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THE PROBLEM OF INTEREST IN ITS RELATION TO CURRENCY & DEBT

THE PROBLEM OF INTEREST

IN ITS RELATION TO

CURRENCY AND DEBT

Seven Essays by

ERNST DICK

Ph.D.

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PREFACE

In my book *The Interest Standard of Currency*, published in 1925, I set forth the reasons to prove that the purchasing power of money is determined by the rate of interest. The rate of interest is represented as the natural standard of currency, and stability of the rate appears as the necessary condition of a stable currency. The present book was originally undertaken with a view to furnishing fresh proofs of that conception and completing the demonstration of the system of an interest standard. The problem of currency stood in the foreground of my general plan. As a matter of fact, essays I, II, and V of the present volume are entirely devoted to it. No. I, *The Relation between the Rate of Interest and the Level of Prices*, states the problem and outlines the general conclusions. In No. II, *The Banknote as a Parity Title*, the facts of the case are presented from a special point of view; the essay is intended as an explanation of the mechanism of an interest standard of currency. No. V, *Aspects of the Discount Problem*, deals with certain points that seemed to call for further elucidation. Indeed, there is no section in this book that does not revert to the question of currency and the relation between interest and price. In so far I might have preserved the title which I had first adopted: *The Problem of Currency in its Relation to Interest and Debt*. It was only after the work was finished, and while I was overhauling it, that I realized what a change of stress had crept into my conception. It was no longer the problem of currency that dominated, but the problem of interest had come to the front rank. Hence the title as it stands now. It implies that currency is not the master force, not the lever by which the economic system can be moved about. As I dug to the foundations of the problem, it was revealed to me that stability of the currency, in so far as it is a boon, is to be had only at the price of a renunciation of all those extravagant expectations which the currency reformers will derive from the advantages of stabilization: the greater and more widely distributed prosperity, the general enrichment of society. In my endeavour to discover the nature of the error

which I had recognized as the root of the currency trouble, I was more and more confirmed in the impression that monetary theory had been led astray by the greed for enrichment, by the evolutionist belief in progress absolute. Everywhere I came up against the idea, however vaguely and diffidently expressed, that society ought to be able to overcome the phenomenon of interest, on which my own currency system is based. Here, then, was the fundamental fallacy of the traditional theory; here, then, was the problem which, of all others, demanded an elucidation. So it happened that the currency problem, in my thought, came to take second rank and cede its prominence to the problem of interest. A stable rate of interest implies not only stability of the level of prices, but is the expression of the more significant, the almost awful stability of the greater economic quantities: of wealth or capital or prosperity, of debt and credit, of production and consumption. The currency no longer stands out as the determining factor, but is reduced to a mere reflex of these mightier forces. Let us, because it is the need of the hour, strive for more stability; but let us be prepared to pay the price too. We shall not succeed in achieving monetary stability, while we seek it in the name of Mammon. Thus my quest of a means to attain a technical improvement culminated in the recognition of a very ancient and very commonplace moral law, which the economists of the evolutionist period had set at nought to the discomfiture of some of their fundamental concepts and of their most insistent aims. It seems to have been their pride to rescue economics from the reproach of being the "dismal" science by proving the possibility of increase, of the overcoming of want through accumulation—the creation of money, or at least of credit, being represented as the principal means to the end. The necessities which I found to be underlying the idea of monetary stability rule this possibility out. Money cannot be created, nor even credit either, to confound interest and make an end of want. Interest will not be overcome, not be reduced. It is the governing factor, the all-pervading energy or essence of any conceivable economic order. But while interest, the expression of want, is unassailable, the way to an increase of wealth is closed; men must always be wanting, so that they may always keep active, bent on exercising their faculties, dependent on one another, members of a community or

brotherhood. Is it a pessimistic view? Does it hold forth dismal prospects? I think not.

My essays, then, are largely a challenge to the economic science of our time (in those two for which Macleod has furnished the texts it is still the present-day theory that is criticized). The first task that imposed itself was to expose the error of the current theory. I was forced to quote from its prominent exponents, so as to show in what respect their arguments are at fault, self-contradictory, or in conflict with the observed facts. I could have wished to avoid the controversy to which the necessity of the case has given rise. But how was I to prove my interpretation right, while leaving the doctrine of the schools unchallenged? How was I to construct a new system, while the old was allowed to occupy the site? Furthermore, how was I to muster and marshal the multitude of facts and points of view that constitute the problem, without the help of those who have laboured in the field before me? My criticisms are a manner of expressing my indebtedness to them. I turned to them for information; their findings and demonstrations have served me in good stead as a test and criticism of my own; the facts collected by them have enriched my material for illustration; by studying their methods of approach and by surveying the ground thus brought under review, I have learnt to handle my own principle to better effect. I must pay the price of this gain by adopting an unattractive, because controversial, treatment of my subject. My first book has not met with any recognition from those in possession of the science; in the present stage of its career my theory is called upon to prove its worth by the test which all new hypotheses must submit to: it has to show that it accounts for the observed facts more comprehensively and can predict events more accurately than the theory which it claims to supersede. The main contention of my theory is that prices move directly as the rate of interest, whereas the orthodox theory says the contrary. What are the facts observed by those who have evolved and taught this theory? What proofs, statistical and logical, have they produced? Last, not least, what are the broader implications of the conflicting conceptions? After proving that our economists had mistaken the observable facts and failed to understand their practical import, I was led to challenge their philosophical interpretation of the facts.

The traditional conception of the relation between interest and price leads to the evolutionist belief in progress, enrichment, the increase of wealth. It is a philosophy of Mammonism. Its practical application resulted in policies of unrestrained expansion and bore fruit in the shape of the most destructive of wars. It stands thereby condemned: the attempt to depress the rate of interest through accumulation and expansion has dire consequences. The other view, the view proposed in this book, of the relation between interest and price, leads to a belief in balance, restraint, moderation, harmony, the recognition of a moral law which will curb interests tending to encroach on interest. Essays III, IV, VI, and more particularly VII, are devoted to the study of this more fundamental aspect of the problem. Here my book is a challenge not only to the economists, but to that great majority of present-day men who have not yet begun to detach themselves from the lure of evolutionism. My sober estimate will not appeal to them, so that, apart from the controversial drawback, my book is likely to suffer from the unpalatable nature of its teachings. However, there is also a reassuring aspect to the sceptical philosophy. As it excludes the notion of progress and enrichment, it also excludes the idea of retrogression or decay. No recent book has had a greater vogue than the tomes on the passing of Western civilization (Oswald Spengler's *Untergang des Abendlandes*). Well, the conception of a stable currency through stability of the rate of interest implies neither more nor less than an assurance that the Western World, by the mere fact of its present efforts to attain such stability, has already turned from decay, and is resolved to emerge again from eclipse. If readers who do not like my pessimism will be mindful of this more hopeful counterpart, they may be reconciled to my harsh and seemingly forbidding conclusions. Finally I would remark that my book was not written to please, nor to satisfy a spirit of aggressiveness in myself. I saw a great and universally held error staring me in the face, a false creed which I had shared, to which I had erected altars, and which I found not only to vitiate the theories of the schools, but to cause infinite practical mischief. What could I do but attack it, regardless of the consequences for the immediate success of my book? If my heresy is somewhat nearer the truth than the orthodox teachings are, it is sure to find those who will consider

it worth their while, and who will accept its implications. So I have some hope that all this apologizing may, after all, be beside the mark. After the attack and the demolition an opportunity will, I trust, be offered for an uncontroversial, for a constructive treatment of the economic problem, as it presents itself in the light of the new conception of the relation between interest and price.

I have spoken of a general plan having presided over the composition of my book. There really was no such thing as a plan except in so far as I was determined to hunt down the interest fallacy. The essays were written—and rewritten—at different times. If the reader is shocked by a certain lack of unity, he should remember that this is a book of essays, not of chapters. It is the work of a learner and seeker, heuristic and tentative, not of a teacher, dogmatic and authoritative. In spite of a few references from essay to essay, they have not been reduced to uniformity. The terminology, in particular, is not consistently the same, which may be a blemish, but should not matter too much, provided that I have succeeded in expressing true thoughts and expressing them clearly. How, indeed, could economic terminology be uniform, while the meaning of terms is so vague, fluctuating, controversial? So long as the phenomenon of price and interest is not understood, it is impossible to agree as to the meaning of the term capital, which is the main element of disturbance. It is generally admitted that the science of economics is in an unsatisfactory condition. Should not this admission suggest to economists that there must be some sort of fundamental error vitiating their doctrine? Well, there is nothing so fundamental in economics as the phenomenon of interest; an erroneous interpretation of it is sufficient to taint and pervert the whole science. I am confident that a new monetary practice, which is going to impose itself from sheer necessity and in the teeth of old theory, will reveal the error even to the schools. By that time the present exposition of the case may find recognition.

The time will not be long in coming. The technical problem of currency regulation is pressing to the fore again. The fact that the gold standard seems to have re-established its rights, proves nothing in its favour. I think it impossible that it should last much longer. Its existence rests on a mere misunderstanding, and its continuance depends on factors which at the

present point of time are rapidly passing away. The settlement of international debts, more particularly the solution of the Reparations problem, demands that interest should be established as the standard; for the measure of debts is the rate of interest, not a weight of gold. Compared with the sums of the international debts now in existence, the amount of monetary gold is a mere trifle, and it will be found impracticable to let this trifle rule over the mutual relations of the peoples. The misunderstanding is going to be cleared away, and the metal will be put in its proper place. By my system the place of gold is that of a very useful and valued servant, so that gold need not suffer any depreciation through being demonetized. But while it is the monetary standard, gold is a threat to the welfare and peace of the world, because it imposes mistaken policies. Deflation, the gradual fall of price-levels, is inevitable under the rule of gold. This fact is coming to be realized more and more generally. Economists, who a few years ago thought lightly of the gold menace, have changed their minds (see Mr. Keynes's article, "Is there enough Gold?" in the *Nation* of January 19, 1929). The League of Nations is even now taking steps to have the matter investigated. However, it is not really gold that is causing deflation. The fall of prices is a consequence of the debt-sinking policies now in operation everywhere, and the scramble for gold is merely one of the effects of debt amortization. This idea is, I believe, new, and if the essays in which it is elaborated (III and IV) suffice to prove the point, they should be admitted to constitute a very important contribution.

The currency systems evolved since the War and so confidently embraced by those in authority have not worked. For years the American dollar had passed as the standard currency. Most abjectly the proudest nations had subjected their own monetary policies to the lead of the Federal Reserve Board—so much so that a former Chancellor of the Exchequer stated that the European currencies, including the English, were not on a gold basis, but on a dollar basis. The dollar itself was a managed currency. And how managed? The turn which events in the United States took from 1927 on, revealed the fact that the measures applied failed to produce the desired results. In the Senate Committee on Banking and Currency the situation was discussed in April 1928. Expert witnesses and officials

from the Reserve Board gave it as their opinion that the situation had got out of hand, that the system of credit control was ineffectual, that the "result of the policy followed had been a surprise to the Board, which, the member declared, was quite perplexed." The English journal from which I gather these facts (*The Statist*, May 19, 1928), winds up its comment with this remark: "The fact that two major committees of Congress are working on it so assiduously, and that the Board itself is 'perplexed,' would indicate that the credit problem is growing in magnitude and practical urgency." Matters were bound to come to this pass, because the system is based on error. The present contribution, then, is not untimely; it rather comes in the nick of time. May it solve the perplexities of the American Reserve Board and at the same time enable the other nations to throw off the yoke of the dollar.

ERNST DICK.

DROSSELSTRASSE 27, BASEL,
May 1929.

CONTENTS

PAGE

PREFACE vii

ESSAY

I. THE RELATION BETWEEN THE RATE OF INTEREST AND THE LEVEL OF PRICES 1

II. THE BANKNOTE AS A PARITY TITLE . . . 48

III. FISCAL POLICIES AND THE CURRENCY. . . 117

IV. THE NOTIONS OF CAPITAL, OF DEBT, OF CREDIT, AND OF CREDIT CREATION 177

V. ASPECTS OF THE DISCOUNT PROBLEM . . . 238

VI. ALFRED MARSHALL'S THEORY OF INTEREST . . 279

VII. INTERESTS THAT DEFEAT THEIR OWN ENDS . . 313

SUMMARY 375

INDEX 379

THE PROBLEM OF INTEREST

First Essay

THE RELATION BETWEEN THE RATE OF INTEREST AND THE LEVEL OF PRICES[1]

§ 1. ECONOMIC science is agreed on two points regarding the relation between the rate of interest and the level of prices:

(1) That variations of the rate of interest have power to influence the level of prices, and
(2) That the level of prices changes in the direction opposed to that of the rate of interest.

Such is not only the unanimous opinion of science, it is also the rule by which the Central Banks the world over conduct their discount policies. It will facilitate our discussion of the problem if I point to a few instances of this policy. When, in 1925, the British Government decided to re-establish the gold standard, the Bank's rate was raised from 4 to 5 per cent; the rate of exchange of the pound sterling being slightly below par, it was supposed that the higher discount rate would raise the value of the currency by depressing the level of prices. In 1926, on the advent of the Poincaré Cabinet, the French rate of discount was raised from 6 to $7\frac{1}{2}$ per cent with a view to inaugurating a policy of deflation. And again, in 1927, the German rate of discount was raised from 5 to 6, and from 6 to 7 per cent, when it seemed necessary to check certain inflationary tendencies. This theory and practice of discount has never been seriously contested, so far as I know, since the time when the rule was established by Macleod in 1856, and if a doubt as to its validity has been uttered now and

[1] This chapter was caused to be printed, and was privately circulated, by Mr. H. R. Scott of Kodaikanal, South India, in 1928.

then,[1] at the present time at least it seems more firmly rooted than ever.[2]

§ 2. In my book *The Interest Standard of Currency*, published in 1925, I attempted to show that it ought to be possible to stabilize the level of prices within reasonable limits by keeping the rate of discount fixed at a certain medium point to be ascertained by experiment. As to the part assigned to gold in the system, all that I need to mention in this connection is that the fixed bank rate is to stand in the place of the fixed price of gold, which has to be given up. The scheme, then, is based on one of the above tenets: the rate of interest governs the level of prices; but it eliminates the other. However, this elimination is reached through an inversion of the tenet: variations in the rate of interest cause the level of prices to move in the same direction, prices rising as the rate is raised, and falling when it is lowered. In the present paper I propose to furnish some fresh points in support of this conception. They have presented themselves to me as I studied certain works dealing with the subject. In doing so I have been struck by the very curious fact that none of these writers have seemed to think it necessary to inquire whether their premises are

[1] Karl Helfferich, the author of a book *Das Geld*, and later on governor of the Reichsbank, wrote in an article (1900): "It is doubtful whether anybody could furnish the proof that rising rates of discount cause an enhancement of the value of money." In 1922 one of the directors of the National Bank of Switzerland said: "Any one who has heeded the discount policies of the various Central Banks must have observed that the effect of raising or lowering the official rate of discount on the quantity of loans demanded, and in consequence on the quantity of the circulation, has become exceedingly problematic."

[2] Future generations of economists will find it hard to comprehend how the present conception could ever have been held so universally. Let me quote a testimony which was published only a few months after the present chapter had first appeared in print. Explaining the theory and practice of the rate of discount as taught at present, Professor Albert Aftalion writes in *Monnaie et Industrie* (Paris, 1929): "When prices tend to rise one must prevent the rise by raising the rate of discount, and so reducing the credits held at the disposal of the public. In their endeavour to protect their cash holdings, central banks, to be sure, have always been led to raise the discount rate in periods of rising prices. But they did so only tardily, and proceeded by moderate degrees. The banks must learn how to apply the higher discount rate at the very start of the upward movement, not shrinking from having recourse, if necessary, to massive doses, until they shall have succeeded in arresting the fever of the boom. In the opposite case, when it is a question of counteracting a fall of prices, the banks should heavily reduce the rate of discount in order to increase the credit facilities of the public, enliven the spirit of enterprise, and cause the level of prices to rise again" (p. 81).

really doubt-proof. In their abstract reasonings, at least, on the subject they all take it for granted that prices and rates of interest do move according to the traditional conception—in very much the same way as up to a certain event nobody ever thought of questioning the idea that the sun moved round the earth.

§ 3. Let me adduce an instance of this strange trustfulness. I find it in the latest work of one of the most penetrating, circumspect, and best-versed writers, Professor A. C. Pigou's *Industrial Fluctuations*. The passage in question is intended to prove that in any circumstances the Central Bank can alter its rate of discount.

"There is no iron law that, other things remaining the same, bankers must retain the discount rate of 5 per cent, and cannot, on their own initiative, shift it for any length of time to 2 per cent or 10 per cent. The only iron law is that, if they do either of these things, certain consequential adjustments must take place in the prices of long-term securities and of commodities. If the discount rate is dropped to 2 per cent, fixed interest securities will rise in value and the money yield of interest on long loans will be dropped to correspond with the drop in discount. . . . The adjustment in the prices of commodities is in this wise. So far as the facts of the situation are known and their consequences foreseen, prices must change at once in whatever degree is required to make the money rate of 2 per cent representative of a real rate of 5 per cent. . . . Prices must rise at once. . . ." (pp. 251–2).

The passage very conveniently places in conjunction the prices of long-term securities at fixed interest and commodity prices. It is asserted that a given move of the bank rate will affect these two prices in the same manner: when the rate of discount is reduced, both the general level of commodity prices and the price of bonds rise. Is that true to the recorded facts? According to Professor Pigou's Table X the Index of General Prices in the United Kingdom was at 128 in 1870, when the discount rate was 3·28 (Table XVII), and at 83 in 1895, when the discount rate was 0·96: in proportion as the rate went down the level of prices went down also. As to the price of securities, I find in Professor J. M. Keynes's *Tract on Monetary Reform* (p. 15) the following figures (base year 1914): money price of the capital value of Consols in 1869 = 127, in 1896 = 150: in proportion as the rate of interest went down, the price of Consols rose. The passage under consideration thus affirms

with the same unsuspecting assurance what is true to the facts and what, though true to a dogma, is contrary to the facts. It is borne out by all the statistics that have come to my notice that securities at a fixed rate of interest rise as the rate of interest and discount falls, and with equal force statistics contradict the dogma that prices should rise as the rate of interest falls. No doubt Professor Pigou knows the statistical facts and records as well as I do; but when he reasons on the subject he is in the grip of the dogma which I have cast off.

§ 4. It is intensely disconcerting to find one writer after another belying the dogma which is the foundation of his creed, when he comes to consider what really happens. Professor Pigou, for instance, says in the very first place where the matter is mentioned (p. 29):

"When the expectations of profit are good, they lead business men to increase their borrowings, in part from the banks, thus directly pushing up the rate of interest and indirectly, by bringing more purchasing power into circulation, pushing up prices."

Nothing could be more logical and convincing than this argument, and what it amounts to is neither more nor less than that the same cause that raises the rate of interest also raises prices, so that the two quantities are found to vary in the same direction, and not inversely, as the dogma purports. The argument is repeated on p. 121:

"Business men are able to achieve extra borrowings of this type because the banks . . . are ready, in response to offers of higher interest, to allow the ratio of their reserves to their liabilities to decrease. . . . (These extra borrowings) . . . set forces in motion which cause the general level of prices to rise."

The case is stated most appropriately, and I shall not mar the argument by making any comments.

There are, then, cogent reasons for questioning the validity of the dogma, and we are led to query: how did it originate, and how did it succeed in casting such a spell on the minds of men? I have alluded to Macleod as having established the rule. Whether that is so or not I do not care to investigate now; all I know is that he himself claims the merit of having first enunciated "this great law of nature." He says (*Theory and Practice of Banking*, vol. II. p. 346, 3rd ed.):

"Now, this principle was certainly not generally understood at the time when the Bank Act of 1844 was passed; and in the first edition of this work (1856) we stated this as the fundamental principle of the Currency.

"An improperly low rate of discount is, in its practical effects, a depreciation of the currency.

"We therefore showed that the only true method of striking at this demand for gold is by raising the rate of discount, and that the true great power of governing and controlling the paper currency, or credit, is by carefully adjusting the rate of discount to the state of the foreign exchanges, and to the state of the bullion in the Bank."

The fundamental law of the movement of gold is stated by Macleod as follows (p. 344):

"When the rate of discount between two places differs by more than sufficient to pay the cost of transmitting bullion from one place to the other, bullion will flow from where discount is lower to where it is higher."

This is part of the dogma which I am impugning, and so a few remarks on the subject of gold may not be out of place here. Macleod qualifies his assertion by saying: "the state of credit at both places being assumed to be equally secure." Now it is clear that the state of credit is expressed in the current rate of interest; hence the state of credit can be the same in two countries only when the rate of interest is the same. The events of these last years have proved more than amply enough that gold will flow from the countries with a higher to countries with a lower rate of interest. The observed facts, therefore, prove the contrary of what the theory asserts. Neither can it ever have been otherwise, notwithstanding the great vogue and universal recognition which the theory of Macleod has enjoyed.[1]

§ 5. In the preface to his work Macleod proudly affirms that it was under the irresistible force of his proofs that France amended one of her laws so as to render the practical application of his great principle legally possible. Since this principle is held as a veritable, and venerable, axiom to this day, it may be useful to look at his proofs. Obviously the subject can be approached from two points of view: the *a posteriori* and the *a priori* one, either historically (statistically) or logically. Macleod is satisfied with the *a priori* or logical examination;

[1] See Pigou, *op. cit.*, p. 265.

he allows no statistics to interfere with his argument. When he does produce figures he omits to use them as a test of his theory, with the result that a reader who has emancipated himself from the dogma is easily brought to discover some very palpable contradictions.

Our quotation affirms that "an improperly low rate of discount is, in its practical effects, a depreciation of the currency." That is to say, when the rate of discount is low, prices will rise. However, there is a qualification: the rate must be "improperly" low. When does it apply? It is certainly true that prices will begin to go up when the rate of interest has been depressed below a certain level, and so I cannot quarrel with this statement. Macleod is more definite when he discusses the laws of price. His theory of price culminates in this principle (vol. I. p. 58):

> "*The value of money varies inversely as price, and directly as discount.*"

The first part of the statement expresses a truism which by this time has come to be fairly generally understood. The second part of the statement is the dogma against which my criticism is directed. It is the inverting of it that constitutes the main contents of my theory of currency, the essential result of my investigations. I say: interest is an affection of the human will; it is desire, appetite, and the rate of interest is an expression of the urgency of the desire: if the desire is strong, and consequently the rate of interest tends to rise, the prices of goods must also rise. But if the price of goods rises, the value (purchasing power) of money declines: it varies inversely, not directly, as discount.

§ 6. Now let us pass under review the argument on which Macleod bases his principle. He writes (vol. I. p. 57):

"Now the value of money is the quantity of any commodity or service which can be got in exchange for it: the greater the quantity so obtained, the greater is the value of money; the less the quantity obtained, the less is the value of money. Or if the commodity be taken as the fixed quantity, the less the money given for it, the greater is the value of money, and the more money given for it, the less is the value of money.

"Debts or credits, however, are commodities which are bought and sold like any material chattels, and for the convenience of sale, they must be divided into certain units. . . . The unit of debt is the right to

demand £100 to be paid one year hence. The sum of money given to purchase this unit of debt is its price, and, of course, the less the price given to buy the fixed unit of debt, the greater is the value of money."

What does Macleod mean by "the sum of money given to purchase this unit of debt"? It depends on which party is considered as the buyer and which the seller. Macleod introduces the banker as the purchaser of the debt and presents the case so as to imply that the banker buys £100, to be paid to him a year hence, with the sum paid out to the borrower to-day: the price of £100 a year hence is 95, or 94, or 96 to-day. He says:

"The difference between the price and the amount of the debt is the profit made by buying it. This difference or profit is termed discount. And it is clear that as the price of the debt decreases or increases, the discount or profit increases or decreases. In the commerce of debts it is always usual to estimate the value of money by the discount, or profit it yields."

This is extremely puzzling. The difficulty of the case arises from the fact that in the transaction in question money does not buy goods, but money. We, therefore, have to decide whether the borrower buys the service of £100 by paying the discount, or whether the lender buys the service of £5—or 6 or 4—by paying the sum lent. To me it seems more natural to say that the banker buys the bill (or other security) rather than the discount, while the borrower buys the cash (or the credit). "The sum of money given to purchase this unit of debt," then, would be the rate of discount. Surely, it is the borrower who acts the part of the buyer. Borrowing and buying are cognate acts. Macleod himself, in the closing sentence of the last quotation given, suggests this interpretation: "estimates the value of money by the discount." For he defines value thus: "Price is therefore always value expressed in money or credit"—i.e. value, when expressed in money, is price. In the present instance discount is the money paid for the hire of money; it is a price, namely the quantity of money, or "the price given to buy the fixed unit of debt." We may, therefore, reasonably substitute the term discount for the phrase just repeated. The statement of principle will then read as follows:

> *"Of course, the less the discount, the greater is the value of money."*

The money of a loan obtained at 4 per cent has a higher purchasing power than money obtained at 5 per cent; the discounting bank sells its commodity, or service, at a lower rate or price, which means a higher value of money—for a "low price" signifies a high purchasing power of money, or the medium of exchange. From the point of view of the lender: if he consents to give only 95—the discount being 5 per cent—instead of 96—if the discount were 4 per cent, it is because he values his money—the money which he receives, that is to say—less highly; he can get £5 instead of only £4 only because the pound is worth so much less. From the point of view of the borrower: if he consents to pay only 4 instead of 5 for the service, it is because he values the money so much more highly; he has comparatively little use for the loan, which means that he is not eager to buy goods, which in its turn signifies that he does not count on a rise, but rather on a fall, of prices: the lowered rate does not cause money to depreciate, but to appreciate.

Macleod remarks in a closing paragraph:

"Hence it must be observed that the term Value of Money has two distinct meanings. There are two great branches of commerce: the commerce in goods or commodities, and the commerce in debts. And the expression, Value of Money, has two distinct meanings according as it is applied to these two branches of commerce. In the commerce of commodities the value of money means the quantity of the commodity it can buy; in the commerce of debts it means the profit, or discount made by buying this debt."

Here again the discount appears as the value, or price, of money. The passage imposes the question as to how the two distinct meanings are connected and merge into each other. Macleod was not, we know, the last economist to assume that the value of money, considered as the purchasing power of money in the market of commodities, is the less in proportion as the price of money, in terms of discount rate, is less; in other words: that commodity prices are higher in proportion as the rate of discount is lower. Hence the rule: when the discount rate falls, the prices of goods rise. It is a delusion so flagrant as to defy explanation. Money is borrowed with a view to obtaining the means for buying goods; borrowing and buying are the two stages of one and the same operation: their purpose is identical. How could it ever be imagined—for it is unimagin-

able!—that the price paid by the borrower and the price paid by the buyer, who are one and the same person, should develop in opposite directions, the one rising as the other falls?

§ 7. The absurdity of the discount theory, our dogma, shines out in bold relief when viewed in the light of its practical consequences. Supposing that the raising of the rates of discount and interest be followed by the fall of prices—the "consequential adjustments" of the passage from Professor Pigou's book—and *vice versa*, the effects produced on the fortunes of debtors and creditors must be cumulative.

(1) The rate is raised, and prices decline: (*a*) The debtors, that is, the owners of goods and labour, lose in a double ratio, their incomes from the sale of their products diminishing, owing to the fall of prices and wages, at a time when their disbursements are increased, owing to the rise in the rate of interest. (*b*) The creditors—that is, the owners of money and money claims—profit in a double ratio, their incomes from the sale of their money and credits increasing, owing to the rise in the rate of interest, at a time when their expenses are diminished, thanks to the fall of prices.

(2) The rate is reduced, prices rise: (*a*) The debtors profit in a double ratio through the increase of their earnings in consequence of rising prices and the decrease of their payments of interest. (*b*) The creditors lose in a double ratio, because their cost of living grows while their incomes shrink.

The shorn lamb is exposed to the fiercer winds, that is what the traditional theory of interest and prices amounts to. There is no compensation, but existences are ruined and fortunes are amassed double quick. An economic order of this sort would be in a perpetual fever; it could not last. Things have never happened the way the theory has it. Still, the theory has been practically applied for seventy years: in 1856 it was enunciated by Macleod and in 1926 the discount rate in France was raised from 6 to $7\frac{1}{2}$ with a view to improving the value of money. This practice cannot have failed to produce some of the consequences which it was intended to prevent. We may attribute to it a large share of the responsibility in the increasing frequency and virulence of the alternating booms and slumps. Sure it is that while this absurd practice is persevered in there can be no hope of any stability.

If it were true that prices rise as the rate of interest falls—for surely one cannot conceive the rate of discount as obeying other laws than the ordinary rate of interest—one of the consequences would be that the demand for goods on hire would increase as the demand for goods on purchase decreases. Imagine it: the rent for houses is reduced, thanks to a reduction of the rate of interest on mortgages; at the same time the price of houses rises in company with prices in general. Obviously people in need of houses will try to hire them rather than buy them. How could, under these circumstances, rents fall and prices rise? Is it conceivable that rents should fall while the price of rentable property rises? Even supposing that the case of rents is not typical enough, and confining our examination to the borrowing of money, the facts remain the same. If prices rose when the rate of interest is reduced, it would be because so much more money is borrowed by people who are eager to acquire property. But then the rate of interest would have to be raised again immediately, seeing that no money would be lent to the banks, while demand for money is greatly increased. It could not happen, as in practice it does happen, that rates are reduced in a number of successive stages and continue abnormally low over a prolonged period of time.

§ 8. The proof put forward by Macleod is of the flimsiest complexion (but I value Macleod very highly for all that); it cannot be credited with having taken possession of the reasoning faculties of economists so as to keep them spell-bound for seventy years. The spell is much older than that. If I may venture a guess as to how it might possibly have been produced, here it is.

The theory of interest is a sort of atavism. For many centuries interest was under an interdict, and people were taught to consider it as usury, a wrong, and a sin. Interest was thought to exploit the borrower, whom Christian pity considered as a Lazarus to be shielded from the wicked Dives. When interest came to be permitted, recognition was accorded only half-heartedly: to prevent it from exploiting the borrowers it must be kept low. A low rate of interest was supposed—and is still supposed—to favour enterprise and all those who depend on work for their livelihood. Hence a low rate appeared as a stimulant and a help to the needy. From this purely ethical,

or sentimental, interpretation to a full-fledged "scientific" theory was only a little step. Had it not been for this emotional inhibition, economists might have broken the spell of the dogma. However, there is another reality which has kept it alive and in force.

The theory of discount simply describes the traditional practice: because the banks have always managed discount in that particular way, that way must be the only right and possible one, its justification lying in the fact that it has never failed to find the turning-point and bring the wandering movement back to familiar ground. In the long run, after many successive raisings of the discount rate, the boom would come to an end, and after repeated reductions of the rate the slump would be overcome. Developments, either one way or the other, had to be carried to the bitter end, to death's door, as it were, before the remedy could be expected to work. As to the practice of the banks, nothing could be more natural. The bankers consider themselves as shopkeepers and act like shopkeepers, always taking the best price they can obtain for their wares, jealous of one another, and essentially unscientific in their mental attitude. That is as it should be; we have no right to blame them. They cannot be held responsible for the stability of the value of money, which is an essentially scientific, and a very modern, notion. But the very fact that the notion is modern should suggest to economists the necessity of reconsidering its foundation, or rather of abandoning a foundation which was established before the notion existed. Must developments be allowed, nay made, to go to the bitter end; must equilibrium be disturbed to the farthest limit? If so, we are bound to approve of those economists who advise us to persevere in the old course, but to improve it by going it one stronger, probably so as to reach death's door somewhat sooner. If not, we shall have to discard the traditional method altogether. In order to make our choice we have to begin by establishing the facts of reality: is a rise of prices of appreciable magnitude normally associated with a fall of the rate of interest, or is the contrary true?

§ 9. I reproduce from Professor Pigou's book a passage summarizing the conclusions of "an elaborate study (by Mr. T. T. Williams) of the relation between rates of discount

for three months' bank-bills and the movements of Sauerbeck's index number over the period 1845–1911":

> "The result of this investigation shows that for every maximum rate of discount there is a corresponding maximum of prices. . . . Out of fourteen pairs of maxima twelve pairs have both maxima during the same year, and in the other two the maximum prices come in the year preceding the year of maximum discounts."

Perhaps I ought to point out that Professor Pigou makes use of these findings for a different purpose from mine; he wishes to show that more often than not the turn in the price-movement precedes the turn in the movement of interest rates, whereas I merely wish to stress the parallelism of direction between the two movements. It seems to me that this latter observation has been lost sight of, no doubt owing to the preoccupation of investigators to settle the question of precedence. Thus, for instance, the publications of the Harvard University Committee of Economic Research are entirely devoted to this side issue. They stress the deviations from the main trend, and the result is that they do not see the wood for the many trees: the essential parallelism escapes their notice. Let me introduce an analogy. Notwithstanding the fact that for a few weeks after the shortest day the weather is usually rather colder than on that particular day, we know for certain that as the days lengthen the temperature will rise, and we attribute the double change to a common cause, the fact that the sun attains a higher position day by day. In the same way I maintain that, although the turn in the price-movement and the turn in the movement of the rate of interest do not synchronize exactly, yet the movements of price and of interest run parallel, effects of a common cause, inseparable, so that whatever inhibits one, or starts one, must also inhibit, or start, the other. If we had, like old Joshua, power to control the course of the sun, should we push it higher up into the sky if we wanted to keep the temperature low? But we do push up the rate of interest with a view to checking a rise of prices, albeit we are aware that in precisely the same way as the temperature will rise as the sun goes higher the price level will rise along with the rate of interest —all while pretending that our intention is to keep the price-level steady. What has become of common logic?

§ 10. I cannot very well spare myself the ungracious and ungrateful task of exposing the inconsistencies into which the explorers of the currency jungle have been betrayed, so it seems to me, by adhering to the ancient dogma. Out of a very considerable mass of material collected from all the important writers on the subject, I shall quote a few representative passages from Knut Wicksell, Professor Irving Fisher, Professor J. M. Keynes, and Albert Aftalion, with a few remarks by Alfred Marshall thrown in.

Knut Wicksell's book *Geldzins und Güterpreise* ("Interest on Money and Commodity Prices") appeared in 1898. Its main subject is the identical one under discussion here. Wicksell was evidently prompted to undertake his investigation by the unfortunate effects of a prolonged period of falling prices. Had he chosen to build his theory on a direct observation of events, he would have recognized as the outstanding feature in the relation between interest and commodity prices the fact that they move on parallel lines: in 1870 the English price index stood at 128, the discount rate at 3·28; in 1895 the figures were 83 and 0·96. The ratio was approximately the same in all countries with a gold standard. But Wicksell built his theory on a preconceived idea, and so he reiterates in twenty variations the ancient dogma that interest and commodity prices move inversely. He says (p. v):

"When the banks offer their money or credit on cheaper terms than usual, the logical consequence must be that more money is demanded by the public, and that prices rise." Again, p. 76: "If we admit—and indeed we cannot help doing so—that it is in the power of the banks to diminish the quantity of the circulation by raising the rate of discount, it is poor logic to deny that the banks could increase the circulation by the contrary measure." And once again, p. 79: "It is not the increased issues of banknotes in themselves, but the cheapening of credit which causes them, that must be considered as the cause of a rise of prices."

While insisting on this conception, Wicksell was well aware that it clashed with the observed facts. He admits it repeatedly, one passage being to this effect (p. 152):

"In reality, however, we observe a continuous rising of the rates of interest as prices rise, and a continuous fall of rates as prices fall."

Naturally he is forced to strain his ingenuity to account for the discrepancy. He introduces into his equation a quantity

which he terms "the natural interest on capital," and of which he says specifically that it cannot be ascertained—a quantity, therefore, which must remain unknown. It is what English economists call "the real rate of interest." I shall have occasion to remark on the subject below.

The writings of Wicksell are even to-day accepted as a fundamental contribution. Our famous contemporary, Professor Gustav Cassel, has made their conclusions quite his own ("*Theoretische Sozialökonomie*"), and so late as 1926 the "*Jahrbücher für Nationalökonomie und Statistik*" published a contribution, "*Kredit und Konjunktur*," which is entirely based on Wicksell.

§ 11. The point at issue is stated by Professor Irving Fisher in the following manner in his book: *The Purchasing Power of Money.*

"A slight rise of prices sets in motion a train of events which tends to repeat itself. Rise of prices generates rise of prices, and continues to do so as long as the interest rate lags behind its normal figure."

Before we can proceed we must try to understand what is meant by the normal figure of the rate of interest. Obviously it is not a definite figure—3 or 4 or 5—but a relative one, namely that higher figure which would prevent the level of prices from rising. In fact it is Wicksell's "natural rate of interest on capital." (I do not mean to suggest that Professor Fisher borrowed the notion from the Swedish author. Wicksell in his book refers to Professor Fisher's study *Appreciation and Interest*, so that he may have been the borrower)[1]. Prices rise because the rate of interest lags behind, is not high enough: the rate of interest appears as responsible for, as the cause of, the price-movement, and we are led to assume that the initial rise of prices must have been induced by an insufficient rate of interest. However, such is not the conception of the author. He repeatedly describes the chain of events as follows:

"(1) Prices rise (whatever the first cause may be).
(2) The rate of interest rises, but not sufficiently.

[1] The notion is attributed by Mr. Keynes to Alfred Marshall; he mentions as one of Marshall's original contributions to the theory of currency, *Memorials of Alfred Marshall*, p. 30: "The distinction between the 'real' rate of interest and the 'money' rate of interest, and the relevance of this to the credit cycle, when the value of money is fluctuating."

(3) Enterprisers, encouraged by large profits, expand their loans.
(4) Deposit currency expands relatively to money.
(5) Prices continue to rise, that is, phenomenon No. 1 is repeated. Then No. 2 is repeated, and so on."

Quite unmistakably the development of the rate of interest is here represented as an effect, and not the cause, of the change of prices; price leads the way, it determines and governs the rate of interest. Alfred Marshall, in a *Note on Changes in the Purchasing Power of Money in Relation to the Real Rate of Interest,* accepts the proofs and conclusions advanced by Professor Fisher. He writes, *Principles of Economics*, p. 677:

"When we come to discuss the causes of alternating periods of inflation and depression of commercial activity, we shall find that they are intimately connected with those variations in the real rate of interest which are caused by changes in the purchasing power of money."

Marshall throughout the *Note* insists on the "real rate" being affected. In spite of his illustrations of the case, I utterly fail to understand what a real rate of interest may signify. I see the necessity of distinguishing between real interest and money interest, or between the rate of interest and the real yield of interest, i.e. the yield of interest in terms of commodities. But what Professor Fisher and Alfred Marshall seem to designate as the real rate of interest has no existence in reality; it is a mere abstraction, arrived at by statistics and computation.

The two passages from *The Purchasing Power of Money* agree in so far as they point to the parallelism between the movement of prices and the movement of the rate of interest. Professor Fisher, however, takes this fact for granted, and he centres his attention on another aspect of the problem, to wit, the question of precedence or of cause and effect. Now it seems to me that it is a mistake to speak of the "real rate of interest" as being caused by anything. From the manner in which Wicksell explains the phenomenon, the real rate of interest is the profit—whether positive or negative—of borrowers added to the money rate of interest. Considered in this light the variations in the real rate of interest are not caused by changes in the purchasing power of money, they are the same thing as these changes, only under a different name. The real rate of interest is the result of an addition, and

nobody would think of considering a result of this kind as being caused by the addition. Only through this faulty mode of reasoning can one be misled into supposing that the rate of interest is both cause and effect of the price-movements. We cannot admit two rates of interest of quite a different character. I have said that the real rate of interest is an abstraction, an unreality. The only effective rate of interest is that which is quoted in the lists of the money market; it is this that business men and speculators go by and that counts as a reality. Obviously, too, Professor Fisher himself is thinking of the actual, or effective, rate of interest, as we shall see more clearly below.[1]

§ 12. Now the question of precedence. Although the second quotation represents the price-movement as preceding and originating the movement of the rate of interest, the very manner in which the fact is expressed suggests that interest must be the governing factor after all. It is contended that the rate of interest rises in consequence of a rise of the price-level, but does not rise enough. Not enough for what purpose? The answer is given both explicitly and implicitly in many places: not enough to prevent a further rise of prices. Now this is to invert the original position as to the relation of cause and effect. For by saying that a heavier increase of the rate of interest would turn the tide of the price-movement, Professor Fisher affirms that the rate of interest determines the movement of prices, and does so in the sense assumed by the orthodox dogma, namely in a countering direction: if the rate of interest were raised higher, prices would not rise—the rate of interest reduces prices in proportion as it rises.

So then we are back at our tenet again. This tenet has some show of reason about it so long as it is not coupled with an admission of the fact that prices and interest rates practically move in the same direction. For *a priori* there is no objection to the assumption that they should move in opposite directions. If the connection between them were of a polar nature, they would needs do so: as the days grow longer the nights grow shorter. If the money paid out as interest were

[1] According to Professor J. M. Keynes, *Memorials of Alfred Marshall*, p. 30, one of Marshall's contributions to monetary theory was "the causal train by which, in modern credit systems, an additional supply of money influences prices, and the part played by the rate of discount."

thrown away and not, as it really is, returned to the payers, no doubt prices would fall as the rate goes up. However, the money is not thrown away, nor does anybody now dare to affirm that prices do fall. But to affirm that prices and interest rates rise together and fall together, and then to conclude that prices would not move if interest but moved more: well, it simply defeats my power of comprehension and baffles my sense of logic.

§ 13. The expression "not enough" introduces the question of magnitude or amplitude. Properly speaking this is irrelevant in a discussion of the direction in which prices and interest rates change relatively to each other. Still it may help us to apprehend the latter point the more clearly, if we put the assertion to the test of facts. We will let Professor Fisher's *Purchasing Power of Money* supply the statistical data. In a later chapter he tabulates the figures of the movement of prices and interest in New York from 1904 to 1908.[1] From this table I reproduce the columns showing the index numbers and the rates of discount for "New York Price, *m*, Two-name 60-day Paper"; as a third column I add the development of the index numbers in per cent, and as a fourth column the movement of the interest rate expressed in per cent.

	I. Price Index.	II. Rate of Interest.	III. Price in per cent.	IV. Rate in per cent.
1904	113·2	4·2	—	—
1905	114·0	4·3	+0·7	+2·4
1906	120·0	5·7	+5·2	+33
1907	127·9	6·4	+6·6	+12
1908	125·7	4·4	−1·7	−30

The rate of interest rises, though not enough, after the index of prices has risen: such is the burden of the theoretical statement. But the figures collected by Professor Fisher himself prove the contrary: the movements of the rate of interest are—proportionally—incomparably larger than those of the price index. It follows that the alterations of the rate of interest must also precede and induce the alterations of the price

[1] P. 271, ed. of 1925.

index; the heavier rise of the rate of interest one year furnishes the impetus for the rise of the price index the next year. The rates of discount are the leading and decisive factor, so that we need not stop to investigate how other rates (long-term loans) may behave under the circumstances. The fact that the movement of the rate of interest precedes is further confirmed by Professor Fisher, implicitly if not explicitly, where he writes: "It has been shown that loans and deposits expand before prices rise."[1] Loans and deposits: that signifies that people, before they increase their purchases—which raises prices—borrow money to buy with—which raises the rate of interest. It is, as Alfred Marshall says in his *Note* above mentioned:

"For when prices are likely to rise, people rush to borrow money and buy goods, and thus help prices to rise; business is inflated, and is managed recklessly. . . ."

The rise of the rate of interest both precedes and exceeds the rise of the price-level. It is only in the later and more excessive stages of inflation that prices may shoot ahead of the rate of interest, especially so when the Government perverts the currency to finance its expenditure. The rate of interest precedes, because interest leads the way. I cannot admit Professor Fisher's opinion that the causes of the rise of prices can be various. The rise of prices follows invariably on an increase of interest, that is of the desire for goods, which can only be satisfied through a more intensive use of money and increased borrowing and diminished lending.

§ 14. Professor Fisher does not say how large the rise in the rate of interest would have to be in order to suffice to arrest the price-movement. The answer to this question is given by Professor Pigou in *Industrial Fluctuations*. In discussing the manner in which past contracts are modified by alterations in the purchasing power of money, he says (pp. 157–8):

"Let us first consider contracts for loans. It is evident that, if these are made in terms of money, and if, after they have been made, the general level of prices alters in a way that was not allowed for when the contract was drawn up, borrowers will pay, and lenders will receive, a different real return (whether interest or principal) in terms of things than they

[1] P. 273.

originally contemplated. In so far as the change of prices which is going to take place is foreseen, it will, of course, be allowed for in the terms of the contract. Thus, suppose that the conditions of real demand and supply at the time the contract is made point to a 5 per cent real rate of interest for one year. If lenders and borrowers both expect prices to be unaltered at the end of the year, the contract will be made at the rate of 5 per cent. If both sides expect prices to have risen 10 per cent, it will be made at (approximately) 15 per cent. . . . In actual fact, however, experience shows that the joint judgment of the market almost always underestimates future price changes, and does not make sufficient allowance for them. Thus, supposing 5 per cent to be the real rate of interest at which contracts aim, when prices are rising they will almost always hit a real rate of less than 5 per cent, and, when prices are falling, a real rate of more than 5 per cent. The evidence which Professor Irving Fisher has collected leaves no doubt that this is so."

I take it that the evidence of Professor Fisher here invoked concerns the assertion that the rate of interest does not rise enough. Professor Pigou's interpretation is to the effect that when the price-level rises from 100 to 110, a 5 per cent rate of interest ought to be raised to 15 per cent in order to maintain the proper proportion. To me it seems that for the rise in the interest rate to be proportionate, it should be 10 per cent of itself, i.e. of 5, not 10 per cent of 100. That would bring it to 5·5. The purchasing power of £5·5 at the end of the year would be equal to that of £5 at the beginning of the year. Of course the lender would not, at this rate, be compensated for the loss in purchasing power of the principal; but surely that is not a question of interest, but a question of profit and loss. However, in a later chapter Professor Pigou, in discussing the means by which discount policy might be employed to stabilize the currency, once more makes use of the above argument (p. 244), and in this connection it sounds so paradoxical that practitioners and politicians may be excused for scoffing at the idea of stabilization altogether.

It is well worth while to enlarge on this point. The manner in which certain economists combine the rate of interest with the fluctuations in the level of prices is, to say the least, misleading. The passage under consideration is intended to convey the same idea as the following one from Mr. Keynes's *Tract on Monetary Reform*, p. 20:

"Economists draw an instructive distinction between what are termed the 'money' rate of interest and the 'real' rate of interest. If a sum of money worth 100 in terms of commodities at the time when the loan

is made is lent for a year at 5 per cent interest, and is only worth 90 in terms of commodities at the end of the year, the lender receives back, including his interest, what is only worth 94½. This is expressed by saying that while the money rate of interest was 5 per cent, the real rate of interest had actually been negative and equal to minus 5½ per cent. In the same way, if at the end of the period the value of money had risen and the capital sum lent had come to be worth 110 in terms of commodities, while the money rate of interest would still be 5 per cent the real rate of interest would have been 15½ per cent."

This is right as far as it goes; but we must beware of generalizing the point and imagining that a 10 per cent rise of the general level of prices makes interest negative all down the line. Such generalization, however, occurs and is accepted even by cautious writers. On the occasion of his lectures delivered at the Institut des Hautes Études Internationales at Geneva, in September 1927, Professor Irving Fisher circulated the following figures: "An eminent American statistician, Professor W. J. King of the National Bureau of Economic Research, has computed that in this manner within a short period of six years in the United States alone capital to the amount of 40 milliards of dollars has been transferred from one section of the population to another section."[1] Obviously such tremendous sums can only result from a computation based on the assumption that all investments of any sort are affected in the manner of Mr. Keynes's hypothetical one-year loan. But surely nothing of the kind can have taken place in reality; the property representing those sums did not actually pass from the losers to the winners, and the gains, in so far as they are calculated on the principal rather than the interest, are purely nominal, figures to be written on paper and circulated in default of anything more conclusive.

Interest does not fall to negative, nor shoot up to treble its normal figure, through general price fluctuations. It cannot do so, for the very natural reason that the supposed winners are not in a position to realize the profit. Consider the case of profits from inflation according to the case prepared for experiment by Mr. Keynes. In order to realize the profit the borrower would have to buy real goods (or industrial shares) on receiving the loan and be sure to dispose of them by the end of the year, when the loan is due for repayment. It is easy enough to imagine one man succeeding in accomplishing the

[1] Repeated in his book, published in 1928, *The Money Illusion*, p. 84.

feat; but you are floored as soon as you try to visualize what would happen if all borrowers undertook to do the same: sell out while prices are still high. How prices would tumble if stocks, instead of being concealed, as is usual in times of boom, were thrown on the market! Why do not all manufacturers and dealers escape the ruinous fall of prices; why are so many caught with large unsold and unsaleable stocks? Because all cannot be first or second and the hindmost have to be bitten by the dogs. Indeed, if the creditors were so minded, i.e. if they could be united to some sort of concerted action, it would be possible for them to recover the loss suffered from inflation: they only need to call in their loans. This move would force the borrowers to dispose of their mortgaged property or hypothecated goods in some haste and be satisfied with very moderate prices, even though they would thus relinquish those fine profits which ingenious computations have projected on the screen of economic make-believe. So much for profiteering through inflation.

The same holds good in the opposite case, when prices have fallen 10 per cent and a money rate of 5 per cent according to Mr. Keynes is doctored into a $15\frac{1}{2}$ per cent real rate: creditors cannot realize the profit. In order to do so they would need to exact the payment of their loans and then to invest the money in real goods. Let them try. There are two alternatives open to them. Either creditors must give notice for their loans before they begin to acquire real property, or they must bid for property before they give notice. In the former case their debtors cannot but go bankrupt, which is likely to damage the creditors, even though they may obtain the property at a very low price. It is property which they have no use for, property, that is, which can only yield some benefit if it is let out to someone able to pay for the use of it. In the assumed situation these potential users of the property are all ruined, bankrupt, expropriated debtors, and in order to enable them to resume their businesses, creditors would be forced to concede very reasonable terms. In the other case the demand for property arising from the speculation of the creditors will force prices upwards to the point at which the previous fall is retrieved. A few individual speculators may succeed in netting a handsome piece of profit by this method, and such profits are always made under the circumstances. But the

imitators always find the opportunity gone; they have started too late.

Forty milliards of dollars: it is an impressive and imposing figure. I am far from wishing to minimize the evils of monetary fluctuations, but surely there is nothing to be gained for the idea of monetary reform by a distorted presentation of what really happens. With extraordinary acumen Professor Pigou in his study of industrial fluctuations has discovered the compensating, or cancelling, reactions that will take place, and I am greatly surprised that he should have failed to do so in the present instance. Is it because the problem of interest is less well understood than others? Probably. Those negative real rates of interest, and those 15 per cent real rates which we meet with in the books are mere computations, unreal because unrealizable. It will not do to confound interest with profits, however nearly they may be allied; the whole conception of "real interest" ought to be discarded.

Now return to our case. Professor Pigou argues that if the rate of interest were but raised sufficiently, prices would *not* rise. How, then, are we to apply his rule? I am at a loss how to explain the case. Or rather, I see it all the other way about: prices would rise all the more. For, evidently, these 15 per cent contracts are meant to be binding on both parties, and the borrower will have to pay 15 per cent, whether prices do rise or not. But no one can contract to pay so much interest, unless he is assured of a corresponding rise in the price of his products. Therefore no money will be borrowed, if would-be borrowers are not assured, and the result will be that prices not only do not rise, but fall. For as increased borrowing is admitted to force prices up, so a cessation of borrowing must cause prices to fall. Thus, then, a 15 per cent rate of interest is bound to force prices either up or down: that higher, and therefore sufficient, rate which is generally pronounced to be the means of forestalling inflation and keeping prices steady, throws the structure of prices all the more violently out of its equilibrium.

Suppose a 10 per cent rise of prices were foreseen and loans were contracted at a 15 per cent rate: would the expected inflation stop at 10 per cent? I doubt it. Everybody would rush out to buy at once and for months ahead; dealers would conceal and withhold their stocks of goods; bonds would be sold at a heavy discount by people eager to secure some real

property; labour would strike for a rise of wages, and within a few weeks the price-level would have leapt up by 20, by 30, by 50 per cent. It would tend to rise in the proportion of 5 : 15, i.e. by 200 per cent, and if the 15 per cent rate were maintained, the price-level would rise indefinitely, because such a charge is bearable only so long as it is reduced by the rise of prices. The proper solution of the question of amplitude thus also answers the question as to the direction of the price-movement: when the rate of interest is raised, prices cannot fall, they are bound to rise. So long as the issue of banknotes is not forced to finance the Government, but is determined by the demands of trade, the rate of interest will keep ahead of the price-level; rather than "not enough," it is always raised or reduced too much. See the figures for the United Kingdom: while the price-level fell from 128 to 83, the discount rate fell from 3·28 to 0·96. Another instance: during the Great War the note issues were forced by Governments and the interest rates were kept artificially low; therefore price-levels rose proportionally more. But since the time when interference by the State ceased, the rate of discount has in many countries dropped below the last pre-war figure, whereas the level of prices has remained some 60 per cent above: the rate of discount has travelled both faster and farther.

§ 15. Here is Professor J. M. Keynes's contribution to our problem. He says in *Tract on Monetary Reform* (pp. 21–2):

"It is true that, in so far as a rise of prices is foreseen, attempts to get advantage from this by increased borrowing force the money rates of interest to move upwards. It is for this reason, amongst others, that a high bank rate should be associated with a period of rising prices, and a low bank rate with a period of falling prices. The apparent abnormality of the money rate of interest at such times is merely the other side of the attempt of the real rate of interest to steady itself. Nevertheless in a period of rapidly changing prices, the money rate of interest seldom adjusts itself adequately or fast enough to prevent the real rate from becoming abnormal. For it is not the fact of a given rise of prices, but the expectation of a rise . . . which affects money rates, and . . . there has seldom or never existed a sufficient general confidence in a further rise or fall of prices to cause the short-money rate of interest to rise above 10 per cent per annum, or to fall below 1 per cent. A fluctuation of this sort is not sufficient to balance a movement of prices, up or down, of more than (say) 5 per cent per annum,—a rate which the actual price movement has frequently exceeded."

Mr. Keynes considers the fact that a high rate of interest is associated with rising prices as an abnormality; that is to say, he believes in the tenet according to which the two quantities move in opposite directions. But is not this association the general rule, and do we call that an abnormality which will happen in nine out of ten cases? We cannot arrive at a satisfactory interpretation of the real facts until we freely accept them and submit to their logic, rather than suspect them as deceptive. Once you surrender the old dogma and yield to the teachings of the recorded and well-attested parallelism between the two factors, it is all plain sailing, whereas a suspicion of abnormality plunges you into an impenetrable fog. From the manner in which Mr. Keynes presents the case, the necessity of the parallelism shines forth very clearly: the circumstances which create an expectation of a change of commodity prices merely reflect a certain development in the general direction of interests, which must inevitably be translated into a movement of the rate of interest. And since money and credit are only the means to the end of acquiring real goods, it is natural, normal, necessary, logical that the price of loans should determine the price of goods, and determine it in the sense of its own direction.

§ 16. In his very detailed study of monetary fluctuations in the recent volume *Monnaie, Prix et Change*, Professor Albert Aftalion presents our subject as follows (p. 243):

"Hence the movements of credit, the cyclical movements of issues or of deposits, rather follow on the cyclical variations of prices, they do not create them. They are rather effects than factors of price. Demand for credit increases in periods of expansion and falls off in slumping periods. And the higher rate of discount prevailing in the boom makes no difference. It is when the rate of discount is at its highest that the demand for credit is multiplied, because a 2 or 3 per cent rise in the rate of discount appears insignificant as compared with the rise in sales prices. It is in the phases of depression, when the rate of discount is at its lowest and credit most easily obtained, that banks are the least called upon for loans, all because the advantage of a 2 to 3 per cent reduction in the rate of discount is of little importance beside the dreaded continuance of a possibly very pronounced fall of sales prices."

This passage is highly instructive. It gives away the secret of the meaning of Professor Fisher's "not enough" in the most outspoken manner. A 2 to 3 per cent rise, or reduction, in

the discount rate it is, if the rate goes up from 5 to 7 or 8, or down to 3 or 2; in other words: 2 per cent of 5 is 2, and 1 per cent of 1 per cent is 1—for a per cent is a per cent. M. Aftalion conceives the case in exactly the same manner as Professor Pigou. The bad logic involved drives him to the desperate shift of making prices precede and determine the movements of credit and money, which amounts to saying that prices are formed before the factors of price have come into existence—the pudding is finished before the ingredients have been procured. I am not a stickler for the niceties of causality; but here I do say that when you depart from the strict observance of the laws of causality in one particular, there is no limit to your further departures.

§ 17. The main thing in the present connection is that Professor Aftalion, like all the others, admits that prices and interest rates move together, their maxima and their minima synchronizing. Indeed, the evidence of records on this particular is so unanimous, if we disregard the deviations which will happen at the turning-points (the heat of summer growing while the sun is already declining), that no one would care any more to support Macleod's proposition, as quoted above. The marvel is that everybody still adheres—as it were with a fervent *credo quia absurdum*—to the practical conclusions resulting from that proposition. Here are a few quotations to show that economic science, on this head, has made no progress since Macleod. Says the author of *The Theory and Practice of Banking* (vol. II. p. 281):

"We may feel sure that if during the various crises . . . there had been more attention paid to observe the natural rate of discount, instead of thwarting the course of nature, though the variations would have been more frequent, they would have been less violent and extreme. If specie is coming in with too great speed it is good to lower the rate of discount quickly to prevent it getting lower; if specie is going out too rapidly, it is good to raise the rate quickly to prevent its being higher."

Macleod criticizes the Bank for not having acted promptly enough and boldly enough. Says Knut Wicksell:

"The more promptly these changes were made, the less scope would there be for any considerable fluctuations in the level of prices to take place, and the slighter and less frequent would the alterations in interest rates themselves need to be, so that finally the money rate of interest,

with the general level of prices remaining almost constant, would only move *pari passu* with the inevitable rising and falling of this natural interest on capital."

Act more promptly, in the manner recommended by Macleod, is his advice. The following is a passage from my own book (pp. 126–7), the conclusion of a criticism of Mr. Keynes's criticism of a "mistaken bank-rate policy" (*A Tract on Monetary Reform*, p. 136):

"Thus Mr. Keynes affects to criticize the Bank while simply contradicting his own truer insight. The Bank does practise the method which he justifies and advocates; it raises the discount rate when it wants to put on the brakes, and it relaxes the valve when it wants to make things go full steam. It does what the expert pronounces to be desirable. He can only criticize it for not acting promptly enough and thoroughly enough."

The following passage is quoted from an article of Mr. Keynes's (see *The Interest Standard of Currency*, p. 122, note):

". . . We shall make our first experiment in the form of putting on dear money at a very early date compared with previous occasions, and avoiding the impending boom."

Act more promptly, is the advice of Mr. Keynes; act, that is, in the traditional manner, only more so. The chapter "A Discount Policy directed towards Price Stabilization" in Professor Pigou's book is a plea for prompter action on the traditional lines. I quote (p. 257):

"Though, however, it is not true that to convert a reserve discount policy into a stabilizing discount policy price-movements should be substituted for proportion movements as the signal for action, it is true that action would need to be taken considerably earlier than it is taken now."

P. 261: "If a discount policy directed towards price stabilization were adopted under conditions such that it was not possible to set the corrective discount changes to work at an earlier stage than that at which they are set to work under a reserve discount policy, it is evident that the discount changes, to be effective, would have to be much larger than they have usually been under the reserve discount policy. Granted, however, that the correctives are applied at an earlier stage, it is not certain that they would have to be larger than the actual changes that occur now. For a small change applied in good time may well prove a stronger stabilizer than a large change applied later on when the forces tending to push prices up or down have gathered way."

To end up with, let us hear the advice of the French economist Professor Aftalion, *Monnaie, Prix et Change*, p. 245:

"Hence a policy of prize stabilization through credit control . . . might not be unefficacious. . . . It would no doubt give better results during the boom than during the slump. . . . A heavy elevation of the discount rate during the boom would work more strongly than heavy reductions during the depression. . . . Moreover, it would not do to defer action until the boom has declared itself. . . . It is mainly in the first stages of the boom that credit policy could best serve to exert its moderating influence."

§ 18. The idea underlying all these passages is that prevention is better than cure. But what if the preventive measure is of a nature to bring on the disease? Supposing that inflation is akin to inflammation, and knowing that a rising rate of discount is a sure symptom of inflation, shall we raise the rate to prevent the evil? We do vaccinate people against smallpox, and vaccination does cause some fever. But the two cases cannot be compared. Vaccination introduces into the system something that endures, whereas the discount, when reduced again, would leave it open to the contagion as it was before. And just consider what the consequences would be if the rate were maintained above its normal figure: prices would have to rise to compensate the borrowers for the increased interest charges.

If we agree that general prices and the rate of interest normally move concurrently, it is impossible that the remedies recommended in the above passages should produce any effect but the one contrary to what is aimed at: if the discount rate is raised earlier, prices will rise all the earlier, and if it is raised more, they will rise all the more. The remedy must be sought, not in exaggerating the traditional methods, which we hold responsible for the fluctuations, but in a method that shall strike a different line of action.

Shall it be simply an inversion? There can be no doubt, supposing that my argument as to the effects of the ruling practice is correct, that an inversion of the policy would counteract the tendencies of prices: an incipient rise of general prices can be checked by a reduction of bank rate. This question is dealt with in *The Interest Standard of Currency*, though not so fully as I could deal with it now, thanks to a riper knowledge of the matter. I shall not enlarge on the subject

here, except in so far as Professor Pigou's book contributes to it. In the chapter "Credit Rationing *versus* Discount Policy," paragraph 2 reads as follows (p. 247):

"In one respect it is evident that selection by rationing is at a disadvantage. Resort to it implies that in times of boom sellers of the rationed article accept an artificially low price; otherwise there would be no surplus demand to which the rationing could be applied. Hence the production of the article—in this case not merely credit creations by banks, but also voluntary savings by the public—will be reduced below what it would be in a free market, and, therefore, we may presume, below what is socially desirable. This objection is on all fours with the corresponding objection to fixing a maximum price, lower than the 'natural' price, for wheat and distributing supplies by rationing. The stimulus to farmers to grow wheat would necessarily be weakened, and the presumption is that less wheat would be grown than it is socially desirable should be grown."

Rationing an article signifies "an artificially low price"; it weakens the stimulus to producing the article, whether it be wheat or credits. The question is whether a low price for credit can be maintained, if there is no conscious and organized rationing. It is commonly supposed that credit is manufactured by the banks; but that is a delusion. Credit is created by the expectations of business men—see above, § 4 the quotation from Professor Pigou, § 15 the quotation from Professor Keynes. The rank and file of business men are warned that it is time to borrow money and buy stuff when the lending terms are raised; so long as the discount rate is kept low there is no need to hurry, and should the rate be reduced against signs that prices tend to rise, the odds are that loans will be deferred, the less credit produced. A very striking instance of this effect might be observed in Germany early in 1927: the rumour of an impending reduction of the discount rate caused a marked diminution in loans, and the returns of the Reichsbank for some time after the reduction showed a very considerable decrease of discounts. When such a universal article as credit is cheapened, demand for it is never stimulated. The measure contributes an element of uncertainty; people stop to see on which side of the fence the cat will jump. Credit is cheapened to all demanders alike; there is no advantage to any one in particular, so that no one is induced to avail himself of the opportunity in a hurry. We must also consider the repercussions on the expectations of the consumers: they will

argue that cheapened credit ought to make for a cheapening of goods, and so they defer purchases; also they have some ground for reckoning with a diminution of their incomes, which will check their desire to spend their means prematurely.

On p. 243 Professor Pigou quotes with approval the following opinion of Mr. Hawtrey concerning cheap rates of discount to counteract depression:

> "Even lending money without interest would not help if borrowers anticipated a loss on every conceivable use that they could make of money."

In proportion as the interest rate is lowered, prices must fall —they have always done so; for the rate falls because people save to invest, and when people save in excess, business suffers. So long as there is any possibility of a further reduction, no one can borrow with safety, because later borrowers have the advantage of him. Most emphatically I contest Professor Pigou's contention, which he makes on the same page, that "a drop in the discount rate in general will tempt additional borrowing"; it deters from borrowing, and the inhibition endures until prices and general business conditions have adjusted themselves to the lowered rate, and all apprehension of further reductions is removed.

§ 19. A case in point has already come up for discussion in § 3; we may suitably return to it now. Professor Pigou says, assuming that the discount rate is dropped from 5 per cent to 2: "Prices must change at once in whatever degree is required to make the money rate of 2 per cent representative of a real rate of 5 per cent." He adds that the change would be a rise of prices. According to the theory here set forth it would be a fall. The real rate of interest is expressed in the quantity of goods which the money yield of a loan will buy. Now a money yield of any sort will buy the less as prices rise, and so it would seem that for a money rate of only 2 per cent, as against 5 per cent, to be equivalent to 5 per cent real interest, prices must fall: you get less money, but the money is so much more substantial, backed by a correspondingly increased quantity of real stuff; it has appreciated. This interpretation agrees with Professor Pigou's demonstration that against a 10 per cent rise of prices within a year the real yield

of loans has to be improved by a rise of the rate of interest; for if compensation in this case is brought about by an alteration of both the factors in the same direction, a drop in the interest rate must be compensated for by a drop in the price-level.

§ 20. We arrive at the same conclusion if we consider the case from yet another point of view. We are told, and on this head I fully agree, that "fixed interest securities will rise in value." They can do so only because they are sought after more eagerly: the public hasten to invest their savings in bonds, rather than in shares, or in real property, or in commodities for consumption. As the demand for securities grows, the demand for these other things must shrink and their prices must fall, as sure as the one scale of a balance must go down as the other goes up. Prices must fall to bring about equality between the new goods to be produced with the help of the cheapened money and the goods already in existence. Take, for an instance, the building trade. It is generally admitted that a high interest rate increases the cost of building and owning houses; hence houses built after the rate has been reduced from 5 to 2 per cent must be cheaper than those built when the rate was 5 per cent, even though the materials and wages have not yet fallen in price. The result is that all the existing houses must fall in price. They fall so much that the new ones are soon found to cost too much, and have to be sold below cost of production. Everything must fall in price, and enterprise be at a standstill, until "the money rate of 2 per cent has become representative of a real rate of 5 per cent.

The "real rate of interest" is never 2 per cent nor 10 per cent, any more than the blood temperature is ever at 60 nor at 120. It really varies hardly at all, and therefore changes in the money rate of interest must be compensated by changes in the purchasing power of money. While the money rate of interest is at 2 per cent, prices must fall, and while it is at 10 per cent, prices must rise: the fall of prices in the former case annihilating both the advantage of the borrower and the disadvantage of the lender, the rise of prices in the latter case destroying the lender's extra profit and restoring the borrower's gain to normal.

Here I must add from the passage under review a conclusion which I have hitherto withheld. "Prices must rise at once," is what we have heard so far; however, the argument closes on this further statement:

> "They must rise at once in a certain definite measure above the level at which they are expected to stand a year hence."

That is to say that prices after their leap upwards will come down again before the year is over. Frankly, I fail to see how this could be. If prices rise at the outset, it is because many people rush to buy goods, impelled by the desire to make profits and driven by the fear of having to buy at a greater expense later on. Now if business men expect that prices will be down again before the year is over, they will not rush to buy; for they would be producing at a higher cost what they would be forced to sell on a falling market. But if they do not rush to buy, there is no reason why prices should leap up so suddenly. Professor Pigou's argument is based on the assumption that the low rate of 2 per cent is "expected to last for one year," and so the fall of prices at the end of the year is by implication attributed to the renewal of the original rate of 5 per cent. It follows that if the lower rate were permanent, prices would not only not fall again, but keep on rising, while securities at a fixed rate of interest would do the same. Before such a conception can be accepted, the proof ought to be forthcoming that the prices of bonds and the prices of goods have ever tended in the same direction for any length of time. That proof will not be forthcoming, and therefore the conception must be rejected as fallacious. It is a strict application of the inveterate dogma, and so the dogma itself must stand condemned.

§ 21. Professor Pigou, just because he has grappled with his subject rather more closely than his predecessors, is faced by considerable difficulties in his attempt to clear the path for a policy of currency stabilization. If the present criticism of his fundamental conception is well founded, it is impossible that his line of attack should lead to the overthrowing of those obstacles, in spite of all his great ingenuity. He fails most signally where he has made light of the opposing forces. He writes (pp. 248–9):

"For the Central Bank, though it does not, when it alters its discount rate, by that very fact compel the market to follow, has means at its command by which it can do this whenever it so desires. If it wishes to lower discount generally from 5 per cent to 4 per cent, and a lowering of its own rate to 4 per cent does not accomplish this, it has only to purchase securities in the market, thus increasing the cash holdings of the other banks and enabling them to follow it in reducing rates. *Per contra*, if it wishes to raise discounts generally from 5 per cent to 6 per cent, it has only to sell securities in the market, thus draining the market of money and forcing the market rate to follow its own rate; for the joint-stock banks will not be willing to allow their cash and balances at the Bank of England to fall much below the proportion (say 1 to 9) in which these usually stand to their liabilities."

This procedure is also recommended by Mr. Keynes in *A Tract on Monetary Reform*, and I have found it mentioned in Wicksell's *Geldzins und Güterpreise*.[1] A fairly comprehensive demonstration of its impossibility is furnished in *The Interest Standard of Currency* (pp. 161–2, 175–9). My objection is, briefly, as follows. The Central Bank cannot buy and sell securities at its own liking. If it lowers its discount rate—whatever the end pursued—securities go up in price, which means that their holders are unwilling to part with them; this effect will be enhanced if the Bank makes a heavy bid for gilt-edged. Even though the money with which the Bank buys them cost the Bank no more than the printing of the notes, the securities will be too dear at the price. And *vice versa*, when the discount rate is raised securities fall in price; they will drop out of the bottom if, to strengthen the effect, the Bank proceeds to throw quantities of them on the market, as suggested by Professor Pigou. The transaction is desperate enough if we judge it by my theory that a higher discount rate causes money to depreciate; the difficulty arises from the fact that depreciating money would have to compete with bonds which depreciate rather more heavily than itself. But the case becomes altogether inconceivable if raising the discount rate brought down prices, according to what I have called the dogma. Money would then appreciate as securities

[1] It seems to have been Marshall who first suggested the idea of open market operations. In his essay on *Remedies for Fluctuations of General Prices*, published in 1887, he has a footnote to this effect: "An automatic Government Department would buy Consols for currency whenever £1 was worth more than a unit, and would sell Consols for currency whenever it was worth less." Marshall, however, explicitly remarked that he did not advocate this remedy. Those who have advocated it cannot have realized the objections here set forth.

depreciate, and the Bank would have to induce the public to buy depreciating securities by surrendering appreciating money. In the case of a reduction of discount the Bank would have to entice the public to sell appreciating securities for depreciating money.

§ 22. One very serious difficulty of a discount policy on the traditional lines seems to have escaped Professor Pigou's notice—or he may have considered it as lying outside the scope of his treatise. I mean the question how a dislocated currency can be re-established on a sound foundation. The problem has created much anxiety of late years, and though it appears to have solved itself somehow, it cannot be said that it is theoretically settled. Reference has been made (§ 1) to the case of countries endeavouring to prevent their currencies from drifting into (further) inflation. One of the means employed has invariably been a raising of the discount rate. There is only one exception that I know of: in Switzerland inflation was checked in August 1919 by a reduction of the rate. Whatever the motives of the Swiss authorities may have been, the fact is that the tendency of prices to go up was broken in Switzerland many months before the change declared itself in any other country. This practical object-lesson, then, proves conclusively that the proper way of counteracting inflation is to reduce, not to raise, the discount rate. The success of this remarkable experiment passed unheeded, and the method has not been imitated—except perhaps in France, 1925, when M. Caillaux, in order to facilitate a contemplated national loan, had the bank rate reduced from 7 per cent to 6 per cent; it is noteworthy that after this move the French franc behaved better than it had done for a long time, and if the improvement was not permanent, it was because a further reduction was not applied in time. However, these exceptions only prove the rule. The writings on the subject take no account of such haphazard departures, and the dogma remains unshaken.

In 1925 the English pound sterling was a trifle short: to make it full weight against the intended restoration of a gold standard the rate of discount was raised from 4 per cent to 5 per cent. If this procedure were correct, it would be impossible to bring the rate of discount back to normal. For it is based

on the following assumption: reducing the rate of discount creates facilities for an increased creation of paper money, with a consequent rise of prices, when prices are already too high. If they were not too high, the pound would not be found short. What is to be done? Can the rate be permanently maintained at 8, at 10, at 12 per cent? Certainly not. But what is to bring it down? The accepted theory has no answer to this question; it cannot teach us how to arrive at a natural state. It must be a worthless theory.

See what contradictions it involves us in! You raise the discount rate in order to depress prices. This would be reasonable enough, if prices were high—and therefore needed to be depressed—when the rate of discount is low. But the situation is far otherwise: when prices are high, the discount rate is invariably high also. In France, for instance, it was 6 per cent when it was raised to 7½ per cent at the beginning of August 1926. Even if it were true that the raising of the rate depresses the price-level, it would be impossible to restore equilibrium by the method under consideration (or, indeed, by any method whatever). For supposing that the price-level had fallen in consequence of the raising of the discount rate, we should be having an abnormally high rate, and it would be necessary to lower it again. However, in doing so we should cause a renewed rise of prices. Thus there would be no chance of steadying the balance. We should be alternating between periods of abnormally high prices and periods of abnormally high interest rates—and just consider the absurdity of it: it would mean that the signs of plenty and of penury would always appear simultaneously, since one sign (say interest) would always be high while the other (the price-level) is low. A mechanism of this sort is against nature; it cannot exist. For the mechanism to be true to nature it must be so contrived that what readjusts the rate must also readjust the price-level.

It may be objected that the English pound, and the French franc, and the German mark, and the Italian lira have all been stabilized, and some of them made to appreciate, through the imposition of high discount rates. Do not let us be deceived. It was not discount that did it, it was the application of main force. A fine example of the methods employed is furnished by Dr. Schacht, the governor of the Reichsbank, in his book

Die Stabilisierung der Mark (1927). In the early part of 1924 the German currency expanded very rapidly under an abnormally high discount rate. Prices rose vigorously, and the unemployment figures fell. But Dr. Schacht was determined not to suffer inflation to undo the work of stabilization. He decreed that credits should be granted only in proportion as old credits were returned to the Reichsbank. This measure naturally made an end of expansion. But it also set the laws of discount at nought: it was what Professor Pigou terms "rationing." Why was the exorbitant rate of discount not sufficient to bridle the demand for money? Not only did it not curb the demand, it stimulated and exasperated it, as it always does, because it cannot be otherwise. So discount had to be suspended in its functions altogether. The demand for money was not regulated by discount any more; it was constrained by an entirely arbitrary decree, and it would have made no difference at what figure the rate stood. The same methods are always resorted to when a resolute effort is made to stop inflation. In 1925 the French currency depreciated rapidly after the rate of discount was raised to 7 per cent; in 1926 it appreciated rapidly, when the rate was raised from 6 to 7½ per cent. It was not the extra ½ per cent that made the difference, but the extra measures which the Poincaré régime imposed: arbitrary interference with the normal mechanism, rationing, the same as Dr. Schacht's dictatorial decree. And I contend that no despotic decree nor any busybodying interference would be required if the rate of discount were lowered rather than raised. The currency can be regulated through discount in any circumstances and in any way that is desired; but the mechanism must be handled rightly.

§ 23. In a certain sense the inversion of the procedure gives rise to similar difficulties. If reducing the rate of interest reduces price, it must be impossible to bring the rate down without at the same time causing a fall of prices, which would seem to defeat the attempt at stabilization. For all that, it ought to be possible to keep a currency stable while the rate of discount is being brought down to normal. In countries where the rate of discount is abnormally high, the level of prices exhibits an almost irresistible tendency to rise—instances of this have just been mentioned. The effect of lowering the

discount rate, if the measure is cautiously applied, will not consist in bringing down prices, but merely in counteracting the rising tendency, which is exactly the thing aimed at.

In the case of a currency that has to rise out of deflation and depression, conditions are somewhat different. Supposing the rate of discount and interest has fallen to below normal, the turn will come of its own accord, provided that the discount rate is not reduced any further: prices will begin to tend upwards again even while the discount rate is stationary. To raise the rate at the moment when this takes place would accelerate the price-movement. If, therefore, it is desired not to let the price-level rise, the way to proceed would be to preserve the lower rate until prices begin to decline again, which they are sure to do after a short time. Raising the rate in this juncture will not reverse the downward movement but merely stop it, unless of course the change is carried too far.

§ 24. Thus, then, discount manipulation would seem to be necessary when a currency is out of joint; somehow the rate must find its only proper level, which I consider as a natural necessity no less than a normal temperature of the living body. Practically the level of prices will not keep perfectly, rigidly stable under any circumstances, and while the gradual adjustment of discount is still proceeding, fluctuations can be avoided even less. But they need not go very far. However, once the rates of interest and discount have attained what may be regarded as the normal level, any sort of further managing to meet possible swervings of the price-level must be deprecated and shunned. It is quite inconceivable that movements should exceed a certain very narrow limit, now a few points up and now a few points down. Curative, or preventive, alterations of the rate could never be applied till after the event, which it is impossible to foresee. If it is admitted, and no one would care to gainsay it, that changes of the rate of interest naturally induce changes in the level of general prices —no matter whether in the same direction or in the opposite— the idea of changing the rate with a view to stabilizing the price-level is a contradiction in itself. The only way to obtain stability must be to keep the rate of interest stable in that one of its forms which is amenable to official or legal control, i.e. the rate of discount of the Central Bank.

I have quoted (§ 17) Professor Pigou to the effect that small changes applied early might possibly produce more effect than larger but tardy ones. Leaving out of consideration the precarious nature of the signals for action which he suggests, I would say that he is right. The smaller and the speedier the change, the more efficacious it is. Reduce the amplitude to zero and increase the speed to infinite, and you have the ideal. The only rate of discount that is always "there," pat in its right place at the right time, is an invariable rate. Only the constant rate can be trusted to anticipate every conceivable flutter of prices. If it is fixed at the natural figure—the normal economic temperature, which it should be possible to ascertain with the same accuracy as biological science has determined the normal temperature of living organisms—the price-level may vibrate, oscillate; but it will be no more than the heaving and sinking of a breathing breast.

Professor Gustav Cassel is one of the stoutest upholders of the dogma; but he also believes in currency stabilization by the discount method. In connection with the latest (August 1927) move of the American discount from 4 to $3\frac{1}{2}$ per cent, alleged to have been made with the purpose of arresting the sinking tendency of the price-level (it had fallen by 10 per cent within the last two years), he discusses the problem in the monthly bulletin of a Stockholm bank. His demonstration of the action of discount policy leads irresistibly to the conclusion that only a permanently fixed rate can achieve stability of the currency, and so he deliberately, as it were to repel my thesis, remarks: "This price, the discount rate, cannot be constant. It must vary with the conditions of the market, and a safe criterion for the complete correctness of a discount policy is only to be obtained after its effects on the general level of prices have become manifest." Why should the discount rate be adapted to the conditions of the market? Does not the money market heed the behests of the discount rate? Which of the two shall lead, and which is to be controlled? We must decide this question and know whether the discount rate is to be paramount ruler or merely one of the followers. According to Professor Cassel's system the official rate and the market rate would be dodging each other all the time, neither of them ever knowing what turn the other is about to take. The idea might do for a kinematographic film, but it cannot serve in

a solution of the currency problem. If you will look close at his argument you will discover the flaw in his reasoning. He seems to consider the currency as a cake the proof of which is in the eating. I prefer a household that shall be so well regulated that we can depend on the excellence of the cook's performance.

§ 25. The American experiment just alluded to reminds me of one more point which I consider as essential: fiscal policies. If for the last two years the American price-level has been steadily depressed, it is because the United States Government is pursuing a policy of sinking the national debt. It is universally admitted that a State which augments its public debt must drift into inflation; then, why not be sure that a State which sinks its debt must be exposed to the rigours of deflation? The American Treasury is not only paying off debt, it is also converting high-rated loan into low-rated; the effect on the price-level is as indicated above, and it agrees with the main theory here set forth.

I believe the problem which forms the subject of this paper to be fundamental. No one will deny that economic theory has been of very little practical use to the world during the troubled times that we have passed through, and truly economists themselves are conscious enough of the unsatisfactory condition of their science. The present article, though far from exhaustive, shows all the recognized writers on the subject just repeating the same formula over and over again. There is no progress, and it seems as if the work of refining on the old error were just wasted effort. However, that is not quite so. The book of Professor Pigou, more than any other, has the great merit of emphasizing the fallacy to such good purpose as to bring it to the point of explosion. There are grand opportunities toward for the workers in the vineyard of economics. Once the true relation between the rate of interest and the level of prices has been grasped, the work of construction can begin. The bearings of a newer and truer interpretation of this relation are unimaginably far reaching. As interest is the fluid which envelops all economic life, an altered conception of interest cannot but change the face of the whole of economic science.

APPENDIX

Professor Pigou's Criticism of the Foregoing Essay, and My Answer to it

The foregoing essay, when completed, was submitted to Professor Pigou. I make bold to reproduce parts of the correspondence that ensued. If the procedure should be deemed improper, I beg leave to remark that I resort to it in a spirit of loyalty to a vital issue, on which the economic welfare of our future largely depends. I am confident that the author of *The Economics of Welfare* will understand and condone my liberty. He was willing to assist me in getting the essay, which is to such a great extent a criticism of his own work, published in an economic periodical; I trust that he will show the same detachment now. And I would add that it is much more a desire to pay homage to his high and well-deserved authority than a mean wish to triumph over him, that prompts me to publish our controversy. I am very much in need of his support, and must try to obtain it even from his objections.

1. "It seems to me, however, that at the root of it there is a fallacy in formal logic. You say, 'C promotes both A and B, and A and B are in fact as a rule found together. Therefore it is impossible that an increase in A taken alone should discourage B.' There is surely a fallacy in this. In certain parts of India it has been found that there is a high correlation between deaths from plague and inoculation against plague. According to your argument, this should prove that inoculation against plague cannot do any good! In fact, of course, the explanation of the correlation is that more people get inoculated when plague is about. The positive correlation between high prices and high discount, which is, of course, well known, seems to me to have no bearing on the question what is the direct effect on prices of raising the rate of discount. The correlation is due to the fact that a third thing usually affects them both in the same sense."

I fully accept your manner of stating my fundamental proposition. Leaving, for the moment, C out of consideration, the fact that A and B, say interest rate and commodity prices, are as a rule found together is confirmed by you, where you

say that the correlation is well known. We are, then, agreed on this point: in the world of facts interest and prices move together and in the same sense; they are correlated, inseparably connected, dependent on each other, like the horses of a team; whatever moves one, also impels the other. Is it, then, bad logic to say that to inhibit a movement of one is to inhibit a movement of the other? This conclusion, to be sure, is not indicated in your above statement, but it is strongly emphasized in my paper. In order to invalidate my argument you have to contest the premise, namely, that the two factors are inseparably connected; that is to say, you have to prove that they do *not* depend on some C (common cause), "a third thing which affects them both in the same sense." You would not think of contesting that premise, seeing that you admit the connection and the positive correlation.

Can it be that this positive correlation should "have no bearing on the question what is the direct effect on prices of raising the rate of discount" (see the end of quotation above)? If C promotes both A and B, can it be conceived that A should be increased with the consequence that B will decrease? Let C be the state of supply on the commodity market, out of which those expectations are born which are supposed to determine the movement of prices and interest rates. When supplies are insufficient the signs of penury will be manifested: rising prices and rising rates of interest. And I do maintain that it is "impossible that an increase in A (the rate of interest) taken alone should discourage B (prices)." Penury must be overcome, the wanting goods have to be produced, and the producers want to be remunerated for their exertions, which is brought about by remunerative prices. I might object to your proposition in so far as it suggests that A could be increased independently of any alteration in C, the cause. A cause is always an alteration. If A is determined by C, A cannot change without a change in C. But B too is determined by C. Hence an alteration in C must alter both A and B; it is impossible that A should increase while B is discouraged. Once you admit that the correlation between high prices and high discount rates exists—and you do admit it very positively —you cannot but admit that an alteration of one must be accompanied by an alteration, in the same sense, of the other.

Is it a fallacy in formal logic? If it is, there are a great many fallacies of this kind current. For instance, the contention that the price of bonds varies inversely as the market rate of interest—which you accept. I fail to see that there is any difference between this case and the case of commodity prices and interest. Statistical records prove a natural connection between interest and the price of bonds; you accept the evidence of these records in the same way as I do. But you reject the evidence of the statistical proofs in the case of commodity prices and interest. Why should the logic of events be different in the two cases? This, then, is your position:

(*a*) You admit the records to prove that commodity prices vary together with, and in the same sense as, the rate of interest.

(*b*) You admit the proof of records that bond prices vary together with, but inversely as, the rate of interest.

(*c*) Your theory as to bond prices tallies with what you admit as to the records.

(*d*) Your theory as to prices inverts what you admit as to the records. How do you justify this departure from consistency? For so long as I do not see clear reasons for discriminating between the two cases, I cannot but consider discrimination as inconsistent. You admit the validity of the two evidences, but you pass judgment in favour of one while you condemn the other. (Professor Pigou's reply to this charge is given and discussed below.)

I might have, and ought to have, emphasized in my paper more sharply the fact that all your logical proofs go to support my conception, whereas your only attempt to support the dogma by a logical consideration is contained in the sentence quoted near the end of § 18: "A drop in the discount rate in general will tempt additional borrowing." It is as I have said: the dogma is used in the place of a proof. So soon as one really tries to find a logically consistent foundation for it, down one goes into the quicksand; it will not bear analysis, and one becomes a heretic straightway, if one begins to probe into it.

After what has been said, you will readily understand that I cannot accept your analogy of plague and inoculation. The cases surely are not comparable. Inoculation does not go with plague as a natural necessity in the way prices go with interest,

or *vice versa*. Although the occurrence of plague does call for inoculation—since the discovery of inoculation—it cannot be said that inoculation is naturally caused by plague; remedies against diseases vary, and therefore the disease cannot be the cause of the remedy, it is an inducement to find a remedy. Also inoculation does not cause plague, as rising prices would cause a rise of interest rates, if the latter did not happen to precede.

A correlation points to a causal connection: one of the two factors is cause, the other effect, or both are effects of a common cause. The causal element is essential. Hence, if deaths from plague and inoculation against plague are found to increase together, the correlation cannot be interpreted as indicating that, as you put it, "inoculation can do no good." It means that either plague causes (calls for) inoculation, or that inoculation causes plague; or, if we are for a common cause, that plague causes an increase both of deaths and of inoculation. In order to establish the true relation one has to put the matter to the test of reason or to decide the question of precedence. There is, of course, no difficulty in the case of plague and inoculation. Now for the case of interest and price. You admit, and you say that everybody admits, the positive correlation to exist. As above, we have to establish the causal connection: either the rise of the rate of interest causes prices to rise, or the rise of prices causes the rate of interest to rise; or there is a common cause of the simultaneous rise of both the rate of interest and of prices. What is impossible is that the decrease of one should go with an increase of the other, as by the theory of discount which you uphold, and which I attack; the positive correlation simply rules the idea out. From the moment when statistics had proved the existence of the positive correlation, the dogma was deprived of its only possible foundation. Since it did not collapse naturally, here am I labouring foolishly hard to demolish it.

2. "If this is so, I should have thought you would have needed to attack the arguments by which advocates of discount policy try to show that high discount, other things equal, will tend to depress prices."

Here I am made aware of having misdirected my attack. I have overlooked the reservation "other things equal." Whether this reservation is really, or usually, or at all, made

in the discussion of the problem, I do not seem to know. Supposing it were made, it would, of course, render the argument unassailable, but also utterly meaningless, because surely an alteration of the rate of interest cannot leave all other things except prices unaffected. Such a reservation would also suppose that the alteration of the rate of interest was made without any necessity (an effect without a cause, or change)—merely for the sake of depressing prices, which in its turn would produce no further effect whatever. In your hypothetical cases you certainly, and very rightly, do not make the reservation—see my first quotation, § 3 above. The number of "consequential adjustments" is unlimited, nothing that is not affected. The only question that remains is to know the direction in which the adjustment will tend. Statistical data prove that in nine out of ten cases a rise of the interest rate is accompanied by a rise of prices. In the passage quoted in § 14 you base your argument on that fact, and in doing so you obviously contradict the conclusion of the former passage. For you say: when prices are expected to rise, borrowers will concede, and lenders exact, higher rates of interest: first comes the higher rate, and in consequence come the higher prices—my theory in its purest form and a flat denial of the dogma. In the first passage a rise of prices is predicted to succeed on a lowering of the rate of interest, in the second passage a rise of prices is predicted to succeed on a raising of the rate. In the former you reason on the dogma, in the latter on observation of what actually happens, and on the logic of the case—which places you on my side. If I had written my essay for you personally, rather than as a criticism of the dogma, I should have stressed the cases in which you agree with me: the present one, the case of bond prices, and a few others besides. It was precisely the occurrence of these agreements that emboldened me to approach you. They seemed to point to a similarity of method and logic, and I have not words to say how delighted I was to find a recognized authority having moved, even though only with one foot, across to my point of view.

3. "To show somehow that the machinery of action which they speak of is not really there . . . to discredit modern forms of the quantity theory of money in fact."

My reading of the problem of interest and price makes havoc of the quantity theory as presented by the advocates of discount policy. I did not, in my paper, enter upon a discussion of it, because it is a chapter from a book in which the question is otherwise dealt with. I admit that my treatment of the theory in *The Interest Standard* is inadequate; I hope to do better on some other occasion. I consider the quantity theory as a mere definition: the quantity of money does not *cause* the price, it *is* the price. I thus eliminate the causal element, which is all-important with Professors Fisher and Keynes.

I can sympathize very heartily with your reluctance in conceding to my point of view. It took me a year's hard thinking to overcome my own aversion against the budding idea of inverting the old theory. When it first flashed upon me it gave me a regular shock, so that I was afraid I was going crazy. I tried to argue the new insight away. I read book after book to re-establish my faith in the dogma. But I found so many contradictions in those books—suspicion having made me more alert—that my faith vanished more and more, and I was more and more confirmed in my heresy. As I turned the case over and over again to make it reveal all its various aspects, I became convinced that the flash had been a revealer. For five years now have I tested the worth of my theory, anxiously and diffidently for a long time, but more and more confidently as, one after another, the arguments linked up and clenched the matter. I would entreat you to disentangle yourself, for experiment's sake, from the toils of the dogma and consider whether my interpretation makes sense, or nonsense. All scientific progress has begun with an act of doubt in some accepted formula; why, then, shrink from the act in this instance? Progress in this momentous question would mean more to humanity than the transition from the Ptolemaic to the Copernican system. If you will read in the *Interest Standard* the chapters relating to the subject, the essential points that have to be considered will present themselves. Here are just a few of the more obvious ones:

1. Does it make sense to say that interest is an item in the cost of production, money being the universal basic material

of all production, and that consequently rising interest charges must normally raise prices?[1]

2. Does it make sense to say that alterations in the rate of interest should be accompanied by compensating, rather than accentuating, or cumulative, adjustments (see § 7 above, and your own passage as quoted in § 14)?

3. Does it make sense to say that a higher rate of interest should cause money to circulate more rapidly—in the same way as a higher temperature causes molecules to circulate more rapidly? A 4 per cent loan yields 1 per cent in three months, a 3 per cent loan yields 1 per cent in four months: the 4 per cent loan must yield quicker returns than the 3 per cent loan, which it can only do if money circulates faster, and so returns to the user more speedily. As a greater velocity of circulation is admitted to make for a rise of prices, the higher interest rate, which causes the velocity to increase, must be the cause of the rise of prices.

4. Does it make sense to say that as borrowing precedes buying—which you too admit to be the case, as by my quotations in § 4—alterations in the rate of interest must precede, and therefore are likely to cause prices to alter in the same sense?

5. Does it make sense to say that a measure intended to be preventive should not have to be repeated a number of times before it becomes effective? I am alluding to the fact that interest rates are raised from 3 to $3\frac{1}{2}$, to 4, to 5, to 6, and to 7, and lowered in the same way, before the turn in the price movement is brought about (see my argument § 8); it is like putting on more pressure in order to stop a movement.

I might also apply the test of sense to the dogma and say: does it make sense to say that an alteration in the rate if interest causes prices to move in the opposite sense, although, as a matter of fact, it is well known, and now generally admitted, that as a rule prices move in the same sense as the rate of interest? I might point to the contradictions, flagrant, tangible, abysmal, that I have detected in the works of such

[1] I find an article on "Money, Credit, and Prices" in *The Economist* of April 7, 1928, concluding with this proposition: "It raises the rate of interest, and this higher rate entering as a component part into the cost of production, may entail an upward tendency of prices." I may be, or not be, justified in attributing this piece of insight and heresy to the proofs furnished in *The Interest Standard of Currency*.

writers as Alfred Marshall, Gustav Cassel, Robert Liefmann, Böhm-Bawerk, and others, all caused by their adherence to the dogma; contradictions which are repeated in one text-book after another, because the premise is simply taken for granted and never put to the test of events or of simple logic.

In his reply to the foregoing discussion Professor Pigou raised two objections.

1. "It does not seem to me that the analogy with bonds is relevant, because I do not hold that the causal connection, which I agree exists in regard to them, is proved by statistics: it is proved by general reasoning."

My answer was to this effect. Surely it is a proof of the soundness of the reasoning, if its conclusions are corroborated by statistics. You would not care to deny that. Now it seems to me that in the case of commodity prices the fact that the logical proof is not borne out, but contradicted by the statistical data—the positive correlation between rates of discount and the price index, of which you say that it is well known—should point to some flaw in the general reasoning. As a matter of fact, I hit upon the principle by general reasoning. I have already mentioned to you how I mistrusted my conclusions. It was only after I had found them confirmed by statistics that I became fully assured of their soundness. I suppose it was a conclusion from general reasoning that made you say, on p. 252, that "prices must change in whatever degree is required to make the money rate of 2 per cent representative of a real rate of 5 per cent." If at that point the dogma had not thrust itself forward and imposed itself on you, so that you would have been led to visualize the case, you would have seen that the price must indeed fall, because obviously only a fall of prices can make a smaller sum of money equivalent to a larger sum as required before the fall of prices. Throughout your book the general reasoning agrees with my theory. It is sound general reasoning which suggested to you (p. 158) that the expectation of a rise of prices would cause the rate of interest to rise: the higher rate and money yield must compensate the lender for the depreciation of his income. But compensation should work both ways: a higher price for his goods must compensate the borrower for the increased interest charges.

2. "There is an exact analogy to this issue in the matter of iron prices. As Professor Moore has shown, there is a positive correlation of a high order between the price of iron and the amount sold. According to your manner of argument, this should prove that by *raising* prices iron producers could cause more to be sold. But, of course, the fact is that variations in business confidence cause parallel variations both in price and quantities sold, and, in given conditions, for iron producers to raise their prices would certainly contract sales. Indeed, the whole purpose of the modern analysis of partial correlation is to take account of cases of this kind."

Agreed. However, there is a further correlation, which, it seems to me, ought to be taken account of: the correlation between price and quantities *produced*. You will find it touched upon in *The Interest Standard*, p. 171: an article the price of which is raised will be produced in larger quantities, and users of the article will also employ it the more strenuously, get more services out of what they have at their disposal. Money does not make an exception: when its price rises, more is produced, and it is made to circulate faster—prices must rise. I am gratified to think that I have largely followed the method which you recommend, i.e. arguing from concrete cases and analogies such as this one.

As to the former point, I might have added something like this: Not proved by statistics, but by general reasoning? Is it the peculiar secret of the method of the economic laboratory to keep these two separate? Is it the method of economists to generalize apart from the actual facts, statistics being one thing, general reasoning another, each kept in a separate compartment? Indeed, it would seem so. Otherwise the statistical interest-price correlation would long since have exploded the theoretical interest-price formula. The positive correlation between price and discount rate was not known, or not familiar, it certainly was not recognized, at the time when the discount theory which I am attacking was evolved; now that it has come to be recognized, the theory has got to be made to square with it.

Second Essay

THE BANKNOTE AS A PARITY TITLE

§ 1. The Notion of Parity.

The banknote constitutes *a title to wealth* in the form preferred by the holder; therefore I call it a *title*, although this may be an innovation. A *parity title* I propose to term it to express the idea that it should always exchange at par, by which I mean: for an equal amount of real wealth.

When I set out to write the present study I did not suspect how very recalcitrant the matter would prove. In the course of some eighteen months I have recast and rewritten it no less than five times, and I cannot say that it satisfies me as it stands now. I am anxious to get it published because the subject is of very urgent practical interest. A full solution is more likely to be arrived at if others will contribute to it.

Only gradually was the nature of the difficulties which I encountered revealed to me in the special intricacies of the notion of parity. Finally I sought illumination in the books of economic science and discovered that the works of reference within my reach have no information to offer. It seems that the science which makes use of the term has not yet come to realize that there is a problem lurking in the notion. The present paragraph cannot do much more than point to the existence of the problem and hint at its nature.

In the economic sense parity signifies equality of price or value. The mere appearance of the word value suffices to indicate the difficulty; for what is value? There is no notion on which the opinions of economists differ more widely or more violently. I am much afraid that the problem of equality of value may cause to economic students no less brain-racking than the notion of simultaneousness has caused to physicists since Einstein showed that there is a problem contained in it. The notions of value and time have a good deal in common any way, and so the work done by the physical relativists may prove helpful to economists when they come to tackle the problem of parity.

We speak of the parity of the rates of exchange, the parity of gold, the parity of a security. Let us consider the case of a security. Its parity is the expression of the fact that it is bought and sold at its nominal price. It is rather significant that such parity is an exceedingly rare accident in the life of a security. Now what is implied in the fact that a security of 100 nominal exchanges at just 100? You gave £100 and you recover £100—but what is a £? Are the £'s you recover every bit as good as those you gave 10 or 20 or 30 years ago? At the present time there are numerous bonds which are redeemed "at par," although the value of the monetary unit in which they are expressed has been reduced by some 60 per cent in the case of those which were issued before 1914, and increased by at least as much in the case of those which were issued between 1918 and 1920. This sort of parity is a deception. And it is the same as to the parity of gold. The pride of some nations at the present moment is to have re-established this parity. All it amounts to is that the ounce of gold can again be bought for the traditional number of £ s. d. What is the gain, what is the advantage of it? How many people would ever think of availing themselves of the opportunity—provided that it is really offered? In its ratio to the price of ordinary goods this price of gold is nothing like what it was 12 or 20 or 30 years ago. Here again the return to the parity is a mere semblance.

In its most proper sense, parity exists when two things are of equal value. However, in this sense parity comes into existence whenever a purchase or exchange is effected: a pound of beef equals 2 shillings. It is of no use in theory; we need a *tertium comparationis*. Two things are to each other in the relation of parity if their price *remains*—not merely is—the same as compared to a third which is supposed, or known, to be fixed. Parity demands permanence, and time is an essential element of the notion of parity, For at any given moment there is universal parity. The momentary relation in which things stand to one another is the momentary accidental equilibrium, or the momentary accidental parity. In so far the term parity is meaningless. When the price of the ounce of gold was legally fixed in terms of monetary units, it was the accidental price, at a chance point of time, in a chance place, that was fixed and perpetuated. All the parity phenomena which occur simply express a ratio with that chance price which was erected into a

law. The pound sterling contains as much gold as happened to be obtainable in Britain for 20 shillings at the moment when the gold standard was established. The monetary unit was made a synonym for a certain weight of gold. But where is the *tertium comparationis*? The gold standard law takes no account of it! It took nearly a century until it began to be realized that a measure for this standard was needed, and that this measure could only be furnished by a quantity which does not consist in any special kind of object, but in an average, to wit, the general level, or index, of prices. The decisive factor in the notion of parity is, therefore, this index, this purely statistical entity. The ratio between the monetary unit and gold would be immaterial, if it were not for the fact that the precious metal has a peculiarly universal hold on people and thus serves as a natural balance weight in a properly regulated currency, as also between different currencies.

What I have been trying to elucidate may possibly be brought out more clearly by an analogy with the facts of a more familiar and more accessible case. A statement such as 1 pound of beef = 2s. does not express a parity; to say that it does would be about as wise as the assertion that two points are the same distance from each other, or parallel. The assertion is true, but meaningless. The notion *parallel* implies an extension in space; it is based on the notion of length. In the same way the notion of parity implies extension in time; it presupposes the permanence of a certain condition, i.e. duration. Now this element of duration is furnished for the price of gold by the interference of a law: 1 oz. of gold to continue permanently at £3 17s. 10½d. However, such parity is purely theoretical, in the same way as the idea of parallel lines exists only in geometry, i.e. theoretically, as a mere fiction and a pure abstraction. In the world of matter and energy there are no abstract lines; here lines are the edges of things, and it is the things that matter. Thus the rails of a railway track have to be parallel; however, they are not mere lines, but bodies, and they must rest and be secured on a given level and firm foundation; also they must maintain a certain direction and lead to the desired place. The gold standard equation is a fiction and an abstraction which in practical economics does not exist and cannot work. A real and effectual standard must mark the parallel edges of material things, of tangible objects; the ounce of gold must be based on

the real and material foundation of economic realities. For the sake of the analogy we may compare the £ s. d. with the thickness of the rails, and the gold with the iron; but the main task of the currency engineer is to construct the road-bed, to find its proper level and direction.

My theory of an interest standard of currency is an innovation in so far as it suggests that the rate of interest may be considered as the natural and concentrated expression of the level of prices. The conception is argued at some length in my book, *The Interest Standard of Currency*. In this connection I would beg leave to submit the following considerations. The level of prices is the composite result of the urgency of the general demand for goods. The factor of supply does not need to enter into the equation, because supply will adapt itself to demand. Whether or no the objects which are offered as supply shall deserve to pass as goods is determined by demand. A thing which nobody demands is not a good. It is demand that creates the goods character in things produced for sale. The urgency of demand does not necessarily vary with supply, but obeys its own laws. It is the expression of a generally prevalent mood, or state of mind, among the population. A newspaper report may change it at a blow; political events influence it; hopes and fears fostered in public opinion, an idea with which the people are consciously indoctrinated, affect it. Thus when, in 1920, the slogan "economize and produce more" was sounded, it was as if a frost had blighted the luxurious growth of demand. Demand wilted and prices came down with a crash.

Demand is the same thing as desire, or interest, for goods. Its urgency is determined by the strength of the desire or interest. It depends on how the consumers estimate, or price, or discount the situation, their estimate of course being coloured by their moods. In the last resort price is a spiritual phenomenon, namely the expression of the average interest which the economic subjects feel and manifest for goods.

Now the word "interest" has a twofold sense. But it is marvellous how the two connotations really express the same fundamental fact. The personal interest which actuates the desire to buy, and therefore is the exact measure of people's readiness to pay the price, the measure of the length to which they will go in trying to satisfy their desire, finds a quasi-concrete expression in the impersonal, or objective rate of interest, which I

would designate as the true standard of price. The statistics of prices are the statistics of the rate of interest, and I venture to state this principle:

> The general level of prices of any one country is to be considered as having been the same (at par) at those points of time when the average rate of interest was the same (at par); or, the general level of prices is the same at a given point of time in those countries with the same rate of interest.

It is generally admitted that a low rate of interest is the sign that a country is richly, abundantly provided. But I ask, where, at what particular point, does abundance begin? What constitutes abundance? Ask the savage, ask the Russian peasant, the French peasant, the American farmer: their answers will differ widely. There is no objective answer to the question. It is purely a matter of sentiment determined by the individual or subjective claims and expectations of the inhabitants. Instead of saying that the country is plentifully provided, we may say that the people are unexacting or abstemious. Whether we put it one way or the other, it signifies that the cost of living is moderate and that men are contented, either with much or with little, and both with what they have and with what they do. Contrariwise, when the rate of interest is high, it is a manifestation of want—either want of goods or want of readiness to feel satisfied; people feel poorly provided, everything seems dear, and everybody grumbles at the shortcomings both of the country's possessions and the people's performances. Like price, the rate of interest is revealed to us as a spiritual phenomenon. Interest and price are manifestations of one and the same fact, namely of men's interest or desire for economic goods, and the height of the rate of interest is the only measure to compare different price-levels by. Thus if the level of prices at different points of time appears as being different while the rate of interest is the same, it must be a deception, and prices are not expressed in the same monetary unit. The material condition of money is irrelevant. Even the purchasing power of gold coins is determined by the rate of interest. Here are some figures to illustrate the changing appreciation of gold. The heights and depths in the value of the English pound sterling are expressed by the following figures:

year	1789	1810	1814	1849	1865	1873	1897
index ..	130	250	235	100	140	150	85

In the face of such differences it would be mockery to talk of parity. Now compare the rates of interest prevailing in England about the same points of time:

year	1805	1815	1844	1865	1895
per cent ..	5¼	5	3	3½	2½

Though these statistics may seem scanty, they suffice to prove that the maxima and the minima of the two curves coincide. If in 1926 the price index in England is approximately twice as high as it was in 1896, it is because the rate of interest is also doubled: rate of discount in the nineties 2–2½, in 1926 5 per cent.[1] The price, or purchasing power, of gold fluctuates with the rate of interest, and so does the use of gold as a circulating medium. At the present moment the managers of the currencies do not wish gold coins to circulate; but they will be happy to let the roubles roll by the time the rates of interest have been depressed to 3 per cent—which Heaven forbid!

It stands to reason that the monetary unit cannot be altered as soon as, and as often as, the rate of interest is shifted. Therefore the general level of prices must needs move, so as to adapt itself to the change of circumstances. In other words: the parity between the monetary unit and the index of prices shifts. The price of gold remains fixed only in its ratio to the monetary unit, but not to the prices of goods. Hence, if it is desired to preserve the parity, or stability, of the level of prices, we must prevent the rate of interest from shifting.

§ 2. The General Mechanism of a Parity Title.

Few people would care to question that the banknote, in order to pass as an irreproachable medium of exchange, ought to be proof against all fluctuations of its purchasing power. When it does come up to this requirement it is a parity title, i.e. a security which is always offered, or taken up, as the case may be, at par by the bank of issue. As the price of this title, like all prices, is exclusively determined by the ratio of supply

[1] But the rate of discount is not a trusty guide. In Switzerland the rate of discount in 1926 was 3½, whereas first-class mortgages paid at least 5¼. In comparing the price-level with the rate of interest, some care must be taken to choose interest in its truest and most representative manifestation. Perhaps an index of interest rates ought to be computed on the same principles as the index of prices.

and demand, it must be created and cancelled in such quantities as will ensure a perfect balance of the two factors. The issuing bank therefore must supply titles to be taken up by the public when their price tends to exceed the parity—satisfy the demand for them—and take up titles whenever their price tends to fall below the parity—buy up the supply of them. The play of forces must be entirely automatic. No managing of any sort, no pressure, no allurement, but simply an open door for titles to issue and return at the behest of the free market. Notes are not to be issued and withdrawn by the bank; they are to be drawn out of the bank and returned to the bank by the public. The bank's part is to keep passive.

In a certain respect, and with certain limitations and restrictions, convertible banknotes have always been parity titles. By the rules of the gold standard system, the bank of issue is forced to exchange notes for gold, or gold for notes, at par, i.e. at a rate fixed by law. The limitation of this title consists in its being confined to a parity with gold; its restriction consists in the provision that for certain reasons convertibility may be suspended. The latter restriction, by itself alone, is sufficient to destroy the character of the banknote as a parity title. It destroys the parity, and it destroys the title, since it annuls the holder's claim to one particular form of wealth. Moreover, as banknotes are not intended to be employed for buying gold only, their parity should not be limited to gold, but ought to extend to the price of all commodities, as expressed in the index-number. Index-number is the only real test of the banknote, which is a parity title only so long as the index of prices keeps stable.[1]

For the exchange mechanism of our titles to run properly, by which I mean automatically, the bank of issue must be provided with some kind of value to be given and received in exchange for banknotes—a definite amount of the one for the same amount of the other. The price of all things, including

[1] Index-number is the statistical test. However, there are others. As stability of the price-level goes with stability of the rate of interest, the behaviour of interest rates furnishes a direct test. And, further, as the rate of interest determines the price of bonds, bond prices are bound to remain stable while the level of prices is preserved unaltered. Thus it may be found that the index computations are not really indispensable. However, since price statistics have been evolved and established as a useful practical aid, there is no reason why they should not be made to serve as a guide in the field of currency observation.

banknotes, is determined by demand (supply being taken for granted), i.e. by the degree of interest which the public manifest for a thing. The degree of interest is expressed in the rate of interest; for degree means the same as rate, and interest in its special or technical connotation (interest which is paid) is the same as interest in its spiritual sense (interest which is felt). Interest, the rate of interest, is the measure and index of all values, and a security with a variable rate of interest cannot be accepted as a true parity title.

It may be objected that securities at a fixed rate of interest are almost never exchanged at par—except at their expiration. But this merely amounts to saying that a fixed rate by itself alone is not enough. The price of these bonds fluctuates because their supply does not adapt itself automatically to the demand.

Dividend-bearing securities, on the other hand, have a variable price because they bear variable interest. If the banknote is to preserve the parity, it must, therefore, differ in some essential feature both from bonds and from shares. Seeing that variations of interest influence the price, the banknote ought to have a fixed rate of interest. (The very important question how the parity might be first obtained by adaptations of the rate of interest has been touched upon above (I, §§ 22–3) and will be further dealt with below). Seeing that a fixed rate of interest by itself may be a cause of fluctuation, the banknote must be provided with the means of adapting its supply to the demand of the market—a ready come and go to suit the changing needs of the hour. So soon as the banknote shows a sign of weakness, i.e. depreciation, it must withdraw to the issuing bank—we shall come to consider the bank of issue as the hospital for damaged titles to wealth—and so soon as it grows overstrong, it must expend its surplus energy by going forth in greater numbers. Withdrawing, it turns its countervalues on to the market—goods being supplied more readily; issuing forth, it relieves the glut of the market—goods being demanded and bought more eagerly. The second indispensable requirement is to fix the rate of interest at the one and only right level.

§ 3. Banknotes and Securities. (*a*) Shares, (*b*) Bonds.

What kind of countervalues of banknotes ought we to consider? Properly speaking, anything that will exchange for

banknotes is their countervalue. However, the bank cannot trade in goods or real capital. It must avail itself of the representatives of goods and real capital, which are three: shares, bills of exchange, and the commodity of commodities, gold. Shares we shall find not to be a suitable instrument; but they best serve for the purpose of demonstrating how the system will work.

Shares rise in price generally when securities at a fixed rate of interest fall in price, and *vice versa*. In the proportion that shares gain, banknotes—which we will suppose to be securities at a fixed rate—lose. Money depreciation is the same as appreciation of shares.[1] In speaking of shares, I do not mean individual shares, which are subject to special influences, but the index-number of shares. When the index-number of shares has risen above the parity, it is a sure sign and proof that the banknote has fallen below par, that its purchasing power has diminished. The reason of this is a disturbance of the balance of output and demand, the supply of banknotes being in excess. Supposing that the bank of issue deal in shares, the shares in its possession will be bought up apace, seeing that it sells them at par when they are at a premium in the open market. By this process as many banknotes as are in excess are returned to the bank. The bank need not advertise its shares, since they are always for sale at its counters; they will be demanded at the slightest sign of their appreciation. For the same reason there is no fear lest the bank should be depleted of its stock, simply because the sale of shares returns banknotes to the bank, and, the supply of cash being thereby diminished, the depreciation of the notes will not be carried to an appreciable extent. In other words, the rise of prices (and of shares) will be nipped in the bud; banknotes regain the parity with shares and with the general index of prices.

At one time in 1922 the index-number of industrial shares in Switzerland was at 25 per cent below par. It could not have gone below par if the bank of issue had been in a position to buy at par any shares that were offered to it, because people would have sold these precarious securities of theirs to the bank, the fresh issues of banknotes swelling the volume of money in circulation and so uplifting the price-level—and along with it the price of shares.

[1] There are exceptions to this rule; see below, p. 60.

It is conceivable, and in many cases it would be unavoidable, that the index-number may persistently tend away from the parity in one particular direction. This would be an indication that the rate of discount is not in the right place. What would have to be done to adjust it will be explained in the second part of this paper.

Shares are unsuited for the purpose of regulating the currency because of an entire want of uniformity. Moreover, the banks of issue do not possess any shares, and my scheme is so conceived as to be applicable without any change in the existing system, except what regards the handling of the rate of discount and the place of gold.

I pause here to point out what distinguishes my plan from that of Mr. Keynes and some other reformers. Mr. Keynes proposes to regulate the currency by way of selling and buying banknotes, much in the manner indicated above. But Mr. Keynes suggests that not shares but State bonds and other securities *at a fixed rate of interest* should be used as instruments of exchange. Hence a close collaboration between the bank of issue and the State treasury is advocated. I consider this provision as a very serious drawback. However, the mistake is nothing compared to the delusion that the negotiation of bonds would do the work required. How can it have escaped the advocates of this scheme that securities at a fixed rate of interest depreciate and appreciate together with money? This being so, how could it be possible to place them on the opposite ends of the see-saw, as ought to be done to preserve the equilibrium? Although money may be depreciating, nobody surely will care to sell it to the bank for an article which *depreciates even more heavily* (bonds), and again, when money appreciates, many would be willing to buy banknotes, but not for securities which appreciate even more promisingly (bonds). The mechanism can only function properly if the articles which are set off against each other are *affected inversely*, which is the case with banknotes on the one hand, shares on the other hand. This one fundamental error is the vice of all the stabilization schemes that have come to my notice. It is directly connected with the discount fallacy which I have discussed in the first essay.

The Central Bank must sell what the open market demands, i.e. what is bought at a premium. Bonds are at a premium, or rise in price, when the index of commodity prices has fallen, or

is falling. The sale of bonds would drain the market of banknotes in a juncture when there is already a drought, and the purchase of bonds would flood the market with fresh waves of banknotes when there is already an excess of them. This is not what the currency managers recommend; but what they do recommend goes against the grain, and the market does not respond.

The question of the regulation of a currency through "open market operations" has already been touched upon where I discussed Professor Pigou's explanation of the procedure. I suppress a number of other quotations on the same subject which I had collected from various sources. Indeed, the method has become a firmly established feature in the discussions of the problem of currency managing. With rare unanimity the writers proclaim the success of the method. Professor Irving Fisher, the champion of monetary stability and one who is unceasingly feeling the pulse of price-movements, has been circulating in the European press articles to make people believe in the efficacy of these operations.[1] The authorities of the Federal Reserve System themselves, in their Annual Reports and other utterances, have been insisting on the happy effects produced by their sales and purchases of Government securities; it has become a regular custom to quote the figures in the periodical returns of the Federal Banks.

No one seems to have heeded the criticism which I put forward in *The Interest Standard of Currency*; authorities are not in the habit of heeding those who dare to dissent. But it seems that the time is now (summer 1928) ripe for this fine fallacy to explode. Some observers have begun to discover that the method has not worked. What, indeed, are the records? In spite of continued purchases of State securities, the Federal Reserve System was not able to prevent the price-level from falling by nearly 10 per cent from the middle of 1925 to the middle of 1927. In August 1927 the rediscount rate was reduced from 4 per cent to $3\frac{1}{2}$, with the express purpose of arresting this falling tendency; at the same time the purchases of securities were heavily increased. These measures had a wonderful effect; by the end of the year the index-number had risen to 148 from 144! Every newspaper had contributed to the success by informing its readers that the Federal Reserve System was going to apply its resources towards relieving the depression and

[1] See his book, *The Money Illusion*, p. 135.

upraising prices: what more natural than that people should buy more readily and that prices should move upwards? However, a very odd anomaly soon became manifest: the amount of rediscounted bills, in other words the banknotes issued against discount, diminished very appreciably. The alleged purpose of the measures was to benefit enterprise; but the fact that discounts decreased proves that business refused to be benefited on these terms—to wit, a lowered discount rate. Instead of reviving, business drooped more and more, and the world was not a little startled, early in 1928, by learning that the number of unemployed in the United States had risen within a few months from one million to four million. Such, then, was the success of the Reserve Board's managing.

While business thus was low and discouraged, the Board most strangely did what is supposed to embarrass and weaken business: it raised the discount rate again and began to sell securities, its object being to put a curb on the speculation at the stock exchange. It was now that the truly wonderful efficacy of this kind of managing was revealed. Speculation became frantic, both bonds and shares soaring; and prices, which had risen only hesitatingly, leapt up merrily. By the middle of May "the index compiled by the Federal Reserve Board of New York showed that the average price of 20 basic commodities had climbed about 6 per cent above its early March level and about 12 per cent above its level of a year ago." Compared with the above figures, the rise was some 2·7 per cent from August to the end of the year; hence over 9 per cent from January to the middle of May. Ten per cent down within two years, 12 per cent up within one year: and they trumpet it out as successful stabilization! Compare with the American experiment the Swiss (if small with great may be compared—but I fail to see why small should not be more easily upset than big): although in a certain sense the Swiss franc is tied to the dollar, the Swiss price-level fluctuated far less; but then the Swiss rate of discount was maintained unflinchingly at $3\frac{1}{2}$ per cent from October 1925 up to the time of my writing this (May 1928); and although the American rate has been raised for the second time already, there is no sign that the Swiss will follow.

American managing is thoroughly discredited. Critics are starting up on all sides. They have been disrespectful enough to suggest that the Reserve Board was under the influence of

"amateur economists."[1] Well, well! I have shown that such lights as Professors Pigou, Keynes, Irving Fisher are advocates of the methods employed; the leading German banking journal, *Das Bankarchiv*, has published contributions in support of them (Oct. 1, 1927). As these are not amateurs, let's listen to those who are, and therefore dare to look things in the face.

Discount policy and open market operations as managed hitherto just paralyse each other. Let down the rate and buy securities with a view to strengthening the circulation of money: any issues that may be forced out by the purchase of bonds are more than counterbalanced by the falling off in the issue of notes against discounts; raise the rate and sell securities in order to contract "the basis of credit": discounts will draw out larger quantities of notes than sales can withdraw from the market. I have said enough in the present paragraph and in the first essay to explain why that should be so.

The vicissitudes of the American currency within these last years are highly instructive in yet another respect bearing on our present inquiry. Shares have gone up in price along with bonds, and it would seem as if my distinction between the two kinds of securities was beside the mark. However, the American experiment has evidently, unmistakably gone amiss, which ought to be taken as a sign that speculation has been mistaken. It would lead me too far afield if I were to enter upon an examination of the case, and I must confine myself to just one observation. Those shares which have risen with the bonds are very much of the nature of bonds. They are the capital of the firmly established, basic, country-wide enterprises, which are managed with a view to a high degree of stability and pay dividends at an almost invariable rate. That is one reason why their prices should follow the lead of fixed-rate securities. Another reason is to be sought in the fact that owing to the declining prospects of enterprise the issues of new shares have been insignificant, so that the moneys becoming available for reinvestment (out of the repayment of public debt; see the next essay) have found no other outlet except into the market of the shares of existing companies. Logically the relation between shares and bonds is as indicated above.[2]

[1] *The Statist*, May 19, 1928.

[2] In the *Revue de l'Institut de Sociologie* (No. 1, 1927), I find a review of a book, *La prévention du chômage et la stabilization économique*, by Henri Fuss,

Shares not being appropriate for what is wanted, the bank of issue must work with those assets which it is naturally furnished with: bills of exchange and gold. These two will do beautifully. The counters of the bank are always open for bills and gold to exchange for banknotes. But we will consider them separately.

§ 4. Banknotes and Bills of Exchange.

Bills of exchange do not visibly rise and fall in price like shares, that is to say, their money price is not quoted above or below their nominal value, as is the case with shares and other negotiable securities. Hence it is not so simple to demonstrate their ups and downs, still less the way in which these changes affect the circulation of banknotes. However, the mere fact that bills of exchange are issued (produced) in such variable quantities as is actually the case proves that their value, or usefulness, is subject to heavy fluctuations and must depend on certain factors and circumstances. Let me quote an instance of this important phenomenon. Between January 7 and April 15, 1925, the amount of discounted bills in the Austrian National Bank was reduced from 182 to 101 million. This signifies that the demand for bills was reduced in the same ratio. Now demand is the natural expression of usefulness or value—and of price, since price must coincide with value. It ought to be possible to discover the reason why bills began to be so neglected in Austria. In some way or other the difference in the value, the price, of the article must be visibly manifested, i.e. stated in figures.

The prices of securities are quoted from day to day in much the same manner as temperatures and other atmospheric measurements. Another figure which is regularly quoted is the rate of interest in its various denominations. A comparison of

in which the open market method is also recommended as being no less powerful than the discount policy. But this author does not speak of State bonds; his proposal is explained thus:

"When prices begin to rise, the Central Banks will reduce their holdings by offering in the market a certain proportion of their industrial securities (*valeurs industrielles*). In this way they absorb a certain part of the available purchasing power, and in consequence check the rise of prices resulting from an excess of this purchasing power."

It would be useful to know what is here meant by *valeurs industrielles*. Is it bonds, is it shares? It is most strange that the difference between the two categories of securities, which is radical and fundamental, should not yet have been understood by economists.

the relative movements of the prices of securities and the rates of interest will manifest the fact that the former are wholly in agreement with the latter, exactly as cause is to effect. Anyone acquainted with the details of a particular security is able to compute its price from the quoted rate of interest. It must be the same with the security called bill of exchange; its price (value, usefulness) depends entirely on the current rate of interest, so that what influences the latter also influences the former.

Bills of exchange, like shares, represent saleable commodities. There is between them only this difference, that whereas the bill represents the product, the share represents the means of production. To all intents and purposes bills of exchange stand to commodities on the one hand and to banknotes on the other hand in exactly the same relation as shares. Bills appreciate when goods appreciate, and their appreciation is translated *ipso facto* into depreciation of banknotes. Hence inevitably the play of forces which we have observed in the exchange of banknotes and shares must be repeated in the exchange of banknotes and bills. When the general price-level, and along with it the value (= usefulness) of bills, rises, the bills for sale at the counters of the bank of issue ought to be taken up against banknotes. The transaction returning banknotes to the bank and withdrawing them from circulation, the result must be that the price-movement is checked and brought back to its starting-point. The parity is re-established. In the opposite case things would take the opposite course: bills are sold to the bank for notes, and the note circulation thus being swelled, the level of prices is buoyed up before it has had time to recede.

That is all very well; but what about the observed facts? Bills of exchange are an invention of old enough standing, and it can easily be proved that, far from acting as stabilizers of the currency, they have rather been instrumental in disturbing the natural tendency to stability. They have not behaved in the manner indicated. Instead of coming to the rescue of cash when cash ran short, they have always rushed in when cash was plentiful, or on the increase, to slink back when the situation was reversed. As a matter of fact, there is a good deal to be said against bills of exchange. But any charges that may be advanced are valid only in so far as they apply to bills as perverted by a mistaken discount policy. It is not enough to have a good mechanism and machine, the point is to run it rightly. The

mechanism by which the circulation of bills of exchange is regulated is the rate of discount. In order to discover the flaw which has prevented the bill of exchange from exercising its natural function, we shall have to examine what are the effects of the discount rate on the value of bills. Anticipating the results of the examination, I will remark here that the perversion of bills has consisted in the fact that they have been misused as a substitute for money; i.e. they have been used as money instead of for the purpose of *calling forth money* (banknotes), according to the process described above. They did not serve as representatives of goods, but as representatives of money, which they are not, and cannot be, without damaging the machine. They have been misused in the same way as gold, which a flaw in the system of the gold standard has reduced to the rôle of money, whereas it ought to be a ware, even though it present itself in the shape of coined sovereigns.

§ 5. The Wrong Use of Bills and the Right.

The usefulness of bills—to the users of bills, but not to the community at large—grows in proportion as prices go up. But why do prices go up? Because the interest which people feel for the thing rises, because the rate of interest is suffered to, or made to, rise. Thus, then, the usefulness of bills grows and shrinks along with the rate of interest. It would be easy to demonstrate this with logical proofs; but mere argument is precarious compared to observed facts. Only these are proof direct. Let statistics examine the records of the banks of issue regarding the relation of the movements of the rate of discount as compared with the figures of the trade in bills of exchange. It will be proved beyond the shadow of a doubt that this trade has always and everywhere increased when the rate of discount went up, and decreased when the rate went down, minor exceptions proving the rule. If this important truth is not known to-day, it was known well enough nearly a hundred years ago. John Stuart Mill, *Principles of Political Economy*, Book III, chap. xii, § 5, quotes from Tooke's *History of Prices*:

"The market rate of interest then rises, and increased applications are made to the Bank for discount."

The trade in bills cannot expand unless favoured by the tendency of the rate of interest. If the bank of issue reduces

the price of its loans, it will not induce expert speculators to avail themselves of the opportunity, and if it raises the price, what happens is still more contrary to what one would expect: bills are not redeemed prematurely. Merchants do not apply to the Bank for bills, for the very simple reason that by so doing they would hinder the rise of prices. Bills would have to be bought with banknotes. The returning of notes to the issuer reduces the volume of cash in circulation, contracting, as the phrase is, the basis of credit. Thus the attempt to force up prices would fail; the speculation would not yield the anticipated profit. This being so, it is obvious that bills are not generally employed in this manner. Why should a man buy a bill to purchase goods with? The banknotes which he would have to surrender for the bill will also pay for the goods. So soon as banknotes are actually used, thus proving their usefulness, they cannot be depreciated. Depreciation begins when bills are employed to displace or supplant the banknotes. Depreciation is merely an expression of failing use, the consequence of failing usefulness. Under the traditional system, bills of exchange do not depend on being discounted at the Bank and thus calling banknotes into existence and activity. Indeed, they offer an opportunity for an extra profit only so long as they can avoid the discount at the Central Bank by circulating on the strength of the general credit. The possibility for them to do so is created by the expectation of a general rise of prices. Users of bills are then enabled to purchase goods in advance and without the help of cash. In avoiding the use of banknotes they not only save the interest on a loan at the Bank, but the free circulation of bills is at the same time the most powerful means of forcing up prices, by which the profit on the turn-over of goods is increased beyond the average. We may designate this as an illegitimate use of bills, although the law allows it, and I am far from suggesting any legal measures to prevent it. But still, it is an abuse and harmful. No currency system can be said to be perfectly contrived in which there is scope for it.

My description of the proceeding should not be interpreted to imply that in periods of expansion and a heavy increase in the trade of bills of exchange, the amount of discounts at the bank of issue does not increase. Did it not increase, no new banknotes could be issued, which would speedily bring the movement to a standstill. What happens is this: *comparatively*

fewer bills are presented for discount. The increase of the volume of the circulation lags behind the increase in the trade with bills of exchange, and many bills are never presented for discount at the bank of issue. The fact is known and well established, though it is wrongly interpreted. Professor Irving Fisher, in describing the chain of events constituting inflation, indicates the following order: (1) prices rise, (2) the rate of interest rises, (3) loans are expanded, (4) the circulation of bills[1] increases *in its proportion to money.* (See above I, § 11.)

The only legitimate use of bills is to avert the fall of the price-level by increasing the supply of cash money and thereby strengthening the demand for goods. This necessitates that bills are presented for discount at the Central Bank, in much the same way as has always been practised in the circumstances under consideration. When credit is in a poor state, so that no one cares to handle bills, business men will draw bills and try to get them discounted at the Bank. If they succeed, they are enabled to avert the fall of prices by carrying their stocks on credit, by being encouraged to reserve their supply—which is to lessen supply—and by circulating those relays of cash money which they have obtained at the Bank. The time for bills to come into action, therefore, is when a crisis is imminent. It is "the curse of an evil deed" which prevents this course of salvation from being practicable. Even though the bank of issue is willing to accommodate distressed merchants and manufacturers by discounting their paper, the use of bills is suddenly and heavily reduced, because the other banks restrict their credits —after having expanded them beyond safe and prudent limits during the boom. The crisis, as a rule, is merely the reaction from a period of excessive activity which an exaggerated trade in bills of exchange has caused and forced.

If bills were prevented from sowing the seeds of the crisis by inflating price, it is evident that these exigencies would not occur so frequently as they have done hitherto. The safest and the sole natural way to forestall the crisis is to prevent the boom as made by the over-expansion of the trade with undiscounted bills of exchange. The misuse of this very ingenious instrument of credit must be stopped, though not by any sort of penal measures, but by an improved handling of the discount

[1] The exact words are "deposit currency;" but deposit currency is materially the same thing as bills of exchange.

mechanism. We have already observed the fact, and we shall come to understand it more clearly yet, that too liberal a circulation of bills cannot develop except when the rate of discount is unduly high. Bills are worth to dealers exactly as much as the rate of discount makes them.[1]

§ 6. Banknotes and Gold.

It is asserted by a certain school of economists that the bill of exchange method, if rightly applied, would suffice to produce a stable standard of currency. I am ready to admit the theoretical possibility, but I reject the methods advocated, which are the traditional ones and unsound, as the experiment has amply proved. They have failed so signally that responsible writers on the subject ought to shrink from recommending them. There are other reasons besides to warn us that it will not do to pledge ourselves to this method exclusively. There is nothing to be gained by reducing the mechanism to just one basis, when the facilities are in existence for strengthening and securing it more fully; facilities which, moreover, it is impossible to eliminate. The banks of issue are possessed of gold—the gold possesses them!—which cannot be turned out, for the very simple reason that it exists and insists on being employed in the currency. There is no way of disposing of the gold in the reserves of the banks of issue. Moreover, gold imposes itself by its natural usefulness as a regulator of currencies, which it would be more than foolish to try to dispense with. However, we have got to learn how gold may be prevented from being misused.

The assumption that there is a connection between the price of gold and the rate of discount is the essential contents of the traditional theory and practice of the gold standard. It is believed that a higher bank rate enhances the value of gold and is a protection to gold, wherefore the rate is raised whenever there is an apprehension that gold might be drained out of the country. We have been furnished with a good object-lesson rather recently. In February 1925 the English bank rate was raised from 4 per cent to 5 per cent; by the end of April the return to the gold standard was officially proclaimed. Whereas

[1] The above-mentioned reduction of the amount of discounts in the National Bank of Austria happened when the rate of discount was still exceptionally high. But it had been unduly *reduced* previously (see below, p. 110). Tendency counts for more than mere height.

in February the Bank of England note was still at a discount compared with gold, it recovered the parity within two months. There is a semblance, then, that the raising of the bank rate produced the desired result. Do not let us be deceived. The effect was due to very different causes. The raising of the rate was not the only measure that was applied. By the use of main force you can produce any result within the compass of your force. You can force a currency at will up to a certain limit, if you are prepared to pay the price. The monetary history of recent years furnishes many instances of such attempts. However, there is the limit. When it is reached, the recoil is sure to come. Remember the German attempt to steady the mark on the occasion of the Ruhr invasion. It lasted for a few weeks, to end in utter collapse when the means gave out. Remember also how in 1924 the French franc was forced from about one-fifth to two-fifths of its nominal international value, only to relapse again.

Gold stands to banknotes in the same relation as shares and bills of exchange. Bills, we said, represent the products of industry, shares the means of production. Gold is the product itself. Gold, like shares and bills, is bought and sold for banknotes. The public will try to exchange their banknotes for gold when the notes depreciate. Only gold ought not to be subjected to depreciation when banknotes depreciate, as must happen under the traditional system. But if gold is delivered freely, and at par, by the Bank, it is impossible that the parity should be broken. If up to April 1925 there was disparity between the price of gold and English banknotes, it was because the trade in gold was suspended, so that the adjustment of values was inhibited. There were too many notes out and too much gold in. Had the trade in gold been restored, the parity would have restored itself almost immediately through the cheapening of gold—owing to its being poured forth from the reserve—and through the enhancement of banknotes—owing to their being redeemed by the Bank.

But what does "at par" signify in this connection? It is the traditional parity, this arbitrary quantity which we are going to abandon in order to arrive at a natural one. A few provisional remarks on the subject must suffice at this point. In the case of a currency which has been heavily depreciated it would not do to release the gold of the reserve at the old money price.

But when the difference is a small one, it seems to me the more natural procedure. A little bit of deflation is a smaller evil than the establishment of a new monetary standard. Now, when the public exchange banknotes for gold, the effect is deflation. For the banknotes which are surrendered cease to buy goods, while the gold obtained in return is either hoarded or sent abroad by importers of goods. At the present moment (October 1926), the contrary procedure is being tried in France. The Banque de France is buying up the gold coins hoarded by the public with a view to re-establishing a decent currency, that is, stopping inflation. A quaint device, indeed. It amounts to mobilizing purchasing power which has been dormant, the object pursued being to check the increase of the volume of money in circulation. The procedure which I consider as the appropriate one is sketched below.

It has happened from time to time that gold was offered at a discount. Such was the case in Sweden during the early part of the war; also in Switzerland in 1922 and again late in 1924. The way in which gold, when in this predicament, returns to the bank of issue is best shown by a quotation from an official statement by one of the directors of the Swiss National Bank: "The Bank has discontinued its former practice of collecting the gold paid in at the public counters. In spite of this—perhaps for this very reason—increasing quantities of gold coins are being returned to it which emerge from hoards." On both occasions when gold behaved in this manner in Switzerland it was below the parity. Depreciation forced it to circulate more vigorously. In doing so, it was instrumental in stopping the fall of prices and in enlivening the money market. In 1922 its reappearance marked the turning-point in the great crisis; in 1924 it averted an imminent slump. It makes no difference whether the gold circulates itself or whether it forces out more banknotes by returning to the Bank; in either case it augments the circulation of money and steadies prices when they incline to fall. The experiment has proved that gold will play its part properly when allowed its own way. For we have to note that the gold standard was still suspended in Switzerland; i.e. there was no fixed price for gold to entrammel the free play of forces. There were gold coins, which of course represented the old parity; but there was no guarantee that they would not suffer depreciation. This is exactly as it ought to be. Gold must not

be nailed to a post, not be protected, it must be free. Only free gold is able to protect itself against depreciation by maintaining its parity with the banknote and, consequently, with the general level of prices.

§ 7. The Interest Standard Law; Banknotes the only Legal Tender.

The terms of the law needed to create a banknote with an assured parity will be essentially different from those of the gold standard law, although at bottom my interest standard does not aim at anything that is not intended by the gold standard. The main difference consists in this: the stability, the permanence, the parity of the price of gold is not a starting-point, but the natural and inevitable result of the proceeding. It does not need to be mentioned in the law. The established law prescribes three things: (1) the monetary standard, i.e. the ratio of the monetary unit to the price of gold: one ounce, or gramme, of gold = so many £ s. d., or $ or francs or marks. (2) Convertibility, i.e. the right of exchanging gold in bars for gold coins or banknotes, in other words, the obligation on the part of the Bank to buy gold at the legal price and to redeem banknotes at the legal price. (3) The ratio of the reserve to the total issue of banknotes, or, in England, the amount of the fiduciary issue.

The law makes no provision whatever as to the rate of interest. The interest standard law would reverse the relation. It bases itself on the rate of interest, leaving the price of gold out of account, to take care of itself. But in much the same way as with a fixed price of gold the rate of interest has never really deviated from its normal level, but has merely oscillated around an immutable average; it is to be expected that the price of gold, too, will maintain its general level, while a fixed rate of discount keeps the level of prices constant. As a matter of fact, it is not the fixed price of gold which has kept the rate of interest within narrow bounds hitherto, but the natural stability of interest which has maintained the value of gold, and the level of prices, comparatively stable. A kind of interest standard has prevailed, although it went by another name and therefore was not rightly understood.

The Interest Standard Law will require only just one clause,

which may be couched, *provisionally*, in something like these terms:

> *The Bank of Issue lends money on the security of properly approved bills of exchange at a rate of interest guaranteeing the maintenance of a stable general level of prices.*

The rate, then, is not expressed in a definite figure. We do not yet know what may be exactly the normal or natural rate. It will have to be ascertained by experiment. By the time when experience and scientific tests have established the normal rate, the law ought to be raised out of its provisional stage and made final: the rate of discount becomes fixed in a definite figure. How long it may take for this end to be achieved, I do not care to predict. It seems to me plausible that any adjustments that may impose themselves during the experimental stage will lead to comparatively safe results, when once the rate comes to be moved in the right direction rather than the wrong, as has been the case hitherto. Thus a sufficient degree of certainty is likely to be reached within a very few years. However, a great deal depends on how fiscal policies will be conducted, and my present estimate must remain subject to the provision that the rules laid down in the next essay shall be obeyed.

The clause does not consider the gold reserve, which implies that a dangerous reduction of the reserve is not apprehended. At bottom the purpose of the reserve is not to serve as a backing or security for the banknotes issued. Any values that the bank takes into custody serve a far more important purpose, and in so far as they tend to take refuge at the bank they do so for their own safety—the bank being the hospital for damaged or threatened values! As banknotes are only issued against bills of exchange—or in exchange for gold—they are *ipso facto* covered. There is only this difference between the gold of the reserve and the paper deposits, that the latter need not be redeemed till their currency expires, whereas the former is immediately redeemable. In the present order of things the possibility of a run on the bank *for gold* is such an inconceivable idea that it is ludicrous to provide against it.

Any clauses concerning gold are superfluous. For gold is demonetized and no longer legal tender; nobody can be bound to make payment or to accept payment in gold. Banknotes are

the only legal tender. Naturally this does away with a legally fixed price and the other prerogatives of gold. These prerogatives are not unmixed advantages to gold itself; they are unnatural limitations, in which a distrust of gold is implied. In abolishing these prerogatives we proclaim our belief in the natural excellence and serviceableness of gold. Convertibility and a stable price are inherent in the very constitution of gold. Unrestricted convertibility imposes itself on the bank of issue as a piece of business policy. For it must be remembered that the bank is the biggest owner of gold and therefore is heavily interested in the value of gold being preserved, which demands that any depreciatory limitations shall be avoided. This consideration forces the bank to take up gold when and if it threatens to depreciate; the same consideration also induces the bank to issue banknotes against gold (as a matter of fact it is the same process), when and if banknotes tend to appreciate. The bank of issue, however, is not only the biggest owner of gold; its greatest asset is the monopoly for the issue of banknotes. Therefore it is heavily concerned in preserving the value of banknotes too. This consideration compels the bank to sell gold for banknotes when banknotes threaten to depreciate, which is the case when gold appreciates and obtains a premium. By selling gold at this juncture the bank inhibits such appreciation, and so it appears that the stability of the price of gold is fully assured. Gold in its main force is serviceable only as the raw material of money; it would depreciate if it were precluded from serving, or if it refused to serve, as money. Hence the owners of gold, in order to safeguard themselves against loss, must take care that the parity of gold is strictly maintained. Gold can change its price only as a commodity, but not as money; it becomes cheaper when commodities are generally cheapened, and *vice versa*. When it threatens to become cheaper, gold must reinforce its money function. Cheaper it becomes when there is too little money issued; going forth to serve as money, gold supplies the need and, rendering useful service as money, it recovers its parity, its price. Over-valued it becomes when too much money is issued. In this situation gold withdraws; it ceases to serve as money, the supply of money—the demand for goods—is thus reduced; the level of prices relapses and along with it the value of the commodity gold. Again the parity is restored.

My proposal, then, is to stick to the old parity and make it, as it were, a corner-stone of the new system, although on different terms. I consider it advisable to benefit by everything that has proved its worth in the old order, and the traditional parity does seem to have made good (see Keynes, *Tract on Monetary Reform*, p. 11). To be sure gold, at the present point of time, is heavily depreciated as compared to the average of the period during which the gold standard has been in force. Neither can anyone calculate or guess how its value will develop in the future. This constitutes a difficulty. However, we need not be deterred. We retain the existing parity, but only on trial. It is not fixed by law and embodied in the constitution. And we shall not shrink from altering the parity, if it is proved to be unsuitable. If gold should persistently appreciate, gold coins will cease to circulate and the gold reserve of the bank of issue will be drained; so we shall know what is the trouble. If gold should persistently depreciate, more and more gold will circulate as money and swell the reserve; so again we shall know what is wrong. Knowing what is wrong, we shall know what measures to take. In the former case (appreciation) we shall make the gold coin smaller, in the latter case larger, in much the same way as, under the present system, the rate of discount is now reduced, now raised. The inconveniences arising from an alteration of this kind would be less than are those from changing rates, and they would naturally happen much less frequently. However, the following considerations present themselves to reassure us that the measure in question is not likely to impose itself.

§ 8. The Value of Gold Determined by the Rate of Interest.

We do propose to demonetize gold, but we do not propose to debar it from performing the work to which it is accustomed and which is its natural domain. Setting a slave free is only abolishing the slave condition in the man, not the man himself or his worth, which resides in his work. Under the gold standard gold is so linked with the banknote as to be forced to appreciate and depreciate with the banknotes. Its rôle is that of money pure and simple, and it must suffer all the vicissitudes of money, gaining and losing under the stimulus and the pressure of the one force which governs the value of money: the rate of interest.

When the link is dropped, the nature of the relation between gold and banknotes is fundamentally altered.

The point is to construct a mechanism which shall ensure a perfect and automatic equilibrium. Consider it as a pair of scales. When gold is legal tender like banknotes, they are both in the same scale, on the same side, and therefore they rise and fall in conjunction, unable to steady and succour each other. A change of the rate of interest does not affect them inversely, as it ought to. Not until the tension produced by the shifting of values has been carried to the breaking-point is gold allowed to reassert itself and part company with the banknote. Gold being forced into the rôle of money pure and simple, it cannot behave as a ware, and it becomes a victim to its own prerogatives. Far from the banknote being made to conform to gold, gold is entirely governed by the banknote. It is for this reason that gold has so often seemed to be an agent of fluctuation. When the rate of discount was kept at too high a point, gold was depreciated, along with the banknote to which it was tied, through interloper bills of exchange, which enabled dealers to dispense with gold, despise, and neglect it, whereby it was cheapened and lost some of its usefulness.

In 1862 Jevons published his observations concerning the variations of the value (the price, the purchasing power) of gold. From 1850 to 1861 gold had depreciated by 13 per cent; in other words, the general level of prices had risen 13 per cent. Now my contention is that such depreciation cannot have taken place without a correspondent rise of the rate of interest (say, from 4 per cent to $4\frac{1}{2}$ per cent), the latter being the cause of the former rather than the effect. The interest which actuates the actors in the drama is not for money, but for real goods, and money being treated merely as a means to the end, it is necessarily less appreciated than the real object of desire. Less appreciated signifies depreciated. Had not interest been allowed to luxuriate, and the rate of interest to advance, it is impossible that the level of prices should have risen and money—gold—been depreciated.

Now it will be objected that obviously it was the discovery and the eager exploitation of the Californian gold-fields that caused the depreciation of gold through increased supplies of the article. I reply that only an inadequate understanding of the nature of interest can locate the cause in the accidents of

supply. Supply is determined by demand, which is simply another word for interest. Check interest, you check demand, and what checks demand also checks output. If, then, the rate of discount had not yielded to pressure, the production of gold would have proceeded more calmly, keeping pace with bridled demand. And even supposing that the gold finds had been excessive, the metal could not have been forced into the circulation as money without displacing either banknotes or silver or credit instruments. The rate of discount limits sovereignly the volume of money that shall be allowed to circulate.

From these considerations it would seem to result that the depreciation of the Californian gold was not the consequence of the exclusive money character of gold, but rather of a mistaken interest policy. In a certain sense that is so, and it will be shown below that gold cannot function as a natural stabilizer, unless aided by a proper handling of the machinery of the discount rate. Gold is an auxiliary, while interest is the master force. But auxiliaries have their importance, and it makes a difference whether gold is legally linked up with the banknote or not.

In estimating the merits and the shortcomings of the traditional system, we ought to guard against mistaking its aim. The advocates of the return to the gold standard have insisted that it is the only escape from the evils of instability. This argument has fostered the belief that the aim of the gold standard is stability of the purchasing power of money. Nothing of the kind. The authorities entrusted with the administration of the currency have never manifested any concern when the purchasing power of money fluctuated; they were not conscious of having failed to come up to requirements. Nobody thought of making them responsible for what happened. Such an attitude would be inconceivable, assuming that the aim of the gold standard was to preserve the stability of the value of money. Hence those who are now glorifying the gold standard with the virtue of stability are misleading public opinion. How specious their argument is may be gathered from the fact that even now they do not seem concerned by the heavy fall of prices which has taken place in the gold standard countries, since England reverted to gold in April 1925. But you cannot fool all the people all the time. It is too manifest that the

traditional practice has not produced stability. At the same time the necessity of stability has been deeply impressed on the minds of all thoughtful men. Hence the heavy opposition of a considerable section of public and scientific opinion against gold; hence the cautions introduced into the new regulations; hence the reluctance of some countries with strong currencies to proclaim the formal re-establishment of the gold standard. We may say without exaggeration that the old gold standard is discredited. It is time that we should discover what is wrong with it both as to its aim and as to its workings.

The currency reformers deserve approbation in so far as they recognize stability as the *sine qua non* of a monetary standard, and their criticism of the traditional system holds good in so far as it is aimed at the failure to make for stability. But they are wrong in attributing the fault rather to the means employed than to the manner of employing them. The most radical suggest that gold and bills of exchange should be expelled from the system (for instance, the German Silvio Gesell and the English Douglasites); some are satisfied with ousting gold (for instance, the author of the book *Money in Fetters*, Henry Lowenfeld); the moderates advocate a "scientific" way of managing the price of gold (Mr. Keynes, Professor Irving Fisher). However, the fault lies elsewhere, namely, in a mistaken conception of the workings of the rate of discount. The value or purchasing power of money, whether gold or paper, is determined by the degree of interest felt and the rate of interest offered or conceded. So long as the official rate, the standard rate, of interest, which is the rate of the bank of issue, is allowed to, or made to, vary, stability of the purchasing power of money is impossible. If the banknote is to become a real parity title, the rate of discount must be fixed. It stands to reason that it can only be kept fixed at its natural level. The problem of currency stabilization, therefore, reduces itself to the question: which is the natural level, how can it be ascertained, and how can it be reached? I believe that the question not only can be answered, but that it has been answered.

The exacter sciences of physics and mechanics would tackle the problem by making experiments. This course must be closed to the science of economics. However, we have been witnesses of many experiments—and we have been made to

feel the effects of the experiments. All that has been undertaken to keep control of the currencies, to save them, to improve them, to reform them, to reconstruct them, has been purely experimental, no one knowing what the outcome would be. But the results that may be gathered from what has actually taken place suffice for us to form certain conclusions, and to shape the framework of a new and better system, More has been achieved than is generally realized. Though not so spectacular as many others, the Swiss experiment has been one of the most instructive and significant.

The Swiss banknote has for the last two years (1924–25) been a parity title entirely in accordance with the principle here set forth, only a little unsteady, because it has, so to speak, not yet found its legs nor gained consciousness of its perfection. The Swiss level of prices appears in the shape of a horizontal zigzag, a few points up, a few points down—deviations which are no more than the heaving and sinking of the chest of a breathing organism. The rate of discount during these two experimental years has been unchanged at 4 per cent, after being raised from 3 per cent. Gold has been allowed to move as it pleased; for, although the exporting of gold is still prohibited, the state of the market has been such as to forbid the export naturally, so that the legal restriction is not felt. Gold has very effectually stabilized the currency. I have already mentioned how its unexpected appearance in the circulation stopped the fall of prices. In the same unobtrusive and unnoticed manner gold interfered on one occasion when the price-movement had taken a vigorous turn upwards; gold ceased to circulate; within a few weeks the coins, which before had literally flooded the market, disappeared. No warnings had been uttered, the newspapers had not cried out for remedies; gold acted automatically. It vanished into the usual hoards, when and because its price rose above the parity with the banknote. The gold 20-franc piece had been worth only 19 francs in paper money; naturally the gold coins, being lighter than the paper notes, had risen to the surface. Now the tables were turned: you had to give 21 francs in paper money for 20 francs in gold; naturally the gold coins sank below the surface and were seen no more. In the first case everybody, including the Government, tried to be rid of gold; in the other case everybody, including the Government, tried to recapture

it. It made a difference of appreciable magnitude in the volume of the money circulation; the augmentation in the one instance, the diminution in the other instance, were sufficient to turn the tide. When gold was cheap as a ware, it acted as money, because as money it was dear; when money became cheaper through the rise of prices, gold refused to be cheapened along with it; so it ceased to act as money and went into cold storage as a ware to appreciate with wares.

This was written in the spring of 1925. Since the last quarter of that year the Swiss banknote has ceased to be a parity title. Early in October the National Bank reduced the rate of discount to 3½ per cent, and since that time the price index has fallen from month to month. From month to month, too, business conditions have been aggravated and the outlook has become gloomier. The Bank pretended to ease the situation —when it was about the most favourable in all Europe—by making money "cheaper"; it has only caused distress and loss to those who depend on money flowing vigorously.

Some little gold has circulated, but not steadily nor plentifully enough to create a better current. I am not sure about the causes which prevent it from intervening as it really should, considering the low rate of discount. The general appreciation of gold within the last twelve months (October 1925 to October 1926) has been very marked, prices having fallen by 8 to 10 per cent in all the gold countries. In *The Interest Standard*, I have contended, in opposition to the views of Mr. Keynes, that gold stands to gain rather than to lose; this forecast seems to be fulfilling itself. It stands to reason that so long as gold keeps on appreciating, gold coins—under the present system—cannot circulate.

I may add here that the going and coming of gold was shepherded by the banks. It created a sensation when, on New Year's Day 1922, the big banks paid the salaries of their employees in gold. It was the action which released the private little hoards.

§ 9. The Automatic Currency and the Managed Currency.

The process by which the banknote becomes a parity title may be summed up thus:—

The bank of issue sells and buys banknotes against bills of exchange and gold at steady prices; or, to put it more accurately,

it lets the public buy its notes from it and sell them to it. Naturally the public will always present themselves at the bank with those assets which threaten to depreciate in their hands. And the bank does not refuse the offer; it pretends to play for a losing bargain. In reality it is playing the game. It does not act like a charitable institution, but aims at profits, as becomes a bank, and as is needful if the business entrusted to it is to succeed. It buys what threatens to depreciate in the hands of the public, that fussy public. Now a thing that threatens to depreciate has already depreciated. You buy at a loss if you buy before depreciation has taken place; but it has always been considered as sound business to buy after the article has passed through the process of depreciation, so that no further cheapening is to be apprehended. In our particular case it is to be noted that whatever the bank of issue takes into its custody is thereby protected from depreciation, provided only that the bank acts correctly. The thing is withdrawn from the market, and although it is permanently for sale, it does not appear as active supply, since the bank does not reduce its price when purchasers keep aloof. What is thus received in a damaged condition by the bank, recovers its pristine excellence while reposing there—we consider the bank of issue as the hospital for wounded titles to wealth! The thing, no sooner received, bids fair to appreciate again. Now it is surely the secret of profitable bargaining to buy immediately before the article begins to rise in price, and that is what the bank is doing. Of course, it must not be imagined that the bank will make an extra profit. Dealers in gold and bills of exchange—professional speculators—also play the game. But the two parties will eternally hold each other in check, with the consequence that the game has to be played fairly. The turn-over of assets will be so trifling as to amount to sums hardly appreciable, mere ripples on a becalmed sea.

On principle it amounts exactly to what the idea of a standard of currency has always involved. Why, then, is it that nothing deserving the name of a standard has ever come into existence? We shall understand the reason of the failure, if we consider the process as it would present itself in the system advocated by Mr. Keynes and others (the "managed currency"), which is essentially the traditional practice. It is proposed that the bank shall raise its rate when it seems necessary to force notes

back to the bank. Mr. Keynes calls it "putting on dear money," or "contracting the basis of credit." Consider what this implies. The bank would have the good public surrender their banknotes; in order to encourage the public to commit the act, the bank proceeds to make the banknotes—dear! This is to expect the good public to part with the article which is appreciating in exchange for an article which is sure to depreciate. The bank, for its part, intends to buy the article which promises to appreciate for one which threatens to depreciate. The bank, then, pretends to be trying to take the good public in. It proclaims that it is going to make its banknotes dearer, and then it insists on having them returned to it. It looks like playing for a winning bargain; in reality it is giving the game away. People will say: banknotes are going to be improved? Then let us have the banknotes which are going to win the day! And while speaking thus, they will act in defiance of the bank's wishes. The knowing ones will neglect the dear money and make their profits on bills of exchange. Thus, the train is switched on to the wrong track; instead of returning to the bank, or, at least, serving in wholesale transactions, the banknotes circulate in the retail market, while leaving to big business an open field for the trade in bills. Instead of appreciating, the banknotes depreciate, and along with them the gold assets of the bank depreciate also. Far from being steadied, the balance inclines more and more to one side, until it finally tips over in regular style. The bank has been playing into the hands of the speculative dealers, and so it is no wonder if all the stakes go to the same side, if the turn-over assumes impossible dimensions, and if the whole of business is turned into a raging sea, heaving up from its very bottom and strewn with innumerable wrecks.

Everything depends on whether the switch is rightly or wrongly set. Values must not be wrenched from their natural parity by variations of the rate of discount. It is because this very obvious truth has been overlooked that the principle of a gold standard has come to grief and been discredited. When the discount mechanism is once properly adjusted, an uncommon state of general equality or permanence may be expected to establish itself. I have had much to say about the coming in and the going out of gold to and from the reserve of the bank of issue. As a matter of fact, there will be very little of this

traffic, and the turn-over of gold at the counters of the bank will amount to nothing.

When gold depreciates as a ware—wares being generally cheapened owing to money shortage—it goes forth into the markets as money, money having gained in value, to exchange itself against cheapened goods. In doing so, it not only swells the volume of money in circulation, relieving the shortage, but at the same time diminishes the supply of goods, relieving the glut. The result is that prices go up, money losing as much as goods gain, and the parity of the banknote is restored. The bank of issue has not had anything to do. Again, when gold depreciates as money, money being generally depreciated owing to a shortage of the supply of goods, people will not return banknotes to the bank for gold; they just reserve their own gold coins, converting the gold of their money into a ware —wares gaining in value owing to a superabundance of money. The supply of money is thus diminished, the supply of goods is increased, and equilibrium is restored. When once the parity of the gold coins and the banknotes of a country is established, everything will happen automatically; securities cannot get damaged, and the hospital may close its gates.

Gold is thus revealed to us as the original and immediate agent of equilibrium. It contributes to the system the active element, whereas the rate of discount furnishes the reposing element, the firm foundation. The energy (interest) remains the same always, but the matter (the tangible money) changes its constitution. Interest is the centre of gravity, while gold is the gravitating medium which naturally seeks its level.

§ 10. A Hamstrung Gold Standard.

I have been endeavouring to demonstrate how gold will function when released from the fetters of the fixed price and deprived of the protection by a special law. Now compare with the free and easy play of forces so obtained the constraint resulting from the system now in force in those countries which pride themselves on having re-established the gold standard. The characteristic feature of this novel system is that no gold coins are intended to circulate. What are the consequences of this limitation? It causes the exchange of gold for banknotes and of banknotes for gold to be so hampered as to render the notion of convertibility illusory. It does away

with the one really valuable feature of a true gold standard currency and is like a cart without wheels. The subtle and all-pervading play of the small forces of gold is inhibited, seeing that the average user of money is debarred from taking a part in it. The massive pile of gold in the Bank is not balanced and checked by a million-fold distributed network of detached drops of gold. Although it is claimed, and although the tenor of the law affirms, that the Bank shall exchange gold for banknotes and banknotes for gold at a fixed price, the fact remains that such exchange is only possible for large quantities, so that only banks and regular dealers in gold can go in for transactions of this kind. The mass of the users of money are excluded, and so it appears that this castrated gold standard is a piece of despotism, a manifestation of distrust in the people and of distrust in the virtue of gold.

When in 1925 a Conservative Government and Parliament proclaimed this new currency law in England, a good deal of criticism was offered. Curiously enough it was not the restrictions imposed that were taken exception to; much the reverse. The objectors demanded more restrictions, all in the name of liberty and democracy. The most notable contribution to the controversy was furnished by Mr. Keynes in an article in the *Nation*. His main argument was to the effect that it would have been better not to revert to gold at all, but having pledged themselves to a gold standard again, the framers of the law should have introduced some further precautions. It is immaterial that he had misunderstood a certain clause; his article revealed the misgivings which are prevalent about a gold standard, or rather about the use of gold in the currency.

The idea of abolishing gold coins is inspired by the apprehension that the supply of gold might prove insufficient to maintain the necessary volume of circulation. It is an attempt to eke out a deficiency, and it amounts to a distrust in the capacities of gold. Mr. Keynes, although he too would not have any gold coins, is animated by the contrary fear. He has much to say about "redundant gold" threatening havoc to an orderly system. Hence his suggestion that the Bank should engage to sell gold at a fixed price, but to reserve the right of rejecting gold offered at the legal price. It is a preposterous scheme when stated as bluntly as I have done. Mr. Keynes used some circumlocutions which helped him to overlook the

flaw; but what he does say is according to my interpretation: the price of gold is to be at once fixed and unfixed.

The limitations actually imposed by the present English law are intended to forestall the possibility of natural deflation —by which term I would designate the appreciation of the currency in terms of goods, i.e. the fall of the general level of prices. The further precaution suggested by Mr. Keynes is intended to prevent inflation through the natural depreciation of gold. Our present world is distracted by fears. "More brain, O Lord! or we shall mar utterly this fair garden we might win," exclaims George Meredith. Fear is bred from imperfect understanding, and in its turn is a bar to better understanding. I must renew my attempt to dispel the apprehensions underlying the various solutions and counter-suggestions under consideration.

From what has been made out so far, it clearly appears that gold coins are an essential part of the mechanism. They constitute the recognition of the freedom of gold, or, in other words, of the people's right to participate in the regulation of the currency. The fixed price, on the other hand, had better be abandoned, or committed to oblivion. The point is to construct the mechanism so that it must work promptly, and this requirement forbids us to fix the price of gold by law. The law is always the perverter of natural virtue. Holders of gold were by the traditional law made to believe that nothing could depreciate their treasure, and so they did not act in self-defence when depreciation did set in. They must be warned that their gold will suffer damage unless they employ it rightly, retaining their gold coins and possibly even withdrawing gold coins from the Bank, whenever the prices of goods tend to rise.[1] A system of automatically operating rewards and penalties will remind the people of their duty to the currency.

(1) The inducement for people to retain their gold coins—

[1] When prices rise rapidly, many people would be glad to surrender their depreciating money for things which do not depreciate, while not suffering from being stored either. The one thing which satisfies these requirements is gold. Would it not be a very great advantage to the community if, in the assumed situation, this desire could be fulfilled, the Central Bank freely selling gold out of its reserve? The people buying gold to hoard would bid the less for commodities, the consequence being that prices would be prevented from rising. As to the "danger" of the gold being sent abroad, it could only happen if gold were more highly appreciated elsewhere, which signifies that much needed goods would be imported in exchange for the gold which departs. (This point is fully dealt with below, V, § 3.)

i.e. to save, to buy less, and so to counteract the rising tendency of the price-movement—will consist in the permanent offer of a premium on gold coins in case the level of prices should rise beyond a certain maximum (say, 5 per cent). In other words, the penalty for not doing so will consist in the reduction of the value of banknotes, as compared with gold coins, and it will fall on those who have neglected to act up to Gresham's law, i.e. to circulate, or spend, or convert the poorer money (banknotes) in order to retain the better.

(2) When money appreciates, the level of prices tending to fall, the public must be induced to circulate their gold coins and, if need be, return them to the Bank for banknotes. In other words, to spend the gold money and so to buy goods, and buy more goods, to counteract the fall of prices. The inducement will consist in the threat that the gold coins will be reduced in their value in case the level of prices should fall by as much as 5 per cent. Or, looked at from the other side, the reward for acting rightly shall consist in the enhancement of the value of the banknote, as compared with gold coins, and it shall go to those who have got rid of the coins by obtaining either goods, or banknotes (which are also spent for goods), or a deposit at their savings bank (which is also spent for goods, though by someone else).

It seems to me inconceivable that, either in the one case or in the other, things should be carried to the point at which the change in the official price of gold might have to be actually resorted to. In the second part of this paper, it will be shown how the discount mechanism, if rightly managed, prevents the larger fluctuations. The automatic play of the gold coins is intended to level out small disturbances of the equilibrium. I will also remark that even if the measure should come to be necessary, it could be carried out with the greatest ease. It would not necessitate the reminting of the coins. It suffices for the Bank to publish the new official price of the coins in terms of paper money. In the case of their appreciation (when the price-level has risen by 5 per cent) the sovereign is proclaimed to be worth 21s., in the opposite case only 19s.[1] The

[1] We are familiar with this procedure from the records of monetary history. The English guinea was a one-pound token with an extra shilling added to its nominal value. When in the seventeenth century this gold coin was struck, its nominal value was 20s. in silver. In consequence of the alteration of the relative values of the two metals, the guinea rose to a premium, and

effects of such a measure would be more visible, but they would not cause nearly so much real disturbance as does the moving of the bank rate. Lastly, there is this to be considered. The transactions involved in the process will be carried out by the professional dealers in money, the banks, with the general public following suit. That is how it happened in Switzerland, as pointed out above.

My demonstration of the workings of the mechanism demands close attention, although it introduces no really new facts. It may assist the reader in grasping the significance of each move if he is reminded that gold, by my system, is demonetized. The gold coins are not money, but gold, a mere material commodity, which must appreciate when money depreciates, and *vice versa*. This point furnishes the clue to the whole process.

I have deprecated the idea of a managed currency. Now there is a certain amount of managing implied in the adjustments of the price of gold here contemplated. I shall not attempt to explain the fact away. Although it is the highest aim of the engineer to construct automatic and self-regulating machines, he knows that management and supervision cannot be dispensed with entirely. To the advantages of the old system we propose to add the supreme one of stability; perfect and permanent automatism cannot in fairness be expected to go with it. We put the aim above the means, and, therefore, shall not feel any compunction to readjust either the price of gold

its value was officially raised to 21s. in 1717. But the pieces were not recoined; they never had the higher price stamped on them. Nor have there been any guineas in circulation for a long time. But the notion of a coin passing at a price above its nominal value has survived, many prices being to this day expressed in guineas.

Assuming that gold coins are not to represent a legally fixed number of monetary units, it will be found expedient not to stamp their "value" on them. In the same way as the custom has come to establish itself of issuing industrial shares with no declared value, it must be possible to make coins with no declared sum stamped on them. After all, a coin is nothing but a share, namely a claim to a share in the goods for sale. It suffices if the coin is guaranteed as to its weight and fineness.

The alteration of the nominal value of gold coins naturally cannot do more than prevent those fluctuations of the price-level which, short of it, would ensue owing to changes in the market price of gold. A few remarks will be made below regarding the danger of gold appreciating. So long as the price of gold is not fixed by law in terms of the currency, such an event need not affect the general level of prices; the rise in the nominal price of the gold pieces will adjust the balance no less effectually than a fall in the general price-level. For supposing the monetary gold of a country amounts to one-half of its total volume of legal tender, a 5 per cent increase of the price of gold will augment the volume by 2½ per cent, which is quite sufficient to restore the price-level.

or even the rate of discount, if a change of conditions and circumstances proves them to be unsuitably chosen.

The framers of the new English gold standard law do not trust in the efficacy of the means to which they pretend to commit the country. It is to be gold, but gold with a difference. Such a self-contradictory attitude can only derive from a duplicity in the conception of the forces governing the currency. It is admitted that the rate of interest (discount) determines the value of money. But it is not understood that if it determines the value of money, *it must determine the price of everything else.* For it is proposed to correct, or to strengthen, the action of the rate of discount through certain other factors. This is clearly illogical except under the assumption that these other factors are not affected by, nor connected with, the rate of interest. Well, the factors in question are securities and gold; bank-rate policy is to be supplemented by negotiation of securities and by the deliberate managing of the supply of gold. Now the price of securities is entirely determined by the rate of interest, and nothing could be more absurd than the idea of making securities—which are governed by the rate of interest—do the work which the rate of interest is supposed to be unable to perform. The same considerations apply to gold. Its value is determined by interest, and if its value is so determined, its production and flow must be likewise. There is only one governing factor. Duplicity, which is abhorred by all true science, must give way to unity of conception.

I yield to the temptation of examining the notion that the country might be flooded with "redundant gold." What could cause gold to pour into England in excessive quantities? In order to find the answer we have to know in exchange for what things gold would pour in. It cannot be for English banknotes; so it must be for English goods and nothing else, because even supposing that it was for English securities, it would still be for goods, since securities, ultimately, represent goods, the interest on them having to be raised out of the sale of goods. Gold would, therefore, be shipped to England when, and because, goods are cheaper here than elsewhere, and there is no alternative conceivable. Gold acts as money, seeing that it buys goods. English goods being so eagerly demanded will go up in price, and prices being levelled up to those in foreign parts, imports of gold will diminish or cease.

Now let us consider the case from the point of view of the banknote. If English prices are lower than foreign prices, it must be because the English banknote is above the international parity, above the gold parity; there is a deficiency of banknotes. Exports being paid for in gold, the English exporters will, naturally, convert what gold they receive into banknotes. The issues of banknotes increase, the level of prices goes up, and the conclusion from the first argument is corroborated: prices are levelled up to parity.

It ought to be corroborated by the interest argument as well. Gold pours into England because English prices are below the international level. Prices are low because the interest for English products, in England, is insufficient; the rate of interest must be lower than abroad. It contradicts the traditional theory, but it agrees with the observable facts, and it is according to sound logic that gold is drawn to countries with the lower rate of interest. The influx of gold marks the revival of interest for English goods, business is encouraged, increasing quantities of loan capital are demanded, higher rates of interest are offered, and the rate of interest goes up to the international level in the same way as commodity prices are levelled up.

The primary cause of the disparity is, therefore, an insufficient rate of interest, and the influx of gold is the natural reaction against this disturbance of the equilibrium. But from this consideration it follows that English prices cannot fall below the international parity, and that the inducement for gold imports cannot arise, provided that the rate of interest is kept up to the mark through the official rate of discount.

It is feared that "cheap" gold, if freely accepted, would force up prices, and so depreciate the currency, the banknote. Cheap gold is tantamount to weak money, such is the argument. Gold is cheap when it buys dear goods; there is no other criterion of its cheapness. Gold tends to flow into the countries where prices are low, or in other words, where money is highly valued. Gold comes in as money, in order to buy cheap goods. Now surely this is not cheap gold, but dear gold! Gold cannot pour into a country except when it is over-valued in the importing country, and this being so, the Bank would surely not refuse to take gold in exchange for banknotes. Cheap gold cannot flow in; it is a physical impossibility. The idea implies that the foreigner would insist on buying English goods when

they are dearer than elsewhere. But the foreigner will do no such thing, and, therefore, a barrier against cheap gold, as desired by Mr. Keynes, is superfluous.

Look at the transaction from the opposite point of view, the point of the English importer of gold. For an English importer there must be. The foreigner cannot place his gold in England, unless he finds an English resident willing to acquire it. The English buyer of the gold must value the gold more highly than the goods which he gives in exchange, his English goods, no matter of what description: commodities, securities. Gold, then, is preferred by the English exporter of goods; he holds it dearer than any other thing that he can get in exchange. Can this be cheap gold, and can the Bank spurn it when the English merchant appreciates it so highly? Of course, gold must be cheap in the country which exports it; but what is that to the Bank of England, whose business it is to serve the British business world?

Turn it whichever way you like, the gold which finds its way into England must be dearer than the things which find their way out of England—dearer to the English public, that is. And who has ever dreamt of a barrier against dear imports? And who shall ever succeed in circumventing gold, the ware of wares, and the wiliest of them all? Gold is privileged in so far as it can always play a double rôle, that of money and that of a commodity, and as cheapness of the one is merely the reflection of the dearth of the other, gold has only to change its mask to keep on the winning side. So it is impossible that it should ever either gain or lose—provided that the price is not fixed by law, and that the rate of discount is fixed in the right place.

But let us assume that the impossible does happen; suppose gold to be cheapened on the world market and flooding England. Will the refusal of the Bank to receive the gold at par prevent the depreciation of the banknote? I think not. Exporters of English goods are paid in gold; they must be willing to accept gold in payment, for if the gold involved them in a loss they would not take it. In other words, they must have a profitable use for the gold, they are assured of a possibility of passing it on; if the Bank does not accommodate them, somebody else will. Exporters re-export the gold as soon as received, they pass it on to their manufacturers, who ship it abroad in payment of their imports. In doing so they avoid

the use of bills of exchange. This shift has serious consequences for the usefulness, the value, of English banknotes. English banknotes are dispensed with in the transaction; they become available for other uses and are offered more freely in home transactions. They are depreciated in the exact proportion as they are neglected through being displaced by gold. I have spoken of the double rôle played by gold. Well, gold can always recover its full value by usurping an ampler share in the work of money—provided that the rate of discount does not interfere. Gold will displace banknotes, which are issued at a fixed rate, by underbidding them, that is by offering itself on more favourable terms. And so it is clear that the mere fact that no gold coin is issued at the Mint is no protection, and that the refusal of the Bank to receive gold is no protection either, because gold which buys English goods must act on prices, no matter in what shape it presents itself. The true protection from the danger of money depreciation is furnished by the opening offered to gold for serving as money—the closing of which is approved by Mr. Keynes. In ousting banknotes from the market through forcing them back to the Bank, gold relieves the circulation of any surplus. But, again, I repeat: it can only do so if the rate of discount keeps true.

To end up with, let us look at the matter from the practical point of view of the actual situation, rather than from the purely theoretical one as above. Mr. Keynes objects to gold, because he is afraid that the world is threatened by a general excess of the precious metal. Other experts, notably Professor Gustav Cassel, rather fear the contrary, namely, that the output of gold may run short of what is required. The most cogent reason for this view is as follows: Gold has been depreciated by the full amount of the rise of the price-level since 1914; £8 are required to-day to do the work for which £5 sufficed previous to the War. This signifies that the supply of gold is diminished in exactly the same proportion, and it follows that the world will be faced with a most serious shortage of gold, if attempts are made to restore gold to all its traditional functions. Now, obviously, the return to the gold standard tends in this direction, so that there is every reason to expect that gold will tend to appreciate, with the consequent depression of prices, and the stagnation of business, and unemployment, and all the other evils which we have experienced since 1920.

Therefore, what the foresight of Governments ought most to guard against, is not the flooding of the country with redundant gold, which will never come to pass, but rather the drain, and the speculative hoarding, of gold. The currencies must be so contrived as to manage with a smaller proportion of gold than previously; that is to say, banknotes must be made to perform a larger part of the work. It is certainly not easy to predict the course which events will take; for we do not know whether the nations are not going to turn away from gold when the danger makes itself really felt. My theory says that the value of gold cannot fluctuate very widely while the rate of discount continues fixed in the right place. The price of gold can be maintained, because the rate of discount will regulate the currency so as to create, automatically, the volume of banknotes necessary for the maintenance of the standard. In the same way as gold can assume a larger share of the circulation if it should lose in value, it can relinquish parts of its present share if it should gain in value. This problem is fully dealt with in *The Interest Standard of Currency* (Part III, chap. vii).

The foregoing discussion of the relation between gold coins and banknotes recalls certain aspects of the theory and history of bi-metallism. A double standard, bi-metallism, was the monetary constitution of many countries for a considerable length of time, and the practical experiences of the working of these systems may furnish an illustration of the matter under consideration. I have contended that gold coins may assume now a larger, now a smaller share in the circulation, in proportion as the price of gold falls or rises. That is exactly what, under a double standard, used to happen with gold and silver respectively. Between 1849 and 1860 the silver five-franc pieces of France, owing to the cheapening of gold, were almost entirely displaced by gold coins. In going to the Mint for coinage, the depreciating metal (gold), sought to recover its value, and to prove its usefulness. It will do so again under an interest standard, in case it should be produced in undue quantities; but also, of course, it will withdraw from monetary service in the opposite case. In displacing the silver coin the usurper gold passed some of its own depreciation on to its rival: silver bullion was cheaper than it would have been without the intrusion of so much gold—monetary silver becoming available industrially. The consequence was that

depreciation was general: the level of prices rose, although less than it would have done if gold had been the only standard metal. The double standard, by itself alone, therefore is proved not to be sufficient to prevent fluctuations; the analogy with the interest standard holds good only in so far as the displacement of one or the other medium of circulation is concerned. But it suggests some further comparisons.

Will the banknote yield as readily as silver did in the above instance? It is not likely that it will ever be completely displaced by gold coins, because of the practical inconvenience that would result. Thus, gold may be expected to meet with more resistance; it will naturally tend to depreciate rather more easily, and if it does depreciate it will do so more visibly, since it cannot raise the level of prices and so disguise its own weakness as a market commodity. The consequence would be an early discouragement of the gold production on the one hand, a more liberal use of gold in the arts on the other hand. Whereas, under the gold standard, the metal does not begin to be more largely employed industrially until it has raised the level of prices—i.e. at the very point of time when, to maintain the level, it ought to remain circulating—under the interest standard this action would set in promptly. There would, then, be three factors to counteract depreciation: a certain increase of the number of gold coins in circulation and of gold in the reserve of the Central Bank, a check on the output of gold, a freer use of gold in the arts. It seems plausible that such a combination of adjustments would suffice to save gold from falling so much as to depress the gold coin below the parity.

The case is much simpler if it is an insufficiency of the gold production that has to be provided against. The nations have been weaned of the belief that there must be gold in circulation; they may, also, be weaned from the belief that there must be a hoard of gold at the Central Bank. It will be possible to release enough gold from monetary use to prevent the market price of the metal from rising above the parity. Moreover, there is this to be said. We are not planning a law that shall outlast Time. Future generations will busy themselves with monetary problems as we are now doing; they will reshape the law which we bequeath to them to suit their needs. If they want more gold for industrial purposes than they can get by mining, they will learn how to dispense with gold in the currency. The

precious metal is not an essential constituent of the interest standard system. It is here proposed to retain it for the very simple reason that, for the time being, it cannot be otherwise employed, and therefore promises to serve as a useful auxiliary.

With a double standard it rarely happened that both the metals were really on an equal footing. "It has been urged," says Jevons in his book *Money* (p. 137), "that the double standard is not really a double one, but only an alternative gold and silver standard." Of course, the interest standard is a single standard with banknotes as the only standard money (legal tender); gold is for subsidiary coinage, as silver has been under the gold standard. It marks a step in the natural evolution of the monetary system; as gold served beside silver, while silver was the standard metal, to end by usurping the place of silver, so banknotes after serving beside gold and silver will end by usurping the place of gold, both the metals retaining a place in the mechanism as mere subsidiaries.

§ 11. Professor Pigou on "The Supply of Currency."

There is an illuminating discussion of the problem of the supply of currency in Professor Pigou's *Industrial Fluctuations* (Part I, chap. vii). After criticizing this writer's conception of the relation between the rate of interest and the movement of prices, I am happy to call him to witness in support of my contention that a stable rate of interest should be the means to the end of stabilizing the currency. If he does not say so in so many words, the conclusion is implied in what he does say. I shall quote rather extensively (p. 271):

"We have next to observe that, if a stabilizing discount policy is adopted in a whole-hearted manner, the logical sequel as regards currency is neither the gold standard plan nor a plan on the Fisher model. It is a paper currency, the volume of which is not regulated by law, but is free to vary in response to whatever changes in the demand for it the stabilizing discount policy allows. For, when once it is decided that the Central Bank shall regulate discount, regardless of anything else, in the interest of price stabilization, a breakdown cannot occur through an excess of currency; it can only occur, if at all, through a deficiency. Thus a currency system so constituted that the Central Bank is free to create and issue as much legal tender money as it requires to do from time to time is the natural associate of this form of discount policy. In so far as this policy is loyally adhered to, this freedom can lead to no excess, while it may obviate the danger of a shortage. In

contrast with what happens under the gold standard *plus* a reserve discount policy, the currency position is always a consequence of the discount policy and not sometimes a cause of it. No regulation of the currency position is required, for it will regulate itself."

The gist of the matter is contained in the statement that *the currency position is always a consequence of the discount policy.* How are we to interpret it? Discount governs the flow and the issue of currency; both an excess and a shortage of currency is the consequence of the discount policy, and of a faulty policy at that, since excess and shortage are faults. Before the issuing bank can be induced to make a fresh move, a fault must be declared, and every move that has to be made necessarily appears as the confession of a fault. The bank will be in a most awkward situation, far more trying than under a gold standard, which always leaves a loophole open for the plea that the gold position, over which it has no control (according to the theory), has thwarted its policy. I have taken to task those directors of Central Banks who have pronounced themselves hostile to the idea of a policy of stabilization. Considering the difficulties of the stabilizing schemes which, while eliminating gold and its supposed automatic influence, fail to substitute some equivalent for the automatic action of gold (its fixed price), it is not hard to sympathize with their attitude. No man, knowing what the implications of the case are, could be willing to assume the responsibility of managing the currency on the principle set forth in the above passage. The system is too vague; it knows of no set measure nor rule: it is a currency without a standard. It would be hard to find a name for it; for surely, paper standard would be too ominous a title. It leaves the crucial question unanswered. For consider it: the rate of discount is supposed to vary, because the level of prices is expected to vary and necessitate an adjustment of the discount rate; the price of gold, too, is to be allowed to vary. No fixed pole or pivot in the whole mechanism—no standard! Surely, if the devisers of the scheme had stopped to visualize the position which it leads to, they would have realized its impossibility.

Indeed, Professor Pigou is fully aware that something more is required. He says (pp. 271–2):

"This assumes, however, that the stabilizing discount policy will in fact be loyally adhered to, and that safeguards against human frailty

are not required. A Central Bank, whether a private concern or an agent of the executive Government, that is free to create legal tender money without limit, has it in its power, if it does depart from the stabilizing discount policy, to make an enormous levy from the public by expanding circulation. A Government in difficulties will be sorely tempted to use this weapon. . . . To leave the Bank or the Government a free hand in currency manufacture without any definite legal restraint is to open the door to grave abuse. Moreover, even if grave abuse does not in fact take place, the fear that it may take place and the suspicion that it will are likely to weaken the general sense of security, which is an important factor in industrial progress."

He goes on to examine the possible devices for obviating the difficulty. The first is to the effect that "it might be advantageous to provide by statute that the aggregate issue of legal tender money shall not exceed some defined maximum except with Parliamentary sanction." However, this expedient does not meet the requirements of every possible emergency; it particularly fails to provide against those panics which will sometimes break out in consequence of some collapse. The argument is concluded with these considerations (p. 274):

"The only way to meet public distrust in the ability of banks to cash cheques with currency is to provide them with ample currency for this purpose. To this end the volume of currency normally in existence must be for a time greatly exceeded. Hence, even though it is desirable on the whole to fix by law a maximum for the issue of currency, in times of panic the note-issuing authority must somehow or other be given power to overstep this limit. Upon this there would be general agreement."

Professor Pigou has furnished a very telling criticism of the gold standard system; it is unable to survive the strain of extraordinary events. Indeed, when the Great War broke out, the foundations of the structure were torn up and cast aside: the fixed price of gold and the convertibility of banknotes were suspended. However, this action was provided for by the currency laws themselves; they are laws which provide for their own suspension in a crisis, a panic. And I ask: is not what Professor Pigou here advocates a repetition of this curious device? He cannot have a very high opinion of the scheme, not any real confidence in its soundness. It does not serve to prevent the panic, nay, it must bear in itself the seeds of panic. Better not waste time and ingenuity on a justification of it. The remedy, too, is of a piece with the malady which seems to

render it necessary. If conditions are allowed to develop so as to end in some great and far-reaching collapse, the evil is not mended by the mere fact that more and more banknotes can be issued. The cases which Professor Pigou specifies happened in the United States in 1907, in England in 1866. Both these years saw the price-level at a high peak. If it had not been for this, it is hard to imagine how the failures could have happened and produced a panic. A currency system which prevents the price-level from rising above its base by more than a few per cent, by that very fact eliminates the cause of general breakdown, and the concomitant panics. It does not need to provide against such emergencies. A system, on the other hand, which has not power to forestall inflation cannot be saved from panic by any device whatever. The only real safeguard of a system is to avoid the shortage and the panic by nipping in the bud the tendencies which make for an excess of issues and a rise of prices. I do not know how to reconcile the contention that "a breakdown cannot occur through an excess of currency; it can only occur, if at all, through a deficiency," with the provisions against panic. The deficiency, which is supposed to cause the panic, can only occur in consequence of a course of expansion, brought about by a mistaken discount policy. We shall presently find Professor Pigou confirming the fact in so far as past records are concerned.

After a brief examination of the systems providing for extra issues of notes on condition that a tax is paid on the excess, Professor Pigou quotes the conclusions of the report of the British Committee on Currency and the Foreign Exchanges (1918), which recommends that the Treasury should have power to authorize the Bank to "issue notes in excess of the legal limit." The closing statement is to this effect:

"The statute should also provide that any profit derived from the excess issue should be surrendered by the Bank to the Exchequer. It will, of course, be necessary that the Bank rate should be raised to, and maintained at, a figure sufficiently high to secure the earliest possible retirement of the excess issue."

In an earlier chapter (vii, Part I) of Professor Pigou's book we read this (p. 90):

"To lend freely does not, of course, mean to lend cheaply. On the contrary, since panic generally comes at the apex of an exaggerated

boom, when high prices have led to expanded imports and are inducing a heavy foreign drain, the rates charged must be high. But at high rates loans must be forthcoming. This is Bagehot's celebrated advice to the Bank of England. . . ."

"The rates must be high": that is to say, the economic temperature must be forced up to fever point. Is not this another of the strange inconsistencies of the theory of discount? The high rate is understood to scare borrowers off, it throws the business community into a panic. In proportion as the rates are raised—from low to medium, from medium to high, from high to exorbitant—the factors of panic gather force; shall we succeed in dispelling the fears by raising the rate from exorbitant to prohibitive? The discount rate has never leapt from 4 per cent to 10 per cent at one bound, and it seems reasonable to assume that if the rate had not been allowed to exceed 4 per cent, it would never have come to a situation in which panic made its appearance. As to the idea of meeting panic by concessions on the one hand, by prohibitive terms on the other hand, it does not seem to me to be prompted by common sense. The high rate is expected to force borrowers to relinquish their loans; it is intended to force them to disgorge. Surrendering the money means that they must surrender the goods against which it was lent to them, and as the necessity overtakes the whole business community at the same time, the surrender can only be effected at greatly reduced prices; in other words, at a great financial loss. The prospect spells panic.

"The currency position is always a consequence of the discount policy," says Professor Pigou. But so long as provisions have to be made for special emergencies the principle suffers an eclipse whenever the provisions are applied. It is monarchy on sufferance, to be suspended in situations of stringency. That will not do. The principle must be erected into a fundamental and unalterable law, on no account to be departed from. In the same way as the gold standard depends on the fixed price of gold being maintained at all costs, a system which is supposed to be governed by discount policy must be established on a fixed discount rate. Failing that, control passes from the law to the authorities entrusted with the application of the law; the foundation gives way and the consequence must be collapse. It is an inconsistency of the first

order to think that a variable rate of discount could serve as a standard of currency; a variable standard is a contradiction in itself. The fixed price of gold, while it is strictly adhered to, is indeed the sovereign controller of the currency position; only a fixed discount rate, not admitting of any sort of policy, can serve as an equally strong controller. But gold is matter, and matter is variable. Under a gold standard, fluctuations are caused by the variations in the productivity of the gold mines. A fixed discount rate, therefore, ought to be a more powerful controller than the fixed price of gold: the currency position cannot be affected by what Professor Pigou terms "autonomous variations in supply" (p. 265).

Professor Pigou, like Professor Cassel, is much concerned about the "secular trend of industry," which he supposes to demand a steady increase in the quantity of currency—he speaks of "increasing monetary needs of a country expanding in numbers and real wealth." I do not believe in increases of wealth requiring additions to the supply of currency; but it is a matter of course that a growing population must add to its currency. The interest standard opposes no obstacle to such increase; the raw material of money is always at hand, seeing that it is not some particular stuff.

§ 12. Discount Experiments.

The success of a currency system designed to secure the stability of the purchasing power of money while working automatically, depends on whether or no the rate of discount shall be kept fixed at the right figure. It remains to be examined which is the right figure and how it may be reached. What are the observed facts? The Swiss banknote preserved its stability for two years on a rate of 4 per cent. In England the bank rate was 4 per cent all through the year 1924; in his speech (1925) to the shareholders of the Midland Bank, Mr. McKenna pointed out that during the year 1924 the English currency was more stable than the American, and if he did not say that this was owing to the discount rate having been kept stable and in its proper place, while the American was moved about, I say so. The Bank of England, anxious not to leave good alone, raised its rate soon after, with the avowed purpose of restoring the banknote to a parity with gold; that is to say, the Governor and the Bank of England believed that a higher rate makes the

paper pound more substantial. According to my theory this is fallacious.

To be sure the *immediate* effect of the raising of the bank rate, more commonly than not, is a slight fall of prices and rise of the rate of exchange. The sufficient reason of this is that the business world, under the impulse of a certain indoctrination which prompts it to expect this development, acts so as to produce the anticipated result. But in a few weeks' time the necessary and natural tendency asserts itself, unless the currency is powerfully interfered with, as was the case in England after Mr. Churchill's act and again in France and Italy during the latter part of 1926.

There are a number of countries where the banknote has not behaved like a parity title. Subject to certain modifications, which I shall touch upon below, the observed facts point to the rule that the currency tends to depreciate in those countries where the rate of discount is abnormally high, and to appreciate in the contrary case: in both the United States and Switzerland the level of prices began to fall steadily after the rate of discount was reduced to $3\frac{1}{2}$ per cent in 1925. This confirms my contention that a stable currency is only to be obtained and maintained with the rate of discount fixed at its natural, or normal, figure. Which it is we shall demonstrate by assuming that we are required to keep the banknote at par with the index of prices, not on the basis of a fixed rate of discount, but through adjustments of the rate when it has been moved up too high or down too low.

However, before I procced to this demonstration, I shall present a few more considerations to show how and why alterations in the rate of discount alter the purchasing power of money according to my theory and contrary to the current theory. I shall make use of various arguments, which I would entreat the reader not to dismiss even though they may strike him as far-fetched and over-subtle. In order to become thoroughly familiarized with a most important subject, it is necessary that we should look at it in all its possible guises and disguises.

§ 13. Interest and Commodities.

The power of money is expressed in the quantity of valuable things it will purchase, or with which it may be purchased.

Money will purchase, and be purchased with, goods; it will also purchase, and be purchased with, interest, which is commodities once removed, since interest is also spent for commodities. Thus, interest and commodities stand in exactly the same relation to money: the value of money is low when commodity prices and the rate of interest are high, and when interest—the rate of interest, that is—and commodity prices are low, the value of money is high, the power of money is great. The case of money value and commodity prices has come to be fairly well understood by most people, whereas the case of interest is still looked at upside down. The Governor and advisers of the Bank of England, and those of the Banque de France, certainly did not see it straight, since they acted on the inverted principle. They did not seem to be aware that if the rate of interest goes down from 5 to 4, it is because £4 will buy as much as £5 did previously (the services of £100 for a year). They do not seem to believe the ascertained facts of historic record, which are to the effect that the rate of interest has always risen and fallen with the level of prices. They seem to be imbued with the logic of John Stuart Mill, who proves by pure argument, unhampered by the weight of hard facts, that in "speculative times . . . the rate of interest is low" (*Principles*, Book III, chap. viii, § 3). The case can be presented in any number of aspects, all proving the same thing. I will add only one more. You pay £100 interest (rent) on a mortgage, when the rate is 5 per cent; but you pay only £80 when the rate is down at 4 per cent. The house is the same as before, but £80 now perform the work for which £100 were required previously—the lowering of the rate of interest has enhanced the power of money.

§ 14. The Rate of Interest as an Aspect of the Velocity of the Circulation of Money.

Another way of demonstrating the relation between the rate of interest and the general price movement is as follows:

A higher rate of interest is equivalent to a shorter term of the loan. Instead of saying how much a sum of 100 yields per annum, we can express the rate by saying how many months or days it takes for 100 to yield one. Thus it comes to the same whether we speak of

a 4 per cent loan or a 3 months' loan,
a 3 per cent loan or a 4 months' loan,
a 2 per cent loan or a 6 months' loan;

for

a 3 months' loan yields 1 per cent in 3 months,
a 4 months' loan yields 1 per cent in 4 months,
a 6 months' loan yields 1 per cent in 6 months.

Instead of taking the year (time) as the unit, we take the per cent. This manner of expressing the ratio enables us to visualize that a higher percentage is tantamount to a shorter time. The 5 per cent loan returns its yield of one to the lender in a shorter time than the 4 per cent loan. In other words, the money must circulate faster, it is under a higher pressure, in proportion as the rate of interest is higher. Now by common consent money circulating at an increasing velocity causes prices to rise.

The borrower consents to pay the higher rate of discount, because he counts on a speedier sale of his wares. He gets the interest charge of 1 per cent returned to him after three months instead of four months. Therefore his profit must be so much the higher, and that implies that the goods rise in price during the interval between the purchase and the sale.

§ 15. Price in Terms of Size.

I proceed to a further argument. Let us assume that there exists a security which is not a banknote, nor at a fixed rate of interest, but at the same time managed as a parity title. We also suppose the currency to be maintained perfectly stable. Let us further assume that the expectation of a certain school of economists is realized, according to which the general rate of interest must irresistibly decline under a stable currency. Thus, then, the rate of interest is supposed to be falling. Obviously it will be necessary to reduce the rate of the parity title in the same proportion, because otherwise its price will rise above par; demand for it, thanks to its better returns, will be heavier. When a thing is more eagerly demanded, it is because it is supplied in insufficient quantities; for the notion of supply and demand is essentially a notion of quantity. The fall of the general rate of interest shortens the supply of parity titles, if their rate is maintained at the former high level; consequently, they go up in price. In order to restore the parity

one has to augment the supply, increase the quantity of parity titles. In other words, the price of the article is higher in proportion as it bears more interest, as the interest evinced for it is livelier.

We are taught, then, that a higher rate of interest is tantamount to short supply, or excessive demand; it is the same thing as a higher price of the article, or capital, in question. When the general rate of interest is high, general prices are high. That is to say, they seem high compared to what they were before—the notion of generally high prices is a contradiction in itself. In order to reduce the price of an individual article it is necessary to lessen the interest for it; and, similarly, in order to depress the general level of prices one has to depress the general rate of interest. Nothing is so proper to make us see the point as is the case of a security: its price falls in proportion as its rate of interest is reduced at a time when the rate of other investments is preserved.

Quantity is the result of the number of pieces and the size of the pieces, and a quantity may be increased, either by adding to the number of pieces or to the size of the pieces. The price of the parity title has risen, because it yields more interest than other investments. It is understood that the remedy shall consist in the reduction of the interest to the average percentage, but not in an addition to the number of pieces. If the desired effect is produced, which is inevitable, it is a proof that the supply of parity titles, their quantity, has been increased, and as no new pieces have been created, such increase must be due to the growth of every individual piece. Here we behold the effect of a lowering of the rate of interest; it weakens demand and depresses the price of the article; the article must be supplied in larger pieces if it is to fetch the old money price. Looked at from the side of money: the money with which the article is acquired gains exactly in the same proportion as the commodity loses. We have thus established the truth that a falling rate of interest enlarges the parity titles. As these are a debt of the issuer, the fall of the rate of interest is revealed as the increaser of the debt. When the rate falls, debts become heavier, because money gains and real values—the things in the possession of the debtors—are depreciated. They become dear, too dear, for the holder, who is forced to relinquish them, because he is unable to carry them at their old price, which he

may have paid for them. So he is forced to offer them for sale, and as there is little demand for them they must be offered cheap. For is it not so: a thing which is being cheapened is always too dear; why, else, should it lose in price?

However, we are intent on proving that in consequence of the lowering of the rate of interest the commodity, or property, becomes larger, so that the reduction of the price is the same thing as the enlargement of the article. In most countries the process may have been observed in the earlier stages of the inflation period, but the other way about. Certain commodities which are traditionally and commonly sold at a steady and uniform price, such as, for instance, the rolls and muffins at the baker's, did not go up in price for a long time; from 1d. to 1½d. is a big jump. So instead of growing dearer, they grew smaller. The rise of price was manifested in a dwindling of the pieces. In exactly the same way it must be possible to express the cheapening of a commodity in terms of a swelling of the article.

In the present instance we are concerned with the cheapening of a hypothetical security. According to the hypothesis, its money price shall not be allowed to vary either one way or the other. Now the other hypothesis, according to which the general rate of interest shrinks thanks to the increasing national wealth, imposes the expectation that our parity title must follow the general trend; otherwise its price would rise above par. But in the same way as the cheapening of a commodity can be regarded as an addition to its volume or substance—longer working hours instead of a reduction of wages—the cheapening process *must* take this course in the case of our parity title. For the point is that its price, in terms of money, shall remain unchanged. I have indicated above what the consequences of the growth of the parity title are: notwithstanding the reduction of the rate of interest, the interest payments will require larger quantities of real goods. Why that is so we are now better able to recognize. It is not possible that all things should be cheapened—i.e. enlarged—at the same time. A piece of goods becomes cheaper for the one party, but correspondingly dearer for the other party. It is highly instructive to observe how any practical measures intended to cheapen things generally, infallibly produce the contrary effect. A country which adopts a policy of deflation with a view to being enabled to sell (export) more cheaply, and so to sell

more, is shocked to discover, by the time a year has elapsed, that it has exported less, that it costs more labour and sacrifice to pay the reduced prices. All goods having grown larger, weightier, the burden is all the harder to bear. The ownership of real goods is felt as an oppressive burden when the interest of those who own the money is adverse to goods; in other words, when interest is feeble and the rate of interest declines.

In an earlier section I insisted that a security with an alterable rate of interest cannot be considered as a parity title. This statement can now be broadened to signify that while the rate of interest is allowed to vary generally, no parity title of any sort is conceivable. For although the price of a particular security may be maintained at a parity through suitable adaptations of its rate of interest, yet its value changes in terms of other goods as soon as the rate of interest changes generally. The reason of this is that the monetary unit in which the security is expressed alters its contents in proportion as the rate of interest changes. The unit grows or shrinks according as the rate of interest falls or rises, whereby the security gains or loses in substance. A stable rate of interest is the necessary condition of any kind of true parity.

We are brought to understand that interest and demand—the rate of interest and price—are but different names of one and the same thing. Reduced interest means reduced demand, and reduced demand means reduced price. But it must not be imagined that one is cause, the other effect. They are parts of one whole, they do not follow one out of the other, but are simultaneous. Lessening demand for houses means a fall of house rent, i.e. interest; but it also means a more eager supply of houses, a semblance of an addition to the number of houses. In the same way, reducing the interest on money means a shrinkage of the demand for loans of money; but it also produces the semblance of an addition to the quantity of money—when the rate of interest goes down, there is much idle money. And again, with regard to bills of exchange, when the lending rate is reduced, the demand for bills is reduced, a conclusion well borne out by the observed facts. The corollary to this argument is that the reduction of the rate of interest is followed by a reduction in the output of the article so affected.

§ 16. The "Size" of the Banknote varies with the Rate of Interest.

Let us now apply to our banknote the insight gained from the consideration of a hypothetical case. The interest of the banknote is the rate of discount. A reduction of the rate of discount renders the banknote more capacious, heavier, dearer, in the same way as reducing the rate of interest made the parity title grow in weight and substance, although it reduced its price. For its owner the banknote has become cheaper when he is charged less interest for its use. It is cheaper for him, means that he obtains more for it, that he can employ it more advantageously. When the price for the loan of banknotes falls, the banknote must be so much the more valuable. But note well the terms of the statement. The exact words are: the price for *the loan* of banknotes, not the price of banknotes direct. The price of the banknotes is expressed in terms of goods; the price for the loan of banknotes, contrariwise, is a money price. If I can procure 100 at a price of 4 instead of 5, these 4 must be as powerful as 5 were previously. But as the banknotes which I receive in borrowing must be exactly as powerful as those which I pay down for the discount, it follows that in consequence of the cheapening of the lending terms, all banknotes must become more powerful. Their becoming more capacious is expressed by the fact that they will embrace, or absorb, greater quantities of goods, in other words buy more —five days' work instead of only four. Ask the English working men how their wages fared, and ask the farmers and the manufacturers how their earnings fared, during the period of the falling rates of discount, 1921 to 1923.

And how are bills of exchange affected? We are obliged to consider their case because the bank of issue does not deal in commodities or labour, but in bills. Bills are goods, the representatives of goods. Like goods, they are the antagonists of banknotes in the tug-of-war which we are here describing. If banknotes, thanks to the reduction of the rate of discount, are enabled to encroach on goods, that is to say, to seize larger quantities of them, they also seize heavier bills, and bills become an undesirable object. Banknotes are preferred to them. The trade in bills shrivels rapidly, and those bills which are in existence, weakened and neglected as they are, seek refuge

in the bank of issue, which is the hospital for suffering titles to wealth.

Before it had become the fashion to manage the currency, the discount policy of the banks of issue was simply to follow the movements, i.e. the fluctuations, of the market rate of interest. Naturally, the rate went up when the demand for loan money was keen, and *vice versa*. It does not appear that anybody troubled to understand the effects produced by this proceeding, which everybody took for granted, in much the same unquestioning way as it was once believed that the sun turned round the earth. This primitive stage is now happily passed; we have entered upon the more advanced era of scientific management, and the practice of currency regulation is governed by theory. It is rather odd that so far this scientific practice has in no way differed from the innocent, purely empirical, primitive one: the rate of discount is to be moved up when the people are too greedy for money, and down when they have no use for it.[1] The managers are managed about, and the counteracters act in concurrence. In the poet's words: "They alter when they alteration find, and bend with the remover to remove." They recognize no "ever fixed mark that looks on tempests and is never shaken." How could stability result from fidgeting? The only progress consists in the fact that the moves are made consciously, with a certain object in view, and that reasons are adduced. Inevitably the time will come when it will be discovered that the object pursued is regularly missed, and some bold spirit will conclude that the means employed must be unsuitable, the reasons given unsound. And thus we are started on the road of progress.

The argument of the managing school is to this effect. When the index of prices shows a tendency to go up, it must be because there is too much money out and circulating; this tendency we can counteract by throwing certain obstacles into the path of currency creation: raise the rate of discount, put on "dear money," ask 5 per cent instead of 4. Let us suppose that it does make money dearer. The enhancement of the price of a commodity always has a double effect. It not only checks the demand for it, but also stimulates its production. This

[1] I find Professor A. Aftalion saying much the same thing in his study of the stabilizing proposals (*Monnaie et Industrie*, chap. iv): "*En tout cas les procédés employés pour agir sur le marché ne constituent pas une nouveauté*," p. 90.

latter effect is entirely overlooked by the current theory and practice. When money is made dearer the natural effect produced by the move is to induce dealers to resort to *substitutes* of money, to circumvent this stiffening money. The natural consequence of this evasion of money is that money loses some of its usefulness, its value. The handiest substitute for money is the bill of exchange (cheques also come under this head), and so the raising of the bank rate inevitably encourages the trade with bills. There is a regular premium placed on bills of exchange. The drawer of a bill concedes a higher discount (to his banker), which, however, means no sacrifice for him, seeing that he obtains a higher price for his goods, which higher price the drawee (the debtor) in his turn charges to his customers. Thus, the extra charge levied by the central bank is added to the price of the goods. Here is the first visible sign of, and excuse for, the rise of prices. Trifling though the actual amount of the increase may be, it is the snowball which in its progress gathers mass and grows into an avalanche. I cannot here go into a detailed analysis of the multifarious train of developments which are superinduced by the measure. The one most readily visible is the forcing out of increasing quantities of banknotes, which become necessary, and are urgently called for, as prices go up. The case of France, touched upon below, presents an incomparable object-lesson.

When prices go up, the inducement to trade in bills becomes irresistible. Who does not willingly pay 1 per cent more discount, if he is enabled to charge his outlay to others and make an extra 10 per cent profit into the bargain? And what is the use of making money dear if the substitute of money becomes so cheap and profitable? Naturally, dealers are eager to have the boom continue, and their liberal use of bills is the most powerful agent of the boom. Everybody is willing to be paid with drafts; dealers play into one another's hands. They make excessive profits, while the consumers and the owners of money and money claims are mulcted.

§ 17. The Credit Policy of the Banks of Issue.

A discount policy consciously aimed at forestalling fluctuations of the purchasing power of money should, above all, heed the effects of its measures on the use of bills (and cheques), which are the main agent of inflation when they are multiplied,

and of deflation when they are neglected. Of course every one of the above-mentioned credit transactions at one stage or another leads through a bank. Expansion would be inhibited if the banks opposed a resistance and did not finance it. However, the banks do not feel called upon to interfere, and why, indeed, should they scruple to accommodate the dealers, seeing that they too must make hay while the sun shines. Their sun is the Central Bank in its readiness to rediscount bills if, and when, their supply of cash runs short. By raising its rate the bank of issue intimates its anticipation of an increasing demand for discounts; it would be strange if the expectation were not fulfilled. The bank acts empirically. It knows from experience that the thing is going to happen, and the thing does happen, because everybody counts on its happening, and acts accordingly. Alfred Marshall, in a note to *Principles of Economics*, p. 106, observes: "The laws of the fluctuation of credit and prices have been much altered by increased powers of prediction." It is time that this alteration should be taken into account in shaping the credit policy of the bank of issue; otherwise the fluctuations will become worse and worse. The bank must avoid raising expectations. It has the monopoly of the issue of banknotes; by raising its rate of discount it warns dealers that cash is demanded, or going to be demanded, more eagerly; in other words, that it will have to issue more banknotes. Now when this happens the consequence is a rise of prices; in the course of time banknotes will be depreciated. Therefore it is advantageous to procure money before depreciation has had time to set in. So it is natural that business men should force their purchases and that prices should rise. The impetus given to the movement, whatever its first cause may be, will carry it through many successive stages. In most cases the rate is not raised once and again, but again and again and again.

It is often contended that bills which are discounted by the bank of issue cannot cause inflation, the reason alleged being that the banknotes issued against bills are returned to the bank when the bills expire. This argument is obviously fallacious, and events have disproved it in many instances. When the rate of discount is raised it is because the bank anticipates that the demand for banknotes is going to increase in consequence of an imminent rise of prices—whether it is an initial rise or a repetition is immaterial. Prices begin to move

upwards before any additional banknotes have been issued; the expansion of credit practised by the other banks provides sufficient means for the rise. The consequence of this development is that larger bills are drawn, and thus larger sums of cash have to be raised at the bank of issue. In trying to exonerate themselves from the charge of causing inflation, the directors of the central banks will point to the figures of their issues and say: here you may see that the level of prices went up before the note issue was increased, and down before it was decreased. It is a poor excuse, and the banks of issue must be held responsible for what happens—more so in the case of the rise than of the fall of prices; discount policy started the chain of processes by creating the inducement to expand the volume of credit transactions in the form of bills of exchange.

I have pointed out that bills are used, not only to raise fresh supplies of cash, but also as a substitute for cash, in the place of cash. In times of a boom, not nearly all bills of exchange go to the central bank for discount, and in so far as they circulate, they produce the same effect as banknotes actually issued. Hence it is that the rise in prices is usually found to exceed the increase of the note issue (see below). But whether drafts are discounted by the central bank or not, they can be employed in one way only, namely, to pay for new purchases which are payable after the maturity of the bill. A bill is not available to meet older liabilities which fall due before its expiration. Hence a bill offers a special advantage only when the drawer (creditor) is eager to buy again, which he is bound to be while prices are booming. But there is nothing to be gained but possible embarrassments by the use of a bill when no prospects of an advance of prices are visible. The premium on bills consists entirely in the rise of prices during the term of their currency, and the chances of a rise depend on the rate of discount. They are born with the raising of the rate; they are maintained while the rate is kept above the natural level; but they are destroyed by the lowering of the rate, though only temporarily, if the rate is still excessive; after an interval a fresh reduction will be necessary.

§ 18. Deflation and an Alternative.

A reduction of the rate of interest is an expression of the fact that the interest in goods has diminished. If it is an act of

conscious management, its natural effect is to discourage the interest in goods. I will adduce only one reason out of many why this should be so. Interest is an item of the cost of production; when this item is reduced the cost of production must also be lessened, and prices ought to follow suit. That is what everybody expects to happen, and expecting it acts upon, deferring purchases until the reduction shall have been effected. Demand thus falls off, and the consequence is obvious. In this way the inducement to use bills of exchange is at a blow withdrawn; it is the sudden collapse of credit. What bills are drawn under the circumstances do not serve the same purpose as before, i.e. to pay for new purchases; they are presented for discount as a means to hold on and avert too sudden and too great a fall of prices. The fact—it rarely fails to make itself observed—that discounts at the Central Bank increase whenever this situation is declared, is an immediate proof that bills have become unnegotiable. Bills are now no longer a substitute for money, but only serve to call money into existence and action. Cash, banknotes, gold come into their own again, they are appreciated once more; neglect and circumvention of them are ended, and depreciation turns into appreciation.

The collapse of credit, the desistence from the use of bills, has disastrous consequences; it spells panic and ruin. The collapse of credit ought to be avoided, and it will be avoided under an improved system. It is here proposed to stop inflation through the reduction of the rate of interest; under the existing system the method to produce the effect is to raise the rate. How can measures the exact reverse of each other lead to identical results? Or has the traditional method never produced the result? First of all, let us be sure that when the general level of prices has been allowed to rise unduly, the turn is bound to come sooner or later, simply because such a price-movement drains the reservoir of saved wealth, and therefore is bound to come to a term, whatever the discount policy may be.

This is a very summary statement of a highly complicated process. Two qualifications impose themselves. As a rule the turn in the price-movement from a rising one to a falling one is not preceded by a fall of the rate of interest; more often lending terms are rather stiffened than relaxed. It is for this reason that the belief has maintained itself that a raising of

the discount rate is the means to stop inflation. But the semblance deceives us. It is the invisible forms of interest that shrink, and the high quoted rates are a kind of screen to cover the retreat. Vastly less money is borrowed, and that amounts to a diminution of interest; the subsequent fall of the interest rates is the visible outcome of the change. As to the fall of prices, it is not caused by a shrinking of the quantity of money actually issued, but by the fact that the substitutes for money (bills) cease to function, and that cash is retained by those who hold it. Thus, if the structure of prices gives way while the bank rate is still high, the decline of the rate is sure to follow and overtake the fall of prices, not the effect of the fall of prices, but in reality the cause, although manifested after the event. Prices fall because the interest for goods has been routed; far more fitly than by a rise of the bank rate, the turn would be ushered in by a reduction.

I said above that the Central Banks are in a higher degree responsible for the rise of prices than for the fall. When the rate of discount has been raised above the normal point, and the level of prices has been forced up by inflation, a reaction becomes inevitable for reasons which are more powerful than any measures that can be applied—short of the abandonment of the monetary unit (devaluation), the proceeding which I am about to explain. Let me preface the subject with a few remarks.

Inflation has drained the reservoir of saved wealth; the whole creditor class has been impoverished. Such wrong demands reparation, and although we are going to prevent the fall of prices, which is commonly considered as the appropriate way of restoring the balance, the stabilization of the price-level must produce some of the effects of deflation. The advantages of debtors will be removed and the burden of debt will make itself felt again. But it will be a slow and orderly retreat, and unnecessary losses and hardships will be avoided.

The problem which we have to solve is to bring down to normal the rate of interest generally, without bringing down the level of prices. It is an experiment which has never been attempted either consciously or unconsciously; always the necessary and wholesome readjustment of the rate of interest has been accompanied by the needlessly destructive general fall of prices.

The following attempt to show how one would have to

proceed in order to avoid deflation is purely academic. The "improved system," alluded to above, cannot be set in operation when panic is imminent at the peak of a price-movement; it must wait till the time when conditions are more settled and prove its worth by preventing a renewed upward swing. The demonstration may serve a useful purpose in so far as it should help us to get a better understanding of the matter.

We do not desire the collapse of credit with paralysis of business; we would avert it if that might be. So if we discourage the use of undiscounted bills, we at the same time must encourage discounts and the creation of fresh supplies of bank-notes. Since the reduction of the discount rate must be expected to cause prices to fall, such reduction will not do. However, there is a middle course: in the situation under review the traditional practice would raise the rate—from 6 to 7½ per cent, as in the French case in 1926. Suppose we leave it unchanged for the time being—do not crack a whip at the runaway horse. After a while the upward movement is sure to come to a stand-still, even though only temporarily. But as it is our intention to prevent a downward movement, it would be a mistake to reduce the rate now. The moment for taking active measures will not have come until there are signs of a fresh upward tendency, which is inevitable while the rate is above normal. The first reduction should therefore be applied as soon as those signs appear; but it must be a slight reduction, and it must not be repeated until again a rising tendency is perceptible. The difference between the new practice and the old would amount to this: (*a*) The rate is not raised at the critical point of time; it stays at 6 instead of going up to 7½; (*b*) Reductions are applied at the moments when an upward tendency declares itself—by the old method they are made while the downward trend persists; (*c*) Reductions are applied in small doses.

A very instructive experiment to demonstrate the workings of the old method was carried out in Austria in 1924–25. The rate of discount had been forced up to 15 per cent; the last leap had been succeeded by convulsions, as usual, and special restrictions had no doubt been imposed to put the patient in a strait-jacket; at all events the rise of prices had been arrested. On November 7, 1924, the Austrian rate of discount was reduced from 15 per cent to 13 per cent. The result was a bad

spell of stagnation, with an appreciable fall of prices and diminution of the note circulation. The dose had been too heavy and clumsily administered. When the reduction was declared, the Austrian National Bank was rudely censured by English experts, who predicted a new course of inflation. Probably the intimidated Austrians resorted to extra restrictions to forestall this eventuality. But 2 per cent at once is brutal, as the event proved. Curiously enough the lesson was not heeded. In spite of the untoward consequences of the first reduction, a new one, again of 2 per cent, was declared in April 1925, while the patient was still labouring under the twinges from the first dose. We find the old fallacy at work: the fall of prices and the stagnation are not attributed to the reduction of the rate of discount, which is believed to have the contrary effect. (I will here remark that the contrary effect will finally be produced, if the measure is repeated often enough; the treatment cannot be endured indefinitely; it is with money as with other things, purely physical. The effects of a change of temperature on the density of water are uniform up to and down to certain points; water becomes steadily lighter as its temperature rises, but when the boiling-point is reached it turns into steam; and it becomes steadily denser as its temperature falls, but at 4° C. it begins to become lighter again, and at zero it turns into ice.)

When it is understood and admitted that the lowering of the rate of discount enhances the value of money (depresses prices), the course to be followed in order to bring down the rate from 15 per cent to 4 per cent will recommend itself naturally. Proceed by small degrees, reducing the rate by only 1 per cent, and $\frac{1}{2}$ or $\frac{1}{4}$ per cent in the later stages, waiting until there are fresh signs of an upward tendency of the index-number before the next step is taken, and so on till the natural level is attained.

There is a rather curious phenomenon implied in the preceding argument. We stated that the value of money is determined by the rate of discount. To reduce the rate steadily in the manner indicated must alter the value of money in the same ratio. Yet the purchasing power of money is supposed to remain stable. How is this discrepancy to be accounted for? The discrepancy existed before the treatment began. In 1924 the purchasing power of the Austrian money was disproportionate to the rate of interest; it was overtaxed. Hence its

weakness and the irresistible tendency to depreciate. The gradual reduction of the rate will strengthen the power of money, i.e. money will resist the tendency more and more successfully in proportion as the strain is relieved.

How the purchasing power of money is overtaxed by an exorbitant rate of discount—the phenomenon is usually described as an acceleration of the velocity of money—has been observed in a great number of cases. Consider the example of France during the era of the first Herriot Ministry, May 1924 to April 1925. The rate of discount was at first 6 per cent and raised to 7 per cent in November 1924 with the express purpose of counteracting inflation. By April 1925 the effects of this move were manifested. The Minister of Finance announced the intention of issuing four milliards of fresh banknotes. This proposal was recommended on the plea that there was a severe shortage of money. The level of prices had risen in a greater proportion than the increase of the note issue;[1] it was evident, the Minister argued, that an addition to the volume of money in circulation need not and would not produce any further inflation. The argument was a queer enough one, but typical of the manner in which problems of currency are understood. It is admitted that new issues of banknotes raise prices. A 400 per cent increase of the circulation has so far produced a 500 per cent increase of prices, but it must not be thought that a 500 per cent increase of notes would further strengthen the effect. Strange logic indeed! But the case very clearly proves that the money was comparatively more efficient than "normally," i.e. with a lower rate of discount. The increase of its volume was 4, but the increase of its effects was 5. It was under a higher pressure. But for this very reason it was also more easily exhausted, and all the more frequently the quantity provided proved insufficient and had to be reinforced. The experiment could not have turned out more conclusive. The raising of the rate of discount from point to point had necessitated corresponding additions to the note issue; the limit which had been set and legally fixed was reached and passed. The result was the spectacular downfall of the Herriot Cabinet. A truly ominous example to show

[1] From February 1922 to February 1924 prices had increased by 78 per cent, the note circulation by only 8·3 per cent (Aftalion, *Monnaie, Prix et Change*, p. 21).

that a mistaken discount policy is apt to overthrow the strongest Governments.

Considering, then, that after a spell of inflation the volume of cash currency (banknotes) has lagged behind the price-level, what is needed to prevent the fall of prices cannot be a diminution of the note issue; it must be an increase. The French Minister of Finance was right after all. Only this increase must be brought about in quite a different way from the one contemplated under the circumstances; not by issues to the State Treasury, but by discounts. The banknotes must displace those bills and credit instruments which are the main factors of money depreciation. A very gradual lowering of the rates of discount will allow this substitution to effect itself.

§ 19. CONCLUSION.

There is much in my arguments that runs counter to certain deeply ingrained views and conceptions in economics. I cannot in this place meet all the objections which I anticipate. But there is one point which I should like to touch upon briefly. The terms dear and cheap, which I have used frequently, are a perpetual source of confusion, and the notions entertained on them are certainly very unscientific. The following passage from Mill's *Principles* (Book III, chap. vi) still seems to be considered as a valid definition of the terms, since it is quoted in a recent publication (*Profits*, by Foster and Catchings, Pollak Foundation):

> "The temporary, or market, value of a thing depends on the demand and supply; rising as the demand rises, and falling as the supply rises. The demand, however, varies with the value, being generally greater when the thing is cheap than when it is dear; and the value always adjusts itself in such a manner that the demand is equal to the supply."

The demand is greater when the thing is cheap? Surely the thing is cheap because, or when, the demand for it is small. So long as a thing is felt to be cheap, demand for it is insufficient, and so long as it becomes cheaper it is too dear; so soon as the demand for it increases, its price will tend to advance: it gets dearer. To say that a thing is cheap or dear is always misleading or meaningless. To say that demand grows or diminishes as the price of an article falls or rises is always wrong, because the rise and fall are not the effect of demand,

but the very expression of it. Now the theory of money and discount is based on the fallacy that more (loan) money will be demanded when it is made cheaper, i.e. when the lending rate is reduced. How could this be conceivable? Money cannot become cheaper unless the demand for it diminishes, and to reduce its price is to force demand to diminish. For demand must agree with price, and what reduces one must also reduce the other. When you desire to make people covet a thing, you must withdraw it from their grasp by making it less accessible, rarer, dearer—provided that it is a thing which people have got to have, whatever the price (the case is different with such an article as Mr. Ford's automobiles). So particularly with money. It seems to become the more valuable the more it depreciates. People certainly need more of it and they make more vigorous efforts to obtain it. But when it appreciates they would rather have it to-morrow than to-day—supposing they are assured of getting it—and they will deny themselves in order to save it for to-morrow; for to-morrow it will buy more. In any case no one tries to borrow money in order to purchase goods, under the circumstances, and the inevitable consequence is that money is not circulated, much less newly created.[1]

To end up with, a word as to the use of gold in the countries which in consequence of too high a rate of discount cannot yet circulate gold coins. Consider the case of France. The franc will never recover its old parity again; devaluation is the only course, and if a stable currency is the aim, it must be devaluation down to the exact level of the stabilized paper franc. Gold, then, must be demonetized so long as the process of stabilization through discount adjustment lasts. The precious metal is bought and sold at its market price. One of the effects of this measure will be to drive those milliards of hoarded gold francs back to the Banque de France in exchange for banknotes, thereby enhancing the usefulness of the banknotes and checking the tendency to inflation. I have already touched upon the subject in an earlier section, where I pointed to a possible

[1] As to the final contention in the quotation from Mill—"the demand is equal to the supply"—I shall have occasion to criticize it in dealing with Professor Cassel's theory of currency and interest in the last of these essays. The logic of the passage under consideration is as desperate as could be, and the fact that the resulting conclusion forms one of the fundamental tenets of the most prominent economist of our own time proves that economics has not made any progress, since Mill, in matters of principle.

danger resulting from this proceeding. The danger will be averted if only the discount rate is managed rightly, so that the banknotes are made to supersede credit instruments, which are the chief agent of inflation. Unfortunately the price of gold is a rather uncertain quantity, while it is being manipulated elsewhere, and moreover is affected by reparations policies. Disregarding this element of uncertainty, we may say that the time for coining gold on a new basis will have come when the parity between gold and banknotes has been preserved over a sufficient period, and the rate of discount is at normal, which will be manifested by the fact that the index of prices no longer tends to rise. Gold coins have not circulated in France for many years, so it will inconvenience no one if their reappearance is delayed for a few years more. In a healthy state of the currency, however, gold coins are a natural element, and serve a highly useful purpose.

The rate of interest is the dominant factor in the play of the economic forces. It makes some difference whether this is understood or not understood. Even more important it is that the play should be understood rightly. At the present time agitation is afoot all over the world to have the claims of interest restricted: the rate of interest is to be depressed with a view to lightening the burden of the debtor class. Yet from what our examination of the effects of the lowering of the rate has revealed, it appears that debts grow heavier, as expressed in terms of goods. Nothing could be more obvious. When the rate of interest suffers a reduction, an equal, if not a bigger, reduction is inflicted on that out of which interest has to be paid: price. When is it that debtors fail? When the rate of interest falls. When is it that workers are thrown out of their employments? When the rate of interest falls. When is it that taxes become unbearable? When the rate of interest falls. The fall of the rate of interest spells slump, unemployment, impoverishment, ill-feeling, sedition.

Debtors, that is to say the working classes, have therefore no advantages to look forward to from a reduction of the rate of interest. But the reverse is also true: creditors have nothing to gain from a raising of the rate. The fluctuations of the rate vitiate all economic and social relations; they are more destructive than earthquakes. They are the chief source of civic and of international strife. So long as the character

of interest is not understood, no improvement in the condition of society is to be hoped for, and I here repeat most emphatically: interest is to-day as little understood as it was when Mill set out to prove that "the rate of interest is not really connected with the value of money." It is the very essence and soul of the value of money, and therefore it depends on the proper management of the rate of interest whether the bank-note will ever become that perfect instrument of exchange which would be worthy of the name of a parity title.[1]

[1] I would beg the reader to compare this criticism of Mill's notion with my remarks as to the relation between price and interest in the closing section of the last essay (p. 365). In a sense Mill is right: a rate of interest of 4 per cent may go with an index-number of 100 no less than with an index-number of 1,200. But then it will not do to speak of the "value of money." The thing money in the two assumed cases is an entirely different quantity; an index of 1,200 stands to an index of 100 as a height of 1,200 inches stands to a height of 100 feet—in the one case money is inches, in the other case it is feet: it is not the same unit.

Third Essay

FISCAL POLICIES AND THE CURRENCY

THE first part of this essay was written after the League of Nations Economic Conference had been decided upon. It was published in the *Economic Review* of February 26 and March 5, 1926, under the title "The Standard of Currency, the Root Problem for the Prospective Economic World Conference." The sections of the second part were added subsequently, prompted by events and writings that came to my notice. It did not seem to me to make for a better form of the whole to work the additions into the original text—apart from certain considerations which make me wish to reproduce it in its pristine cast. Neither do I think that it will annoy the reader to be led over the same ground again after the first rapid survey. References from the earlier to the later sections dealing with the same points have been inserted in their respective places.

PART I

§ 1. INTRODUCTORY.

The world is once more to be helped along by an international conference. This time it is a purely economic conference that has been decided upon. The League of Nations has already taken the matter in hand. Considering how little satisfaction previous efforts of the kind have yielded, we ought, I think, to set about this new one with a little more circumspection and thoroughness. I venture to suggest that those who have any ideas to contribute towards a solution of our economic problems should be encouraged, and enabled, to make them known. The subjoined paper is the contribution of one who has for many years devoted himself to the study of the problem of currency. He is well acquainted with the various reform schemes that have been advocated; he also

knows the mind and the grounds of their opponents. His position has come to be a rather awkward one, in so far as his conclusions run counter to the ideas of both the opposing camps. While agreeing with the reformers in their contention that the gold standard as hitherto applied fails to provide the needful stability, while greatly appreciating the ingenuity displayed by the reformers in discovering good reasons for the necessity of more stability, he is convinced that the practical solutions evolved so far are unsound and therefore impracticable. He is, in consequence, an opponent of the reformers. Curiously enough he opposes them mainly on those very points on which they agree with their opponents. In a sense he is even farther removed from gold standard theory than the reformers. It may be well to touch upon the difference briefly, as it may enable the reader to understand his argument more easily. Both the old school (gold standard) and the new (index standard) believe that currency is more free in proportion as the rate of interest is lower. Consciously or unconsciously, there is implied in this belief *a feeling of enmity to interest.* After having been an ardent warrior against the claims of interest, he has come to an entirely different conception of the nature and functions of interest. In itself interest is not exploitation, is not an evil; only its fluctuations are. That is the main conception on which his scheme of a stable standard of currency is based. He is, then, a reformer in so far as he suggests a different attitude to and treatment of interest; but having absolved interest he was also reconciled to the other main factor in the currency mechanism: gold. Whereas the reformers have been blaming gold for the failure of the traditional system and therefore desire to throw gold out altogether, he attributes the shortcomings of the currencies to a faulty handling of the system, not to the system as a whole. Thus he is not reduced to smashing the system root and branch; he need not go in for radicalism. A very slight, though decisive, alteration in the matter of discount policy is all that he considers necessary to obtain the possible degree of stability. The following pages are an application of his theory to some of the burning questions of the time. Should his criticism strike readers as not unfounded, they may be induced to a hope that some improvement can be achieved.

What, then, are the subjects which an economic world

conference should deal with? Is it questions of markets, of raw materials, of working hours and wages? To anyone not infected with the Socialist idea of State control in all things, these are matters which should be left for settlement to the ingenuity and energy of those immediately and personally concerned: the exporters and importers of goods, the employers and the employed. The less Governments are allowed to, or made to, interfere in this domain of economics, the better. Their business is not to conclude contracts and do business, but to safeguard those contracts which have been entered upon by private parties. A conference got up officially, with delegates entrusted with official power to engage in international obligations, should confine itself to such questions as fall naturally under the direct authority of States, and all that the conference should aim at would be to devise means for preventing the State from taking an active part in the business of the world.

To safeguard contracts is the main duty of Governments. Where the sanctity of contracts is assured in the full implication of the term, business will prosper without any further aid. Business contracts are all based on currency; therefore the safeguarding of the currency is what we demand of the State. We shall see that more is implied in this than meets the eye. Many of the nations foremost in international trade have re-established a gold standard, and it is believed that their currencies at least are safe. But neither the believers in the gold standard, nor the detesters of gold, seem to realize what dangers are at the present moment threatening the stability of any accepted standard and consequently the economic prosperity of nations.

1. THE PROBLEM OF STATE DEBTS.

Motto: "The attempt and not the deed confounds us."—MACBETH.

§ 2. PUBLIC DEBTS ARE NOT A BURDEN.[1]

All the nations have greatly increased their public debts and therefore are made to feel themselves impoverished. It is obvious that this conception must influence business.

[1] See also below § 15, Professor Pigou's opinion.

Nobody cares to supply the wants of impoverished customers, and so the spirit of enterprise languishes. People who believe themselves to be poor naturally shrink from expenditure, and when whole nations, nay the whole world of nations, are taught to consider themselves poor, a liberal hand is viewed with reprobation, and the discovery that coal-miners indulge themselves by going to see the movies raises violent denunciations and protests on the part of the mine-owners, just as the sight of a Rolls-Royce infuriates the virtuous Socialist.

State debts are considered by everybody as a burden on his own shoulders; everybody therefore clamours for their reduction. Is there a Government that has not elaborated a scheme for the sinking of the national debt? Certainly not. Has any voice ever been raised against the desirability of the effort? Certainly not. Publicists from every conceivable camp vie with one another in pouring forth arguments for the necessity of paying off the public debts. The funniest sight to me is the advocates of the monetary reform schemes, who one and all join in the general chorus, utterly unaware of the fact that reducing the debt must inevitably cause deflation and render stability of the value of money impossible.

Where there are debtors there must be creditors. If debts impoverish the nation and individuals, they must likewise enrich someone. The liabilities and the assets necessarily balance, whence it follows that the mere creation of a public debt cannot reduce the wealth of a nation considered as a whole. Impoverishment is brought about by the waste of the real wealth, such as wars will call for, and it is the same whether the expenditure is met out of loans or out of taxation. If debts were the measure of a nation's wealth, the richest nations would at this time be Germany (if we discount the reparations debt, which is not a legitimate one), Austria, Poland, Russia, who have wiped out their debts by means of inflation.

Public debts, then, do not signify poverty. Hence the paying of them cannot spell enrichment. There is, to be sure, a French proverb saying: *Qui paie ses dettes s'enrichit*—"He who pays his debts enriches himself," which seems to contradict my contention. But do not let us be deceived, for proverbs are of the nature of oracles, which have to be interpreted wisely. The proverb applies to individual debtors, and it leaves the other half of the truth unexpressed: He who allows his out-

standing debts to be paid off to him is impoverished. I would call this the more vital part of the truth, because it is generally overlooked. A few words to demonstrate this may not be out of place.

An individual, in order to clear himself of a debt, must manage to earn more than he spends on his cost of living. In other words, he must produce more than he consumes. This he can only succeed in if there is another individual who consumes more than he produces, and so eats up his substance, his outstanding debt. Otherwise the surplus production of the debtor is unsaleable and the money to reduce the debt is not realized. As there are always individuals who do consume their capital, it is possible for individuals to repay their debts. We may regard a nation as an individual in the society of nations, and it is clear that nation *A* can reduce its debt if nation *B* is willing to consume its claim on *A*. The case implies that *A* should produce more than it consumes, while *B* must produce less. It is the situation in which we see Germany and her claimants of reparations. No reparations can be paid, or received, unless Germany is enabled to sell more abroad than she buys, so that other nations must buy and consume more than they produce and sell abroad. The recipients of reparations must needs eat up their claims and so impoverish themselves by letting their productive capacity run to waste.

But the case is different if we consider a nation as an isolated unit—say, if we consider the society of nations as one whole, which is the only proper way of considering it. It is now impossible that any surplus should be produced, because there is no one to whom such surplus could be disposed of. Thus it appears that the total indebtedness of the world of nations cannot be diminished. Here we have probed to the core of our problem. All the nations are striving to reduce their liabilities, both external and internal; that is to say, that each one wants to produce more than it consumes, to sell more than it buys. This observation furnishes the key to the present economic situation: the all-round over-production, the congestion of the markets, the friction, the rivalry. Cut this Gordian knot, and you have solved the problem which an economic conference has to face.

Why should a nation need to economize in order to be

enriched? Nations are not like individuals. You and I are growing older, and when old we shall lose our capacity to provide for the needs of the day. Therefore we reserve some of our working income against our old age. But a nation does not age, at least not in the same manner. It is always young and strong, always capable of supplying its daily wants out of its daily toil. While a nation feels young and vigorous it cannot think of accumulation. For a nation to do so is a sign of wasted strength and spirit, of decrepitude and despair. I would remind our present-day nations of the poet's fine word:

> "Ah, take the cash and let the credit go,
> Nor heed the rumble of a distant drum."
>
> OMAR KHAYYÁM.

All our danger arises from our straining after an imaginary credit and from our listening to the distant drum, and our poverty is simply translated from the erroneous notion that we ought to feel poor in consideration of our many public debts.

§ 3. DEBT REPAYMENT AS A CAUSE OF DEFLATION.[1]

I am going to analyse the case from the point of view of the internal debt first. It is practically the same in all countries: the debt amounts to so much; so much a year is required to sink it within a given number of years. The creditors of the State are expected to allow a certain part of their bonds to be cancelled annually, that is to say they have to sell bonds to the Treasury for cash. This would be all right if they were able to reinvest their funds, either in public or private loans. But that is out of the question. In order to clear the sums provided for by the sinking fund scheme, the Treasury is forced to economize on its expenditure, and therefore cannot embark on any new undertakings. This in its turn narrows the field of private enterprise; the industries, in consequence, are debarred from raising loans. No opening is to be found for the available funds of the creditors, who are reduced to consuming them and so eating up their fortunes. The rich men are expected to impoverish themselves that the State may be enriched through the sinking of its debt. But the rich men

[1] See also below § 8.

will oppose a resistance to such a course, and as it is they who have to contribute the means for the attempt, they will withhold their means. Laws or no laws, the inhibition happens automatically.

There are those who gloat on the notion of reducing the excess of the rich. They fondly think that they would be benefited. But that is a mistake. The loss of one set of rich men would make the gain of the other set of rich men, while the non-possessing part of the population would not profit anything at all, seeing that *we are sharers of the State debt only to the extent that we are owners of property.*

The wealth of a nation is divided between those who own the real capital and those who own the money capital. But this does not mean that the total wealth is the sum of the money capital added to the value of the real capital. In effect the total of the two is only just as much as each of them taken singly. To visualize this, the simplest way is to imagine the case of a house which is mortgaged to the amount of half its price; one half is owned by the proprietor, the other half by the creditor. It is the same with any kind of property. Also the State debt is so divided, the owners of the money capital being the creditors, the owners of the real capital the debtors. The national debt is therefore a charge on the latter category and an asset of the former—whereas those who own nothing have no direct interest in it either one way or the other. This way of viewing the matter is, I believe, new, and I must beg the reader to consider a while before he rejects it.

We found that the State creditors are embarrassed if their bonds are being redeemed by the Treasury. And surely it cannot be otherwise, since the transaction narrows the market for money investments and so depresses the price of loan money, which is the rate of interest. So it is proved that one category of owners is made to suffer a loss, while the other is benefited. But, "which is the merchant, and which the Jew?" As the debt shrinks, the charge on real capital ought to be eased. However, the very contrary will take place: the owners of real capital are even more seriously embarrassed. Not because they are made to pay their share of the taxes necessary to meet the exigencies of the sinking fund; as a matter of fact they pay them into their own pockets, since it is their debt that is being reduced. Their difficulties arise from the manner in

which the State creditors react against the menace to their interests. They retrench on their expenditure, as indeed they are forced to, and supposed to do. (It is their manner of "withholding their means," and what law could be invoked against it?)[1] Demand for goods is thereby weakened, the turn-over of the output is hampered, prices decline, the yield of real capital decreases, the purchasing power of money grows, the value of bonds rises, and the debt, far from being lessened and lightened, becomes bigger and more burdensome, even though the figures in which it is expressed should be somewhat reduced. Thus it is that the redemption of public debts causes the decline of the level of prices and is the undoing of the owners of real capital. Knowing this, we understand the reason why it is the bondholders that favour debt redemption. In proportion as the debt diminishes, bonds gain in value, in exactly the same way as commodities rise in price as the supply diminishes.

What I have been trying to indicate in the foregoing paragraph is up to a certain point foreshadowed in a book to which I owe a great debt of gratitude, as it provided the first stimulus to my taking up this problem. I am speaking of *The Fallacy of Saving*, by John M. Robertson, 1892. The author proves by irrefutable arguments that the economy needed to accumulate the funds for the repayment of the debt must result in an economic crisis, with all its evils. But his solution of the problem is strangely unreal: the State is to provide employment by "instituting important public works" (p. 122). How can the State pay off debts and at the same time defray the expense of such works? It is impossible. But Mr. Robertson insists on the necessity of making an end of the national debt, which he looks upon as an evil, "a particular form of social parasitism." He considers interest as exploitation, and he fails to see that debt redemption means the enrichment of one class of rich men at the expense of the other class of rich men, with incidental unemployment and suffering for

[1] The financial article in the June issue (1928) of *The Atlantic Monthly* recalls events which happened when debt-sinking began to produce effects in the United States about the year 1881. A capitalist who had been living in rather grand style on the revenue from 6 per cent State securities, finding that he could reinvest the money repaid on maturing bonds only at 3 per cent, "immediately disposed of his carriage, horses, footman, and other servants, and adopted a scale of living in keeping with a greatly reduced income."

large sections of the working class. Enmity to the claims of interest is bound to mislead the investigator, and the notion that interest is abstracted from the product of labour is the fundamental error of the science of economics. This error was born from the failure of economists to realize that wages and the rate of interest are exactly the same thing, namely, the basic price of goods, so that any development that curtails one also damages the other. (It is all because the true principle of the standard of currency has not been grasped.)

Through the fall of prices, that is the appreciation of currency and money claims, the owners of money capital recover more than what they pay out in taxes—in so far as their commercial loans do not come to grief through the insolvency of debtors in consequence of the slump. A policy of debt redemption inevitably brings in its wake an economic crisis with a decline of prices, which may be said to restore the debt as fast as it is being diminished. But this fact is as yet so little understood that I must beg leave to explain my meaning. Suppose the debt to be reduced by 2 per cent annually; suppose the level of prices to be reduced by the same percentage—which it is sure to be. A little bit of computation will show that the debt, expressed in terms, not of money, but of goods (the price of goods) remains the same. A debt of 100 million is equal to a million units of, say, coal at a price of 100 a unit; when the debt has shrunk to 98 million and the price of coal to 98 per unit, it still takes a million units of coal to equal the debt. The debt is not diminished one jot, although two millions have been paid out to the creditors; every bond still outstanding is worth exactly 2 per cent more.

Perhaps it will contribute to make the point clearer if we invert the case. When a State adds to its debts the consequence is the depreciation of money through inflation. Running into debt comes from excessive consumption; when consumption exceeds, prices rise. Although the figures expressing the debt are swelled, the weight of the debt diminishes. We said that the national debt is a charge on the real capital of the people. Now when prices rise, the money yield of real capital grows; its value is enhanced, its owners are enriched; whereas the owners of the money capital, the creditors, are exploited through increasing cost of living. Knowing this, we understand why it is the debtors—the owners of real capital—who favour

the augmentation of the public debt. Debts are like any kind of property: the more there is of them, the less is their value and the pleasanter the debtor's lot.

From what has been said, it follows that the national debt is increased when it is supposed to diminish, and diminished when it is supposed to be augmented. That is to say, a policy of debt redemption cannot succeed. The deed is never accomplished, but "the attempt confounds us." The attempt, in the first place, superinduces the stagnation of business, with loss of employment to the workers, loss of capital to the owners and shareholders of real capital, a merry spell of profiteering on the part of the fundholders. Then the inevitable reaction sets in: protectionist tendencies prevail and the raising of tariffs puts a check on the decline of prices. The same effect is produced by the high direct taxes. A situation is thus created in which business might revive, and will show spasmodic revivals. But no lasting recovery is possible so long as the policy of debt repayment is persevered in.

Why should it be desirable to reduce the national debt? Is it not just as much a national asset? Whatever interest is paid by the debtors (the owners of real capital, be it remembered) is returned to them in the shape of decent prices for their goods. It is no more of a burden than the air lying over us is, which would crush us if it were not for the air in our lungs, which suffices to neutralize the pressure from outside. The public debt has been a bone of contention long enough. It is time to recognize that the safest, the most equitable, and impartial policy is to leave it alone and have only one care: to keep it unchanged. This is one of the corner-stones of a stable system of currency, which in its turn is the very rock of economic security and prosperity.

§ 4. International Debts.

Now for the international debts, i.e. debts which States owe to foreign creditors. (As a matter of fact private debts should not be viewed or treated differently.) I have already pointed out that their repayment is impossible, unless the creditor States consent to eat up their claims and be impoverished. There is no way out of this *impasse*. If economizing is not to blight enterprise, international debts will have to be left intact. The Reparations debt of Germany must be either

remitted or, since it cannot be allowed to continue for ever, reduced to a fraction. I fail to see why international obligations should be an evil. They are a bond of unity so long as nothing is done to alter their value by any one of the parties refusing to buy its share of the debtor's exports and so enhancing the value of its currency and of its claims. This is one of the main points for the economic conference to settle. I would suggest a solution something to this effect:

(1) *The foreign claims of a State, including the claims of private creditors on private debtors, are automatically reduced in the same proportion as its level of prices falls.* (Another way of expressing the same idea would be this: the claims on foreign debtors are reduced in the same proportion as the national debt is reduced.)

The fall of prices is an indication of insufficient consumption. A country where it takes place does not buy and consume enough, and thereby restricts the market for the goods of other countries. It is an element of disturbance, and must be brought to its senses through a penalty. Reducing a country's foreign claims amounts to making it pay to its foreign debtors what it has failed to buy from them; the debtors are invited to consume what the creditor, in his greed, has spurned. What is needed is an instrument for forcing each nation to consume its own output, to refrain from an attempt to enrich itself, which can only be done to the detriment of others, and is a hostile or treacherous act. The conference has got to solve the task of organizing consumption. We have not heard for a long time of any people being debarred from obtaining the needed supplies of raw materials; it is outlets that are wanted, and outlets depend on consumption.

There is perhaps a certain difficulty in the fact that not all countries have evolved very reliable price statistics. However, this need not scare or deter us. The creditor nations do have good methods for computing an index of prices. And they ought to be generous. If they would allow their price-level to go up a few points, it would help things along greatly. This rising of prices would signify that the creditors are consuming more than they produce, and in doing so they would be eating up part of their claims and lightening the burden of debt of their poorer neighbours.

I will presume to submit to our conference another suggestion: (2) *The foreign claims of a State whose official rate of discount is below 5 per cent is reduced by as much as its rate differs from this normal rate.*

The United States of America, for instance, would thus have the choice of either reducing by some 30 per cent the claims of its capitalists on foreign debtors, or of raising its rate of discount from $3\frac{1}{2}$ per cent to 5 per cent, which latter measure may be expected to cause the level of prices to go up accordingly.

I am much afraid that those of my readers who are familiar with and believers in the current theory of currency control will scornfully dismiss my proposals. It would take up too much space to prove my point, and I must refer the objectors to my book above mentioned. Perhaps it will turn their thought in my favour if I point out how the value of bonds is affected by a change of the discount rate. The price of bonds, which have a fixed rate of interest, will rise when the rate of discount falls and *vice versa*. Suppose a bond bears 5 per cent; obviously its price is above par while shares range below 5 per cent, and the price of shares is largely determined by the rate of discount. (It is only because the investing public has been wrongly indoctrinated that the reverse has seemed to happen of late.) If shares gain and the discount rate is raised along with the growing of dividends, the bond naturally loses. We have this alternative: the price of bonds goes up: this signifies that the debt is becoming weightier, that the debtor is more heavily burdened; the price of bonds sinks: this signifies that the debt is becoming lighter and the debtor's burden is eased. No one, surely, will deny that much. Well, it follows that if the creditor nations wish to be accommodating, the means to the end is to ease the burden by bringing down the value of their bonds, which necessitates the raising of the rate of discount.[1]

From the problem of debt we have been led round to the problem of the rate of interest. This was inevitable, since debt and interest are the same thing. When it is a question of stabilizing a debt, the stabilization of the rate of interest is a

[1] When I say "their bonds," i.e. the bonds of the creditors, I do not mean the bonds issued by, and constituting the national debt of, the so-called creditor country; I mean the foreign bonds placed in the country. Obviously a change in the discount rate affects these foreign securities in the same way as it does national bonds, and so it is within the creditor's power to lighten the debtor's burden by means of a raising of the discount rate.

natural corollary. An alteration of the official rate of discount affects all debts, private and public, internal and external, because it affects prices, and prices are the measure of debts. No stabilization of any sort can be achieved so long as the rate of discount is not fixed at its proper level. To prove this and to show how it can be done is the main object of my book.

I know all the arguments that can be urged against such a notion, and will answer them briefly by an analogy. It used to be thought that flying, for a body heavier than air, was only possible by means of wings that are set flapping. But we have all become familiar with bodies that fly with stable wings: airplanes. Well, my solution of the currency problem rests on the same principle as airplanes: in the place of flapping wings (the up and down of discount rates) my mechanism has a propeller. More I cannot say without embarking upon a lengthy demonstration. Perhaps my analogy is enough to make the reader consider whether my suggestion might not be worth a little attention.

2. HOW TAXATION AFFECTS INTERNATIONAL TRADE.

§ 5. Taxes as an Element of Prices.[1]

In the first part of my essay I tried to show why and how measures to reduce the public debts disturb the stability of the currency and are detrimental to the exigencies of international trade. The effect produced by debt redemption is to enhance the purchasing power of money, in other words: deflation. In the present part I shall undertake, in the first place, to demonstrate how and why the taxation necessary to repay debts has the contrary effect, forcing up prices and so diminishing the purchasing power of money, which means inflation. If my contention holds good, it signifies that the means employed are contrary to the end pursued, so that mighty energies are wasted in the attempt to achieve the impossible. What are we to think of a policy that sets out on a course which necessitates only such steps as tend in the opposite direction, so that the action and the counteraction just paralyse each other? There is nothing so apt to destroy hope and kill enterprise as a sense of wasted effort, and there is

[1] See also below § 12.

nothing more humiliating for Governments than to have scheme after scheme frustrated. The political tendencies away from democracy are largely due to the failure of Governments to be as good as their word, and the spirit of Fascism will rapidly spread unless sounder, more consistent, and more realizable policies are inaugurated. If the scorners of a real solution would only consider the practical results of their theories, they might be chastened into some amount of willingness to consider new suggestions, however strange these may at first appear.

A Government which sets out to pay off debts is forced to augment its revenue, unless it can manage to retrench on its expenditure. The latter course, which implies wage cuts more than anything else, has clearly a deflationary effect, seeing that wages and salaries are prices; the former course implies the creation of new taxes or the increasing of existing ones, which cannot but tend to raise prices, seeing that taxes are prices and an element of price. Thus the idea of debt redemption is proved to be inherently contradictory.

Prices are composed of a number of elements, such as wages, interest charges, taxes, which in their turn must also be considered as prices. Whatever enlarges any one of these constituents will necessarily increase the final price. It does not require an elaborate argument to show that the forcing up of taxes must have an inflationary effect. However, all economists, theoretical and practical, seem to hold the contrary opinion. While manifestly benefited by inflation, business men are as a rule violently opposed to taxation. At the present moment in all the countries afflicted with the fever of debt redemption there is from the camp of business one chorus of protest against what is called the exorbitancy of the taxes. Trade is poor, and it is natural that the drain of imposts should be resented. But *the notion that trade would revive if taxes were eased is an illusion.* One of the English critics of my book imagines having dealt the final blow to my theory by ridiculing the contention that a reduction of taxes would hamper business. We are here discussing the means for restoring business to a better state of health; so it is not out of place to examine the question.

My argument takes its cue from the theory of a German currency reformer, Silvio Gesell, which is to the effect that

the raising of the taxes diminishes the purchasing power of the public and therefore should be used as a means to curb inflation—and *vice versa*. This theorist, then, who prides himself on his heresies, holds the current view that high taxes hamper business. Yet at the same time he utters a warning that Customs duties, i.e. indirect taxes, should not be included in measures to influence price through taxation, because the effect of raising the tariff would be to raise prices, when it is desired to depress them, and *vice versa*. Let us try to fathom the case. Taxes, it is argued, constitute an item in the cost of living and the cost of production. They lessen the means of purchasers, who are forced to buy the less until prices have been adapted to their reduced purchasing power, that is to say, reduced. The argument seems plausible; but the semblance deceives. If indirect taxation is admitted to produce the contrary effect, there is no reason why direct taxation should not. It is with taxes as with interest: they are not paid once or twice a year, but every day; they are contained in every price that is asked and conceded. If, therefore, taxes are reduced (or increased), an element is subtracted from (or added to) every price. May I be allowed to quote a paragraph from my own book *The Interest Standard of Currency* (p. 182):

"We have to look at the matter not only from the purchaser's point of view, but also from the point of view of the seller. The manufacturer of an article may resist the pull on prices while he has to pay full taxes, but yield when his taxes are lessened for him; he may resist the temptation to raise his prices while taxes are moderate, while the raising of his taxes will furnish him a welcome pretext for giving the screw a turn upwards. Gesell again and again stresses the idea that the *expectations* of the business world and the general public are the decisive factor in the movements of prices. What expectations does the reduction of taxes create? When prices tend to fall it is because the public wants them to fall, and is exasperated that they refuse to fall. Now the easing of the tax-levy will put it into every head that prices ought to yield, that the producers and merchants have no valid grounds for resisting. The consuming public will not rush out to spend what they save on their taxes; they will wait until the shopkeeper has surrendered his share in the general bounty. There cannot be the slightest doubt but that the measure, if applied in the circumstances here assumed, must produce the contrary effect of the one contemplated. Suppose now it is applied when prices are tending to rise: lower taxes when Gesell would have them raised. The consuming public are opposed to this price-movement, and at strain for some good reason for resisting it. The reduction of taxes will furnish this reason; every buyer argues that the producer,

who has had the cost of production reduced for him, has no justification in further raising his prices; he expects that the rising movement will be stopped, and so he defers his purchases, which means a slower circulation of his money and a curb on prices."

I have very little to add to this. The truth of the contention is beautifully borne out by what is happening in France these weeks and months of the financial crisis. Successive Governments have added taxes to taxes in order to stop inflation, with the result that inflation has proceeded all the more merrily.

If the decline of prices does embarrass business—and there is innumerable evidence to prove this point (see, for instance, the publications of the League of Nations' Labour Office)—and if it is true that taxes are an element of price: there is no other conclusion possible but that additional taxes will rather benefit than damage business, at least temporarily. And *vice versa*. More generally speaking, it must be admitted that the fluctuations of taxes always move in the same direction as the fluctuations of the price-level.

It is not, then, the amount of taxation that crushes enterprise, but merely the way in which the revenue is spent. The money paid out in taxes would be recovered in the form of better prices if the taxes went to the payment of higher wages and salaries, to the creation of public works (not necessarily warships); but it cannot be recovered if it is held up on its way by a policy of debt sinking. In the long run, to be sure, it will move on and return to the producers. But there is time lost in the process, and time *is* money. The losing of time actually destroys money, because the intervening fall of prices destroys money capital and inevitably leads to a restriction of the volume of money issued.

The effect of taxes on the price-movement has been misinterpreted, because the counteracting influence of other measures has been overlooked. The contrivers of schemes to stabilize the currencies are all championing the old error. Mr. J. M. Keynes advocates the Capital Levy to check inflation: the increase of taxation, i.e. prices, with a view to checking the rise of prices. Silvio Gesell and his disciples clamoured for a capital levy during the inflation period in Germany, and at the present moment (December 1925), when France is passing through one of her inflationary phases, they again recommend their panacea. But practical statesmen are infected

with the same error, as witness the bungling efforts of the French Governments already mentioned.

My theory says: it is impossible to overtake inflation—by which term I would designate any course making for the rising of prices, the depreciation of money—through the raising of taxes, because higher taxes in themselves constitute a factor of money depreciation. And likewise the lowering of taxes cannot counteract the fall of prices and so remove the handicap on enterprise, because to lower taxes is to remove one of the main props of the price-level. In the first part of my article I concluded that the stabilization of the currencies implies the stabilization of the public debt. Here now we are led to conclude that it also implies the stabilization of the taxes. Of course this is really saying the same thing. For what could necessitate an increase or a decrease of the State's revenue if the debt is to be left unaltered?

Enough has been said, I should think, to make it understood that direct taxation exercises a most powerful influence on the economic forces. An economic world conference, therefore, cannot ignore this problem, and ought *to lay down rules to enforce a policy making for the stabilization of taxes.*

§ 6. Customs Duties and the Currency.

It is a matter of fairly general knowledge that *Customs duties* influence international trade. Again and again it is painfully demonstrated to producers and consumers alike how the action of some foreign Government may encroach upon their economic interests. When the so-called McKenna Duties were restored by the present British Government, several Swiss industries, for example, were disastrously affected. But everything properly considered there is no real difference between these indirect taxes and the direct ones. To me the problem of free trade is merged in the all-including problem of currency.

Economic history, so far as I know, records no instance of the institution of new protective tariffs except in periods of deflation (of falling prices). If at the present moment one country after another attempts to raise its Customs barrier, it is because their prices have fallen or are falling. There is a curious contradiction involved in this, one of those baffling inconsistencies which make men seek the evil in a place where it is not to be found, and apply remedies that can do no lasting

good. How is it that countries with falling prices are threatened by an excess of imports? Do not goods tend to go to those markets where prices are high? Assuredly so. The fall of prices, then, enhances prices, since we see goods rush to the countries where prices go down? Assuredly so. The fall of prices enhances *the value of money*, by which the importer profits because the rate of exchange translates a smaller sum as expressed in the buyer's currency into a bigger sum as expressed in the producer's currency. That is one of the truths which, though proved up to the hilt, and in countless instances, is persistently missed by those who ought least to miss it.

However, the raising of the Customs duties actually does result in what is required: it stops the fall of prices. But it is a roundabout method and therefore an expensive procedure attended by many offensive complications. The sooner it is discarded the better. All that is needed to dispense with it is stability of the currency, which quite automatically includes stability of the balance of trade and, concurrently, in so far as other countries preserve a stable currency, stability of the rates of exchange. Of course I do not mean to deny that certain interests will keep up an agitation for protection; but I am confident that they will be defeated.

Some free traders propose to abolish Customs duties entirely and at one fell swoop. But that is madness. It cannot be done either suddenly or gradually. Although import duties were primarily instituted as a fiscal measure, i.e. with a view to obtaining Government revenues, the mechanism which they have necessitated has assumed functions which cannot now be ignored or stopped, and while the mechanism is needed, there is nothing to be gained by relieving it of the function of collecting the import tax, which is as legitimate as any other. International trade relations have evolved so as to adapt themselves to the existing duties. They are forced to readapt themselves continually as tariffs change, and this readaptation is a waste of energies, while the possible degree of perfection is never reached. Hence what is wanted in the interest of international trade is neither the abolition nor the reduction of the tariffs, but their stabilization. If some industries appear to be less well protected than others, the readjustment of the balance will come about in a very short time and much more naturally than by way of new legislation. The sheltered trades will

absorb capital and labour from the exposed ones, with the result that profits and wages are levelled, which is justice and the last word.

Customs tariffs are arrived at through treaties between the trading nations. Such treaties are grave matters, and to tamper with them, whether wittingly or unwittingly, is a breach of faith. Now I maintain that any alteration of the value of a currency is in effect a breach of the Customs treaties. Consider, for instance, the case of two countries such as France and Denmark during the year 1925. I suppose there is between them a treaty regulating the duty on the various imports. The French currency during 1925 was depreciated by, say, 50 per cent, the Danish appreciated by, say, 40 per cent. Suppose that the French duty on Danish butter is fixed at two francs a kilo, a kilo costing 20 francs at the beginning of the year, but 30 francs at the end of the year. From one-tenth of the price the duty was thus reduced to one-fifteenth of the price. The Danish duty on French wine is fixed, say, at one crown a bottle, a bottle costing five crowns at the beginning of the year and three crowns at the end. From one-fifth of the price the duty was thus increased to one-third of the price. That is how solemn international engagements are kept when currencies are not stable. What wonder that the morals of international trade should have degenerated? What wonder that confidence should be shattered and the mechanism of trade dislocated? What would happen if a Government presumed to raise the duty on imports by some 60 per cent without first bargaining for a new contract? What are we to think of the husbandry of a State which allows its revenue on an important article of consumption to dwindle by some 40 per cent within a year? That is what happened with the French duty on Danish butter in the latter case, and with the Danish duty on French wine in the former case, all in consequence of inflation in France, of deflation in Denmark. Switzerland, a neighbour of France, had only recently raised its tariff; yet all through the year of French inflation the Swiss shopkeepers in the border localities complained loudly about the unfairness of the competition waged against them by the French dealers across the boundary. What better proof than this that tariff treaties are scraps of paper and tariff barriers crazy defences when the currencies go crazy?

To alter the tariff rates is an attack on the stability of the currency; to let the currency depreciate or appreciate is an attack on the tariff rates. Of course stable tariff rates do not suffice to stabilize the currency; but they are a necessary condition to achieve this end. And indeed, when the idea of stability of money value has once been grasped in all its bearings and firmly established in practice, tariff policies will have an end, and efforts to revive them will be discredited.

An international economic conference cannot evade this portentous issue. It will miss its purpose if it fails to provide an agreement, solemnly pledged by all participants, *to refrain from any alteration of the existing tariffs*.[1]

§ 7. Export Duties.

In the last days of 1925, just while I was writing this essay, the newspapers reported that a certain amount of animosity was afoot in the United States against those countries which were *protecting their exports* by some system or other. It was hinted that America was prepared for a rubber war against England. Obviously such a situation presents a problem which an economic world conference should take up and solve. Let us see how it resolves itself when viewed under the light of my theory of currency.

Mr. Hoover's charge against England is that the price of rubber, of which the United States is the greatest consumer, while England controls its output in a monopolistic way, is unduly raised by the British policy of limiting the output. In other words, it is supposed that the British producers of rubber are overpaid and receive more than the cost of production would justify. Supposing this to be the case, the consequence must be that more money pours into the exporting country than out of it, so that money may be expected to accumulate in it. This state of things cannot endure long, because accumulations of money become a burden and have to be disbursed and dispersed, sooner or later. When this takes place more money is supplied, and the inevitable result is a general rise of prices: the standard of currency is upset. Rising prices mean a lower rate of exchange, and this in its turn signifies that exports are cheapened, while imports are rendered

[1] A criticism of the tariff recommendations of the League's Economic Conference is given below § 14.

more expensive. Thus it appears that the natural process of adaptation may be counted on to restore the balance, so that acts of retaliation need not be resorted to. However, the fact that so shrewd and fair-minded a statesman as Mr. Hoover should be roused to protest by the interference of the British Government proves the unsoundness of the action—its ultimate futility being proved by the results just shown. An economic conference must lay down strict rules to stop such attempts.

I have expressed the opinion that a country selling above cost of production price accumulates money. When money has accumulated in a country it is because this country has made unfair profits on its exports. I hope to publish this article also in America; but I will not shrink from pointing to our American friends as those that have sinned in this respect. The accumulation of gold in the United States betrays the evil deed. It will not do to object that the gold is the fruit of thrift and wisdom. The War, which occasioned it all, may have been folly and wickedness; but it was a fatality also. The peoples of Europe who passed through the ordeal should not have been exploited, and what exploitation has taken place should be atoned for as speedily as possible. I refer the reader to the chapter of my book which is entitled "The American Hoard of Gold."

The idea that has been more and more insistently impressed upon me as I threaded the maze of the currency tangle is that the currency is the great arbiter of justice. It will visit on the offender any sin of commission or omission, it will bring wrongs home to roost. But why should there be wrongdoing, injustice; why depend on the chastening cure rather than on the chance of prevention? It is possible to establish a system which will keep the value of money tolerably stable. My article is mainly concerned with showing what should be avoided by Governments in the interest of stability. To recapitulate: (1) Avoid attempts to alter the magnitude of the public debt; (2) avoid attempts to alter the national revenue in its relation to expenditure; (3) avoid attempts to alter the degree of fiscal protection afforded to the various industries. I have tried to explain the interdependence between these factors and the currency. Indeed, they are so closely related that they should be considered as one and the same thing, only viewed under varying aspects. Stabilization cannot be

confined to one or the other, as those stabilizers of currencies who have had a hearing so far believe, but must be extended to every phenomenon bearing on price. Such all-round stability will greatly narrow the field of politics. It will not narrow the field of human endeavour, though it cannot fail to relieve mankind of much that we have come to resent as its more sordid cares. I therefore will stress once more the opinion that an economic world conference can have no other task to fulfil than the devising of the best ways and means for enabling the nations of the world to secure at length the great boon of stability.

PART II

§ 8. The Teachings of History.

In no country has the problem of the national debt been as much agitated as in England. The history of the English national debt proves the truth of the main contention of my essay. The debt was first started with the foundation of the Bank of England, the first issue of Bank of England notes being the equivalent of the Company's loan to the Government. The transaction amounted to the doubling of a certain amount of currency: the Bank gave its gold to the Government to spend, and then issued the same amount in notes which were lent, on discounts, to business men to be spent over again. The effect could only be inflation. The operation was repeated several times in connection with the successive renewals of the Bank's charter, so that the 14 millions of the fiduciary issue represent the foundation of the towering structure of the national debt of Great Britain.[1] Now suppose the debt were paid off. Even though the taking down of the upper storeys did not—as it does—necessitate the withdrawal of currency, the repayment of the 14 millions owed to the Bank would destroy 14 millions' worth of banknotes. It would mean a diminution of the volume of currency to that amount; how could, under the circumstances, deflation fail to declare itself?

Take the case of France. The French debt to the Banque de France amounted to some 40 milliard francs, which were in

[1] It was 14 million when Macleod wrote, now it is vastly more.

circulation in the form of banknotes. There were even then French politicians and publicists who advocated the repayment of these sums to the Banque; the Government was to collect, through taxation, the banknotes circulating and hand them back to the bank. It does not require much thought and knowledge to realize that such a procedure would reduce prices to a small fraction.

It is less easy to understand that the repayment of subscription loans, i.e. loans raised on the public, must have the same effect: the cancelling of currency. It is not realized that the loans could not have been raised unless the currency was previously increased. I will try to show as briefly as I may how the effect is produced. Banknotes are issued through the discounting of bills of exchange. Their quantity, therefore, is determined by the volume of business transacted with the aid of bills. More bills are required when business goes stronger, and fewer are called for when trade is poor. Now when a country inaugurates a policy of parsimony it is impossible that trade should not shrink and dwindle. For the private citizen cannot but obey the general tendency; he must economize along with the public bodies. In the first instance his purchasing power is lessened by the increase of the taxes. This effect would soon be compensated for if the Government spent the taxes on wages, salaries, and purchases. But the money is not so employed; much to the contrary, expenditure is cut down (the Geddes axe!). From those sections of the population who are first affected by this contraction of incomes, the effect passes on to others, and the slump becomes general. The turn-over of business falls off; fewer and smaller bills are drawn from month to month. Inevitably the notes paid into the Bank in redeeming the discounted bills cannot all be issued again; quantities must be destroyed. Thus it is that the repayment of public loans must result in the destruction of currency.

If I were not lacking in a turn for statistics I should here produce a few tables of figures to show how again and again, in all countries, periods of deflation have coincided with periods of debt redemption. In my country, Switzerland, the sinking fund scheme has been in operation for the last two years; some few million francs have been paid off. Well, the index of prices has steadily declined; at the end of 1926 it was by

some 6 per cent lower than a year before. The United States are sinking their debt rapidly; by the index of Professor Fisher the price-level has been falling pretty steadily,[1] all in spite of the fact that the private debts contracted under the instalment scheme, as also the municipal debts, have steadily increased to counteract the effect of the national policy. In England, on the other hand, the debt has increased in 1926 owing to the general strike and the coal stoppage: the level of prices has risen.

New facts and figures to prove and illustrate my thesis are pouring in on me from all sides. Here is the American case. In a message to the Budget Commission of Congress, January 1927, President Coolidge stated that the national debt of the United States was reduced by four billion dollars from 1920 to 1926; that is, by 17 per cent. In 1920 the American index-number was at about 240; in 1926 it was at about 150. The purchasing power of the dollar had thus increased by 37 per cent. The debt, in terms of dollars, had decreased by 17 per cent, but the dollars of the remaining debt had increased their capacity by 37 per cent. It follows that in terms of goods the debt must have increased. Supposing that a ton of coal cost $20 in 1920, the debt of 23 billion was worth 1·15 billion tons; in 1926 the price of a ton of coal was 12 dollars, and the debt of 19 billion dollars was worth 1·583 billion tons.

The American case is phenomenal enough to be conclusive in itself. The recorded facts proving that the watering of the currency and the increase of the public debt go hand in hand are not far to seek. We only need to compare the figures of the year 1913 with those of 1920, or of 1926. The evidence is overwhelming in its mass and in its universality. Not a single country has escaped. If my contention were merely a rule, it would show some exceptions; the fact that it suffers no exceptions erects the rule into a veritable axiom.

Here is another case. According to the annual report for 1927 of the Banque de France the State debt to the Bank was "reduced from 35·45 milliards to 24·55 milliards, i.e. some 31 per cent, within the time of thirteen months." But the report does not mention, in this connection, the fact that within the same period the purchasing power of the French franc

[1] The fall amounted to 7 per cent in the first seven months of 1926.

increased in about the same proportion.[1] The reduction of the debt was not real, it was only nominal. Expressed in terms of real goods the debt was not any smaller at the end of the period than at the beginning. We have once again the confirmation of my thesis that sinking the national debt is a delusion. What is sunk in the process is a mere abstract figure. So soon as the figure is weighted with the concrete thing to which it is attached, the case assumes a different aspect. Nor is it doing justice to the nature of the case to compare only the relative purchasing power of the currency before and after the reduction. The securities in which the State debt is embodied have a price in the market, and when their purchasing power increases, this price is naturally raised. If this enhancement of the price of national bonds is taken into account, repayments are revealed as increasing, rather than diminishing, the debt.

These instances are conclusive even though they are limited to short periods. But let us also consider the older and longer records. The two most pronounced periods of deflation were after the Napoleonic Wars, 1815–40, and after the American Civil War and the Franco-Prussian War, 1873–95. I have not many figures at hand, but a few suffice. In 1815 the interest on the National Debt of England amounted to 32 million, in 1841 to 30 million; within the same period the purchasing power of the income of Consols rose from 61 to 85. The American War debt was paid off at a rapid pace during the 'seventies and 'eighties; all along, with only a few set-backs in between, the purchasing power of money increased. It increased in Europe too. If the national debts had not been reduced concurrently, their weight would have grown in the exact proportion as the purchasing power of money grew. Even as it was, the reduction in the amount of the debts was less than the fall of prices, so that the burden was heavier at the end of the period than it had been before the repayment began.

[1] The French index-number stood at 854 in July 1926, and at 600 in October 1927; the reduction amounts to some 29 per cent. As to the case of the British debt, the units in which it is expressed have been swelled by some 15 per cent from 1924 to 1928—the level of prices, according to the *Economist's* index, having fallen from 166 to 140·9. Has the amount of the debt decreased in anything like that proportion? If not, the debt has grown through being amortized. (I have seen statistics to this effect: March 1920—highest point—7,828 million, March 31, 1928, 7,527 million; that is, rather less than 4 per cent in eight years.)

§ 9. Debt Policies and Monetary Policies.

This was the time when the bi-metallist agitation occurred. The currency reformers alleged that it was a shortage in the gold supply that caused the fall of prices. I do not deny this argument; but I cannot admit it to be a sufficient proof when taken singly. If it had not been for the debt-sinking policies then in vogue everywhere, the currency policies themselves would have been different. It was entirely against their choice that many countries demonetized their silver. No doubt the debt policies and the monetary policies are strongly interdependent. If a new and powerful gold supply were to be opened up at the present moment, the debt-sinking tendency would be reversed; otherwise the new gold could not be employed at all. On the other hand, if for some reason or other the futility of a debt-sinking policy were understood, and the nations began to reverse it, we may be sure that the gold standard restrictions would go overboard. Policies are the sport of circumstance; they are entirely governed by interest. Let interest, in but one of its manifestations, be fixed, and the debt policies and the currency policies must become ever so much steadier. A stable rate of discount is a barrier against the encroachments of the debtor class upon the rights of the creditor class, in so far as it prevents debts from being increased and the purchasing power of money from being depressed; it forms a barrier against the contrary encroachments too, in so far as it does not permit of a debt-sinking policy and the enhancement of the purchasing power of money. For surely it is not conceivable that the debt should be diminished or augmented, while the rate of interest remains stable. Price determines supply. While the price of debts, which is the rate of interest, stays high, debts must and will be supplied, that is to say contracted; for debts are a commodity. And *vice versa*, while the price of debts is kept low, debts cannot be supplied in increasing quantities; for now nobody can be willing to incur new debts if he can help it. Of course this is contrary to the prevalent theory; but the prevalent theory is wrong, disproved from the hilt down to the point by everything on record as well as by the inherent logic of the case. It is this unfortunate theory which is at the root of the debt-redemption folly. For it says, among other things, that the

payments can be accelerated in proportion as they are continued. Every payment, it is argued, reduces the interest charge, so that the next payment can be increased by that amount. It is contrary to the law of inertia, and a theory which leads to such contradiction stands condemned. As debts diminish they become more and more valuable to those who own them, more and more burdensome to those who owe them. Although the rate of interest may fall, it requires increasing quantities of products to pay it. Unthinking men abhor the law of inertia which seems to impose so much effort on them, forces them to exert themselves. But what about the bumps and clashes which would inevitably happen if movements were to gather impetus as they proceed, in the manner of objects falling down? Suppose the debt repayment could be increased from year to year down to the final extinction of the debt: how should our grandsons manage to direct these tremendous energies into new channels? Impossible. It would be a horrid crash, sufficient to burst the State which debt-redemption is intended to preserve.[1]

I will remark by the way that the Reparations Debt of Germany and the famous Dawes Scheme, if carried out to the merry end, would upset not only one country but the whole community of nations. Has it never occurred to statesmen or to leading economists to inquire what it means suddenly to stop a gold river which has been set flowing in a certain bed and direction? It is an impossible situation, and nature, which is wiser than the framers of Versailles Treaties and Dawes Schemes, will block up the channel and make an end of the folly, before it comes to the point of utter ruin.

§ 10. Public Debts and Social Justice.

I have quoted Robertson's *Fallacy of Saving*. This writer strongly disapproves of the authors who have declared against the idea of debt redemption, such as Lauderdale and Malthus. Of Lauderdale he says, p. 29:

"But Lauderdale, unhappily, never goes beyond the demonstration of the danger, and has the air of being well pleased to see the National Debt subsist in full for ever. Such a point of view might be attractive to the idle classes, but could never be to the majority."

[1] See also below § 15, subsection 5.

With me it is not a question of justifying the debt. In an ideal State it would never have been formed, and a decently governed nation will not add to the debt. My point is to show that any attempt to reduce it must have ruinous consequences. Its formation raised the level of prices; hence its reduction cannot but depress the level of prices. Now to me the structure of prices presents the aspect of a vast city erected on the debris of earlier civilizations. To go back to the older foundations would necessitate an unspeakable amount of demolition. What for? Is not one level just as good as another? Is not the best foundation the one that will last?

As to the public debt favouring the idle classes, the notion is utter nonsense. The interest has to be paid out of taxes, and it is the rich who contribute the taxes. *The workers simply cannot be taxed*; they are too necessary in the organism. Any taxes laid on them have to be returned to them in their wages. Hence if the debt were abolished and taxes thereby reduced, the rich as a whole would be neither better nor worse off than before, although all the rich would not be equally affected, as shown above. When the debt was contracted, the effects were very damaging for one section of rich men; the sinking of the debt would favour the same section—though not the same individuals.

Public debts are not a necessity; but, when once formed, they cannot be extinguished save at the cost of a social revolution. Indeed, public debts are a comparatively recent invention. When in 1798 the old and proud republic of Berne was overthrown by French invaders, it owed no debts; on the contrary, there was a handsome fund of coined gold and silver in its Treasury, which the bringers of liberty carried off as their reward. That the British debt dates from the foundation of the Bank of England has already been mentioned. The invention of national debts was merely a new method of taxation. It was made at a time when confiscation was no longer feasible, and it should be considered as a substitute for confiscation: subtle fraud in the place of brute force. It is not devoid of some interest to note that the country which was the first to make use of the State debt as a means for increasing the currency, did not fare badly under the régime. It was during the eighteenth century that England began to outstrip the

continental nations in the development of her industrial and commercial resources.

§ 11. The Measure of Debts.

Private debts—in which the debts of municipalities and other public corporations are included—are a necessary condition of division of labour. They influence the currency in exactly the same way as does a national debt: they are born with the currency, and their increase (per head of the population) makes for inflation, their decrease for deflation. In order to visualize this connection, let us suppose the debt to amount to 1,000 for every inhabitant, and the index of prices to be established at 100. How can the aggregate of private debts be increased or diminished? Increased it is when more money is borrowed. But what money is there to borrow? All the money in existence is employed in some way or other; even the money in the hoard may be considered as an investment; it is held as a reserve and thus serves a useful purpose. It even acts on the level of prices. The existing level of prices is the exact expression of the existing quantity of money multiplied by its velocity of circulation—which is merely another term for the tension of credit. It is therefore impossible that the aggregate borrowings of the population should be expanded, unless the volume of money, per head, be expanded also. When this happens the index of prices must rise: it is inflation. Nor are the reasons far to seek. People borrow money in order to buy goods; when more is borrowed the demand for goods grows more powerful, which must cause prices to rise. For it cannot be imagined that the supply of goods should increase at the same time. Demand does not grow more urgent except when the supply of goods seems inadequate, nor do people raise loans unless they anticipate a rise of prices and, consequently, a safe profit from the investment of borrowed money in an early purchase of goods, or the means of producing goods. This increasing demand for loan money may be satisfied out of existing hoards for a short spell; but very soon it calls for new issues of money: when the debt is 1,200, the index is 120.

This argument may be reduced to greater brevity. Debts and credits must balance. When the debts are enlarged, the credits are enlarged by exactly the same amount. Now it is a matter of common knowledge that an expansion of credit

produces a rise of prices, which is inflation. But credit being the same as debt—as to the amount—the statement holds good that an expansion of debt must cause inflation, or the rise of prices—and *vice versa*.

The rise of prices signifies a depreciation of money. Hence we see that, as the debt is increased as to the sum, the unit in which it is expressed is proportionally reduced, and it follows that the debt is not really increased at all. Only the figures are swelled, while the substance remains unaltered. But also this: although the total weight and burden of the debt is not increased, the debt is distributed differently, the burden of the debtors being eased, that of the creditors made heavier. Whereas the whole is unaffected, and may preserve its serenity, the parts are thrown into a turmoil.

What are debts? What is it that the debtor owes? Oh, money, of course. But whence the money? From the sale of wares or services, of course. The money is a mere intermediary. What the debtor really owes is goods and services, and the total debt of a nation is the exact equivalent of the total goods and services which the nation can supply. We owe what we have and possess, not what we lack. This statement, although it may sound paradoxical to the inexpert, should be accepted, not with incredulity but as a matter of course, by bankers and book-keepers. In book-keeping we debit the account of a party or department for any amounts which it has received and ought to be found in possession of. For example, we debit the till for all that it contains: the till owes what it has and possesses. And the credits and the debts must balance; the same figures which in the cash book appear on the side of credit, in the ledger are entered on the side of debit. Now supposing that the credits are considered as a good, a boon, a positive quantity—as wealth; and supposing that debts are logically felt as the contrary of all this: it follows that the increase of the credits can be no gain, seeing that it is counterbalanced by an equal increase of the debts, the negative quantity, and, further, that a reduction of the debt can be no gain either, seeing that it is offset by an equal reduction of the credits.

Nor is this a mere juggling with words, as might be suspected by those who are wont to think of debts and credits in terms of money and figures, the mere symbols, rather than

in terms of wares and services. Debts and credits are based on real things, actual possessions, material and personal. Their increase or decrease is a mere illusion so long as it cannot be shown that it alters the quantity of wares and services which the nation owes to itself and must furnish to itself. In order to constitute a real gain, the reduction of the aggregate debt of a community, taken as an isolated whole, would need to be attended by an increase of its actual resources: the community must add to its possessions of houses, factories, means of communication, schools, museums, lands—of everything that is considered as wealth—while taking care not to add to its numbers, that is the number of creditors or sharers in this wealth. Now the advocates of debt redemption do not expect any development of this sort. Neither, indeed, is it a conceivable development, implying as it does that such an increase shall be brought about while everybody retrenches on his expenditure and cuts down his consumption with a view to paying off his debts and enriching himself. Who is to build new houses at a time when people, in order to save for their sinking fund, reduce their demand for housing space? Who is to construct new railways and ships and motor-cars and hotels at a time when the whole population abstains from travelling so as to avoid unnecessary expense? The conditions imposed by a generally prevalent endeavour to pay off debts, far from making for an increase of the real wealth of a community, rather tend to the destruction of wealth. For while no new goods and means of production are produced, those in existence are reduced by the inevitable wear and tear. Thus it appears that if the debt were really diminished, the real wealth would be so likewise: the community would have impoverished itself by dint of economy. Perhaps it might not feel impoverished, thanks to an adaptation of its standard of living. It would probably develop miserly and mean habits, and even pride itself on such progress. But still the debt would not be reduced as compared with its means and standard; for to a mean and niggardly community, afraid of the debts which it owes to itself, even a small debt would seem large. The arguments for a further reduction would still be equally valid and remain so, to whatever limits the process of contraction and the cult of avarice were carried.

These considerations force us to conclude that the measure

of the debt of a community, private or public, cannot be expressed in a sum of money. It depends on the standard which the community has evolved. But seeing that the standard is likely to change along with the degree of indebtedness, we are led to conclude that the wealth of an isolated community is not susceptible of an increase or decrease that can be felt as such. This wealth does not consist in things, but is a purely psychological quantity.

The Industrial Age Man is likely to demur at my proposition that we cannot increase our wealth. He depends on increase for his happiness, and thinks he has fallen on evil days if his country's yearly balance does not show some addition on the good side. Increase and wealth to him are synonymous. Yes, we have increased our possessions. But we have also raised our claims on the community. Now this means that every man demands more of every other man, so that each owes more to the others, as he claims more of the others. We have raised our standards of material comfort; we are hard to satisfy—in other words, we do not give one another easy times. The consequence is that no one seems to have a good time of it, and that we cannot enjoy our many possessions, which have to be increased all the same if we are to be happy. We are not happier than our poor forefathers were, albeit we think ourselves ever so much richer. But what do we know about their feelings in this matter? They may have felt as rich as we do and as proud of their progress, and as profoundly puzzled as to the reason why they did not emerge out of their debts.

The nature of wealth is most aptly expressed by Ruskin in *Unto This Last*, where he says that riches are

> "a power like that of electricity, acting only through inequalities or negations of itself. The force of the guinea in your pocket depends wholly on the default of a guinea in your neighbour's pocket."

Debt redemption, which abolishes inequalities, makes an end of all riches. Therefore it is not the way to achieve the enrichment of communities. Neither, of course, is the opposite course, the making of debts, the way. There is no way at all, since, as we have just found, a community, considered as an isolated system, cannot be enriched in any conceivable manner. The wealth of each member cancels the wealth of every other

member up to the point where the differences begin. Compare the eminences in wealth with the mere earthly elevations. A peak rising to a few thousand metres above the level of the sea is considered as a high mountain. It is high if looked at from the valley or plain at its foot. But why do we not measure altitudes from the centre of the earth? If we did, the differences among the heights of the peaks would dwindle to insignificance: the elevations would cancel one another, and the men living in the low plains might be said to be perched on high tops, each of which would be blocking up its neighbours and be blocked up by them. It is so with wealth: raise its level ever so high, you cannot call forth in men the impression of a gain in height, of an advance; the level remains the level. You only use bigger figures in expressing the height, and that is as if you began to count somewhat lower down. And should the eminences not be allowed to rise with the level, the economic planet would be one even flat—an attractive world indeed!

My theory of wealth and debt holds forth no promise of social or economic reconstruction: no gains to this set or to that set, nor to the whole either. It does not appeal to the hopeful and sanguine reformers. The question is: will it appeal to the scientific minds? It opens up a vast vista of theoretic reconstruction, which might conceivably influence practice. The problems of debts, of taxation, of protection loom large in the political domain, and my theory simplifies them greatly. Although a sceptic in many respects, I have kept a sufficient supply of hopes to buoy my little craft and drive it onward against the tides of present tendencies. There may be large gains to be reaped from a new outlook, a new appreciation of things.

§ 12. Interest as the Basis of Debt and Taxation.

The present section is inserted to qualify, and rectify, certain points made in the original draft of this essay. The necessity to do so was suggested to me by two passages which happened to appear under different headings in the same issue of *The Economist* (February 11, 1928). In § 5 above, I said: "Prices are composed of a number of elements, such as wages, interest charges, taxes, which in their turn must also be considered as prices. Whatever enlarges any one of these constituents will necessarily increase the final price." This is placing

wages and taxes on the same plane as interest, and the statement is misleading. Taxes must not be co-ordinated to interest; they are subordinate to it. Hence it will not do to say, as I have not been careful enough to avoid saying, that taxes in themselves contribute to the level of prices, raising it or lowering it in proportion as they are raised or lowered. They do so only on condition that the rate of interest is raised or lowered at the same time. The movements of the level of prices are entirely and exclusively determined by the shiftings of the rate of interest, taxes following suit, so that it naturally happens that they are higher when interest is higher, and *vice versa*. Taxes follow suit, because when the rate of interest rises and forces up prices, the State, in order to meet its increasing expenditure, is forced to demand more of its taxpayers. It is all one general movement upward, impelled by the force of rising interest. This brings us to the question whether or no taxes can be shifted, with which, precisely, the two utterances alluded to are concerned.

The first is a letter to the Editor of *The Economist* by Mr. P. D. Leake. To demonstrate the relation between prices and taxes the author produces these figures:

	1913	1927
Average gross rate of interest ..	5·5	6·21
Less standard rate of income tax ..	0·32	1·24
Net rate of interest ..	5·18	4·97

His comment is to this effect:

"The higher gross rate of interest in 1927 was paid on new capital issued at the higher price-level—requiring about 170 against 100 of capital in 1913. These facts strongly support the business view, that the burden of taxation is shifted from the actual payers of the tax, and becomes a factor in the cost of production, and therefore in the maintenance of our present inflated price-level. It is interesting to recall the fact that the published report of the Committee on National Debt and Taxation states, in § 293, that there are two directly opposite views on the question of relation between direct taxation and price-level. According to one view a general income tax cannot, to any important extent, be shifted by the person on whom it is laid. This is afterwards

referred to as the doctrinal view based on theoretical reasoning. The other view is that income tax can be shifted, and that so far as it is not otherwise shifted, it is passed on by prices of production being maintained at a level substantially higher than would otherwise be the case. This latter is referred to as the business view, and is said to be founded on arguments largely drawn from practical business experience."

Mr. Leake is a chartered accountant, and was called to give evidence before the Committee on National Debt and Taxation. He shares the "business view": taxes are shifted by passing into prices; they are a factor in the cost of production, as by my argument in the sentence repeated above. I have been led to realize that the question is not quite so simple as that. It stands to reason that taxes cannot be shifted by all taxpayers all the time; for at that rate nobody would be paying any taxes at all. The burden which one section of the community succeeds in throwing off naturally falls on, and must be borne by, the other section. Neither is it conceivable that the same section should always be so favoured or so mulcted. It is never all the people all of the time, nor some people all of the time, but always some people some of the time. It all depends on the circumstances. In so far as taxes can be passed on in the prices of goods, it is the handlers of goods that are in the position of vantage. Their advantage begins when prices begin to rise; it is as if they did not pay any taxes; it also is as if they did not pay any interest: fiscal charges are more than made up to them by increasing earnings, thanks to raised prices. Those who have to pay the higher prices and also higher taxes are made to bear the whole burden. This cannot last for ever; sooner or later the process must be reversed. The fall of prices becomes inevitable when the burdened section has been so impoverished as to be unable to pay the prices, and when the prices fall, it is clear that taxes cannot be put on them and shifted. The burden now lies on the producers, and it is doubled by the diminution of their earnings. It is now the other section of the community that goes scot-free: the owners of money, even though they do pay taxes, are enriched by the appreciation of their property, and the phenomenon may be described as a shifting of the tax burden from the creditors to the debtors.

Which of the two views, then, is right? While general price-levels shift, there is shifting of tax burdens, now from the

debtors to the creditors, now the other way about. In so far the business view would seem to be right. But if we keep account of the revenges of time, which will turn gain into loss and loss into gain, we arrive at a different conclusion: the balance is restored, and the doctrinal view is confirmed. Both views are partially right and partially wrong. They are born from the mirage produced by the general fluctuations of price-levels; they will disappear, or take on a different expression, when currencies are definitely stabilized.

Nobody would seriously care to justify those shiftings as making for the general good. They prove that intentions have miscarried, and they are the source of recrimination and bitterness. The figures collected by Mr. Leake are very suggestive in this respect. The rate of interest was higher in 1927 than in 1913, but the yield of investments was smaller. For the real yield of investments to recover their former dimensions there is only one way open: money must appreciate. It is a fact that, since the peak of inflation, the rates of interest have declined rather more heavily than the level of prices; hence prices must have a tendency to fall. We may account for it by saying that it is an expression of the need to compensate investors for past losses. And there is some reason to fear lest the movement should reach out beyond the point of the pre-war relation, so that creditors would be over-compensated. The danger is not to be taken lightly, nor do I see why the thing should be allowed to happen. The gain would not go to those who actually underwent spoliation. By the time when the advantage is all on the side of the creditors, those creditors who were robbed by inflation will either have passed away (the aged), or they will be subjected to fresh injustice in so far as having grown up and become producers they will find their earnings reduced by falling prices. Although in the long run the balance is restored, the losses inflicted on individuals cannot be compensated, because it is too long a run for them to live to come into its benefits.

It cannot be said that inflation and deflation are the cause of the shifting of taxes. The shifting is the consequence of conditions which place certain sections of the community in a position of vantage, and inflation and deflation are merely one of the means by which the shifting is brought about. There are other means, and they are put into operation if the currency

refuses to lend itself—which will be an innovation indeed, for hitherto the currency has never refused. In order to form an idea of the process we have to consider an assumed case, and it is most conveniently suggested by the second passage from *The Economist*. I take it from a review of Mr. Hawtrey's book, *Currency and Credit*:

"It will probably seem evident that most of the worst evils of currency debasement and price inflation with all their social and political consequences were due to inadequate taxation, in part, at least, during the war. . . . It was the opinion of *The Economist* . . . that taxation might have been, and ought to have been, applied much more vigorously, and that if this had been done, much inflation would have been avoided, and the disgusting spectacle of the unfit staying at home and making fortunes and earning huge wages. . . ."

Here are two propositions: higher taxes would have prevented inflation, and if there had been no inflation there would have been no profiteering. The first is only half true, and the other is fallacious. As to profiteering, it is an error into which all money reformers seem to fall—I shared it most heartily and longer than I can excuse myself for doing. In order to see the fallacy, we only need to visualize the general conditions created by the war, quite apart from what happened to the currencies: the terrific urgency of material needs. Those who were in a position to supply these wants found themselves enabled to ask what prices they pleased. Any taxes that they were made to pay they added to their prices, and no measure of any kind would have had power to prevent this. If the currency machine gave forth the necessary cash, the prices of the more urgently needed goods must soar; if no fresh currency was forthcoming and the general level of prices was prevented from rising, these goods would extort a higher price in terms of other goods. The real wealth of the nation was bound to go to those who were in the position of vantage, whose services the country could not dispense with and must buy at any sacrifice. Inflation or no inflation, profiteering was inevitable. You cannot go into a great war and shun the evils of war by tricks of money managing. The profits were made at the expense of those sections of the community which were debarred from contributing to the provisioning of the country: the men who went to the war, and the people who, living as they did on income from investments, had nothing to offer but their

money. The former had their glory and their pride for a reward; the latter were the useless lot, and must needs be pushed to the wall in the emergency. It certainly was not inflation that did it. These mere money-owners had to be taxed, that the providers of necessary goods might be stimulated by prospects of gain to put in their utmost exertions.

As to higher taxes having power to prevent inflation, I still maintain the conception set forth in § 5 above. While the currency system supplies the cash needed to swell prices, prices must and will swell, and taxes become a factor of price swelling. However, whether or no the new cash shall be forthcoming or not forthcoming, depends entirely on whether the rate of discount is raised or not raised. The raising of the discount rate spells money shortage, and forces out fresh issues of cash. Now the question is whether, under these circumstances, the war could have been financed out of taxes. I say no. When money is made to depreciate through the rising of interest rates, taxes also depreciate. As I have said above, they cannot be raised fast enough to keep pace with, much less to overtake, the depreciation. And so the war has to be financed out of loans, i.e. indirect taxation, or taxation by stealth. When the rate of discount is raised, debts must be numerically increaeed, and somebody must borrow the freshly issued money. The Government is the borrower, loans being, as it were, forced upon it. If it is desired to finance the war out of direct taxation, the rate of interest must not be raised—it might even be necessary to lower it; the inducement to borrow must be withheld. And so we are led to see the part of truth contained in the *Economist's* opinion: the war might have been paid for out of direct taxes if inflation had been avoided. The connection exists. Only we have to understand what it is that makes for inflation.

If inflation was to be avoided, the rate of discount should have been kept low. It was not done, because nobody was prepared for such a course. The rate had to be raised according to precedent, if not by the express terms of the Bank Charter Act. A flood of Treasury notes had to be issued to take the place of gold and banknotes, which an undisciplined public withheld from circulation. I believe that if the discount rate had not been put up, these issues would have returned to the Treasury. It might even have been possible to reduce the

circulation of banknotes: if imports had been paid for with the country's (the Bank's) gold, the contraction of the paper currency would have been the inevitable consequence. And would it not have been the natural course to make this use of that gold? The anxious hoarding of it was one of the causes why it depreciated. However, the rate of discount was raised, jerked up to its top rung, and so not only was it impossible that the emergency issues should have been returned, but the maintenance of high rates necessitated ever renewed issues. Direct taxation was unable to cope with the needs of every day; it had to be taxation through loans and by stealth. For do not let us be deceived: taxation it must needs be, and the loans were serviceable only in so far as they acted as a tax. The expense of the war had to be met somehow day by day; payment could not be deferred to a later time, and it is not true that the country is paying for the war now—albeit it may still be at work repairing its ravages. In so far as the expense was defrayed out of loans, the loans produced the effect of a levy on present means: they lessened the purchasing power of money, thus withdrawing substance from the owners of money and investments.

Hypothetically it is conceivable that loans might have been obtained at such a low rate of interest that inflation would have been avoided. The lenders would have sacrificed their interest to the country and so surrendered part of their substance. However, the hypothesis could never be realized. While Governments choose to buy the support of their subjects at a price, additional loans cannot come off short of an increase in the rate of interest: where there is buying and a price, the law of supply and demand holds sway. If the rate of interest is kept low, loans will not be forthcoming; expenditure then has to be met out of direct taxation. Under these circumstances the increase of taxes cannot cause inflation. But neither can it prevent or even lessen profiteering. While the rate of interest stays low and no currency can be manufactured, taxes are effective, and what is paid into the Treasury does not depreciate; but the burden is shifted none the less: the "other means" alluded to above become operative. The money needed to stimulate the producers must be extorted from those who do not produce; if it is not accomplished by stealth—through inflation—it must be by discrimination. On the outbreak

of the war the rate of interest on public loans was raised very high. It looked as if those who had money to lend—to spare—were to be enriched first of all. But this seeming favour turned out to their discomfiture. It could not be otherwise; for what the time called for was not really money, but the service of heads and hands, and so these took the material reward. But nothing worse could have happened to the creditors if the rate of interest had not been raised for them; possibly they might have fared rather better. The raising of the rate was unnecessary, a mistake. In a sense it was immoral. For consider it: offer a higher reward to those who gave nothing but what they could well spare, their superfluity, in the nation's hour of need and stress, when the others were expected to offer their very lives or to work twice as hard! Such things can only occur in a civilization which has not mastered the economic laws. But what is to be expected of nations which cannot manage to keep clear of armed conflict?

Rates of interest, prices, taxes, debts: all increased numerically as the war went on. These four are one indivisible whole. While the rate of interest is prevented from rising, the level of prices cannot rise—at least price-levels have never been observed to rise, over any length of time, unless interest rates were raised. But when a war is on, taxes must be increased, and so it looks as though they were independent of interest. Can we not consider them as a price—the price of public service, to wit? When war demands the increase of this service, the people must devote a larger share of their incomes to this particular kind of goods, and other goods must be the cheaper for it, which means that other services are the less well paid. In normal times it cannot be necessary to increase taxes unless in consequence of rising prices, and so it would seem that, as stability of the rate of discount prevents prices from rising, it also prevents the increase of taxation. As for debts, it is perfectly evident that they cannot grow unless the rate of interest is raised, nor diminish unless the rate is reduced. Although the tendency either one way or the other may make itself felt, it is bound to be broken in its incipient stages. Interest governs all, as I have said before, and shall have to repeat again.

§ 13. The Accumulation of Funds.

The sinking of a debt is a way of emerging from a depression: you fill a hole into which you have got yourself. But why stop in your ascent when you have come up level? Why not persevere on the upward move and raise yourself on to a mound and a position of real eminence? The mound would be an accumulation of funds, surplus wealth to be expended, or not expended, in some future emergency—very much like the fat in the camel's hump. The formation of funds for collective purposes, either national or of private organizations, may be considered as an endeavour to pay the debts, not of the past generations, but of future generations. Trade unions collect funds to arm themselves against future wage struggles; unemployment funds are formed in the good times out of the contributions of both employers and employed, with State subsidies added, to be spent by way of relief in the bad times. In some countries there are schemes of an old-age insurance on the same principle: appropriate so many millions yearly from specific sources to accumulate a fund of such magnitude as to allow pensions to be paid out of current interest revenue. After what has been said on the sinking of debts and its economic consequences, it is not hard to realize that the accumulation of these funds must produce the same effect. The efforts which are made with a view to enriching the future are bound to bring about the turn and the event, or the evil, which they are intended to meet—namely, in the case of the trade unions, the wage struggle, the strike, the defeat; unemployment in the case of unemployment insurance, and in the case of old-age insurance, the desolating discovery that pensions are no real help.

(*a*) *Strike Funds and Insurance against Unemployment.*

Let us consider the process in some detail. Suppose that all wage workers are organized in trade unions. Out of every wage payment a certain percentage, say 2 per cent, is handed over to the fund. These moneys are savings, reserves, incomes which are not spent and therefore are withheld from the economic current. It may be objected that the money is not left lying idle in the treasuries, but is invested at interest. I do not see how this could be contrived, considering what the purpose of the reserve is. A very considerable proportion must

at all events be retained in readiness, like a standing army. However, let it be granted that the funds are invested, whatever the provisions as to the recall of the loans. Now the question arises how the borrowers are going to employ the money and pay the interest. Borrowers can only be business men, i.e. the employers of the trade union members and the very people on whom war is to be waged at the given moment. The savings made by workmen for the purpose of forming fighting funds naturally reduce the demand for consumption goods and consequently the sales of the producers. Business is the poorer for it. The money saved therefore is not likely to find employment towards the enlargement of plant or the setting up of new enterprises. Sooner or later a situation must be produced in which new investments are no longer possible. The rate of interest begins to fall, prices following suit, and wages being drawn in the wake of prices; now the strike is declared, and as no strike undertaken in such a situation can be successful, the stoppage serves no other purpose than the dispersal of the strike fund. The formation of the fund was the direct cause of the event which now causes its annihilation. Obviously, as this method is applied more generally, as more and more workers are drawn into the organizations, and as the contributions are increased, the time for the thing to happen will become ripe the sooner. It is bad enough when the workers alone collect funds; matters are made worse if the employers contribute to them under the delusion that the strike might be thereby averted—or converted into peaceful unemployment. But national unemployment insurance with funds formed out of general revenue are the height of mischief and folly.

The problem of insurance against unemployment is examined in great detail and with much acumen in Professor A. C. Pigou's book on *Industrial Fluctuations*. This writer leaves the student under the impression that such insurance, for all its pitfalls, might contribute towards a lessening of fluctuations. I shall not enter on particular points of his argument. Unemployment funds intended as a means to forestall fluctuations are exactly the same thing as war—not merely armies—as a means to secure peace. The funds are, let me repeat it, unspent incomes; but if they are to represent anything at all, they must be backed by real goods, and so the funds can only grow

in proportion as the quantity of unused, unsold goods grows. When this process has been carried to a certain stage, these unused goods appear as over-production, which means over-employment. The natural and inevitable remedy is the reduction of employment, and it makes no difference worth mentioning whether it takes the form of strikes, or lock-outs, or short-time, or the closing down of plant. The accumulations brought about by organized and compulsory saving have to be disposed of, dispersed, before work can be resumed.

I have dealt with Professor Pigou's theory of currency and interest in the first of these essays. He shares the orthodox view that prices rise as the rate of interest goes down. If then accumulation causes the rate of interest to decline—and surely there is no other consequence to be imagined—prices, by this theory, go up. As this effect is admitted by Professor Pigou to stimulate enterprise and improve the state of employment, the unemployment funds would be found to increase employment in proportion as they grow. Obviously this would mean that they could never be employed and would be found useless. However, experience has proved that the funds do not grow indefinitely, but are as a rule spent rather prematurely. It is because employment does not increase with accumulation, which in its turn proves that the theory of interest on which Professor Pigou bases his argument is contrary to the real facts. This writer, for all his circumspection, his wide knowledge, and his zeal for economic welfare, overlooked and missed one of the vital points in the problem of unemployment insurance, because his vision was blurred by a faulty theory of interest and price. It is not his theory in particular, but the theory of all the schools of economics the world over, and therefore the blame does not fall on the individual applier of it, but on the science as a whole. This science justifies unemployment insurance, although by its own teachings the funds should be expected to produce results which would render the funds themselves useless. We have here a signal instance of the contradictions in which the science of economics becomes involved through a vicious theory of interest.

(*b*) *Old-age Insurance.*

The case of old-age insurance presents some special features. In the first place it appears steeped in an atmosphere of senti-

ment: the very idea of it passes as a good deed, and he who undertakes to question its merits lays himself open to the charge of callousness. In the second place the experiment has never been made, so that there are no experiences to guide the investigator; his solution, therefore, must depend on the theory from which he conducts his reasoning.

I have indicated the purpose of the old-age insurance schemes. The idea amounts to this: the present generation is called upon to work hard and to save so that the coming generations may have an insurance that shall cost them no contributions, that is to say: nothing at all. The belief in accumulation, this most conspicuous fruit of our noble theory of interest, has here brought forth a piece of madness that cannot be improved upon: save once and have for ever. If the science of economics had a true theory of interest, if it knew how money is connected with the things whereby old people sustain their lives, science would rise in protest against such schemes. Instead of doing that, science blesses them and gravely undertakes the task of computing the sums and collecting the statistics.

The thing is impossible, for the very simple reason that the potatoes, the milk, the meat, the concert seats and the kino-treats, the pleasure trips and what not, which the present generation is invited to forgo, cannot be accumulated and preserved against the time when those who are infants now shall be tottering to their graves. For do not let us be deluded as to the nature of the funds. Those money contributions which are levied to form the great hoard are unsold goods and services—how else could the hoard come into existence? We are not saving anything at all, if we use everything that we get, and there will be nothing left over for our children when they become grandparents. Of course the advocates of the fund consider the business differently. They think of figures written on paper which shall be doubled automatically in so many years through interest and compound interest. They imagine that what an individual hoarder can do is no more difficult for a whole nation to do. But the part and the whole are not on the same plane. If the fund is to be formed, the money paid into it must be retained. If it were spent apace there would be no fund, but only long rows of figures and perhaps some imposing buildings to accommodate a staff of clerks and directors. Now it is clear that if the money is not spent,

business must come to a standstill; for what is the use of producing goods that cannot be disposed of? So then the money has got to be spent. It is suggested that the State and the municipalities, instead of borrowing from the capitalists, will take loans from the old-age insurance. But what are the implications of this expedient? Private capitalists are debarred from investing their savings, if they can manage to save. Leave them to their fate; we are good socialists and rejoice in their embarrassments! But here is another hitch. If the fund is to grow, the debt of the State and the municipalities must grow at the same pace. The State and the municipalities, of which those who collect the fund and those who are to benefit by it are members, become the debtors of the insurance. And they spend the money. They spend it on improvements which the present generation demands for its own benefit. That is to say, they do not produce for the future, but for present needs. We collect a fund which we forthwith transform into a debt; the future generations, beneficiaries of the fund, will be paying the interest on the debt which we bequeath to them. As a compensation for these interest charges these lucky unfortunates, or unlucky fortunates, will receive their old-age pensions. The interest and the pensions will exactly balance, which amounts to saying that the future generations will have to produce themselves all that they wish to enjoy—the same as we. There is not going to be any fund at all, seeing that the public debts will be exactly equivalent to the insurance fund: the minus and the plus balance.

If this is what the insurance schemers contemplate, it is not easy to see what is to be gained by the undertaking. It would be wiser, i.e. one would save a lot of trouble and unproductive expense, if one devoted the money levied for the fund directly for the financing of present public needs and so avoided new debts. The attempt to form the fund is sure to confound us, and the deed will never be accomplished. It is not possible that one generation should deny itself and save that future generations may be enriched in all eternity—spend more, enjoy more, while not having to work the more. It is against nature and the order of the Universe, which imposes on man the necessity of labouring for his daily need.

However, these consequences are not contemplated by the advocates of the scheme. They intend to save, to enforce

economies, that the fund may come into being. They cannot but oppose the spending of the moneys, and I could easily fill pages with quotations of their sagacious advice of how the people ought to be coerced to retrench. It may be that their virtuous zeal for the noble deed is only a screen to cover their real intention and a pretext for wage-cuts and price-cuts in the interest of the creditors. Socialists support the scheme because they fondly imagine that the fund could be formed without any damage to the wage-earners. But the mere attempt must impede the flow of the economic current and make for some degree of stagnation. It is perverse, pernicious fiscal policy that gives in to and countenances the clamour for old-age funds. At the bottom of it there is a fallacious theory of interest and price. The sinking of debts, the accumulation of reserves, cause the clogging up of the economic channels. They are incompatible with the idea of a stable currency. For stability of the purchasing power of money supposes the cessation of the economic tides. What need is there of any accumulations in a climate which allows things to grow and ripen all the year round? Men used to provide special store-rooms and granaries in their private houses; but these contrivances have long since been discontinued, because supplies are so well assured. In the same way the camel himself would get rid of his hump if the desert came to grow a permanent crop of fodder for him. It is only in economic theory that the hump is to be perpetuated whatever the circumstances.

There are truths which people can understand and see; but there are also truths which people only believe and acquiesce in, because they have been taught at school. What I have been trying to demonstrate is a truth which only few are capable of understanding and seeing, and which no one is bound to acquiesce in, as it is not taught in the schools. I have made the attempt to prove the impossibility of public funds to a number of persons with good heads and education. The time I had of it! They did end by agreeing, but I am afraid that my proofs left them unimpressed and unconvinced. It is the intervention of money that creates the difficulty. People cannot understand that money is a mere token and that everything happens as it would happen if there were no money at all. I will try once more to analyse the connection. My contention is that a nation considered as a whole, or as a

unit, cannot save anything for future generations. It can save nothing in so far as money, even though it were pure gold, is nothing without the corresponding goods, and in so far as the goods do not endure. A nation considered as a whole, i.e. as a closed system, is in the same situation as Robinson Crusoe on his island, who did not need any money, because there was nothing to be exchanged. In the same way a nation considered as a unit does not need any money; money is only for the members. Robinson was not able to save money; he could only save things, form a store of provisions—which would keep till the next harvest, but not till the next generation, according to the nature of things. It is the same with a nation considered as a unit: it can save no money. If the laying-by of mere money were all that was needed, it would not be necessary to tax the people in order to form a fund; it would suffice to print and pile up money tokens. Nobody thinks of such a proceeding, because it is realized that no treasure is formed in this way. Very well, it is exactly the same with figures which one enters upon bulky books: they are like money tokens not backed by any real goods. There is no fund, because the goods have been used up apace. The savings have been borrowed and spent on things for immediate use. The claim of the insured old-agers constitutes the debt of those who have to pay the interest, and interest is goods that have to be produced by dint of labour. It will be as it has always been: those who are capable of working must supply the sustenance of those who are not capable—from generation to generation. The present generation, which is burdened with the full number of its own unemployables, cannot provide for the unemployables of all the coming generations.

§ 14. The Tariff Recommendations of the League's Economic Conference.

I shall not attempt to compare the work accomplished by the League of Nations Economic Conference with the expectations of my programme. The problem of debt was not discussed at all, and so I am dispensed from the obligation to defend my point of view: the Conference carefully avoided digging down to the root of the trouble, and therefore its actual work must remain barren. By far the greatest stir the Conference produced came from its recommendations concerning the

customs tariffs. The Report dwells on the evil effects of protection and the disappointments which one nation after another had experienced from protectionist policies. It recommends the setting up of tariff treaties to create a firmer basis and make an end of tariff wars. So far, then, I have cause to pride myself on having anticipated the recommendations of the Conference. However, the zeal of the delegates was not satisfied at that. Having been persuaded that high tariffs were harmful, they came to the conclusion that "the time had come to put an end to the increase in tariffs and to move in the opposite direction." And so they "invited the League economic organization to endeavour to bring about a general amelioration and reduction of tariffs."[1] This runs counter to my proposal, and I am going to try to give reasons for my disagreement with the Conference's recommendation.

To "move in the opposite direction" are the words. The Conference wants the tariffs to be moved with a view to ensuring more stability and avoiding uncertainty. The experts of the Conference evidently believe, as so many economists do, in absolute high and low. The tariffs have been raised and, being higher than before, they are felt to be high, too high, high to a fault. A fault must be remedied. When I know that I have gone too far and missed my aim, I retrace my steps, and so what more natural than to lower the tariff when it is discovered that the previous increases have had untoward effects? When will men learn that this sort of reasoning is bad judgment? If in making for a certain locality I have gone beyond the crucial point and then retrace my steps, I probably shall not meet with any new obstacles, because the way is likely not to have changed. But when the economic levels between nations have been shifted, the case is different: you cannot retrace your steps, because the way has become blocked and barred with the new conditions that have sprung up in consequence of the change.

Certain considerations present themselves naturally. In fact Mr. Layton, in his examination of the proposal, brings in exactly the same arguments as I put forward in a short article which I published, within a few weeks after the Conference, in a

[1] Quoted from an address by Mr. Walter T. Layton, the editor of the *Economist*, and Chairman of the Committee that prepared the agenda for the Conference, in *Proceedings of the Academy of Political Science*, New York, January 1928.

Swiss periodical. I pointed out that the mere height of a tariff does not matter, since the highest tariffs in existence are found both in rich and poor countries (United States—Spain). Mr. Layton stresses this idea very strongly and very tellingly; how, then, could he fail to see that it destroys the argument for a reduction of tariffs? He tries to defend the proposal by pointing to precedents to which he attributes happy effects. He says (p. 158): "The most notable case was after 1860, when a downward movement of tariffs was started in Europe by the Cobden Treaty between Britain and France; and in the decades which followed that treaty, in the period of moderate protection, foreign trade between the nations increased very rapidly." Decades after 1860? In 1870 came the Franco-German War, and in its wake followed a period of prolonged depression. There is also this to be urged. In the earlier 'sixties world prices had a tendency to rise, thanks to the increasing gold production. Under these circumstances the lowering of tariffs did not produce the destructive deflationary effect which it would produce under the present circumstances. It was the same when England abolished the corn duties: the new gold from California prevented the fall of prices and compensated the effect of the diminution of customs duties. Mr. Layton does not mention a more recent case, the so-called McKenna Duties in England, which were removed when deflation seemed desirable, but restored again in 1925, after deflation had lost its charms. It cannot be proved from past experiences that tariff reductions are beneficial. It is not difficult to show that they cannot but be detrimental.

Suppose a reduction is decided upon, either universally or in but one country: what are the reactions? Obviously those who import goods will, if possible, defer their orders until the new tariffs come into force—in exactly the same way as an increase in tariffs has always caused importers to rush their orders. The foreign producer is kept waiting in suspense. He does not know how large the orders will be, and if he is a cautious man he will limit his output. There are very serious inconveniences involved, even if he is assured of being able to sell at a later time: the goods have to be stored, which entails a great deal of trouble and expense. Consider next the jolt it gives to the transporting machinery. For weeks and months before the application of the new tariff the railways

and merchant marine get no freights; then suddenly comes an avalanche. The same will happen to the money market: at first money lies idle, and the dealers in money have nothing to do; next the flood will break loose. These difficulties are so self-evident that one wonders how they could escape a practical economist.

However, there is a train of consequences which are rather less manifest. The nations are made to expect certain advantages, positive gains. Out of what, out of whom, are these gains to flow? It is hard to imagine by what trick all could be benefited at the same time, in a world where one man's gain has always and fatally been another man's loss. Well, but surely we shall pay so much less for our imports, and is not that a gain? To whom do we pay less? We pay less duty, and so the Government which levies the duty receives so much the less revenue—from its own people. There is no alternative to this, no matter whether the difference goes to the seller in the form of a higher selling price, or to the buyer in the form of a lower buying price, or to both if they agree to share the difference. The customs revenue is diminished in any event. The Government is forced to find a substitute in new direct taxes, or else to curtail its expenditure. Somebody has to bear the loss and the burden. Nor is it hard to recognize who is going to be mulcted: it is the producers of home goods. Suppose the duty on footwear is to be reduced. Everybody counts on a cheapening of boots. Instead of buying new boots now, people wait a month or a few months. The boot industry will feel the pinch of this waiting, and the manufacturers, foreseeing the effects, will take measures: they limit their output, they work short-time, or reduce their staff. And it is not only boots that are to undergo this treatment—all industry is threatened with the same sort of visitation. The slump is inevitable, and the loss in wages and profits and opportunities will never be made up to those on whom it is inflicted. The general price-level will be depressed, and remain depressed, in the exact proportion of the tariff reduction. It is a clear gain —for the time being—to those sections of the community who do not live on a working income: the rentiers, and it will take years of readjustment before the balance is restored. It is suggested that periodical reductions should be provided in the tariff treaties: take off a few per cent every few years. It is

sheer madness. Such a course will be a perpetual disturbance and prove far more damaging than has been the contrary course, which we condemn.

§ 14. Professor Pigou on Fiscal Policies.

I am forced to reopen the subject by the appearance of Professor Pigou's book, *A Study in Public Finance*. After what has been said in the first of my essays concerning his conception of the relation between interest and price, it is fairly obvious that his ideas as to the connection between fiscal policies and the currency cannot agree with mine—at all points. However, as his theory of interest and currency is self-contradictory, so are his opinions on matters of finance: there are points on which he lends support to my heresy, and it is with a view to strengthening my case that I wish to enter upon a discussion of his teachings.

1. The science of finance has its dogma, a system of orthodox beliefs. Adhere to it, and you are safe; nothing to prevent you from applauding an English Chancellor of the Exchequer for adopting, in 1928, the fiscal devices introduced, in the 'seventies of last century, by Disraeli. What is the use of a dogma that does not save you the trouble of comparing results with expectations? Disraeli intended (or pretended?) to sink the National Debt. By 1895 it might have been possible to determine whether the debt, in terms of real wealth, had been diminished. The purchasing power of the pound sterling, in which the debt was expressed, within the period had grown by some 35 per cent; unless the debt as expressed in terms of money was reduced by at least as much, it had not diminished. We need not go out of our way to investigate the matter; we may be quite sure that the figure was not lowered by more than a very few per cent.[1] However, the science of finance is

[1] The success of the debt-sinking policy in Great Britain cannot have been very much greater than what is suggested with regard to the French debt by Professor A. Aftalion in his book of *Monnaie et Industrie*, chapter *L'épargne française et l'industrie*. After insisting that amortization is desirable, necessary, a duty, and an obligation, this writer winds up his argument with a retrospect on previous efforts: "It will be, at all events in French financial history, a praiseworthy innovation to have a Sinking Fund functioning which amortizes while no fresh loans are being raised. It will be fine if the fatality which has pursued the former *Caisses d'amortissement* will spare the present Caisse, so that we may live to see in France a real amortization, an amortization without concomitant loans" (p. 223). In plainer terms: former attempts have all miscarried; therefore try, try again, but beware of trying to understand the cause of former failures.

not aware of the fact; otherwise Professor Pigou, who certainly knows his science, could not have written as he did.

He upholds the debt-sinking theory, saying (p. 287):

"A large national debt weakens the financial position of a State and makes it difficult for it to raise money to meet an emergency with which it may be confronted. Consequently, it has always been the policy of prudent Governments in times of peace steadily to reduce debt. When the British debt, in years before the war, stood at the comparatively low figure of £700 million, there was no dispute about this. Every year more revenue was raised than was needed for current expenditure and the payment of debt interest, and the balance was devoted, through the agency of a sinking fund, to reducing the principal of the debt. It is agreed that a policy at least as strict as this must be followed now. . . ."

While thus upholding the theory, he demolishes its foundation. In examining the effect of payments of interest on "loans raised at home," he says (p. 235):

"So far as interest is concerned, it is obvious that what is taken from the income of taxpayers in taxes goes into the income of holders of loan stock, and that, therefore, all that happens is a transfer of income from one section of the community to another section, and, in so far as taxpayers and loan holders are identical, from one pocket to another pocket in the same coat. Plainly, in a transfer of this kind, it is impossible that any *direct objective burden* . . . can be involved."

This agrees exactly with what is affirmed in § 2 above. But Professor Pigou does not draw the same conclusions as I do; he fails to realize that the repayment of a debt which has once been contracted and funded, on this assumption, can be no advantage and therefore no necessity—and consequently must be impossible. He is in favour of repayment. Is it because he was conscious of the logical contradiction that he hazards a demonstration to show that the sinking of debt does not involve any objective burden either? He says (pp. 236–7):

"On posterity as a whole no direct objective burden is imposed by the repayment of an internal loan, any more than by payment of interest upon it. The payment of interest and the repayment of principal alike are transfers, not costs, and to whatever is somewhere lost there corresponds elsewhere an exactly equivalent objective gain."

Surely, if the payment of interest is no objective burden, it follows that the debt itself is no objective burden. That being so, it is not easy to imagine how repayment could be prevented

from growing into a burden. For it is like picking up and loading upon our shoulders a log that might be left lying without any inconvenience resulting. It is a burden to be doing what had better be left undone. The burden of a public debt is purely imaginary—and Professor Pigou says so with me; but the attempt to throw off an imaginary burden demands an effort which makes the burden real, galling.

2. With regard to the question whether the individual bondholder is damaged, or not damaged, by repayment, Professor Pigou makes out a rather curious case (Part III, chap. i, § 6). First as to the premises:

"To simplify the discussion I shall begin by studying a representative man so situated that what he pays in taxes to finance the national debt exactly corresponds to what he receives in interest and in repayment of his loan holdings."

An analysis of this assumption can teach us nothing, leaving, as it does, out of consideration those subjects who are made to contribute to the repayment without being creditors. Any deductions from such imperfect premises must be fallacious. Professor Pigou's certainly are. He argues that the representative man may, without impoverishing himself, spend any sums that are repaid to him, because next year his taxes will be reduced by as much as his interest from bonds is reduced: he gets £5 less and pays £5 less:

"When account is taken of this fact, it becomes clear that, in a stationary community, the representative man's net income, after taxation has been deducted, will be exactly the same in the future as it has been in the past. His position as a whole, therefore, is not damaged in any way, and there is no reason why, to safeguard himself, he should save that £100 which he would normally have spent."

This proposition contradicts my contention that the sinking of debts necessitates saving on the part of taxpayers and so brings about the fall of prices. If Professor Pigou were right, all my proofs would fall to the ground. But he is certainly wrong. Disregarding the qualification "in a stationary community" (which is entirely irrelevant, since a community which is sinking its debt cannot be stationary), I would remark that the person in question, by the time the debt was wiped out, would be rid both of his fortune and of his taxes: he would have spent his substance, and having become penniless,

he would naturally cease to be a taxpayer. Surely this is impoverishment—unless we expect that to happen which my theory attributes to the paying off of all debts: prices and interest reduced to zero. But it cannot happen, least of all on Professor Pigou's assumption that the bondholders go on consuming as before; for obviously such consumption does not allow prices to fall. I have shown that the creditors of the State stand to gain from the sinking of the debt; they are enriched through what is taken from the debtors by way of the fall of prices. However, seeing that the impoverishment of the producers has certain untoward effects on production, there must be a limit to debt sinking—although there seems to be no limit to the belief of Chancellors of the Exchequer and of economists in the virtue of the thing.

3. In a certain respect, though, Professor Pigou's views as to the effect of taxes on work and enterprise agree with those expressed in that part of my essay which appeared in print in 1926. He says (p. 290):

". . . It will follow that large sums can be raised by direct taxation for the service of internal debt with very much less damage to work and enterprise, and so to economic welfare, than is implied in the conventional complaints of business men about the oppressive effects of such taxation upon industry."

It is incomprehensible to me by what sort of logic Professor Pigou from these premises could have derived the following conclusion:

"In the matter of saving it is even arguable that the net effect of debt service transfers—presumed to include some annual repayment of principal—will . . . be favourable rather than the reverse, since the repaid principal will almost certainly be devoted to new investment, while the funds to make repayment will be provided at least in part by economies in consumption."

Can it be that owing to the fact that the taxpayers by the necessity of providing for the sinking fund are forced to save ("economies in consumption!"), work and enterprise should be favoured? Yes, indeed, supposing that the reduction of work and enterprise are the thing wished for by those concerned. But we know that it is not; we dread the effects, for they present themselves in the shape of Unemployment and

Bankruptcy. The passage under consideration is an irresistible condemnation of the orthodox theory of capital and interest. Professor Pigou evidently bases his favourable expectations on the belief that "the repaid principal will be devoted to new investment." New investment—the phrase here means money offered for investment—is supposed to be an aid to enterprise and work. It is nothing of the kind, precisely because of the "economies in consumption": they inhibit enterprise. Let me introduce here an actual case in point. In the earlier part of 1928 a tremendous boom in shares occurred in the United States; at the same time unemployment assumed almost alarming dimensions. The high price of shares and the "scarcity of jobs" were effects of the same cause: debt repayment enforced economies in consumption; nobody wished to issue new shares for new enterprises, and so the money was spent in inflating the price of old shares, while the workers crowded out by economizing (so-called labour-saving) devices found no openings in new enterprises. Here we see how work and enterprise are favoured by debt-sinking policies. As on other subjects, the reasonable view gained from the unbiased observation of facts, and the dogmatic view diametrically opposed to the observable facts, are presented side by side. If it had not been for the dogma, such a shrewd thinker as Professor Pigou could not have produced on one and the same page the two passages just quoted: they are irreconcilable.

Professor Aftalion holds exactly the same view as his English colleague. Here are a few of his arguments (*Monnaie et Industrie*, p. 221):

"The debt-sinking policy should therefore logically favour the augmentation of industrial, of productive investments. Is not this the normal object of any debt-repayment policy that is not merely apparent but effective? What, indeed, is the economic nature of debt sinking? To amortize by means of taxation is to impose on the taxpayer a compulsory economy in order to repay older savings, which, seeing that they no longer find any refuge in the State treasuries (*caisses de l'Etat*), must be employed productively in industry."

He expects from this process of compulsory saving "*l'accroissement des forces productives nationales*—an increase of the national productive forces"; for he realizes that one of the effects would be a reduction of the rates of interest, and according to the dogma that event is manna to famished industry. Visualize

it: the State economizes, municipalities economize, all the taxpayers economize—whom is industry to produce for? And if industry is unable to sell its products, how can industrialists wish to borrow the savings which are offered so enticingly cheap? These savings are unsold goods, and industry turns from them in disgust.

4. As to the alternative of taxes *versus* loans to finance the war, Professor Pigou holds a position of his own in so far as he appears to consider taxes and loans as equivalent, while setting up another alternative: loans *versus* finance by bank credits. That is to say, he does not attribute to loans the effect of making for inflation. Thus at the very outset of the part on "Finance by Borrowing," he argues that a Government providing for its regular expenditure by borrowing would ultimately find itself in a situation "in which the annual obligations might come to exceed the maximum sum that it had the power to raise in tax revenue, even for the purpose of transfer expenditure." He adds: "This thesis is universally accepted." Very well, I contest it and believe to have said enough to prove my point. So long as loans are raised and the amount of the public debt, per capita, is increased, money depreciates. It follows that in proportion as depreciation proceeds, debts are diminished from within, hollowed out as it were, and the service of a public debt becomes the easier. But it becomes more and more difficult, and finally impossible, to raise fresh loans. Although I reject the explanation which Professor Pigou furnishes for the harmfulness, I agree with him as to the unworkableness, of the method. As regards the connection between debt and the currency, more is said in the fourth essay below.

According to Professor Pigou it is only bank credits that cause inflation. He says (p. 250):

"The most obvious means to adopt is, of course, that of offering very high interest for money loaned voluntarily in the ordinary way. For the sake of future budgets every Government will, however, be disinclined to push this means very far. To some extent their unwillingness is unjustified. For, in so far as the alternative to high interest on war loan is the creation of more bank credits, this creation means raised prices, which, in turn, mean larger capital debt on given Government purchases; and, on the assumption that prices afterwards fall again, future budgets may be just as much burdened by a larger debt as by a smaller debt at higher interest."

I do not think that there is any valid reason for distinguishing between loans and bank credits. After describing "the very complicated method of obtaining resources for the Government" actually employed in England to finance the war, Professor Pigou shows quite conclusively that "a straightforward issue of currency notes in direct payment for the Government's purchases" (p. 225) would practically have produced the same effect on prices. In the same way it can be shown that real loans and bank credits produce the same effect on the currency. Both procedures suppose increased issues of notes (legal tender). To demonstrate this in the case of loans, as Professor Pigou demonstrates it for credits, let us assume that all war expenditure was met out of loans. We are told in the last quotation that to obtain sufficient loans "very high interest" has to be offered. According to the dogma this would cause prices to fall; however, our assumption provides a very apt instance to prove that the dogma is wrong. Any money which the Government obtains is spent, incontinently, in purchases: the demand for goods is most urgent. At the same time business is tremendously stimulated; it competes for loans with the Government. Now these new loans have to be translated into means of payment, cash, legal tender: an inflated body of debts demands an extended garment to cover it, and that garment is money. It does not matter what the particular mechanism for the manufacture of the money may be. If the money obtained by the Government is withdrawn by the lenders from other investments (business, commercial), those who are thereby deprived of it must raise fresh supplies elsewhere, that is from the banks and through the banks, ultimately, from the Bank of Issue.[1] This bank cannot refuse to issue notes, knowing what the emergency is: a refusal would paralyse all business in the hour of the nation's greatest need. Other considerations might be adduced; but I will let this one suffice. A true theory of interest and currency would have saved the author of *A Study in Public Finance* the trouble of an unnecessary distinction; a good and workable doctrine of finance demands a true theory of interest.

I shall have occasion in the next essay (§ 13) to criticize Professor Pigou's idea of credit creation. It is at the bottom

[1] In the place of long-termed loans they obtain short-termed loans.

of the present misconception, and the case illustrates the fallacy very nicely. Banks are credited with the power of generating economic energy not otherwise available: they only need to expand their credits, and it is their own choice whether they will do so or not do so. But we have just seen that they cannot choose. When the credits are needed they must be given. The credit is generated by the necessities of the juncture, i.e. by those who need the credits, and not by the banks. The banks are merely an executive organ: when war is on, they are made to fall in line with all the rest; if they did not, they would be found out and dealt with.

I have already given to understand (§ 12) that from the point of view of social justice it does not make much difference whether a war is financed out of taxes or out of loans. It now appears that mere bank credits, supposed to be the most reprehensible method, are not very much worse than either taxes or loans. However, at the present moment the nations are more immediately concerned to know how peace should be financed. The latest academic contribution to the science of finance has only one piece of specific advice to offer: sink the legacy from the war, the public debt. It is just one more voice in the general chorus. If Professor Pigou had realized that the repayment of debt is fatally accompanied by the fall of general prices, he would not have recommended this policy; for he is aware of the dangers arising from deflation (see, for instance, p. 279 of *Public Finance*). Coming at a point of time when nations are settling down to permanent policies, his book might have turned a dangerous tide of popular misconception, if it had struck a newer note by applying correctly those ideas in which I have shown him to agree with the ideas set forth in this essay. The nations are going to pay dearly for the shortcomings of the theory of interest and currency as taught by the schools.

5. Material for a postscript to this appendix is supplied to me by the British Chancellor of the Exchequer's budget speech to Parliament in April 1928. By way of illustrating the fallacies which these paragraphs of mine are attacking I quote a few passages:

"We have only to go on paying the same sort of sums as we are paying now, steadily and punctually, and the debt will be extinguished within the lifetime of some of those who are now listening . . . and to

establish a fixed debt charge for the interest for all the services of debt and for the sinking fund, so that as the interest charge falls through the working of the sinking fund the process of amortizing the debt will grow ever greater and more rapid. . . . The interest saved by the annual repayment of debt, and in economies effected in administration, will each year be automatically added to the effective sinking fund. . . .

"The payment of 355 million a year, if steadily maintained, even if the rate of interest does not fall lower than 4½ per cent, will extinguish our entire debt . . . in a period of exactly fifty years."

This corresponds very accurately with my description of the repayment fancies in § 9 above. Mr. Churchill bases his calculations on the expectation that the rate of interest will fall, thanks to amortization; in consequence of reduced rates the annual payments of interest will shrink, which leaves so much more for the sinking fund. It is curious how little the men of our so-called scientific age are careful to consider whether an alteration in one part of a system is not likely to induce an alteration in another part. What if, as the interest charge falls, revenue should also drop? If Mr. Churchill and his experts had applied the economic theory of the Universities more fully, he would have concluded that taxpayers would have their money incomes enlarged owing to the fall of interest rates, which is supposed to bring fresh supplies of money into circulation and to raise prices; and thus he might have held out promises even more extravagant: increasing revenue and therefore growing sums for repayment. But if we apply to the case the test of experience and a better sort of logic than the Universities have so far been able to muster, it becomes clear that as interest rates fall the money revenue from taxes must shrink away because of the fall of prices and the consequent stagnation of economic activity. The "fixed debt charge" will not be forthcoming, and there will be an end of amortization. However, the debt in terms of real wealth will have become heavier; to lighten it the nations will resort to a little bit of war, which seems to be the only remedy for deflation—in this our enlightened age no less than it was in the less advanced civilizations of the past.

I notice that this budget is heralded and extolled as a "producers' budget." It announces a reform in local rating intended, or purporting, to relieve the burden of rates now weighing on many industries. At the same time it is admitted that the providing of the sinking fund calls for special

economies; Professor Pigou says so, and the Chancellor of the Exchequer speaks of economies in administration. Does this hold forth prospects of gain for producers? The money which is now paid in rates has to be taken out of somebody's pockets, and these somebodies can only be the producers' customers. It does not benefit producers to have their customers mulcted, does it? Understand how the various factors are connected into a whole, and it is easy enough to see that these paltry devices for shifting about a charge that has to be borne cannot be of any real help.[1]

[1] As to the main contention of this essay, namely that the creation of new debts causes inflation and that repayment causes deflation, it is confirmed by an article published in *Zeitschrift für die Gesamte Staatswissenschaft*, 1929, 3 Heft: *Kreditinflation und Kreditdeflation in Theorie und Praxis*, by Professor Willibald Mildschuh, Prague. In his 1929 election programme Mr. Baldwin said: "We decided definitely against schemes which would lead to large borrowing, because we believe that they run the risk in the first place of *causing inflation*."

Fourth Essay

THE NOTIONS OF CAPITAL, OF DEBT, OF CREDIT, AND OF CREDIT CREATION

With Texts from Macleod and Others

In the first essay I dealt briefly with Macleod's central idea of currency regulation through discount. My treatment of the matter in that connection is entirely critical and far from doing justice to the work of Macleod taken as a whole. I owe it to myself no less than to him to make amends and try to set forth somewhat more fully the merits of the contribution to the problem furnished by this truly original thinker, He, it seems, was the first to recognize that discount, or interest, governs the currency. I, who share this view, cannot but appreciate this as one of the few real discoveries ever made in the science of economics. The fact that he did not succeed completely in solving the problem does not lessen his merit as a pioneer; he established the existence of the problem and defined its essential features. His great work on *The Theory and Practice of Banking* is a rich mine of suggestions and facts for the building of a theory of currency. I am going to avail myself of the treasure in the attempt to complete the proof of my theory of an interest standard of currency.

§ 1. The Point of Contact.

Macleod's ultimate and final statement of the principle of currency is couched in these terms (I, p. 55):

"*Where there is no debt there can be no currency.*"

He also says this (p. 52):

"*The amount of currency, or circulating medium, in any country, is the sum total of all the debts due to every individual in it—that is, all the money and credit in it.*"

These two statements are in perfect agreement with the main contention of the essay on *Fiscal Policies*—as also with the chapter entitled "Money and Credit" in *The Interest Standard*

of Currency, where it is shown that currency stability is necessary because currency is the expression of credits and debts. I came to study Macleod late in the day. My line of approach and my method of treating the subject are as different from Macleod's as could be. I was unspeakably surprised to find my views so fully confirmed by considerations of which I had not thought yet, and phrased in a manner which had not occurred to me. I did not know whether I was to rejoice in having found an ally, or to grieve in having to waive the claim of being the originator of this conception. The work of Macleod has had little or no influence on the recent discussions of the currency problem, and the really significant part of it does not seem to have had any influence at all; it was not understood. But it will come into its own. A great scientific truth must be discovered many times independently before it will make itself felt. On the whole there is a surplus of satisfaction for the discoverer in finding that his fine truth has been discovered by others before him; for he needs to be reassured while striving against the indifference, the misunderstandings, the hostility which he encounters on all sides.

The agreement on the conception of the nature of currency naturally cannot be an isolated coincidence; it must result from an agreement on the more fundamental notions of property, capital, wealth, labour, production, and consumption. I am going to set forth briefly Macleod's ideas on some of these subjects and to say in what respect my findings are in harmony with them or differ from them. I am in a rather unfortunate position in so far as the chapters in which I have laid down my arguments are not yet published; for in the present volume I cannot do more than reproduce a few extracts, which must needs be insufficient to show how the final results have been arrived at. I shall freely mix criticism with exposition.

§ 2. Some Equations.

Let us draw the consequences from the two propositions quoted above:

"Where there is no debt there can be no currency."
"The amount of currency is the sum total of all the debts."

The characteristic of a debt is that it demands a payment of interest so long as it exists. Again, property yielding interest

is usually termed capital; hence we may substitute for the term "debt" the term "capital," and we get the propositions:

Where there is no capital there can be no currency; or,
Where there is no debt there can be no capital. And,
The amount of currency is the sum total of all the capital; o
The debt is equal to the capital.

The latter pair can be expressed in terms of simple equations:

Currency = capital; or capital = debt,

and it can be rendered in a variety of versions. For instance, we may say: money and its substitutes or representatives are the only capital and all the capital that is in a country. Or: the credits (in which money in its various forms is included) issued in a community are all its capital. Or, credits and capital are the same thing; the creditors only are capitalists. Also this: capital can increase and decrease only together with debt. Hence, if capital is considered as positive and debt as negative, an increase of capital is counterbalanced or annulled by the simultaneous increase of debt, and the sinking of debts is no gain to the community, because accompanied by an equal destruction of capital.

Further, currency is that which we give in exchange for wares, what we buy wares with and pay for wares with. Therefore currency must be equal to wares, and by wares I mean anything that is bought with currency, including services. By substituting the term wares in the above propositions, we get these new ones: the debt is equal to all the wares; the wares constitute the debt. Or: the capital, or currency, is equivalent to all the wares; no things are wares which do not exchange for capital, or currency. Or: capital is that which exchanges for wares, which one can obtain wares for. Or—allowing that what exchanges for capital is the equivalent of capital, as good as capital: any amount of currency is capital to the extent of the quantity of wares for which it will exchange, and objects or services are wares to the extent of the amount of currency expressing their price.

Having identified wares with debt, we may substitute the term wares for debt in the original propositions, which now read as follows:

Where there are no wares there can be no currency, and:
The amount of currency is the sum total of all the wares.

What is it but our old acquaintance, the quantity theory of money?

I ought not to have been surprised at Macleod's discovery, which after all is merely an older theory in disguise. However, it does cast a new and more revealing light on the underlying thing, as we shall have occasion to see yet.

Nothing is capital that is not exchangeable. Exchangeable is the same as saleable, and therefore we say and define: capital =exchangeable property. However, saleable property is the usual definition of what I term "a ware," plural "wares," collective "merchandise." (We need all these three forms. I prefer "ware" to "commodity," because the latter suggests practical or technical usefulness, while "ware" means purely and simply "made or procured and kept, or offered, for sale"). Thus it appears that capital and merchandise are designated by one and the same attribute: saleable. The essential significance of saleable is: existing for, or by virtue of, something else. Currency assumes the capital property through contact with wares, and it is nothing in the absence of wares. In the same way: wares become saleable through contact with currency, and there can be no wares in the absence of currency; for wares constitute the debt. This point must never be lost sight of; else we are bound to fall into the error of adding quantities which are only exchangeable: one *for* the other, but never and no on account one *and* the other. If currency is capital, the wares are not capital but debt. The two quantities can never be united in the same hand; they are as strictly severed and as far apart as the two poles. Of course an individual person may own both wares and currency; however, the currency in his possession does not stand for the wares in his possession. He can part with either for more of the other; in computing his total property he may add the two items. Not so the community; the sum total of its wealth is only the sum of its currency—money plus claims. For one man's currency is a title to another man's wares, i.e. it is another man's debt or liability. It will not do to add the liabilities to the assets in making up the account.

The economic planet, then, has the two hemispheres of capital and debts, or currency (credit) and wares (labour). All the material possessions and the labour of a community constitute its debt. The proposition may sound like a paradox; but it should be taken literally. A debt is what is due and must

be supplied. Well, material possessions are of a nature which forces us to supply them and to apply them; unused they perish without yielding any satisfaction or gain. The same with labour: it cannot be bottled up and preserved. Therefore wares and labour are natural debts. This interpretation is also borne out by the terms of the quantity theory of money, which places wares over against currency.

Why, then, do men get themselves into debt by producing perishable goods? Why do they burden themselves with wares through which they become debtors? Because nature, as it claims tribute from wares and labour, also imposes a tribute on those who hold the capital, the credits, or the currency. These capitalists are as perishable as the wares, and they depend on the wares, or labour, for their very lives. This forces them to surrender their claims to those who have laboured. It is the great and endless force which urges the current of exchange. Thus capital is also debt. It is all debts, duty, necessity—with a surface semblance, but no reality, of choice.

§ 3. Names and the Thing.

The above equations are not mere symbols; they express material facts. Currency, capital, debt, the total of wares are equal in quantity because they represent one and the same thing. They are four different names for one identical object. Let us try to visualize the case in a concrete instance. Here is a house just finished, ready to receive its inhabitants. How did it come into existence? Somebody manifested his need of a house, either for his personal accommodation or for a speculation. The first material object required to translate this need, or interest, for a house into reality was a sum of money sufficient to pay for the building of the house. Thus the house has come out of a quantity of energy in the form of currency. The sum of money expended and the price of the finished house must normally be equal, and we get the equation confirmed: currency = ware. Now suppose that the person who had the house built borrowed the money, and we have the factor of debt and with it the equation: the amount of currency borrowed = the debt. We at the same time have the factor of capital; for the borrower's debt is the lender's capital, and the capital is exactly as great as the debt, so that the equation reads: capital = debt. But still there is only one object: the ware (the house). Although

the debtor says that he owes the money with which the house was built, he really owes the house; for he does not possess the money any more, it was paid out to the builders. And similarly the creditor or capitalist may be said to own the house; for the mortgage in his hands is a title to the house in case the debtor should default. Thus the four terms "currency," "ware," "debt," "capital," arise out of, or cover, only just one object, and the inevitable consequence is that they are equivalent.

However, the house is only a part of a greater whole. Strictly speaking, what has been said of the part is only true of the whole. The price of a house may rise or fall. The owner (debtor) alone is affected by the gain or the loss, while the creditor, as he forgoes a share in the profit, claims the full sum of the loan in case of a loss. Thus the object may come to be more than the debt or less than the debt. But when we consider the whole of economic objects, the debt can be neither more nor less than the object, and the aggregate price of all the objects must coincide with the total of currency in existence. The capital and the debt, the currency and the ware, must be strictly equivalent. Whatever changes may take place in the relative prices of individual wares, all the wares taken together cannot be worth more than there is currency to pay for them. Likewise all the currency taken together cannot exchange for more wares than are in existence. What one particular object (or its owner) gains or loses, makes the loss or the gain of some other object (or its owner).

However, here again we are made to pause and inquire. We have observed, in the Germany of the inflation time to the full extent, in most other countries to a considerable extent, the value of debts reduced. How can it be affirmed that under the circumstances the wealth was equally divided among the creditors and the debtors? When the debt was extinguished, all but in name, through inflation, the owner of the object had become his own creditor: the debt and the capital were now united in the same hand. A man of means is likely to be his own creditor for the real property in his possession. He owes the house he lives in to himself. But in acquiring it he spent the currency, and therefore the currency for the house is due to him when he parts with the house; it will come back to him as the object departs from him. There is also this possibility: the ownership in the object and the ownership in the currency may fall apart

again—the owner can raise money on the house by a mortgage (have the money back without selling the object), or he can sell the object on credit (part with it without taking the money back). But always the four factors are present in some combination or other. One might be tempted to say that it is the case of an object with its three dimensions. It is quite impossible that there should be either more factors or fewer. Every economic quantity is first of all a material object, and the object presents the three aspects of currency, capital, and debt. However the analogy must not be carried too far. It is clear that the term "currency" does not stand to the object in the same relation as do the terms "capital" and "debt." After insisting on the oneness of the whole it is well also to remember its division into the two polar halves, with currency and capital on one side, the ware and debt on the other side of the line.

At the bottom of all these relations we are led to discover the general structure of society with its main division: debtors and creditors. The creditors are those members who have served or are going to serve; the debtors are those who are actually serving. Without this division there could be neither wares nor currency. Supposing that all were workers, producers, the constitution of society would inevitably be communistic, i.e. undifferentiated. For it would mean not only that all shall work, but work equally well or equally poorly, because inequality would be sure to create a surplus in the possession of the more efficient, and shortage or want among the less efficient, out of which difference capital and debt would needs follow. In a genuinely communistic society currency is not necessary and would not be thought of; neither are markets nor wares. Debts, the abhorred thing, thus appear as inherent in human constitution: the inequality in the endowment of men is translated into the economic phenomenon of debt and capital, and capitalism is the expression of this inequality. In a vague, emotional way the opponents of capitalism have realized this fatality; for they postulate equality, the duty much rather than the right for all to work. The use of money is incompatible with a communistic order. Money is the natural outcome from differentiation among the social units, and it is inseparable from capital, debt, private property, as also from markets and wares.

§ 4. Concerning Capital.

After these preliminary remarks we turn to Macleod to see how he arrives at and accounts for his propositions as stated above. His definition of capital is to this effect (p. 71):

> "*Capital is any economic quantity whatever used so as to produce a Profit.*"

The term "economic quantity" itself is defined as (p. 2):

> "*Anything whose value can be measured in money.*"

Thus we see that Macleod makes money an essential condition of capital: no money, no economic quantity, and no capital. He does not say so explicitly, but it is inherent in the nature of the case, that money is an aspect of division of labour. Capital, therefore, is born with division of labour, and what may appear as a growth of capital is in reality only an extension of division of labour to objects which were undivided property previously. Such extension adds to the debt in so far as it invests with the characteristic of wares objects that used to be held for personal use. Hence an "increase of capital" is not an increase of property, or of wealth.

Macleod's definition of capital does not distinguish between profits made by lending and profits made by selling. Indeed, he treats loans as sales or purchases. He shows, chiefly by legal arguments (he was a lawyer), that to lend money is to sell money: the money passes to the borrower and "becomes his absolute property to deal with in any way he pleases." He says (p. 58):

> "If a man 'lends' £100 for a year, it is in reality a sale, or exchange, in which he sells the money, and in exchange for it he receives the right to demand £105 at the end of the year; and the £5 is the interest."

Now as to the notion of profit which Macleod thinks essential to the idea of capital. In its ordinary acceptation profit signifies the difference between the selling price and the buying price. At that rate the question whether an economic quantity is capital or not capital would depend on the outcome of a computation, and many things that are called capital would be found to lack the requisite characteristic of profit. For instance, Macleod says that money invested in the Funds is capital, because it yields interest. But there is not always a profit,

although the interest is properly paid. A bond bearing 4 per cent may fall in price by 10 per cent within a year, and where is the profit then? But the bond does not cease to be capital for all that. Its capital property is reborn in the new price, which is the result of its money yield capitalized at the higher current rate of interest. So long as a thing can command money, or obtain a price, it is an economic quantity and can be used so as to produce a profit; it is "capital." The seller may lose on his outlay; but the buyer acquires the object at a price which he expects to yield him a profit: contact with money restores the capital faculty in the object. Thus it would seem that the notion of profit is not essential. But every exchange of economic quantities is attended by profit or interest. If one party to the bargain goes without a profit, or even incurs a loss, the other is all the more sure to gain. Wares are made, not for use, but for profit, that is for sale, for exchange; but no exchange would take place if it were not for the gain, each party exchanging what he has less use for, and values less, for what he needs more and values more highly. Even though the property is sold at a loss, there is a gain for the seller, in so far as he considers it more profitable to part with it than to retain it.

From my objection to the idea that profit—in the ordinary acceptation of the word—is the distinctive characteristic of capital, it follows that I cannot agree with this statement of Macleod's (p. 74):

"It must be carefully observed that there is nothing which is in its own nature and always capital. . . . Whether a thing is capital or not does not in any way depend on the nature of the thing itself, but solely and exclusively on its method of use. It is sometimes said that capital is simply the accumulation of the products of past labour. But this is a most vital error, and must be guarded most carefully against. All the accumulation of the past is not used as capital; but only that portion of it which is traded with, or used for the purpose of profit."

Whether it is a necessary reserve to say that nothing is in its own nature and always capital, depends on the conception of capital to which one is pledged. If we adhere to the definition which we have arrived at in our first section, we shall maintain that currency is in its own nature capital, the word currency is synonymous with capital, and there is no room for any ambiguity. The definition also implies that nothing is ever capital that is not currency. It is not the object that constitutes

the capital; the price of the object, the money's worth of it, is the capital.[1] Macleod's conception is in many ways superior to the one which he challenges in the passage under consideration. It insists on the necessity of money coming into play, which is indeed fundamental. But he is at once too lax and too narrow in his distinction between capital and non-capital. Too lax he is, in so far as he allows "goods" to be capital; too narrow in so far as he denies that money is always capital, and limits the scope of the attribute of capital to what is actually sold. As to the former point, he says (p. 71):

"Suppose a person has a sum of money. If he expends it on his own personal enjoyment and gratification, or on his household expenses, such money is not used as capital."

But the money is spent, exchanged, sold in the process; how then could it fail to be capital? Is not enjoyment and gratification and the maintenance of the household also profit? Money must be capital always and by its own nature, simply because it is nothing if not exchanged. As to the second point, it is the logical deduction from the idea that what "the proprietor uses for his own personal enjoyment" is not capital. Assuming that material things other than money (land, houses, etc.) may be considered as capital, they are so only when actually sold, and sold at a profit; but they are not capital while being used by the proprietor himself: such is Macleod's view. I should suggest a different point of view, if I admitted the assumption —which I do not. Material things are capital if they are saleable, so long as there is some currency to back them and exchange them when the owner desires to dispose of them. The decisive question is: does the currency exist that will move the object from one hand to another? And the answer depends on whether there are people who may be expected to have and to evince an interest for the object. Where there is an interest, there is the readiness to pay the interest—there is currency; for currency is merely an embodiment of interest. And where there is interest there is capital.

[1] I find Professor Irving Fisher defining capital as "the value of a given quantity of goods" (see his contribution to *Die Wirtschaftstheorie der Gegenwart*, vol. iii, p. 23). Obviously the term value is here meant to signify price, seeing that value cannot be expressed otherwise than by a sum of money. Hence capital is a sum of money; not an object, but the money's worth of the object.

I have alluded to the case of a community in which all debts have been wiped out through infinite inflation: the owners of the real wealth owe nothing. It is easy to see that their wealth thereby ceases to be capital. It is no longer saleable, because there are no members of the society who could buy it. For with the debt has vanished the currency. The defrauded creditors are entirely destitute, and those who are wealthy are already in possession. The destruction of debt is at the same time the destruction of capital, and it makes no difference whether the debt is extinguished through inflation or through regular repayment. The destruction of the debt also spells destruction to the capitalists; they cannot exist and must either turn workers or quit this earthly life (in so far as they are kept alive by doles or charity, they are pensioners, i.e. capitalists)—in the Germany of the inflation time they starved themselves to death or committed suicide. I think I am justified in stressing these points. The connection seems to be less understood at the present time than ever before. The debt repayment policies in vogue everywhere are no less foolish than is a statement from a writer, who claims to be an intimate of one of the framers of the Dawes Plan, to the effect that the German nation owes its surprising prosperity (1927) to the fact that it has got rid of its debts. (See *The Atlantic Monthly* for May 1928, the article "A Tourist in Spite of Himself," by A. Edward Newton.)

§ 5. Interest and Price.

The purpose of the present discussion is entirely practical. I intend to show that interest governs price, so that the level of prices may be regulated through interest. The ordinary manner of conceiving the notions of interest and capital does not lead to that conclusion; but Macleod's treatment of the subject is an important approach to it. He abolishes the distinction between selling, or the phenomenon of price, and lending, or the phenomenon of interest. Price and interest are thereby merged in one. Ordinary wares and so-called capital ("means of production produced through labour," and similar phrases) appear as one and the same thing: economic quantities, exchangeable property. To say that the yield of capital is profit, is to characterize capital as merchandise; for profit results from the sale of merchandise; it is the difference between two prices or estimates, and so, when the profit happens to be

derived from lending, and therefore is called interest, interest appears as an element of price. However, although this conclusion is the natural logic of his definition, Macleod has missed it entirely. He does say that interest governs price; that we know. But we also know that he inverts the relation between interest and price. Most strangely he failed to realize that interest is an ingredient in the price pudding, the price leaven, as it were—so that price must be higher or lower as interest is higher or lower. He turned it the other way about. He was thus the originator of two principles; but far from recognizing their common foundation, he separated them and kept them in separate compartments of his thought and theory from beginning to end. More than that, he made one the very contrary of the other; for he says: Price becomes the lower as the rate of interest is raised higher; and at the same time he affirms that currency, which is the raw material of price, grows the larger as the debt increases. The debt increases owing to a growing demand for currency (increased borrowing), which surely cannot but raise the rate of interest. Hence the rising of the rate of interest goes with the increase of currency, which in its turn must raise prices. So it is clear that price is normally raised as the rate of interest is raised. It must be an effect of the trickery and intricacy of the subject-matter that economic science should have accepted, and erected into a dogma, the principle which the originator perverted, while rejecting or neglecting the true one.

Macleod treats interest as profit. He, in fact, treats every form of income as profit—or interest. He says: "When a man sells his labour for money he uses it as capital." Thus, then, a wage would have to be considered as the yield or earnings of capital, i.e. as interest. Indeed, a wage is a price; in the price is contained the element of interest, interest being that constituent of price for the sake of which the labour or the outcome of labour, the ware, is sold. What is termed capital, according to the accepted terminology, is the product of past labour; therefore present labour may properly be allowed to pass for capital.

§ 6. Capital as the Reverse of Debt.

However, we have drifted away from our original definition of capital; nay, we have turned it upside down. For we had found that labour and wares are debt, the very reverse of

capital. What presented itself to us as capital was currency. I do not think it possible for any one to keep clear of contradiction and confusion while making use of the term "capital" in any one of its current shades of meaning. It would be a great gain if it could be eliminated, or at least confined to just one sharply circumscribed connotation. I am going to make an attempt in this direction and propose to employ the word "capital" as the reverse of debt. Here are my reasons.

The English language lacks a clear and unambiguous term for the thing in question. Of course, if creditor is the reverse of debtor, credit ought to be the reverse of debt, and the word is sometimes used in this sense. However, there is a drawback: the word denotes other aspects and is much better reserved for them. Macleod insists that the word "debt" also signifies the contrary of debt; he says in a summary (p. 101): "The word debt means the creditor's right of action, as well as the debtor's duty to pay." But that gives rise to intolerable confusion. I have already pointed out that debt is that which has to pay interest, while that which receives, or is paid interest, is termed capital. The opposition is as perfect as that of north and south, positive and negative, active and passive, male and female. The word "capital," always vague and ambiguous in its ordinary meanings, will not play us false, if we agree to make it the reverse of the word "debt," about which there can be no ambiguity; especially so if we can be mindful that the debt consists of products and services. In this way we get a clear partition of quantities, a real equation: capital and debts, or currency and wares.

§ 7. The Whole and its Different Aspects.

In order to keep true to this partition we must dispose of a conception which is prominent in Macleod's work. We have found him treating labour as a commodity and also as capital; that is to blur the partition. But he goes farther: he also speaks of money and credit as a commodity, identifying it with "goods and chattels and vendible commodities." He also says: "This universally exchangeable merchandise is called money." To be sure, when he speaks of money he usually means the metal. He classes money with "material property" such as: "lands, houses, money, jewellery, corn, cattle, timber, etc." Banknotes, on the other hand, he treats as credit: "rights of action, banknotes,

bills of exchange, the funds, shares." But he is not consistent throughout; for he sometimes treats cash money as credit, and he writes this (p. 35):

"Now, when a person takes a piece of money in exchange for products or services, he can neither eat it, nor drink it, nor can he clothe himself with it; it is of no absolute direct use in itself; its sole use is to be a *right* or *title* to demand something from someone else; and the person who receives it in exchange for products or services only agrees to do so because he *believes* that he can exchange it away again, for something which he does want, whenever he pleases. It is, therefore, what is termed *credit.*"

A piece of money, that is, a piece of silver or gold, therefore is merely credit. And Macleod insists that both money and credit are bought and sold and are therefore merchandise. He says (p. 69): "The money is payment for the goods; but the goods are equally payment for the money." He is so intent on proving that credit is wealth, that he often forgets his better insight and erects credit into an independent quantity, capital not counterbalanced by debt. He says: "And credit in all its forms is a mass of independent exchangeable property" (p. 98), and also this (p. 182): "Credit is wealth over and above and additional to money." He thinks that personal qualities which procure a person credit are an addition to the total wealth of the community; he forgets that the community gives the credit, and therefore cannot be enriched by it. He is always expressing himself in a way which suggests that the three categories of wealth which he distinguishes—"material things, personal qualities, abstract rights"—were separate entities. Thus on p. 3, after enumerating examples of the first species, he adds: "There are, however, other things or orders of quantities which can be bought and sold." And he is going to examine whether they, too, are wealth. His finding is to this effect (p. 76):

"Many persons have found it very hard to understand how credit is capital. But when we agree that anything which has purchasing power is wealth, all difficulty vanishes. Money is purchasing power; and a trader's credit is his purchasing power over and above his money, and therefore, by the very definition, each is equally wealth."

"By the definition"—unfortunately a definition is not a proof. Macleod would thus have us add the wealth represented by the three categories. We shall see in a later section what it was that betrayed him into this error. Meanwhile let us be

perfectly unambiguous on this point, that the three "kinds of wealth" are merely different aspects of one whole, which is not the sum of the three, but only just as much as each of them taken singly. Separated from each other, they are nothing. Land without labour is nothing, cattle is nothing, grain is nothing; likewise rights are nothing without the material goods to which they give a claim; and again, labour is nothing without the material objects to which it is applied—also labour cannot become an economic quantity unless it is sold at a money price and is thus enabled to exchange its value for some other value. Labour had better be left out of account anyway; it is neutralized by the needs and claims of the labourers. On the other hand, it may be remarked that where there is division of labour there must also be division of ownership: one man's property is other men's debt. As I owe my labour to the community, so the community owes to me means of subsistence (it provided them for me before I began to contribute my labour). My debt is means of subsistence which I owe to others; my capital is means of subsistence due to me from others: the debt and the capital of all make up the two hemispheres of the economic whole.

§ 8. The Increase of Capital: a Misconception.

Capital and debt are inseparable, each is conditioned by the other. That is what Macleod might have made the foundation of his system. For he must have caught a glimpse of this truth when he wrote this at the close of a paragraph on "Debts as negative quantities" (p. 198):

"As the opposite or inverse quantities in an obligation are created together, can only exist together, and vanish together: they are exactly analogous to polar forces."

If Macleod had kept in mind the full implication of this statement, and if he had realized more clearly what it is that constitutes the debt, he could not have written paragraphs about the "increase of capital," as he did. He would have seen that anything that is added to the "positive quantity" must also be added to the "negative quantity," and that positive and negative must balance. On p. 74 he writes:

"Capital may increase first by an actual increase of quantity. Thus flocks and herds, poultry, cattle, and all the fruits of the earth increase by adding to their number or quantities."

On the same page he tries to show that "there is no such thing as absolute capital." How then could additions to the quantity of material possessions be an increase of capital pure and simple? They are not, for the simple reason that the debt is increased in the same ratio. Those additions themselves are part of the debt; the owner owes them to the community, seeing that he cannot preserve them for his personal use. He has to give them up in order to secure the community's services in return. But if he increases his supply of wares he will find, in the majority of cases, that the community does not increase its returns to him: the increase of supply depresses the price of the article, and price, by Macleod's own definition, is the measure of capital. Nor is this all: any increase of the property owned brings with it an increase of labour and care, that is duties, or debt.

The other way in which, according to Macleod, capital may be increased is (p. 75):

"by commerce or exchange: that is, by exchanging away something which has a lower value in a place and obtaining something which has a higher value in return for it."

Incidentally I will remark that this is merely a form of production—as defined, very ingeniously, by Macleod himself—and the case differs in nothing from the first. However, Macleod illustrates his idea by examples which imply rather more. He supposes that a merchant, thanks to his credit, is enabled to make a profit of £20, which he treats as an increase of capital. It is an increase for the particular individual; but from the point of view of the community it is not. The "polar force" adds the same amount to the hemisphere of debt and counterbalances the profit by a loss. Those £20 must have escaped from somebody, somewhere. They are not an addition to the whole, but a transfer from one part to another. For instance, supposing that £20 of new currency had been created to enable the merchant to realize his profit, the holders of the previously existing currency would lose a certain fraction of its purchasing power, their capital thus being diminished by exactly as much as his has been increased. Macleod knew of the law of polarity holding sway in economy; but he did not apply it.

He failed to ascertain what the polar forces exactly are and how they are divided. Thus in the discussion on debts as negative quantities he starts from the proposition that "if

money is termed positive capital, credit may be termed negative capital" (p. 197). He therefore makes credit equivalent to debt, both being treated as negative. But in other places he says the contrary. For instance (II, p. 332):

> "Hence, money and bills of exchange are fundamentally analogous: they are each of them merely the evidence of a debt due to their possessor."

We must draw the line sharply, uncompromisingly, and never transgress it. Labour and the products of labour constitute the debt. The reasons for this apparently paradoxical thesis are not purely theoretical. We are received into the republic of producers as debtors. For we have been consumers before we begin to produce; we have been capitalists, creditors, living on "interest" for 15 or 20 years, and now we are indebted to the community: what our labour produces is due to the community. Therefore labour and its products are the debt, while currency and credit are the opposite of debt, are capital.

The notion of the increase of capital, or wealth, has been the obsession which has vitiated the thought of several generations of economists, including the present. More about it will be said in the last of these essays; at this point I wish to insert some further remarks with a view to strengthening the above argument.

The notion is the direct outcome of the conception of interest and capital which I am attacking. When capital is considered as a given quantity of material goods, rather than the price, or value, of the goods, the increase of capital is proved by an addition; it must seem possible to increase the quantity by dint of labour on the one hand, of abstention from consumption on the other hand. The author of the article on *The Theory of Interest* in the encyclopædic German publication, *Die Wirtschaftstheorie der Gegenwart* (1928), H. Oswalt, writes (vol. III, pp. 143–4):

> "If, other things being unchanged, the quantity of capital increased, capital would have to be employed for purposes hitherto excluded because unremunerative. . . . The consequence of this development would be that interest would disappear, because capital would be no longer relatively scarce. Whether this will ever be brought about, science cannot predict."

So also, Professor Taussig, *Principles of Economics*, chap. 38, § 6, says:

"And then, so far as the forces of demand determine interest, it will be brought down to *nil*. Like other problems bearing on the distribution of wealth, this must be confessed to be unsettled."

Poor science, forsooth! The German author teaches that capital is what is scarce. What, then, is meant by the increase of capital? Is it the scarcity that is supposed to increase? No, indeed, it is the quantity of goods, of wealth, of property; for the goods are conceived to constitute the capital. But if we increase the quantity of goods, we diminish the scarcity, and seeing that scarcity is a necessary condition of the existence of capital, the consequence of a diminution of the scarcity must be a diminution of the capital itself; the more diligently we devote ourselves to the augmentation of the thing, the more do we reduce its magnitude. And is it not rather a queer fancy to define a phenomenon by its scarcity, to say that a thing exists only in so far as it is scarce, insufficient? Also the idea, implicit in our quotation, that it should be more remunerative to employ more capital for the creation of new, additional capital in proportion as capital is more abundant, strikes me as somewhat problematical. But the orthodox theory is quite positive on this head: when interest, thanks to abundant capital, falls, the production of capital is stimulated. Anyone who holds this theory should not hesitate in predicting the utter elimination of interest. It is only by my heretical theory that it can be confidently affirmed that interest is not to be eradicated; to hint at the contrary is no wiser than it would be for biological science to consider the possibility of suppressing the instinct of propagation.

In the same way as Oswalt, such a recognized authority as Friedrich von Wieser refutes his own definition of capital with his own arguments. His conception permits the possibility of an increase of capital. He says in *Theorie der gesellschaftlichen Wirtschaft* (English under the title of *Social Economics*), p. 54:

"In a progressive economic society capital is not only replaced, but increased, new capital be ingadded to the old; reproduction is supplemented by new creations."

This a few pages after he has written as follows (p. 50):

"Whereas individual capital goods are consumed through being used, capital as a whole is unconsumable. In a continuous transformation

of its constituent parts it is continually renewed. In this statement is contained the essential principle of the theory of capital."

It is indeed the essential principle. But to me it appears that if capital is unconsumable, i.e. not susceptible of being diminished, it must also be invariable in quantity: mankind as a whole is always possessed of the same quantity of capital. Only parts can increase, and if some parts do increase, others must decrease, because the whole has neither material nor room for a general increase; also it is one of the laws of growth that anything that has increased must come to decrease again. Looked at from this point of view, the idea that capital is invariable amounts to saying that the quantity of capital is determined by men's capacity of becoming conscious of the utility or the value of things. This interpretation agrees well with our definition of capital as being the price of goods.

Only once have I met with the idea that capital, or wealth, considered as a whole, might be invariable. Edgeworth, *Papers Relating to Political Economy* (vol. I, p. 210), says:

"Thus it may be plausibly contended in virtue of the analogies of Fechner's law that, where the total wealth of a people has increased, an equal quantity of utility is represented by a larger quantity of wealth."

There is a footnote added:

"The standard defined in this section . . . appears to be particularly appropriate to the case in which National Wealth is regarded as a constant quantity. . . . The average scale of living being higher, the same amount of goods will not appear of the same importance to the average consumer."

The question is referred to again in another connection (p. 346), thus: "the final utility of wealth decreasing with the progress of society." (By the way, is it really progress when utility decreases? Should not the notion of progress disappear when the notion of the increase of wealth goes overboard? Of course, this view throws us back into the gloom of the "dismal science"; but again, we are not called upon to act the Mark Tapleys of economics.) The way in which Edgeworth accounts for the conception is somewhat jejune; the thought evidently was not familiar to him, or not to his liking—it clashed with the teachings then in vogue. He does not say where the idea had been expressed, but quotes another writer to this effect:

"The total well-being we derive from goods depends not only on the positive satisfactions experienced in use or consumption, but also on the social satisfactions that flow to us in consequence, the latter largely determined by the relation of our consumption to that of our neighbours."[1]

To which Edgeworth adds this:

"In a progressive state of society the second circumstance as well as the first tends to depreciate goods with respect to utility."

Let us paraphrase it. I esteem my possessions the less highly, even though they have not been changed with respect either to their quantity or to their quality, when I see that my neighbour's possessions have increased. It is the subjective estimate, not the objective measurement that determines the quantity of capital. The enriched neighbour, comparing his condition with mine, may feel upraised, the increase is a gain for him; but my sense of loss cancels the gain from the point of view of the whole. After I have caught up with him again, his own increase is thereby annihilated; we are on a level again and quite unable to tell whether it is a higher or a lower level. Our efforts have not availed to increase capital as a whole. We see, then, that capital is merely a sense of difference—as interest is the manifestation of a difference. The ironing out of differences diminishes the utility of possessions and thereby the capital of men. Were all men equal, none owing anything to anybody, the phenomenon of capital would not exist; there would be no currency, no prices, no exchanges, and no division of labour.

The fact that Edgeworth connects the problem of the magnitude of wealth with the monetary standard is highly significant. It was the study of the nature of currency and the quest of a means for bringing about a stable standard that led me to recognize that there can be no such thing as an increase—nor, of course, a decrease either—of capital, but that the wealth of an economic whole, or isolated system, must be a constant quantity. The value of the currency is determined by the ratio between production and consumption; it may fluctuate locally and temporarily, but is invariable with reference to the whole, for the simple reason that everything that is produced is somehow consumed, given up, which means that mankind, i.e. the economic whole, is unable to add to its wealth by the creation of a permanent surplus.

§ 9. Zones of the Economic Hemispheres.

The equator of the economic planet separates debts from capital, or products from currency. Both the debts and the capital are arranged in a certain order of latitudes and degrees. Each presents itself under various aspects which correspond to each other from hemisphere to hemisphere. Some products or services are made to-day and exchanged to-day for cash, as, for instance, a hair-cut or a newspaper (of course, much that appertains to hair-cutting and newspaper-making is neither made to-day nor paid for to-day). Other products were made long years ago; where is the currency, or capital, for them? For they remain a debt as long as they exist and are used, and if a debt, there must be the currency to settle the debt or to transfer it when a transfer becomes necessary. Let us consider the matter in the light of a concrete case.

A dairy farm produces two very different kinds of products: milk and its derivatives, and cattle. The milk is the ultimate product, and we will assume it to be sold day by day for cash. The daily product and the daily money are matched; they make the original pair, the two zones on the equator. Wares and money (currency) appear in their concretest and most easily understood shape. They are made for each other, and neither has any reason of being without the other. The farmer would not keep cows and produce milk if he were not assured that he is able to sell the milk; nor would his customers provide the money if they did not count on obtaining the milk they want. The money must be there for the milk, and the milk must be there for the money.

The cattle is on a different plane, or in a different zone, from the milk, though also a product. It is both product and means of production. It is not produced and sold daily for cash; but from time to time a piece of cattle is sold. While the cow produces milk it is a part of the farmer's stock-in-trade; but when it is for sale it becomes a ware, and for it to become a ware there must be some demand for it embodied in a sum of money. We are back again at our original pair, money and a ware. But we ask: where is the money for the cow while the cow is stock-in-trade? For somehow the money must be in existence. It was invested in the cow and cannot have been withdrawn. Money is the living soul of economic quantities; without

money, nothing can continue an economic quantity for one day. Since the money is still latent in stock-in-trade, it must be possible to produce or procure it when it comes to exchanging the cow: the butcher, in buying the animal, pays down the money to the farmer. Thus we have another pair—the two moderate zones, in which things have a certain permanence: a waiting or ripening ware and waiting money. Again I say that each is made for the other, and everything as in the case of the first pair. If there were no money for the cow when it must be sold, the farmer would not produce the cow—by which I mean: not offer it for sale; he would dispose of it in some other way. But he would be forced to have the cost of the cow paid to him in the price of the milk all the same; the consumers could not get the milk on any other terms. Everything that aspires to the title of an economic quantity must be backed by currency—and by the interest of consumers to prompt them to pay the price, that is, the cost of production. The debt and the capital must balance.

Cows and milk are not the whole of the farm. There are the buildings and there is the farm land (I pass the case of the movable equipment). These, too, are products in which money has been "sunk" and which may be sold and therefore require to be backed by currency. From what I have observed in my native village in the neighbourhood of Berne (surely one of the most up-to-date farming districts in Europe), farms change hands on an average at least once in 25 years. When a farm changes hands there must be money to effect the exchange. The currency, or capital, sunk in it must be waiting to be ready against the day when it is wanted. The farm buildings and the land are waiting or latent wares, are a debt; so is the currency backing them waiting money, credit, or capital. It may be in the form of a mortgage, or in the form of a bank-book, or in the form of some other security; but it must be available when called for. We have arrived at our third pair of zones of merchandise and money, or debt and capital. As the ware and debt is differently constituted from what it is in the original pair, so too is the means of exchange, the currency or capital; but their relation and mutual dependence is exactly the same.

§ 10. Public Property and Currency.

Now we come to the last and most shadowy pair of capital and debt. Indeed, it is so shadowy and extenuated as to become almost unreal, a mere ghost. The owner-farmer and his creditor are members of the community and sharers in all the publicly owned wealth. But the question is: does the term "wealth" really apply in the case of these objects (public buildings, public roads, the schools, the police, customs-houses, armies, and navies)? All of these things may be necessities, and some are great conveniences; but shall we call our necessities our wealth? Indeed, the public works are by many citizens felt and resented as a charge and a diminution rather than an augmentation of their private wealth. If a general condition of safety and order and a high degree of education prevails in a country, the value of private property is, no doubt, enhanced thereby. But such a condition is not to be had for nothing. The owners of the private wealth, the capitalists, have to contribute to the expense of producing and maintaining it. If the country or municipality, in equipping itself, has contracted a debt, the interest that has to be paid is a first charge on the capitalists. There is no escape from this charge. The capitalists may take a higher rate of interest from their debtors, the owners of the means of production and the products; but then this charge will pass into the price of the products which the capitalists (owners of money and money claims) have to buy. We have shown in a previous chapter that prices are higher in proportion as the debt is greater. On the other hand, if no debt has been contracted by the State, its equipment having been paid for out of taxes, there is no charge for interest, and it would seem as if the value of property should be enhanced. It is not enhanced, because its money price is so much reduced. For there is less currency out and the products must sell at lower prices. In so far as there is no public debt the value of the public property need not be translated into actual currency. It cannot even be estimated or expressed in terms of money. Its whole money value has been, as it were, emptied out and distributed among the owners of the private property—who, it should be remembered, have contributed the means by which the State acquired its possessions. Public property has no price; it is practically never sold. It is not saleable, and consequently not an economic

quantity. Hence there need not be, nor can there be, any currency to offset it; but the currency in the possession of the capitalists is all the more substantial or concentrated, having had the value of the public property pressed or condensed into it. Contrariwise, when there is a debt, funded or otherwise, on the public property, currency is required to exchange these rights, and instead of belonging to the community, the property really belongs to the capitalists, the creditors. Only it must not be imagined that they are any the richer for it. Their currency or capital is diluted, and their incomes, though expressed in larger figures, do not buy more products or services; for whatever the numerical quantity of currency or capital, it cannot buy more things than exist and constitute the debt.

I suppose that the idea that publicly owned wealth, when debt-free, is not "wealth," is somewhat startling. It agrees with some of Macleod's ideas; only he did not work them out in detail and so failed to demonstrate their application. My present point I arrived at long before I read Macleod; but it connects in a straight line with his fundamental conceptions of currency and wealth. If there can be no currency where there is no debt, public property on which there is no debt cannot be backed by currency; if, on the other hand, only that is wealth which can be exchanged for money, State-owned property cannot be wealth, because there is no money to exchange it. However useful and indispensable the objects in themselves may be, they have no price. They have passed into a category which is not "economic." They form a part of the general conditions of the locality or country, very much like the conditions of climate, site, etc. They may have been, or not have been, a debt once. As a general rule, we may state that public debts remain public debts; but for argument's sake we will assume that the debt has been paid off. The debt has vanished, and with it has vanished that which is the opposite pole of debt, the capital. Now capital can no more be destroyed than energy can be annihilated. The capital has simply been transferred to the private debts, which have become correspondingly heavier through deflation.

In order to illustrate the manner in which the value of publicly owned property is transferred to private property, I will recount a case that has happened under my own eyes. Some fifteen years ago the town of Basle made a contract with the

owners of a tract of land which was to be opened up for an extension of the city. The landowners agreed to pay the expense of a main road with a tram line, and to pay a fixed annual sum for a number of years towards covering the expenses of the tram service. In this way the city acquired, free of charge, several miles of a fine avenue and the entire outfit for the tram service. But the landowners did not make the municipality a present. What they paid out they are recovering in the price of the land, and we are brought to understand the process by which the money value of public property, when not mortgaged, is transferred to the private property which enjoys the benefits from the general improvement. It is clear that in estimating the total money value of the tract in question the money cost of the road and tram must not be added to the sum.

§ 11. Money the Soul of Economic Quantities.

When I say that the things produced by labour, so long as they remain economic quantities, must be backed by money or currency, I am, as remarked above, strictly within the range of Macleod's definitions. If he teaches us that "an economic quantity means anything whose value can be measured in money," my proposition merely stresses the idea that the money to measure the quantity by must somehow be in existence and accessible. We may consider money, or currency, as the basic material of our works. Of all the real wealth in existence it may be said: in the beginning it was money. As the sand and stones, the wood and metal that went to the building of a house are still in the house, albeit transformed, when the house is one hundred years old, so the money must still be in it. How else could there be any capital about the house? The house cannot outlast the money invested in it by one hour. In proportion as the money is found to evaporate out of the house, the owner writes off a yearly quota of its money value. The money oozes out of the house, as it were, in the driblets which the owner collects from the tenants in the rent, which is swelled by a certain percentage for wear and tear. By the time when all the money that has been sunk in the house, including repairs, has been written off, the house must be unsaleable at any price above the value of the site plus that of the scrap material. Imagine what happens when the mortgage on a house is withdrawn because the money is wanted elsewhere. Some other person

must buy the mortgage, i.e. advance the money. It may be the owner himself, if he has the means; but if he has not, and if he fails to raise a new loan, the transaction is impossible: the creditor cannot get at his money, any more than at the bricks, sunk in the house. He can only seize the house by foreclosure and then try to sell it.

How little Macleod was true to his most vital principles may be gathered from the manner in which he deals with our present point. Read his paragraphs on "Cash Credits" (pp. 347–51). He concludes on this rhapsody:

"The invention of cash credits has advanced the wealth of Scotland by centuries. Thus we have an enormous mass of exchangeable property created out of *Nothing* by the mere will of the bank and its customers, which produces all the solid effects of gold and silver; and, when it has done its work, it vanishes again into *Nothing*, at the will of the same persons who called it into existence. Hence we see that the mere will of man has created vast masses of *Wealth* out of *Nothing*; and then, having served their purpose, they were decreated into nothing. . . . But their solid results have by no means faded. . . . On the contrary, their solid results have been vast tracts of barren moor converted into fields of waving corn, the manufactures of Glasgow, Dundee, and Paisley; the unrivalled steamships of the Clyde; great public works of all sorts: roads, canals, bridges, harbours, docks, railroads; and poor young men converted into princely merchants."

This is miraculous. The wealth created out of nothing and then "decreated into nothing," it still exists. We are asked to believe that the banks issue their credit for works not yet begun and allow it to be cancelled, withdrawn from them, when the works are completed in all their perfection: the negative is wiped out, while the positive remains. Macleod seems to consider it as an easy thing to collect and hand back to the banks the paper bills with which the labourers were originally paid—it is significant that he alludes to the magic of Prospero. Yes, he believes that the money can be withdrawn and the "fields of waving corn," the "manufactures of Glasgow," "the steamships of the Clyde," left without any currency to back them: they are nobody's debt. Macleod tells us that credits are created out of nothing and decreated into nothing. Is it not rather the same credits shifted from one use to another? Supposing that a million of credits is created every day and a million extinguished every day, it is as if a sum of money had been lent and the same sum returned. It is not something made

out of nothing and something annihilated. If credit were wealth to be had at the expense of a stroke of the pen, why are not all men wealthy? And why should credit, once created, be extinguished again, if it is wealth? Credit, I fancy, is as hard to create as hard cash. It demands a creditable population, a people trained in the stern school of the rare virtues of honesty, industry, frugality, perseverance. Where this requirement is met, credit is a natural expression of the fact. It comes unbidden. But at the same time it assumes such forms as are more permanent than those cash credits with which, according to Macleod, the work is started. Although certain credits meant to last only for a short term may be extinguished, the credit itself survives to back and animate the objects which have been produced. It appears in the form of mortgages for farms, of shares and bonds for the industries, of obligations or funds for the public works. And if the public works are really paid off, the credits thus liberated go to enhance the value of mortgages, shares, and bonds, as shown above. So it is not creation out of nothing, nor decreation into nothing, but transformation of energy. If Macleod had reflected on the difference between the volume of currency in Scotland about the year 1700 and the volume in 1850, he would have realized that the credits which were born with the real wealth of which he speaks had not been decreated into nothing. The capital and the debt have only one life between them. It is a human life at that.

What would the Scotch population of the year 1700 do with the Scotch wealth of 1926? The question suggests that there is another aspect to our problem. The imposing list of capital goods which Macleod enumerates must be paralleled with a list of capitalists, which he has forgotten to furnish. To be sure he mentions "poor young men converted into princely merchants." But we know that the majority of Scotch people have not been princely merchants. Still, the Scotch people at large must be considered as the capitalists belonging to the capital. They have developed along with the capital. They have greatly increased in numbers as their possessions increased. They have also increased in other ways besides, especially in the number of their wants and their demands on the means of the country. Their claims have grown with the facilities for meeting them. I do not suppose that, even in the time of Macleod, there were many Scotchmen who would have admitted that they got more

than their share and more than was good for them. At the present time we have read of certain "wild men of the Clyde" driven to desperate acts, and even words, by their sense of want and privation. Surely, rhapsodies are out of place. But Macleod wrote the first edition of his work in those complacent 'fifties, when Matthew Arnold invented the appellation of Philistines for the self-satisfied believers in a glorious present. We of the present generation have been considerably sobered, and it is only economic science which still talks of the increase of wealth or of capital. It is not too soon for us to apply the insight to be gained from the recognition of the polar forces, of which shrewd and penetrating Macleod in a happy moment caught a glimpse. The economic planet consists of "opposite or inverse quantities which are created together, can only exist together, and vanish together." In the passage I have been analysing he suggests something very different; he would let one vanish while the other persists.

§ 12. Concerning Currency.

"Where there is no debt, there can be no currency," is Macleod's principle. Therefore: where there is a debt there must be currency. It is a grand principle, and a fine inspiration. However, it does not seem easy to apply it consistently (Heaven knows how I may be sinning against it!). Macleod certainly committed some very strange blunders. I must try to explain what I consider wrong in his application of it—by way of experimenting with it and so learning, if possible, how to use it rightly and to good effect.

He was carried too far in his endeavour to identify things which, though similar in certain respects, are yet radically opposed to one another. He identified money with wares. The identification is useful enough for certain purposes, but it is misleading when used for other purposes. Money is that part of our economic outfit by which all the other parts are moved about and exchanged; it is a thing apart, entirely of its own kind—which does not signify, of course, that it does not obey the laws common to all things. We become aware of its peculiar use and position if we observe that in computing the value of the total possessions of a community we must not include the money in the general list. Even the precious metals have to be excluded in so far as they serve monetary purposes. To

include them would be the same as to add the yardstick to the length of the cloth; the monetary gold is part of the measure. We shall see yet to what lengths Macleod was led astray because he did not make this distinction.

He was betrayed into error through not making out to himself clearly enough that the material property of a community constitutes the debt as against the capital represented by the money and those credit instruments which may be included under the head of currency: daily goods or common wares being the equivalent due to daily cash; stock-in-trade the equivalent due to short-termed credits, such as bills of exchange, deposits in current account, etc.; fixed plant and land the equivalent due to long-termed credits, such as bonds and shares and the funds. My classification corresponds pretty well with Macleod's three "different forms of currency" (p. 51):

"1. Coined money: gold, silver, or copper. 2. The paper currency: bank notes, bills of exchange and promissory notes, in all their varieties. 3. Simple debts of all sorts, not recorded on circulating paper, such as credits in bankers' books termed deposits, book debts of traders, and private debts between individuals."

Why does he not mention shares and bonds? I do not see any reason whatever for treating them differently from the items in the list of debts. Money and all these other forms of currency represent what in German is called *Guthaben*, in French *avoir*; they are not the thing itself, but merely a claim or title to the thing. The material property, the wares in all their various degrees of permanence, represent what in my German chapters I have termed *die Habe*, the thing which one has for use. Cash money is not fundamentally different from other kinds of claims or securities; it differs from them only in so far as it is employed in the purchase of smaller or more immediate objects, while they are employed in the exchange of larger or remoter objects. It is a difference in degree, not in kind. Of course the different uses overlap and shade into each other imperceptibly. As to the quantity, the volume of currency is exactly equal to the amount of existing debts, which in their turn are comprised within the quantity of the existing real wealth: the community can owe to itself neither more nor less than it has.

How did Macleod arrive at his conception of money as being the representative of debt (debt in the sense of creditor's "right

of action"—what I have proposed to term capital)? He has a lengthy argument to show how money was invented or evolved to supply certain deficiencies inherent in barter. He says (p. 34):

"So long as the things exchanged were equal in value there would be no need for money. If it always happened that the exchange of products or services were equal, there would be an end of the transaction. But it would often happen that when one person required some product or service from someone else, that person would not require an equivalent amount of product or service from him, or perhaps even none at all. If, then, a transaction took place with such an unequal result, there would remain a certain amount of product or service due from one to the other; and this would constitute a debt—that is to say, a right, or property would be created in the person of the one who had received the less amount of service or product to demand the balance due at some future time; and at the same time there would be the corresponding duty created in the person of the other who had received the greater amount to render the balance due when required."

To indicate Macleod's "fundamental concept of Monetary science" I quote these further statements from p. 55:

"Money represents debts which are due to persons who have done services to others, and have received no equivalent service in return. It is merely the right to demand these equivalent services when they please; and its special function is to measure, record, and preserve for future use these rights.[1]

"Hence it is clear that the currency represents nothing but transferable debt, and that whatever represents transferable debt is currency, whatever its nature or form may be."

With regard to the enumeration of the forms of currency given above I would remark that bonds and shares certainly represent transferable debt. I must persist in the endeavour to mark the equator which partitions capital off from debt. It is necessary to do so, if I am to vindicate Macleod's principle of currency against his own misapprehensions or perversions of it.

After much subtle reasoning from his initial statement of the nature of money as the expression of debt, he arrives at the proposition concerning the quantities which I have already quoted (p. 52):

"The amount of currency or circulating medium, in any country, is the sum total of all the debts due to every individual in it—that is, all the money and credit in it."

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[1] This is an almost literal translation from Bastiat's *Harmonies Economiques*, pp. 260–1.

But now we are enabled to see the flaw in the statement: it does not say in what the debt consists. For the terms, "currency or circulating medium" of the first part, and the "money and credit" of the second part of the statement all designate the claim or the right, while the other side of the equation is not expressed. It is this curious omission, I surmise, that has betrayed Macleod into conceiving the rights as wealth pure and simple, so that he could write this (p. 44):

"The whole mass of these rights form a vast mass of property, and are wealth, for exactly the same reason that gold is; they affect prices exactly like an equal mass of gold, and they are the subject of the most colossal commerce of modern times."

The way in which the idea is expressed lends itself to misconception, and Macleod himself has fallen a victim to this danger. The safe interpretation was close at hand, but never fully grasped. See the above quotations on the nature of money: credits, promises to pay, orders to pay, rights, claims, simple debts are of the same order of wealth as money. Macleod says they are wealth because they are exchangeable; but it would be as reasonable to say that they are exchangeable because they are valuable. Valuable they are because they enable the holder to "demand something from someone," this something being "something which he does want," "something to be paid or done by someone." Or this (p. 44): "Credit is an order to pay money, and money is an order to pay goods," and again (p. 55): "the right to demand these equivalent services." From these statements it clearly appears what it is that constitutes the debt: services, goods, the real utility.

Macleod's suggestion as to the origin of money lends very good support to my conception of real wealth constituting the debt. One of the parties has received a greater amount "of product or service," and this surplus is "due from one to the other"—from the one, evidently, who is in possession of it to the one who has surrendered it. The possessor owes the thing, or an equivalent thing, to the man who has given it him on credit. Of course the explanation of money as given by Macleod is incomplete so long as it is confined to only two parties; the token which the debtor hands to the creditor is money only on condition that it is generally transferable, as indicated in the quotation from p. 55. However, this does not alter the

essential nature of the case: what is due to the holder of the token is services, goods, products, real wealth. In so far as the owner of money, or currency in any form, is the creditor, the debt can only consist in that which the creditor has not got; as above: services, goods, the real utility. When we say that money has been sunk in a property, we really mean that labour, and its product, wares, have been expended on it; the person who parts with the property for money or credit must be able, thanks to the money or money token, to recover that labour in some form or other. Macleod cannot have visualized the case clearly; or he forgot his true principle when he was intent on proving something else. Thus, at the end of the chapter "On Some Theories of Currency," we find him writing this (p. 285):

"It is, then, an incontrovertible fundamental truth in monetary science that specie and credit form the circulating medium, and that they must increase and decrease together. An increase of currency, without an increase of debt, has no effect but to diminish the value of the currency."

Here "debt" is opposed to currency. As we know, Macleod comprises under the head of currency (1) coined money, (2) the paper currency, (3) simple debts (see above). That is to say, currency is both money and money claims or credit. Consequently the debt must be that which exchanges for the money and the claims: goods and services. However, Macleod has in mind something very different. He continues thus:

"The same thing happens if, when debt is destroyed, currency is not destroyed with it."

"Debt is destroyed"—does this mean that houses are burnt down, ships sunk, machines wrecked, coal-mines abandoned by the miners? I am afraid that Macleod was not thinking of that. I go on quoting:

"If a metallic currency increases faster than debt, nature provides a remedy—it is immediately exported."

How exported? There must be countries where the contrary process is taking place: debt (the quantity of goods and services) increasing faster than the currency. But what happens if there are no such countries? And what about Macleod's principle that gold tends towards the countries where interest

is higher? A country which increases its wealth in goods and services cannot possibly have a higher rate of interest than a country where goods do not increase. I raise this point in the present connection to show how little Macleod took care to co-ordinate his principles.

"But with an inconvertible paper currency this cannot happen, and when debt is destroyed currency remains in circulation. When this goes on for any length of time, or to any extent, the inevitable result is a depreciation of the paper currency, which is shown by the rise of the market above the Mint price of gold."

This does not yet furnish much of a clue as to what is meant by debt. But the following sentence removes all doubts:

"This was eminently exemplified in England in the years subsequent to 1810. The extravagant speculations were followed by an enormous destruction of capital; but the currency which was issued to represent it remained in circulation and soon manifested itself in a rapid fall of the value of paper. It was impossible that paper should ever right itself unless this superfluous currency was destroyed."

What was destroyed by extravagant speculation was not houses and workshops and ships, but merely the capital of the speculators who failed: claims, deposits, book debts, private debts, shares, bonds—everything that is considered as credit and that Macleod, in his definition, includes under the general term currency. In the present instance, however, he has departed from the definition, and he confines the term "currency" to legal tender. The whole argument of the passage quoted is, therefore, to the effect that there is a necessary ratio between the quantity of specie on the one hand and the quantity of credit on the other hand; the other half of the sphere is entirely left out of account. When Macleod speaks of debt he means credit, or capital in the sense which I give to the word. But now the question arises: how can the currency (that is, by the terms of the context, the volume of legal tender) increase without an increase of the capital, or credit? I maintain that it cannot. It is as impossible as that one part of the fluid in a vessel should expand under the influence of heat, while another part does not expand. If credit did not expand, the currency could not be increased. This is one of the main points of my theory of currency (see the essay on *The Banknote as a Parity Title*). If it were not for the fact that the expansion of credit—or more

correctly, the tension of credit in a certain direction—precedes, and very greatly exceeds, the increase of legal tender, no increase and, consequently, no depreciation of the currency could take place. Depreciation is the result, we are told, when debt, i.e. according to the context, claims to goods and services are destroyed, while currency (legal tender) is not destroyed with it. Strange! Depreciation is the general rise of prices; when claims to goods are destroyed, the demand for goods must be weakened, and prices must fall; they cannot rise, and money must appreciate.[1]

I need not take up all the points; enough has been said to show that the argument is thoroughly vitiated if the term "debt" is made to signify credit. And there can be no doubt, I think, that Macleod did mean it so in the passage before us. But the argument is true when debt is interpreted in the manner which I propose.

What Macleod calls a "destruction of capital" is the transfer of capital from the unlucky to the lucky speculators. I expect to publish shortly a book on the idea of profits, in which my main endeavour is directed to proving that all individual profits are fully compensated for by individual losses, so that there is no general profit. The importance of the question has been brought home to me afresh by what I find to be Macleod's conception. He holds that the profits and losses of individuals are national profits and losses. The passage under review was prompted by this idea. I say: there was no destruction of capital; the losses of the unlucky speculators made the gains of other capitalists. There was, by the terms of the proposition, no real wealth destroyed; only claims to the existing wealth were annihilated. Obviously the owners of the remaining capital were enriched thereby; for they were rid of those who had a claim to a share in the wealth, so that the whole fell to their lot. This transfer of wealth is not a diminution, and it need not affect the value of the currency—although practically it generally does, only not in the sense of depreciation, but of appreciation. (This point is further discussed in the next essay, § 1.)

Macleod was not mindful of the necessary and inevitable connection between the thing which is the medium of exchange

[1] As a matter of fact the English price-level was lower in 1814 than in 1810 (see the figures quoted above, essay II, § 1), When "extravagant speculation" collapses, the consequence is never a rise, it is regularly a fall, of prices, i.e. appreciation of the currency, not depreciation.

and the things which are exchanged. He saw the "colossal commerce" in mere rights, which to be sure constitutes the business of banking and is the subject of his book, as a thing apart. He overlooked the fact that together with every bit of money and credit (metallic currency and paper currency) there goes a piece of *Habe*, of real goods or services, which is sold and bought. When a bill of exchange changes hands, the real ownership of the goods against which it is drawn passes from the indorser to the indorsee. This process is best illustrated by the case of so-called "documentary bills." In discounting the bill, the negotiating bank takes possession of the bill of lading and the policy of insurance; the shipment is hypothecated to the bank, which thereby becomes the virtual owner. Although the method is somewhat different in the case of home bills, in substance it is the same. When a share is sold, the ownership in a share in the enterprise is transferred. And so, of course, the actual money, in passing from one person to another, moves some ware along with it. The *Guthaben* and the *Habe*—the claim and the utility—are inseparable, although never united in the same hands. It is the effect of polarity, which holds things together as much as it divides them.

Macleod considered the commerce in money and credits as a thing apart and was not concerned about the more fundamental commerce in real goods of which it is the reflection. He did not care much about what might happen to prices, provided only that the coinage was in good order and bullion was safe. The explanation of this attitude is to be found in his conception of value, which we must now examine.

§ 13. Macleod's Conception of Value.

The connection between money and value is first established in this passage (p. 40):

> "Though the fundamental nature of money is that it is a mere right of demanding something, yet the quantity of matter, or stuff, which is required to represent any amount of debt, or as the equivalent of any commodity against which it is exchanged, will entirely depend upon the general laws of value."

It is the money matter or stuff that is in question here. Macleod conceives money as matter, and buying and selling as an exchange of one kind of stuff for some other kind of stuff. How

then could money, fundamentally, be a mere right? I have insisted in the preceding paragraph that currency, in moving on, moves wares along with it: the material thing is inseparably bound up with it, attached to it, by invisible cords. Is it really necessary that money itself should be matter or stuff? I agree with Macleod in thinking that money, like all earthly agents, needs a body to it. As electricity, in order to be made serviceable, requires a material to generate and convey it, so it seems to me, does money energy depend on some material foundation. Only we must not imagine that it is the material that generates or is the energy, and so I reject the idea that gold is money by virtue of its material constitution. The value of gold does not create the value of money; but like other economic quantities, gold has value in so far as there is money energy, of which gold seems to be the most suitable conductor.

The problem of value is the subject of the second chapter. As an "economic phenomenon," value is defined thus (p. 103):

"To bring value into economics it must be manifested in some tangible form; a person must manifest his desire, demand, or value for something else, by giving something in exchange for it to acquire possession of it."

There is much excellent observation and reasoning in these pages. A rare piece of insight, for instance, is contained in this statement (pp. 108):

"Hence it is clear that nothing can have fixed or invariable value unless everything else is fixed and invariable in value as well; because, though a quantity may retain its value unchanged with regard to a certain number of things, yet if its value has changed with regard to any other things whatever, the value of the quantity has changed."

A question which concerns us closely in our quest of the means to stabilize the purchasing power of money is neatly handled in a paragraph which I quote in full (pp. 108–9):

"Price is the value of a quantity in money or credit only. Now, if money and credit be increased very greatly in quantity, the prices of all things may rise; but they will still preserve their relative values among themselves. If a loaf of bread and a pound of meat each cost a shilling, and if, in consequence of the excessive abundance of money and credit, they each rise to two shillings, the pound of meat is still the value of the loaf of bread. Hence there may be a general rise, or a general fall, of prices.

"But there can be no such thing as a general rise, or a general fall, of values. Everything can no more rise or fall with respect to everything else, than, as Mill says, a dozen runners can each outrun all the rest, or a hundred trees can all overtop one another. To suppose that all things could rise relatively to each other would be to realize Pat's idea of society, where every man is as good as his neighbour, and a great deal better too."

It is one of my fundamental tenets that the quantity of money can neither be increased nor decreased per head of the population. I confess that the notion has baffled me greatly, and I have not found it confirmed by any writer yet. But I cannot get away from it. Is it really to increase the quantity of money if the value of the things which balance the money remains unchanged? It is to increase the number of the money units; but it reduces the substance of the units in the same proportion, so that the total money substance is not increased. A debt may be expressed in terms of pence, or of shillings, or of pounds; but the debt itself is a definite object, which is not made more valuable if stated in a large figure of smaller units rather than in a smaller figure of larger units. As to the idea that a general rise or fall of prices leaves relative values unaffected, I will remark, by the way, that such is not the case; a great many prices are thrown out of their natural positions and values are thereby dislocated.

Macleod's treatment of value becomes erroneous, to my thinking, where he sets out to examine the origin or the source of value. He begins by "enumerating the different kinds of quantities which have value." And this is his list (p. 120):

"1. Corporeal or material property. . . . Lands, trees, cattle, corn and other fruits of the earth, houses, furniture, clothes, money, fish, minerals, precious stones, manufactured articles of all sorts.

"2. Immaterial property: Under this species is comprised labour of all sorts: agricultural, artisan, professional, scientific, literary.

"3. Incorporeal property: Rights of action, or credits, or debts of all sorts, the funds, copyrights, shares in companies, the goodwill of a business, the practice of a profession, tolls, ferries, annuities of all sorts . . . ground rents. . . ."

In order to discover the cause of value, we must then:

"discover that single general cause which is common to all these different quantities; which being present, value is present; which when it increases, value increases; which when it decreases, value decreases; and which being absent, value is absent."

The enumeration gives rise to the error already criticized: it suggests the idea that the items under the three heads are independent and may be added together to make up the total of all values. But I repeat: it is not one and the other, but one *for* the other, one by virtue of the other. It is all one and the same thing under three different denominations. Had Macleod discriminated and sought to find another common property besides that of exchangeability, he would have discovered that they serve one sole and common purpose: to assure life in its most desirable form. He would have realized that only labour can serve this purpose; for from labour all material property derives, not excluding land in so far as it is an economic quantity. But Macleod had a preconceived idea, which barred his access to this essential insight. He was bent on proving that those forms which he designates as incorporeal property, the exchange of which is the special business of banking, have a value of their own. After denying intrinsic value to gold and material things in general, he comes very near to crediting credit with intrinsic value.

He starts with the proposition that "demand is the sole cause of value" (p. 120). It is opposed to the orthodox theory that labour is the source of value, and Macleod is at some pains to refute this conception. He enumerates cases of objects which "have" value without having cost any labour, and of course finds them in the arsenal of the theory of rent. It is indeed the *ne plus ultra* of bad logic in economists to establish the labour theory of value beside the theory of rent. For the assumption of the existence of rent, that is, the value of things that are the "free gift of nature" and therefore are not the product of human labour, leaves no room for the idea that labour is the source of value. The former says: there are objects of value which have not been produced by labour; the latter says: there are no objects of value that have not been produced by labour. Macleod is right in saying (p. 127):

> "If it could be shown that there was a single instance of value not due to labour, that would be sufficient to overthrow the doctrine that all value is due to labour, or that labour is necessary to value."

The labour theory of value and the theory of rent exclude each other. Macleod believed in the theory of rent, and so he was

bound to reject the labour theory. He was a better logician than either Ricardo, or Mill, or Marx.

My theory of interest is incompatible with the theory of rent. I cannot here go out of my way to explain why, and therefore I shall not criticize the examples of rent cited by Macleod. But I must remark that the notion of labour should not be taken in too narrow a sense. Macleod mentions the case of girls selling their hair for money, and asks: "Was the value of the girl's hair due to human labour?" Of course it was. The girl was reared by her parents; to foster her cost a great deal of labour and care, and her hair was a part of her life. Moreover, her hair was an ornament of the girl's; to give it up was a sacrifice, and must have cost the effort of overcoming a natural repugnance to the act—considering what the fashion then was; at present it is different. What shall pass for labour if an act of self-conquest does not? If we take the word "labour" in its true sense of sacrifice, of self-abnegation, or renunciation, there remains no objection to the doctrine that labour makes the value of things.

However, even if we accept the term in its ordinary sense, the labour theory of value remains valid. Macleod says (p. 128):

> "It is quite evident that the land owes its value, not to the labour bestowed upon it, but to the demand for its products; and persons bestow their labour upon the land because its products have value. It is the wants and desires of men for the products of the land which induces persons to bestow their labour upon the land. But if persons ceased to demand these products, their value would instantly die off."

That is a matter of course. But it is no less a matter of course that no value would be created, no matter how strong demand might be, if the labour were not supplied and the work remained undone. Value, we have to understand, has a double origin, in the same way as life, in order to come into being, supposes the union of the two sexes. Polarity is everywhere. Macleod quotes Whately to the effect that pearls do not fetch a high price because men dive for them, but that men dive for pearls because they fetch a high price. Certainly so; but for a pearl at the bottom of the sea no one will pay a price; it is only one half of the thing wanted, and has no value until it has come into contact with, been wedded to, labour. Why do we not pay for the air without which we cannot live? Why has it no value? Because it costs no labour, no sacrifice to obtain it. Whatever

we may have for nothing need not be acquired by labour, and anything that has cost and will cost labour cannot be without value.

To be sure, here again the meaning of labour needs to be defined and rightly understood. Labour must not be confused with bungling, busybodying, mere bustling, and play. Also, since I have said that the idea of sacrifice is inherent in labour, I would add that a sacrifice which nobody demands, or which does nobody any good, is not a true sacrifice, but an act of foolishness. An article which is unsaleable and therefore without value—for the time being—is often the result of unwise, or inexpert enterprise; it does represent an effort, but an effort which, owing to some fault or failing, is not carried through, and collapses like a building which breaks down before it is completed. The failure is due to the fact that some necessary part of the work has been neglected. Finally, it may be observed that demand itself signifies economic activity or work; it performs the highly important function of selection, of judging, and discrimination. The price which we pay for things is the price of exemption from labour. It measures the effort which it would cost us to procure the thing by our own labour. Carey put forward the idea that the value of past labour is determined by the value of present labour (theory of cost of reproduction); that is to say, the question is not: Has labour been expended on the object? but rather: How much labour would have to be expended if it had to be made?

After these general remarks on the problem we pass on to a brief examination of the conclusion to which Macleod directs his whole argument. He writes (p. 133):

"The necessity for and the bearing of this investigation on our present subject is obvious. For if it be laid down that labour is necessary to all value, how could the notes of the Bank of England, or of any other bank, have any value? How could a bill of exchange on the most solvent merchant have value?"

These queries suggest that banknotes and bills, which have cost no labour, have value of their own. If that were so, the further question imposes itself why more banknotes and bills are not issued. The mere writing or printing and the paper may cost practically nothing; but in so far as these items are concerned, bills and banknotes are nothing: they have to be

backed by the real stuff; the claim to goods is no good without the goods.

Macleod accounts for the miracle of the value of mere paper by saying that banknotes and bills "will be paid in money," and he adds:

> "The fact is that a banknote and a bill of exchange have value for precisely the same reason that money itself has value: because they are exchangeable. Banknotes and bills are exchangeable for money, and money is exchangeable for other products and services."

On the products and services which we meet at the end of the argument everything depends. Remember that it is a question of value without labour, and ask yourself whether the very words "products and services" do not put the notion to scorn. To affirm that demand in itself creates value is to affirm that you can have something for nothing—unless we discover the value on the side of demand itself, embodied in the valuable object which you give up in exchange for the desired good, and which you must have acquired by dint of application, art, or fraud, before you can offer it. There is labour, in some form or other, implied wherever value is declared. The demand, the desire, the esteem determine the measure of the value; but for the value to come into existence labour is required. In some cases it may be hard to say exactly what was done to create the value; but is it not a contribution to the wealth of the community, when a person first recognizes the presence or the possibility of a new value?

Macleod would have us believe that no labour is necessary to give banknotes and bills value. Apart from the existence of material products and services, there is something that has to be produced before banknotes and bills become possible: a general state of society in which law and order and the education of the people are such as to guarantee the security of those paper claims. The cost in labour of bills and banknotes is enormous: all the institutions of the State needed to devise and administer the law are necessary to give banknotes value. To the expense of these institutions must contribute all those who make use of banknotes. These inventions of civilized society are certainly very useful, and therefore valuable. But they cost labour—neither more nor less than corresponds to their utility. To say that banknotes and bills cost

no labour is the same as to affirm that our banks with their palatial buildings, their staff of highly paid employees, and royal directors, cost no labour. Why cannot writers on the problem of currency steer their course clear of the Siren's island—the silly promise of value for nothing, of general enrichment, of exemption from the law of gravity? The facts of life are so unmistakable on the subject. Where there is a right, there is a duty; where there is a liberty, there is a tax; where there is value, there is sacrifice; and where there is profit, there is loss. Or, as we said before: capital and debt balance and polar forces make negative equivalent to positive.

§ 14. Macleod's Theory of Currency and Credit Creation.

I shall now trace the influence of Macleod's conception of value on his theory of currency. It would seem that it ought to have made of him an adherent of a pure paper currency. But it has not; he is firmly planted on a creed of metallism. I have already quoted a passage in which the idea is stressed that the paper claims "affect prices like an equal mass of gold." This looks as if securities were on the same footing with gold. It would require a chapter to examine the case in detail. I believe that the assertion is well founded. It has been shown above how the money investments constitute the currency which determines the price of waiting goods (stock-in-trade, fixed plant, land). Were the securities taken away, there would be nothing left to form a price for these goods, and although the price of what I called daily wares is determined by cash money, the disappearance of the paper claims would reduce even these retail prices to a fraction. The value of the paper claims would not be annihilated; it would be condensed into the metallic claims. Supposing that credit is fifty times as great as legal tender, the purchasing power of money would be multiplied by fifty. However, it must not be imagined that business would go on as before. Where money is not diluted and buoyed up by credit, it cannot move. It depends on credit as much as credit depends on money.

In Chapter xiv Macleod discusses the ratio between the quantity of money and the quantity of credit. Taking his start from the idea that bullion alone can form the basis of a paper currency and credit in general, he arrives at this conclusion (II, p. 276):

"As all paper currency is a 'promise to pay' gold or silver bullion at some definite time, it is quite evident that the 'promises to pay' floating in a nation must bear some proportion in quantity to the actual quantity of the bullion. It is quite impossible to fix any definite proportion, because that depends upon a multitude of peculiar circumstances. Experience is the only guide on the subject."

On one point Macleod is quite definite, namely, that "money and credit must always increase and decrease together." This is a principle which it would be well for the "credit controllers" to take to heart. But Macleod himself does not seem to me to have put it to the best use. The only practical application he points to is that when a country contains much gold it is enabled to expand its credit. But what is an increase of money and of credit, if not accompanied by an increase of debt, i.e. of real goods; and how can a country add to its gold supply while adding to its property of other wealth? By my theory there is no possibility of any increase of this sort for a community considered as an isolated system. The only useful conclusion to be derived from the principle under discussion is to the effect that credit cannot be made to perform the function of money, when money happens to run short. There is not room for much credit on a small money base—a small money base always being the manifestation of poverty in material goods: the currency is equal to the debt. In proportion as a nation adds to its general wealth, it must add to its currency, and part of the addition must consist of valuable stuff, however unreasonable that may appear. But what is poverty, and what is wealth? A mere feeling. Adding to the currency means adding to the debt, which offsets the wealth. So it appears that the wealth of a nation, considered as an isolated system, cannot be increased. If the additional objects are not offset by claims to them, it is as if they belonged to nobody; they are inaccessible and therefore useless, non-wealth. As a matter of fact, the state of things described as overproduction simply signifies that products have become inaccessible through the absence of claims, or money and credit: the positive hemisphere is attempting to encroach on the negative; capital and debt are not of equal magnitude, and the ensuing crisis and stagnation is the natural reaction to bring about equilibrium again by reducing the hemisphere of goods. The idea of additions to wealth is an illusion, and that

being the case, additions to the metallic currency of a closed system cannot be necessary or possible. It is only an increase of the system itself—the population—that can call for, and must bring about, an increase of the currency.

In all these relations there is perhaps no measurable factor; all that we do know is that the debt and the capital must balance. Of course the rate of interest may be said to be the measure of credit; but then it must also be the measure of the real wealth, and it is the measure of the real wants of the community.

Poverty is relative, a mere notion. An observer of conditions will declare that a society is rich or poor in accordance with his own standard of wealth; but the society itself may have a different standard and consider itself rich while the outsider taxes it as destitute. When a society feels needy and resents its economic condition, the want of material goods causes credit to expand. Credit is not determined by the volume of material possessions, but by a feeling, a spiritual state in the economic subject. An addition, in terms of real goods, to the general wealth must be preceded by a growth of credit impelled by a sense of want and dissatisfaction, and by the will to improve conditions. These considerations do not invalidate my contention that the quantity of money is invariable. A "poor" society which is satisfied with its economic possessions has as much money as a rich society which is also satisfied. Both have as much money as they require to carry on; they would not be satisfied, if they were conscious of a shortage of money.

The ratio between the quantity of legal tender and the quantity of credit currency, although it has not yet been established, must be about as constant as the ratios of the solar system. It is not the same year in year out, but it has its regular recurrences. As the rate of interest oscillates round a certain average, so the ratio between legal tender and credit fluctuates round a certain average; it is most certainly determined by the rate of interest. Its fluctuations are confined between narrow limits, and there can be no doubt about the fact, stressed by Macleod, that money and credit increase together and decrease together—as to the number of units. (In substance they are invariable; when credit seems to expand or to shrink, it does so only in one direction, so that expansion

in one direction is counterbalanced by contraction in the opposite direction, and *vice versa*.) This principle needs to be qualified by one consideration only: credit will move more readily than money, and therefore its developments precede and exceed the developments of money.

I entirely concur with the sentiment expressed by Macleod in the following passage (p. 138):

"The fact is that astronomy is the physical science which is the type of economics. The fundamental problem of economics is identically the same as the fundamental problem of astronomy. The astronomer sees a vast number of heavenly bodies moving in all sorts of directions—sometimes advancing, sometimes apparently stationary, sometimes retrograding—and his object is to discover a single general law which accounts for and governs all these varying relations. So the economist sees a multitude of quantities constantly changing their numerical relations to each other, and his object is to discover a single general law which governs all these varying relations. Economics, like astronomy, is a pure science of ratios."

It seems to bear out my idea that the rate of interest is the ratio of ratios, so that the laws governing the rate of interest must combine into the "single general law" which governs all the economic relations.

In a certain sense Macleod's doctrine of currency has fallen a victim to his theory of value. There is a vast discrepancy between his condemnation of certain schemes of money creation and his own idea of the possibility of making currency. He says (II, p. 311):

"Nothing can be more unfortunate and misleading than the expression which is so frequently used that banking is only the 'economy of capital,' and that the business of a banker is to borrow money from one set of persons and lend it to another set. Bankers, no doubt, do collect sums from a vast number of persons, but the peculiar essence of their business is, not to lend that money to other persons, but on the basis of this bullion to create a vast superstructure of credit; to multiply their promises to pay many times: these credits being payable on demand and performing all the functions of an equal amount of cash. Thus banking is not an economy of capital, but an increase of capital; the business of banking is not to lend money, but to create credit. . . ."

And this newly manufactured credit he affirms to be every bit as good as real money, which in its turn is pronounced to be an increase of capital (in the sense of positive wealth). He says (II, p. 408):

"These banking credits are, for all practical purposes, the same as money. They cannot, of course, be exported like money; but for all internal purposes they produce identically the same effects as an equal amount of money. They are, in fact, Capital created out of Nothing."

I have already dealt with one of Macleod's instances of the creation of wealth out of nothing. I take the matter up once more, so as to show how the proceeding affects the purchasing power of money. He has a paragraph "on Credit created for the purpose of being applied to the formation of new Products" (I, p. 311). A community, he tells us, may enrich itself with a market hall by means of suitable issues of conveniently small bonds. But I had better quote:

"In such a case the corporation might borrow money on their own bonds, repayable at a future period. These bonds would be the creation of property. They are the right to demand a future payment, and are valuable exchangeable property, which may be bought and sold like anything else.

"But the corporation need not borrow money. They might create their own obligations, payable after a certain time, small enough to be received in payment of wages, and be readily received by the dealers in the town, and perform all the functions of a currency, and be equivalent to money. They would be equally efficacious in producing or forming the market hall as so much money. And the market hall itself would be capital, because it would produce a profit. As the stalls were let and the rents received for them, the bonds might be redeemed, and the debt cleared off. It is said that several market halls have been built by adopting this plan."

The scheme was resuscitated in the fervid days of post-war reforms. One is amazed to find Macleod, of all others, sponsoring it. It is a repudiation of his main principles. These bonds have to be considered as currency—he says so himself—and they must influence prices, raising them in so far as they are added to the currency existing previously. The builders of the market hall are paid with newly printed paper, which is not balanced by an increase of "debt," namely, wares and services. It is a poor excuse to say that this new money is spent for the purchase of new goods, to wit, the materials for the market hall. The materials cost nothing at all; the money is received by people, the sellers of the labour and land out of which the materials have to be procured, and these people are, one and all, consumers, who will spend their earnings in the purchase of wares and services, the supply of which is not increased.

Therefore prices must rise. They rise at the expense of those who own the older currency (actual money plus money claims), so that it is really they who pay for the market hall. Naturally the contrary process must take place later, when the bonds are redeemed; their gradual disappearance from circulation diminishes the currency, and prices fall. How, under the circumstances, it will be possible to let the stalls, I am unable to guess. For a period of falling prices does not encourage trade. The operation to which Macleod would seduce us does not seem to have been successful enough to recommend itself to impecunious communities—which are always with us, like the poor. If it is urged that the abandonment of the plan is only due to the hostility of the capitalists, our experimental period furnishes an answer: why does not the Russia of communistic and anti-capitalistic practice adopt the method? It is not workable, because opposed to the principle that the currency increases with the debt, and that an increase of currency forces up the level of prices.

The fable of the Guernsey Market Hall has been retailed many times. There is a book devoted to it: *The Guernsey Market*, by Albert Kimsey Owen (New York, 1897). In 1922 an account of the transaction was published in *The Ford International Weekly*, from which I cull this passage:

> "With the paper money thus procured the building was paid for, and the same paper money served as a means of exchange in the ordinary course of trade. On the expiration of the term agreed upon, the Governor called a meeting of the people in the Market Square and there publicly burned the paper money."

How did he come by the money? Not a word is said on this crucial question. The money had been issued and was circulating among the population. In order to get hold of it again, the Governor must have "searched the people's pockets" and drawers. Macleod is a little more circumspect than the American writer; he suggests that the bonds were paid into the treasury by way of rent for the stalls. However, this suggestion only serves to set into relief the real difficulty. The bonds received by the treasury had to be retained against the final bonfire. In this way the market was drained of its circulating medium, and the consequences could only be those already indicated. The bonds constitute a debt of the com-

munity; their withdrawal is the extinction of the debt. The present argument furnishes a telling illustration of the thesis evolved in the preceding essay that the reduction of debt must be accompanied by the fall of prices.

The case of the market hall bonds illustrates my theory that money can come into being through interest only. These bonds are an impossible method, for the one and only reason that they are not based on interest, not supported by interest. The issuing corporation contracts a debt and ought to pay interest on it; the interest ought to go to the holders of the bonds. But the bonds are supposed to circulate by way of an ordinary medium of exchange. They are first paid out to the workers as wages, then passed to the dealers, who in their turn have to spend them in payment of their purchases. Thus the bonds ought normally to keep moving on. How can they be provided with coupons? What will happen as the day when interest is due approaches? The mechanism does not work. Now suppose the bonds do not bear interest. In this case the corporation contracts a debt which demands no payment of interest, an inconceivable thing. There would be nothing to keep the tickets straight; they are deprived of the guiding force of interest. Why should the corporation ever redeem them? It stands to reason that the public could not be induced to accept these dead husks in payment of wages or wares.

It may be pointed out that houses and market halls, in order to come into existence, must be preceded by the formation of capital (regular currency, not spurious bonds); "in the beginning it was money," I have said, and money is capital, and capital is the fountain-head, the beginning. But again the money, or capital, must be preceded by something; it is the concretization of the spiritual energy called interest. When houses or market halls are genuinely wanted, the money will be produced somehow; but it will be money fraught with interest to keep it going the straight street, and the interest will be paid as long as the house lasts.

In his criticism of the currency theory of John Law, Macleod is led to say and to stress this (II, p. 251):

"Money does not represent commodities at all, but only debt, or services due, which have not received their equivalent in commodities."

If my interpretation of the word "debt," as given above, is

accepted, debt is synonymous with commodities; therefore it would seem that money does represent commodities. However, the expression "represent" may give rise to some confusion. It must not be taken to mean: money instead of wares. A community cannot keep money instead of wares; it must have money if it is to have wares. The relation between them is not one of cause and effect, however, but one of polarity. Money and wares are simultaneous and of equal magnitude. It will not do to "make" money, when and because it is believed that the hemisphere of wares has been added to (when there is a glut); additions of money will not carry off the unsaleable wares, as all the present-day money reformers affirm. There can never be a shortage of money. When the semblance of it is declared, it is lack of interest in wares that is the trouble, and the situation will always present itself, when the interest in wares has been over-stimulated for a spell through allowing the rate of interest to rise too high. Money does not need to, it cannot, be added to or diminished; what happens when it seems to change its volume is dilution or condensation through expansions and contractions of credit—or rather the swerving, or tending, of credit now in one direction (away from money towards goods), now in the other direction (away from goods towards money, or claims to future goods). These fluctuations, in their turn, are made possible by corresponding shiftings of the rate of interest.

I am induced to go into Macleod's argument a little farther, because it seems to have been erected into a regular theory quite recently. The passage under consideration continues thus:

"All those who think that there is any necessary connection between the quantity of money in a country and the quantity of commodities in it are influenced by the views of Law. Take the case of a private individual. Is there any necessary relation between the quantity of money he retains and the quantity of commodities he purchases? The quantity of money he has is just the quantity of debt—of services due to him—which he has not yet parted with for something else. It is the quantity of power of purchasing commodities he has over and above what he has already expended. And the quantity of money a nation possesses is simply the quantity of accumulated industry it possesses over and above all commodities, but they have no relation whatever to each other."

We have here a truly representative case of the mistake, so common in the science of economics, of identifying the

individual with the nation, and of applying to the whole the laws which govern the parts. Most emphatically I maintain that there is a perfectly rigid and unalterable relation between money and commodities: they balance, whatever the quantities may be.[1] The money retained by one individual forces another individual to retain wares, and in the same manner the money retained by one nation forces other nations to retain wares: thus, if America retains the world's gold, Europe must be choking in unsaleable wares and unsaleable labour; the experiment has been enacted before all our eyes. Macleod is forced to admit the existence of a relation; for he says:

"Now, the value of money depends upon its relations to what it represents, namely debt, and not to commodities. If money or currency increases faster than debt or services due, it immediately causes a diminution of its value."

The value of money is determined by its numerical quantity, and so the relation between the quantity of money and the quantity of commodities is established.

Macleod says further (p. 252):

"But the money of the nation is the mode and form in which the accumulation of industry which has not yet been spent in commodities is preserved."

Surely and again, the accumulation of industry can only consist of goods, and money preserves the goods in so far as it is an expression of the fact that they will be demanded and paid for by the owners of the money. Things for which there is no money either waiting or forthcoming are not economic quantities, and they are not preserved. In this sense it is true that money is the preserver of the life of goods. But Macleod here contradicts his own idea, discussed above, that wealth created with the aid of credit remains wealth after the credit has been "decreated into nothing." Without money to back them, goods must perish. Likewise money must needs depreciate, be reduced in substance, if not in the quantity of units, if wares are not accumulated along with money. But wares cannot be accumulated beyond the limit of their durability,

[1] Indeed, Macleod says so in so many words: "The quantity of money a nation possesses is simply the quantity of accumulated industry it possesses." Does not this accumulated industry consist of commodities, and nothing but commodities?

and therefore money cannot accumulate either. This is the reason why the mercantilistic doctrine of money was bound to come to grief. Money perishes like wares, with the wares, unless it is animated and kept alive by the people's interest in goods.

The theory derived from the above conception of Macleod's is Professor Frederick Soddy's idea of "virtual wealth," as set forth in his book, *Wealth, Virtual Wealth, and Debt.* Soddy ridicules Macleod's notion of debt; but he seems to have been strongly influenced by it. This is how he introduces his concept of virtual wealth (p. 137):

"Hence we arrive at the conclusion that . . . the monetary system of distributing wealth does so because of the power it confers upon individuals *not* to possess, but to be *owed* wealth to which they are entitled, in order that any kind or quantity desired may be obtained as and when required without effort. Money is not wealth even to the individual, but the evidence that the owner of the money has *not* received the wealth to which he is entitled, and that he can demand it at his own convenience. So that in a community, of necessity, the aggregate money, irrespective of its amount, represents the aggregate value of the wealth which the community prefers to be owed on these terms rather than to own. This negative quantity of wealth I term the Virtual Wealth of the community, because the community is obliged, by its monetary system and the necessity of having one, to act as though it possessed this much more wealth than it actually possesses."

Compare with this what Macleod states (I, p. 55):

"Supposing, then, that there is nothing but metallic money in use, the following axiom is evident:

"The quantity of money in any country represents the quantity of debt that there would be if there were no money."

The fundamental conception is the same, and it makes little difference that one calls money a debt, while the other calls it wealth. I fail to understand what Professor Soddy means by saying: "the community prefers to be owed . . . rather than to own." What is owed must exist somewhere, and somebody belonging to the community must own it. Unless the *Habe*, the real thing, is there, the *Guthaben*, the claim to the thing, is null and void. I do not understand Macleod's axiom either. It makes two assumptions which cancel each other. We are asked to imagine what would be, supposing there is only metallic money while there is no money at all.

There is exactly as much money as there is interest for goods, and as much "accumulation of industry" as there is money. If money represents the rights, the accumulation represents the debt, and the two must balance. No one can owe more than he possesses, nor can anybody claim things that do not exist. Hence assignats on confiscated lands do not make "money"; they add nothing to the accumulation. But the new paper claims swell the number of the existing ones; the shares in the common debt become correspondingly smaller.

The arguments with which Macleod combats the theory of Law are a direct refutation of his own contention that the banks can create credit and capital out of nothing, and sell more than they buy. At the present time there is a great hue and cry against the banks on this charge, especially in England. The "Douglas Scheme" purports to let the State do for the benefit of the community what the banks are suspected—on the authority of Macleod—of doing for their particular profit and at the expense of the public. The writings of Professor Soddy fairly seethe with indignation at the encroachments which he imputes to the banks. Macleod was bent on making out a strong case for the importance of banking, and so he was betrayed into the exaggeration of saying that "the essence of their business is, on the basis of this bullion, to create a vast superstructure of credit." It is a clear contradiction of everything that he has to object to the scheme of old John Law. Compare with the statement just repeated this one (II, p. 252):

"The theory of basing a paper currency on commodities involves this palpable contradiction in terms, that one can buy commodities and also have the money as well."

Is not bullion a commodity like land? And how should it be possible to create a superstructure of credit on bullion, if land cannot be the basis of a paper currency, which is credit? Macleod had come very near the truth; but he clung to the idea that matter is the essence of things. Here is the closing paragraph of the chapter "On the Definition of Currency" (II, p. 333):

"For what is it that exists in all places, in all times, and among almost all persons? Debt, or services due. And what is it that is universally

required to measure, record, and transfer them. *Some material.* But we see that all currencies are more or less local, none are universal. The idea, or the want alone, is universal."

Some material: why, then, one material rather than another? The advocates of the index standard of currency propose to make the whole mass of materials the basis and measure, because it has been found that no particular material is a reliable foundation. But this is to make the thing which is to be measured, the measure. As in the case of the gold standard, there is no *tertium comparationis*. No material will do; the idea is the real thing. What "measures, records, and transfers" debt, or services due, is interest. The value of the claim is determined by interest, and the general measure of interest is the current rate of interest. The value of the claim is guaranteed to remain fixed and unalterable when the general measure, the rate of interest, is kept constant. The mere money value of the debt is guaranteed by law; but as yet there is no law to guarantee the constancy of the measure. It is a state of lawlessness and a grave evil. Fix the measure! The current rate of interest is not amenable to direct control. But it is organically and most closely connected with the rate of discount of the central bank of issue, which is privileged by a special charter and therefore subject to the imposition of special duties. If we fix by law the official rate of discount, we confine the current rate of interest within narrow limits, the natural consequence being that the general level of prices, or the purchasing power of money, or the value of debts, is preserved constant.

What the foregoing section contains is mainly a discussion of Macleod's Quantity Theory. He does not, I believe, use the term at all; it was the generation of economists who came after him that took up the problem in regular form. Still, it seems to me that the conception of Macleod had some influence in shaping the formulas of his successors. I repeat two of his statements: "The quantity of money a nation possesses is simply the quantity of accumulated industry it possesses." "The money of a nation is the mode and form in which the accumulation of industry which has not yet been spent in commodities is preserved." The idea is that money is something retained, preserved, withheld for future use, a margin allowing scope for the free play of the need for goods. Money is made to stand for a surplus, in contradistinction to a whole. Now

compare with the above propositions what, according to Professor J. M. Keynes, was taught by Alfred Marshall (*Memorials of Alfred Marshall*, p. 29): " . . . that the value of money is a function of its supply on the one hand, and the demand for it on the other, as measured by the average stock of command over commodities which each person cares to keep in a ready form." It is much the same idea as that which Macleod was groping after; the very expressions seem to recall those used by Macleod ("demand these equivalent services when they please"). The resemblance is even greater in the following statements:

Macleod: "Supposing that there is nothing but metallic money in use, the following axiom is evident: The quantity of money in any country represents the quantity of debt there would be if there were no money."

Marshall: "The exchange value of the whole amount of coin in the Kingdom is just equal to that of the whole amount of the commodities over which the members of the community have decided to keep a command in this ready form."

Evidently Marshall divides the quantity of goods into two parts, although he mentions only one; instead of "the whole amount of the commodities," the statement should read "that part of the whole amount of the commodities over which . . . ." The coin is set over against a part, and this part corresponds to what Macleod designates as the "quantity of debt or services due." Marshall preferred his formula, Mr. Keynes informs us, because "it avoids the awkward conception of 'rapidity of circulation.' " But, on the other hand, it seems to me to omit a very essential factor; it does not say what the other part might consist of, and it is reduced to operating with the unknown factor of the changing desires of the owners of money, who wish to keep now more, now less "stock of command over commodities"; in the place of the vague notion of rapidity of circulation Marshall had to introduce the no less vague notion of elasticity.

Marshall's authority was so universally accepted as to eclipse the contribution of his older contemporary, which passed unheeded. It is possible that Marshall hit upon his quantity formula independently; still, one would imagine him to have studied *The Theory and Practice of Banking*, and pondered

over Macleod's attempts. However unsatisfactory the propositions of Macleod may be in certain respects, one piece of insight he had that his overshadowers failed to apprehend: he connected the currency with debt. His curious endeavour to eliminate the commodity factor out of the quantity theory ("money represents debt and not commodities," or, "there is no necessary connection between the quantity of money and the quantity of commodities") was evidently prompted by the conviction that it could not be only commodities, that currency has its being, not in the turmoil of the commodity market, but rather in the far more fundamental and comprehensive complex of mutual obligations of all kinds. It is a great and most vital truth.

§ 15. Some Further Reflections on Credit Creation.

1. The problem of credit creation is discussed by Professor Pigou in Chapter xii, Part I, of *Industrial Fluctuations*. This author upholds the idea of "the power of banking systems to create credit." He challenges "Professor Cannan's round assertion that the whole conception of bankers 'creating credit' is confused and fallacious." So then he shares the view of Macleod: the banks do not merely lend what is lent to them, they create out of nothing. How else could they emit more than they receive? Do economists not recognize the law of the constancy of energy? Or is it that they use the words "create" and "creation" in a sense specially their own? I confess freely that I am unable to follow Professor Pigou's reasoning. He considers it as a creation of credit when a bank "credits a customer . . . whether against specific securities or by way of overdraft." He further establishes a relation between "the amount of credit created . . . and the addition made . . . to bank deposits." Are not the specific securities which a customer gives to the bank a deposit? Surely it is not a creation of credit if a bank lends against securities or deposits in any form; it is a transformation of one kind of credit into another kind, and so it is not an addition to the total credit. The conclusion of the argument is to this effect (p. 127):

"In the light of this discussion, and subject to the several cautions contained in it, we may regard the addition made to bank deposits in any year as a rough index of the quantity of bank credit created for industrialists during that year."

If this is to say that the amount of credit issued by the banks is equal to the deposits received, it can only mean that no credit is created: the banks emit only just as much as they take in. For the deposits are credit. If I buy a bond, I give the issuer credit; in depositing the bond with a bank as a security for a loan, I recover the money which I gave for the bond, the bank accepting the bond because it has money available. I say money, though it is a question of credit, and I maintain that the substitution is legitimate. Even though no money is handled in the transaction, the credit cannot be detached from the actual money, just as the credit remains connected with the material wealth against which it was originally issued. It is never one and the other, but always, inevitably, one for the other. In trying to show how credit is created, Professor Pigou merely succeeds in showing that there is no creation at all, but only transformation. Bankers are not gods, not creators, but only transformers like the rest of us. The term "transformer" suggests the analogy of the electric apparatus, in some respects a very appropriate one: the power station which generates the electricity—the energy—is elsewhere; the banks' function, and all that they can do is to transform the current.

I think I can detect in Professor Pigou's chapter the root of the credit creation fallacy. Credit creation, or credit expansion, goes with an advance in the rate of interest. It is supposed that this induces people to lend the more eagerly: a rentier, Professor Pigou explains, will "respond by leaving balances unspent in the bank—putting, say, £100 on deposit account there to earn the improved interest offered—instead of spending it, and so transferring it to the balances of other people." Thereupon the bank proceeds to create £100 worth of new credits; i.e. it does not merely lend the £100 saved by the rentier, but another £100 extra: "If the banks do not create an extra £100 of credit for business men, the intention of the rentier is, so to speak, defeated." Here again I confess my inability to understand the case. What I do understand is that the assumption on which it is based cannot be sound: it is not true that people are the readier to deny themselves, so as to be able to add to their bank deposits, merely because the rate of interest is generally raised. We are back again at the point in which the various strands of economic error

concentrate: the theory of interest. If it were true that the public save more, and invest their savings in banks, as the rate of interest goes up, obviously the consequence would be a fall of prices, and the orthodox theory would be proved right: prices would fall as the rate of interest rises.[1] However, this is disproved by the records of what actually happens, and no amount of reasoning can explain away the facts on record. Since, then, the effect is not produced, the cause cannot be operative: the rise of the rate of interest does not cause the public to save and diminish their consumption—at least in the earlier stages of the process. Indeed, how could they? The rate of interest rises because business men anticipate a rise of prices—the author of *Industrial Fluctuations* says so in more than one place. Consumers are all of them business men, and as all anticipate the rise of prices, none will do what the theory purports, to wit, defer and diminish their purchases; they will do the very contrary. And so, instead of more money being offered to the banks as deposits, the supply shrinks away, while demand increases; prices instead of falling will rise. The banks are pestered for loans all the more, and how are they to satisfy this demand? It is now that they ought to prove their ability to create credit. But they are unable to lend, unless some one will lend to them. It is here that Professor Pigou suggests a very ingenious expedient. He says (p. 125):

"Obviously the banks can only create credit for customers on condition that these customers or others lend to them in this sense—the sense of being ready to accept their promises to pay. But this gives no ground for quarrelling with the convenient phrase 'credit creation.'"

In lending their promises to pay, the banks make their borrowers lend to them, so that their debtors are also their creditors. We need not analyse the case any further; it is a hopeless one. It is impossible to prove that there is such a thing as credit creation by the banks; even by the method here suggested it would not be the banks, but their customers, that create the credit. At all events, the banks cannot issue any promises to pay unless they are assured that the Central Bank is going to furnish the necessary cash. If they disregard

[1] But who would be so rash as to borrow, and sink in the production of real wealth, the savings of the rentiers, when so much less money is spent to purchase goods? Savings represent unsold goods.

this necessity, they court bankruptcy; they do not create credit, but swindle the public.

I have not dragged in Professor Pigou merely for the sake of controversy. What he has to say on the subject contributes to illustrate the function of the rate of interest in the process —which we will term the transformation of credit rather than the creation of credit. When the rate of interest rises, credit has already changed its urgency and its direction; what happens to the rate, i.e. the deliberate action of the banks, is merely a manifestation of forces which have been set moving outside the banks, and the banks follow the lead, as they are bound to do. However, a movement once started will continue, until it has spent its impetus, unless it encounters an obstacle, something that refuses to move along with it or to be overridden. Thus if the rate of interest did not yield to the impetus, it is hard to see how the credit movement could proceed, carrying supply and demand and prices along with it. If the rate of interest refused to budge in just one of its positions, namely, the rate of discount of the Central Bank of Issue, the movement would be pulled up almost as promptly as if interest were stabilized generally, for the very simple reason that the other banks could not dare to let themselves go, but would refuse to transform the credit which speculators and business men are trying to start in a certain desired direction.

2. If a high rate of interest is the means to induce people to lend the more readily, a low rate must be the means to attract borrowers. Indeed, such is the common belief. I have already quoted Professor Pigou to this effect (I, end § 19); I shall have occasion to criticize Professor Cassel on this head (VII, § 6). The idea occurs regularly in the German discussions of the credit creation problem. Here are a few passages from an article summarizing the utterances of many authors: E. Egner: *Zur Lehre vom Zwangssparen* in *Zeitschrift für die Gesamte Staatswissenschaft*, Bd. 84, p. 537.

"The creation of money depends on the ease with which credit may be obtained compared with the prospects of profit to be realized; in other words . . . the money rate of interest must be reduced below the real rate. If, therefore, credit is relatively cheap, the demand for it will increase and more paper credit will be circulated"—

the consequence being a rise of general prices.

"The banker will maintain the rate as low as he possibly can, and so seek to realize increased profits by extending his grants of credit."

And again:

"That is to say that the increased quantity of available credit can be absorbed only at a reduced rate for loans. Thus credit inflation and low interest condition each other."

This statement is referred to the book of one of the most authoritative writers, himself a banker: Albert Hahn, *Die Theorie des Bankkredites.*

The two propositions—a high rate with ready lending, a low rate with ready borrowing—lead to the conclusion that the banks are best supplied with normal savings whenever business has no use for them, and run short of loanable funds whenever the demand for loans is most urgent. It is a preposterous state of things; only a thoroughly vicious handling of the mechanism can be responsible for it. However, by the theory under discussion, the banks ought to be overflowing when the rate of interest is high, and empty when the rate is low. As a matter of fact the reverse is true: savings flow in as the rate falls, and borrowers shun the thing offered so enticingly cheap. But what remains is the fact that supply and demand are not kept at a decently constant ratio: gluts and drains alternate. The mischief is caused by the topsy-turvy theory of interest and the discount policy based on it. The article from which I have been quoting furnishes a fine proof of the potency of the dogma in blinding the student to the facts of reality. The author has analysed the situation to such good purpose as to reach this conclusion:

"When savings accumulate at the banks, credit must be extended to the industries—care being taken that the credit does not reach the consumers. However, the entrepreneurs have no interest for this credit, unless it can be profitably employed. If, in the situation under review, there is not sufficient demand on the part of consumers, the accumulation of savings must cause a fall in the rate of interest. However, there is this difficulty: that at this point of time the goods corresponding to the saved purchasing power have become unsaleable, so that their price must be reduced and the profitableness of the industries so affected is diminished."

Even though the case is poorly worded, the outcome is unmistakably the clear proof that the same cause which depresses the rate of interest also depresses prices. The author, however, does not heed it, and goes on reiterating that a low rate of interest is the necessary condition of credit creation. But the fall of prices reduces the earnings of enterprises and discourages from enterprise; therefore it is impossible that a reduction of the rate should encourage borrowing.

Credit cannot be created on any account whatever. The notion of credit creation was born from the sense of the difficulties induced by a mistaken credit policy, which has periodically brought about situations in which new credits in support of languishing, or frightened, enterprise seemed to be called for. When the credit mechanism is once rightly managed, it will appear that normal, genuine savings are sufficient to sustain industry and confidence, and the illusion of credit creation will vanish.

We have it from Macleod—and as far as I can see it was he who fathered the idea—that credit creation is the device by which new, additional wealth may be created out of nothing. It is in the name of this new wealth, commonly termed economic progress, that credit creation is postulated. It has begun to dawn upon some authors that the thing is problematic. Thus Professor Soddy insists that the mere expansion of banking credits will not do: it must be genuine abstinence from consumption, people by-passing the mart of commodities, forgoing the enjoyment of commodities, and devoting their means to the construction of new industrial plant. We are to consume less so that we may have increased means of producing those goods which we are asked to deny ourselves. So, too, the author of the German article, in criticizing Schumpeter's theory of economic evolution, points out that any new creations made possible thanks to credit creation are only a transfer of forces and activities from old industries to new, and therefore do not constitute any addition to the existing wealth. But he believes in progress, and the way to achieve it according to him is economy:

"In order to set progress in motion, i.e. to make the quantity of capital goods grow, the consumer not only must save, abstain from consuming, but definitely renounce spending part of his purchasing

power on consumable goods: he must not consume at a future point of time what he forgoes now."

To me it seems utterly senseless. Progress by economy is no wiser and no more possible than by credit creation. More of this will be said in the closing essay, where an attempt is made to show how these efforts are frustrated.

Fifth Essay

ASPECTS OF THE DISCOUNT PROBLEM

WITH TEXTS FROM MACLEOD

THE point on which my conception of the effects of alterations in the rate of discount differs from Macleod's has been shown in the first essay. He claims to base his conclusions on the observation of facts, and so do I; yet our conclusions, though agreeing as to the question of principle—namely that interest governs price—are diametrically opposed as to the manner in which the principle should be applied. Were the facts observed by Macleod different from those that have come to my notice? They were not. He proceeded on a different hypothesis, which caused him to put a different interpretation on the facts. This hypothesis he formed upon a short-range view of the phenomena, which prevented him from seeing things in their proper relations. He says in the Preface to *The Theory and Practice of Banking* (p. x):

> "In the autumn of 1855 a very sudden and severe monetary drain took place. During this drain some very startling and extraordinary circumstances took place, which I have never seen mentioned in any book. Reflecting on these, I came to the conclusion that the only method of controlling credit and the paper currency is by sedulously adjusting the rate of discount by the bullion in the Bank of England and by the state of the foreign exchanges. And I explained the reasoning on which this principle is founded in the first edition of this work."

A year's observation is not enough. It may yield results which are contrary to the truth, although the facts are correctly observed. Prices have sometimes fallen after a raising of the rate of discount; I have explained the case in *The Interest Standard of Currency*, and I shall have occasion to touch upon it again below. Macleod was not entirely wrong. But his merit consists in having seen that there is a natural relation between discount and prices. It was probably all that might reasonably be expected from the first observer. If my theory marks an advance on his, the fact is easily accounted for by the unexampled magnitude of the field of observation which has fallen

to my lot, and by the revealing completeness and long range of the phenomena enacted before my eyes.

§ 1. The Bullion Report.

Macleod devotes a special section to the discussion of the regulation of the currency through discount. He takes his start from a conception much to the fore in the official inquiry which resulted in the famous bullion report. He quotes the Report to this effect (II, p. 268): (The directors of the Bank of England maintained)

"that there can be no possible excess of Bank of England paper, so long as the advances in which it is issued are made upon the principles which at present guide the conduct of the directors; that is, so long as the discounts of mercantile bills are confined to paper of undoubted solidity, arising out of real commercial transactions, and payable at short and fixed periods."

The Report contests this view in so far as it is pronounced to be valid in the case of an inconvertible paper currency. The argument is that when banknotes are convertible, they are forced back to the issuing bank as soon as they begin to depreciate; hence the Bank may discount freely without any risk of damaging the currency. But when banknotes are not convertible, they will cause depreciation, seeing that the issues are continually increased. The opinion of the authors of the Report was therefore that convertibility is all that is needed to prevent abuses. This view is even at this day widely, almost universally, prevalent. My objection to it is that in the course of the nineteenth century the purchasing power of money has again and again undergone diminution in spite of convertibility. Of course the authors of the Report did not so much as conceive a doubt as to the merits of the gold standard; their one and only concern was to preserve the Mint price of gold at par with the market price.

And Macleod did not go beyond this. Although agreeing with the general conclusions of the Report—that convertibility is safety—he rejects its argument against the views of the directors. He says (II, p. 271).

"The Committee were further in great error in supposing that so small an amount as could be added to the circulating medium in so short a time as during the currency of the bills that were discounted could have any general effect on prices."

His one and only objection to this method of creating currency is this: the drawees of bills may go bankrupt. So long as bank-notes are convertible such failures, to be sure, need not injure the value of the currency; but while convertibility is suspended, the aggregate effect of failures must be to produce an excess of currency. This effect, Macleod affirms, would be declared even though the Bank itself received back all its notes, only the drawers of the bills suffering a loss. For he holds that any loss is a destruction of capital, and the losses of individuals signify a loss to the community. I am sorry to say that this argument is of the flimsiest texture. The losses of individuals from unlucky speculation—and Macleod explicitly says that they are meant—constitute the profits of other individuals. Even losses to the Bank itself cannot affect the currency, so long as they do not result from a destruction of real goods.

§ 2. An Advance on the Bullion Report.

The outcome of Macleod's examination is that the discounting of bills is not the proper method of regulating the circulation of money. He was satisfied with one paltry and far-fetched objection to this method, because he held a preconceived idea that only gold (bullion) will do, that bullion is "the only true foundation of a paper currency." One might conclude, then, that bullion will really do and that no further means are required, that nothing can happen to the value of money provided that there is a fund of gold to redeem the paper issues with. Yet he knew better. He was aware that the value of money is not by any means assured through mere convertibility, and he understood the evils of alterations. He says (I, p. 114):

> "These considerations greatly affect the public in matters of public debts. The State agrees at a particular time to pay a fixed quantity of bullion for ever, or for a long period of time. Now, even supposing that all other things remain the same, the value of the money may vary greatly during long periods, either from the increased scarcity or the increased abundance of the metal: and either the State or the creditors may be grievously affected by these changes."

However, this insight did not suggest to him that something ought to be done to obviate such misfortunes. But unconsciously he was prompted by it to devise certain improvements

in the monetary mechanism. Although by his general argument convertibility should be sufficient to preserve the parity between paper and gold, Macleod is not satisfied with convertibility and automatism. He seems to have been the first advocate of a "managed currency," and though he failed to state clear reasons for his endeavour, he was after a method for obtaining a larger measure of stability of the purchasing power of money. After insisting that convertibility is *the* thing, he warns us that it is only one thing. For beside gold, there is credit, which not being weighable yet active, has to be controlled in some way or other. This is rather inconsistent in so far as in another connection Macleod represents bullion as "metallic credit" and cash money as "the highest and most pronounced form of credit." Assuming that such is the true interpretation, one fails to see why metal money and the inferior forms of credit should not obey the same laws. As to the manner of controlling credit, again Macleod appears to me inconsistent. He insists that the price of credit should be allowed to regulate itself. Now surely price is the hold by which economic quantities are controlled; I know of no other. But Macleod says: credit has a price, a money price; in order to control the currency, i.e. to regulate it and hold it within bounds, we are to let the price of credit form freely according to the state of the money supply (money being gold). His words are (II, 278):

> "Discounting a bill for a merchant is not lending him money, but buying a debt due to him; and the price of such debt must follow exactly the same laws as the price of corn, or any other article. . . . If money becomes very scarce, the price of debts must fall, i.e. the discount must rise. If specie becomes abundant, the price of debts will rise, i.e. discount will fall. The price of debts, then, must follow the same great laws of nature that the price of wheat does."

I ask: why should the price of debts adapt itself to the state of the money supply? There is at least fifty times as much debt as there is money; why not force the supply of money to adapt itself to the requirements of the debt, by keeping the price of debt constant at all costs? Why try to expose the ocean of debt to an imaginary governing influence of the river of money? The attempt cannot succeed, and the efforts made are sheer waste.

So much for the idea that the rate of discount has got to

vary. The passage under consideration also points the way in which it should vary, and on this head again I am opposed to Macleod. Let us consider the argument and try to visualize the process implied. Discounting a bill is buying a debt due. Suppose the debt to be nominally 100. If there is little money available, the discounting banker cannot pay out as much for the bill as he could, and would, do if there were plenty of money: he discounts (retains) 5 instead of 4, and so pays out 95 instead of 96, which signifies that "the debt" has become cheaper. The argument seems clear and sound. However, there is something lacking. The quantity of money available determines, not only the rate of discount, or the price of the debt, but the debt itself, i.e. its magnitude, the amount of the bill, or the price of the goods against which the bill is drawn. Scarcity of money of course makes for a low price of goods; according to Macleod's argument it also makes for a high rate of discount. Hence the seller of the goods is supposed to accept a low price and, moreover, in discounting the bill, to allow a higher discount. Is not that asking of him more than he can bear? How long will he consent to deliver the goods? We realize the utter impossibility of the case so soon as, by visualizing the situation, we are made to understand that one and the same party has to suffer the effects, or bear the brunt, of both the lowered price of goods and the raised price of money. The argument must somehow be wrong, since it leads to an impossible conclusion.

When does money (specie) become scarce? According to the law of Gresham, good money is displaced, made to disappear, by poor money. Good money is specie, poor money is paper credit; hence scarcity of good money is the effect produced by a superabundance of paper money. When credit, in the form of paper money, is abundant, the prices of goods are not low but high—nominally; it is one of the reasons why money seems scarce. The seller of goods can afford to pay the higher rate of discount, seeing that he recovers his outlay in the price of his wares. In other words: raising the rate of discount is no deterrent to borrowing, but rather a stimulant, because it must normally be counterbalanced by the rise of prices. When it is desired to check borrowing, with a view to checking the rise of prices, the only proper remedy would seem to be the lowering of the discount rate.

There is also this to be urged against Macleod's argument. "When money becomes scarce, the price of debts must fall," he says. He is thinking of bills of exchange. But the statement ought to apply to bonds, i.e. securities at a fixed rate of interest, as well. For, as a matter of fact, a bill is a security at a fixed rate too; the interest is paid in advance and therefore cannot be altered during its currency. When money is scarce, the economic quantity that will certainly fall in price is goods. Now I maintain that bonds will go up in price when the prices of goods fall. That they do rise is amply proved by the recorded fluctuations in the prices of Consols. Nor are the reasons far to seek. In proportion as goods become cheaper, the income from Consols increases its purchasing power, so that the securities become the more valuable. Such gain must translate itself into a rise of their price. Now this is equivalent to a fall in the rate of interest; for a rate of 3 per cent is a yield of only $2\frac{1}{2}$ per cent, if the security costs 120 instead of its nominal price of 100. When the conditions of the security market produce this rise in the price of bonds, the rate of interest must fall—or rather, it must have fallen. It falls along with, if not before, the price of goods. Hence it appears that scarcity of money—whatever the notion may amount to—must go with a low, not with a high, rate of interest. But when it comes to devising a remedy against the money deficiency, the only possibility would seem to be the raising of the discount rate. For the purpose is to force out fresh supplies of money from any source that may be accessible, which demands the pressure of a higher discount rate.

Macleod goes on by arguing that, as attempts to interfere with the price of wheat are always a mistake and harmful, so too are attempts to force the price of credit: discount must vary in order to right the fluctuations in the circulation of money. He declaims against those who are

> "in a perverse combination to thwart this great law of nature, and attempt to keep the rate of discount, or the price of debts, fixed at a uniform scale."

And he says enthusiastically (p. 279):

> "Like all true laws of nature, the simplicity, beauty, and perfection of its action is marvellous, and it produces a multitude of results which are not perhaps very obvious at first."

Macleod drove his theory home to such good purpose that it disposed of those who durst talk of fixing the rate of discount. But here I am to resuscitate the abandoned postulate. Of the grounds on which it was advanced in Macleod's time I am ignorant. I am not shaken by the defeat of my precursors. It often happens that some new invention revives an old and half-forgotten fancy and translates it into reality. Thus the automobile is the dream of the first inventors of the locomotive engine come true; for their original idea was to run the engine on the common highway. The principle as first conceived was right; all that was needed was to learn how to apply it rightly.

Now for Macleod's proofs of the beauties of the law of discount:

"If specie is leaving the country and becomes scarce compared to credit, every principle of nature shows that the value of money must rise, i.e. the rate of discount must rise; and this has a tendency to prevent the outflow of bullion, and to attract it from abroad; on the other hand, if specie be flowing into the country and likely to become too abundant compared to credit, a fall in its value, or a fall in the rate of discount, repels it from the country."

Macleod here places money and credit in opposition with each other. We have seen, in the previous chapter (p. 209), that on principle he considers both money and credit as currency, i.e. the same thing. The confusion produced by separating them appears in the fact that he speaks of the rate of discount as being "the value of money." The rate of discount is the price of currency, in which money and credit are combined. If a higher rate adds to the value of money and thereby tends to increase the quantity of money, it must affect credit in the same way. But by the terms of the present passage there is a discrepancy between the quantity of money and the quantity of credit. To remedy that, it would seem necessary to apply measures which affect money one way, credit the other way. There are no such measures, because money and credit are the same and "must increase and decrease together," as Macleod himself says. Ever since Macleod the theory of discount has proclaimed the very reverse of this: it supposes a raising of the rate of discount to cause a contraction, i.e. a diminution, of credit, and an enhancement of the value of money. The higher rate is the means employed to attract money, which is to increase money, so that one and the same measure would

cause both the diminution of credit and the increase of money. That is inconceivable. The raising of the discount rate must cause credit to increase along with the increase of the quantity of money.

A good deal depends on what is here meant by credit. It is not the credit (esteem) of the country, nor is it the credit (estimation) of money; it is credit instruments, paper currency, such as bills of exchange, cheques, book debts, shares and bonds; in other words: substitutes of money, and the natural consequence of such increase is to force gold out of the circulation and out of the country. Hence the higher rate, although it favours the substitutes of money, does not attract gold, but repels it. In a sense this is to favour gold and to damage paper money. For gold obtains a premium; it rises above the parity with paper. That is what Macleod has in view when he says that "specie . . . becomes scarce compared to credit." He wants the ratio to be maintained and proposes the measure which he supposes to favour gold: the higher rate of discount. And it does favour gold, so much so that gold is enabled to travel abroad and make itself all the rarer. Another way to maintain the ratio would be to favour credit by lowering the rate of discount. It is a well-known fact that favour goes with rarity: when favoured, credit will make itself rare exactly as favoured people do. This would force gold to exert itself and render services, so as to regain its reputation of usefulness.

When gold goes, it is because credit is too active, too much stimulated, by a high rate of discount, a high price. An article which costs much is employed all the more vigorously. Macleod desires credit to be curtailed, to shrink, to lessen its activity. And he proposes to achieve the end by—raising its price, of all things! The higher price can have only one effect: to stimulate it even more and increase its activity. Of course the error of Macleod was due to the idea that a higher price deters purchasers, which is only half the truth. The higher price encourages the makers of the article, and in the case of credit the makers are also the users. But there is bad logic all through the argument. Macleod wishes to reduce, to curtail credit in a situation when credit is specially needed to overcome a difficult situation, as we shall see more clearly by and by; and he proposes to reduce it by offering it a higher price. Probably each of these two fundamental fallacies, if presented

singly, would long since have been detected; their combination gave them the proud appearance of solid truth which no one dared to question.

§ 3. The Vice of the Discount Theory.

Macleod in the passage quoted says that the value of money must rise when gold quits the country. It will rise eventually; but while the drain continues, the value of money must be falling. For the gold is let go because the people wish to exchange it for things which they prefer to money. It does not seem very logical to call this an appreciation of money; I should call it depreciation. Now the drain of gold cannot go on indefinitely; neither can the depreciation of money which causes the drain. Why, then, take measures against it; why move the rate of discount and why raise it? The utter absurdity of the measure shines forth from the reasons supplied by Macleod to explain why it should be taken. What is it that causes the drain of gold? We are told that (p. 279):

"if a nation be visited with a great failure of the crops, it can only buy such food from foreign countries with its commodities or its money; it cannot send its credit in payment abroad. Now, if commodities are too dear, it must pay with money, and credit in this country is the great producing power, and credit for the time is a great sustainer of prices by enabling people to withhold their commodities from the market. Now, raising the rate of discount curtails credit, forces sales, and thereby lowers the prices of commodities, and makes it less profitable to export specie, and more profitable to export goods. Moreover, this rise in the value of money here, i.e. the low price of debts and commodities, tempts buyers from neighbouring countries to bring their money here. It thus causes the inflow of bullion and restores our currency to a uniformity of value with that of neighbouring countries."

The same argument is repeated, with a few additions, on p. 285; a further cause mentioned being war. Then let us also include an industrial conflict, such as the mining dispute in England in 1926, which caused such a failure of the industrial harvest.

Now we can see and admire the beauties and perfections of our ingenious theory of discount. Rightly interpreted, it says, neither more nor less: add insult to injury! When any one of the main industries, such as farming or coal-mining, has suffered a damaging attack, care should be taken to inflict

equal losses on the remaining industries. Restore the balance by reducing the prosperity of the whole. Shackle credit, which is "the great producing power." The passage from which I have been quoting continues thus:

> "If a nation has to spend a great part of its money in buying foreign corn, it is quite clear that it has not so much to spend in purchasing goods; an overproduction of goods, therefore, can only end in a disastrous fall in prices. And here, too, the beautiful action of this great law of nature is manifest. So enormous a proportion of the commodities of this country are produced by the credit system, that a rise in the rate of discount just hits profits between wind and water, as we may say. Consequently, a rise in the rate of discount retards and curtails production in proportion to the diminished consuming powers of the nation, and so prevents such a ruinous fall in prices as would necessarily follow an undiminished production, accompanied by a diminished power of consumption."

Here we have it in plain English: when the crops of English fields have failed, the output of English mines and factories must be "retarded and curtailed."

It is sheer madness. A theory which when logically applied leads to the recommendation of such preposterous remedies is a scandal.

But let us examine the case in some detail. To begin with, it may be pointed out that under the assumed circumstances (failure of crops, agricultural or industrial) the real wealth of a country is diminished. Now the existing quantity of money is always equivalent to the quantity of real wealth. Hence it must diminish along with the latter quantity. The diminution can be brought about in two ways, one being the drain of gold, the other the depreciation of the currency. No trick of discount manipulation has power to obviate this dilemma, and it is foolish to try to interfere by measures that can only make matters worse. We have got to choose between the two courses: the drain or inflation. In the former case we allow the metal to depart; it will return again when the deficiency has been filled. In the latter case we allow the price-level to rise; it will be restored with the return of plenty. Macleod is not primarily concerned about the fluctuations of the purchasing power of money, whereas our paramount care is to avoid them. So we shall prefer the procedure which promises to preserve the index of prices. In the present instance this is also the choice of

Macleod. But he believes that the feat can be achieved in a way that shall prevent the drain of gold at the same time, whereas according to my theory the drain is the only safeguard—apart from the more matter-of-fact expedients of harder work and reduced consumption—against the danger of money depreciation. Raise the rate of discount, such is the formula of the charm. Let us consider the probable effects of the measure.

The business world knows that by the rules of custom the measure is to be expected. It also knows that certain goods are badly wanted, so that imports bid fair to find a ready sale at a good and safe profit. He who manages to procure the credit (money) to buy with before prices have risen and the price of credit itself has been raised, will gain all the more. Everybody tries to obtain credit—credit being born of misfortune. There is an immediate scramble for loans. Many will borrow more than they actually need. Bills are manufactured, and if legitimately drawn bills do not suffice, accommodation paper will crop up. This greedy demand for money which precedes the raising of the discount rate, is largely provoked by the anticipation of the raising. Were the procedure inverted, that is, if it were the regular course to reduce the discount rate, the effects on the money market would be reversed: business men would borrow less greedily. I have described the process at some length in *The Interest Standard of Currency*, to which I beg leave to refer the reader. But it is not necessary that the discount should be lowered. Keeping it steady is a safer course; for it would be a mistake to encourage the speculators to defer the purchase of much needed goods.

Macleod of course is aware that the general rate of interest moves with the rate of discount; it rises when the latter is raised. At a time when large sections of the producing class have their incomes reduced in consequence of a poor harvest or other troubles, their situation is to be made worse by a rise in the rate of interest. And not satisfied with this, Macleod further expects and wants prices to fall. The lenders of money would thus have their incomes increased without having to spend more on their cost of living: the catastrophe does not only not touch them, it is for them a regular gain. But an economic order of this sort could not have lasted. The creditors are made to shoulder their share in the general loss: they

must either take less interest or undergo the penalty of money depreciation. The raising of the rate of interest cannot possibly depress prices; it must be compensated for by the rise of prices.

What has just been observed applies to the first part of my quotation; but it does not agree with the second part. For the second part affirms the contrary of the first. It insists on the necessity of raising the discount rate with a view to forestalling a fall of prices in consequence of over-production, whereas the first part suggests that the raising of the rate would serve to lower prices, this being the end to be achieved. Where are we now? This little bit of special contradiction furnishes a first-rate example of the general muddle into which the theory of discount plunges us. The theory says: a higher rate diminishes the use of credit, and as credit is a factor of price, it also reduces prices. Now another way to bring prices down is to increase output and supply; hence the higher rate ought to stimulate output and supply. However, this is contrary to the theory—read over the second part of my quotation: the higher rate curtails production, and consequently prices do not fall. Could anything be more preposterous than a theory, a doctrine, a dogma that gives rise to such a conflict of consequences? And do not imagine that I am merely dealing with an inadvertency of just one careless writer. Macleod's theory is the theory of to-day and the law of present-day practice. One of the latest, and loudest, of its exponents, Mr. Keynes, suggests with the most undoubting confidence that the rate of discount should be raised when, depression having come to an end, prices begin to tend upwards again. Why do so? The higher rate is expected to prevent the boom, in other words, that increase in business activity which is supposed to increase output and supply, and therefore ought to be the very thing to prevent prices from rising.

I need not go into Macleod's further arguments. They are all collected with a view to supporting a vicious hypothesis, and he was carried away by his zeal in combating another vicious theory, namely the theory that demanded that the escaping gold should be replaced by paper money. Without investigating the matter, we may be sure that the advocates of this postulate recommended the reduction of the rate of discount; as Macleod condemned the aim pursued, he was

bound also to condemn the means proposed, and so he insisted on the necessity of raising the discount rate.

I have quoted Macleod to the effect that "if money becomes very scarce . . . the discount must rise." Why must it rise? In the world of cause and effect every effect produced is a reaction against the cause, an escape from the cause, and the consequence of the effect is to abolish the cause. If the rise of discount comes in consequence of a scarcity of money, its effect must be to counteract such scarcity, to end it, to obviate the evil. That is to say, the higher discount rate must stimulate the production of money. That is what was at the bottom of Macleod's thought that a higher rate of discount would attract gold from abroad. But gold is not money; it is a ware. Therefore the raising of the discount rate does not attract gold. However, it does force the output of money on credit. Now an increase of money must raise prices, and so by Macleod's own theory the higher discount rate must raise prices, causing money to depreciate. But his theory also has it that "the value of money varies directly as discount," which is the exact contrary of what we have just found to be the logic of the statement under discussion here. If a scarcity of money causes the rate of discount to rise, and if the rise of the discount causes more money to be produced, and if an increased output of money causes prices to rise—or money to depreciate—surely the only true conclusion is that a lower value of money is the consequence of a higher discount rate, and the rule holds good that the value of money varies inversely as discount.

Having established and reconfirmed this rule, we are enabled to see the more clearly how utterly preposterous it is to raise the rate of discount with a view to meeting the exigencies of the assumed case of some national calamity. And it is well worth entering upon the assumption; for the case is not merely hypothetical, it is the common practice. What was done to discount when the war broke out in 1914? The rate was raised. What did they do in every country when inflation from the post-war orgies threatened ruin? They raised the rate. The panacea for any kind of economic calamity is believed to be the raising of the discount rate. The rate is put up when the crops, agricultural or industrial, have failed. There are fewer wares demanding to be exchanged for money; less money is required; there is too much money out. Logically the quantity of money

ought to be reduced. We have heard Macleod insist that the rate of discount should be raised when there is a scarcity of money; why then raise it in the assumed situation? Money is in excess; the raising of discount forces the output of money and adds to the excess: the remedy cannot but aggravate the evil.

Obviously the proper counter-measure would be to reduce the rate of discount. However, I see a serious drawback to such a move; my scheme of a stable discount does not permit the interference. As I have already pointed out, the lowering of discount would cause the diminution of money; for it destroys credit, the belief in the profitableness of enterprise. When crops have failed, enterprise should be encouraged to replace the losses suffered. Therefore I reject the idea of lowering the discount rate, even though it should be necessary to prevent the rise of the price-level. Let it rise. The movement cannot go very far, and is sure to swing back after a short time. A small advance in prices would certainly act as a stimulant rather than a deterrent.

Macleod was enthusiastic over the beauties of the law of discount. The law is not without beauty, indeed; no true law is. But so long as it is misunderstood and misapplied, it only shows its uglier side. A law is the more perfect as it leaves less scope for interpretation. While the discount is intended to be managed, it is sure to be mismanaged. Have it fixed in the right place, and do not worry if prices happen to stray a little; "leave them alone, and they'll come home," like little Bo-peep's sheep.

Macleod goes on to discuss the question of the rates of exchange. Before entering upon his treatment of the matter, I would remark that in the assumed case which we have been examining, a country with no gold reserve to pay for the extra imports would have to force the export of those of its products which have not suffered from failure—unless it prefers to pay with the proceeds of the sales of foreign securities. In order to succeed in forcing exports, it must cheapen its goods, and this is brought about by the fall of its rate of exchange, provided that it does not find means to depress the money price of its goods for export. It can be done. The missing goods, which have to be imported, rise in price; the more abundant goods, which must be exported in exchange, fall in price. The move-

ment upward and the movement downward compensate each other, with the result that both the level of prices and the rate of exchange remain stable. A necessary condition of this course is that the rate of discount shall be lowered. For obviously the prices of goods are not likely to fall in a country which has suffered from a failure of crops, unless under a heavy pressure, and there is no measure strong enough to bring such pressure to bear except the reduction of discount. However, I have pointed out above why it does not seem advisable to have prices depressed when a special effort is called for. I consider a small and temporary depreciation of money and fall of the rate of exchange as a slighter evil than a departure from the established rate of discount.

Macleod wants the rate of exchange to be preserved even under the trying circumstances of his assumed case. He says that the point to be aimed at is not to preserve the rate of discount, but rather to maintain the parity of the British currency with the currencies of other countries. An end worthy of some effort, indeed. But a good deal depends on whether the other countries manage to preserve their own equilibrium. I ask: can the rates of exchange stay at par, when the rates of discount differ? It is impossible, and here again the strange logic of the discount theory reveals itself. Macleod recommends the raising of the rate of discount—which brings in its train the rise of the rate of interest—on the plea that a higher rate favours the afflux of foreign capital, money capital. But what the country needs, under the circumstances, is not capital, it is goods for consumption, such as wheat and coal. And rather than import money capital, it must try to export capital. The situation is so thoroughly adverse to an influx of capital that no raising of interest rates can have power to attract it. The measure is altogether wrong and entirely futile from this point of view as well as from others.[1]

[1] In the preceding chapter we defined capital as a claim to real goods. What, in the circumstances of the assumed case, the country needs is not claims to goods—its own goods, that is—but the goods themselves. It is generally supposed that an import of capital takes place when a country contracts a debt abroad. Such a transaction can only mean that the borrower country imports goods which it does not pay for in exports, but out of the proceeds of the loan, the repayment of the loan being in reality payment for goods received on credit. Claims to the country's future resources, that is capital in the sense of our definition, money (gold) and money equivalents, are not imported, but exported. It is the word "capital," this most indeterminate of terms, which has muddled up the thought of Macleod.

§ 4. The Flow of Gold.

Of course Macleod assumes that gold will always tend towards the countries with a higher rate of discount (see quotation above, p. 5). He even thinks that he has proved the point with the observed facts of actual events. We will, then, examine some of his instances (p. 281):

"On the other hand, if, when specie is flowing in with too great abundance, it be not repelled by a due diminution in the value of money, i.e. a fall in the rate of discount, it will continue to do so until it is so abundant that a violent fall takes place. Persons who are accustomed to depend on the incomes they derive from the interest of money suddenly find that their means are seriously diminished. In the year 1824 there was such a plethora of capital in the country that the Scotch banks gave no interest on deposits. . . ."

Macleod interprets the occurrence so as to signify that gold flowed in because the rate of discount was too high. But how so? The rate did not drop from 5 per cent to 0 per cent at one blow; it was lowered gradually, and in proportion as it was reduced gold continued to press in. The case is a clear proof of the fact that gold tends towards those places where the rate of interest gives way. Macleod surveys the monetary crisis which occurred in England since the foundation of the Bank of England. On pp. 164 and 182 (II) he produces tables to show the development of the gold reserve as compared with the rates of discount. In 1846 the reserve fell from 16 million to 14 million while the rate stayed at 3 per cent. (The fact that the discount rate is preserved must not be interpreted to mean that the gold reserve should remain constant. Gold may be affected by what happens abroad, and stability in but one country is not really stability at all.) To stop the drain the rate was raised to $3\frac{1}{2}$, to 4, to 5 per cent, the efflux keeping pace with this upward movement. Exactly the same aspect is presented by the crisis of 1855: on January 4th the discount was at 5 per cent, the reserve 13 million; the rate fell to $4\frac{1}{2}$, 4, $3\frac{1}{2}$, while the reserve increased to 17 million (June 14th). Now the tide turned, the reserve falling, the rate rising, and when the latter was 7 per cent, the former was only 10 million. We observe the most perfect parallelism. To be sure, it must be admitted that the Bank changed the discount rate as the reserve increased or decreased, quite mechanically.

Macleod commends it for this policy, although it contradicts his own principle that the discount governs the currency. But it does not matter which of the two parallel movements is considered as the primary one; the fact remains that the alterations of the discount rate never failed to accelerate the movement by which they were prompted and which they were intended to stop. What should we say of the mechanism of a vehicle which accelerates the speed of the carriage when it is applied to lessen the speed? Yet Macleod insists, and down to the present hour all the schools of economists insist unanimously, that the discount mechanism which produces the queer effect is in perfect order and handled as it ought to be. They might as reasonably affirm that the proper way of bringing a motor-car to a standstill is to run it over the kerb and into the china shop.[1]

It stands to reason that gold may flow out or flow in while the rate of discount remains unmoved. In the same way a railway train may run now more, now less rapidly, although the pressure of steam remains the same. It all depends on whether the track has a rising or a falling grade or no grade at all. As I have already hinted, the grade on which gold moves may be altered from the other end, i.e. by what happens abroad. But for all that, one should beware of applying a remedy which in case after case is found to enhance the effect which one is endeavouring to forestall. The facts of experience are so absolutely consistent in proving that gold is forced out of the country as the rate of discount is raised step by step, and forced in as the rate is let down rung by rung, that no argument, no amount of reasoning will do to explain them away.

[1] Some time in August 1927 a Viennese currency expert, in an article published in a leading Swiss paper, discussed the effects of a raising of the Austrian discount rate some weeks previously. The avowed purpose of the move had been to counteract an inflationary tendency which had declared itself. And what was it that our observer had to report? That the tendency had been accentuated in all its manifestations. Did he then conclude that the discount measure must have been wrong? Not our expert. He expressly contended that the outcome proved it to have been right. What happened subsequently was very significant. The Austrian rate had been raised in conjunction with a raising of the rate of the German Reichsbank; but whereas the German rate was raised once more later on, the Austrian was reduced again, and the consequence was that instead of expansion persisting, as it did in the case of Germany, conditions in Austria at once veered round. A few weeks later the same correspondent commented on the curious fact that with a much lower rate of discount, credit in Austria had contracted, while it had further expanded in Germany.

Macleod enumerates several reasons why gold should tend towards countries with a higher rate of interest (the same list may be found in the most up-to-date textbooks). Capitalists, it is urged, will carry their gold to places where it commands higher returns. Nothing could be more plausible. By the theory of discount there is this further inducement, that a high rate goes with falling prices, so that the foreign investor would not only receive more money for interest, but money which has a higher purchasing power. Is not this excess of profitableness rather suspicious? How can the debtor undertake to pay out more while he expects to take in less? Anyone who does so is either a knave who intends to cheat the investor out of his principal, or a fool who is bound to go bankrupt; in either case the investment is jeopardized. One inducement, arising out of one advantage, must suffice, and I say that gold gravitates to where interest is low, because where interest is low prices are low: gold goes forth to seek out and buy goods at low prices.

However, I am far from wishing to say that there are not circumstances which may appear to invert the phenomenon: gold may pour into a country with rising rates of interest and rising prices. It must do so sometimes. When the Californian goldfields were in their hey-day, the rate of interest in California was 25 per cent; prices were correspondingly high—not low, it may be guessed. Well, the Californian gold went forth to the four corners of the earth to seek cheaper goods. Wherever it turned up, or was expected, it stimulated business. Business began to borrow, to offer higher rates of interest; credit expansion and additions to the volume of currency raised the price-levels, and thus, while the process of levelling out the inequalities lasted, gold flowed into the European countries, while the price of loan money and the prices of goods tended upward. (It was the period when Macleod began to make his observations.) A similar development must have taken place every time when some new and powerful gold supply was opened. But the significant fact about it is that *the gold invariably came from places where the rate of interest was higher*. Had the economists, in studying the phenomenon of the influx of gold, been more circumspect, they would have arrived at different conclusions from those which they published. They would have formulated the rule that

gold flows from places where the rate of interest is higher to places where the rate is lower. They might have added explanatory remarks something to this effect: fresh gold supplies have always come from inaccessible regions of the earth; naturally life in these regions was very dear, and the men who ventured out so far were ready to accept any terms for loans, so only that they might be enabled to equip themselves as gold-diggers; the new gold had to be exported as fast as it was got, and, in spreading itself over the earth, it roused the spirit of speculation, raising prices and the rates of interest in the countries which supplied the gold region with goods; hence it was natural that gold should flow into these countries while the rising tendency still lasted, which could only be as long as gold came from a region with rates and prices still higher. In studying the movements of gold, it is necessary to take account, not only of what is and happens in the countries which receive it, but as much of what is and happens in those countries from which it escapes. And it is obvious that as gold flows from regions with higher rates of interest and higher prices, both the rates and the prices must fall—in these regions —as the exports of gold continue. It looks as if the lowering of interest rates were the means to the end of driving out gold, exactly as, at the opposite pole, it seems as if the raising of the rates attracted gold. But nothing is farther from the truth. As a matter of fact, the discount rates, in the case under consideration, make no difference whatever. A country which kept its rate and currency stable would receive neither less nor more of the gold than one that allowed both to rise: the rates of exchange would bring about the necessary adjustment. Gold is the upraiser of regions that lie low. Wherever its sheen breaks in, things start up fresh. But things cannot keep on reviving; therefore gold will cease to go to, and rather turn away from, regions where they have been up and doing and are getting tired of work and prosperity. And so its tides are as restless as those of the sea itself, until men shall learn how to beware of forcing prosperity and prices too high.

Nature has its freaks and life its anomalies. In the later part of 1927 a clear departure from the rule which I have been explaining might be observed. The rate of discount of the American Reserve Banks was reduced to $3\frac{1}{2}$ per cent (from 4) in August; the English bank rate stood at $4\frac{1}{2}$ and the German

rate at 6, and later on at 7 per cent. While this state of things lasted, the American rate of exchange showed signs of weakness compared with the English and the German rates, and about the middle of December the news that a shipment of gold, the first since the time before the Great War, was on its way from New York to London created something of a sensation. Gold, then, did gravitate from the low-rated to the high-rated region, and the orthodox theory was proved true. But I ask: why had the thing never happened before, why had gold, all those many years, tended to flow from the high regions to the low regions? Does it prove the truth of a theory if there is one case in its favour to one hundred against it? The development of the American rate of exchange, i.e. the weakness of the dollar in consequence of a reduction of the rate of discount, was an anomaly brought about by certain exceptional circumstances. In the first place the reduction was made with the express purpose of arresting the appreciation of the dollar, and the business world having been indoctrinated accordingly, acted up to the expectations of the currency managers. Taken by itself alone, however, the measure would have produced the contrary effect, even though the public did respond in the desired manner; but there were other forces at work. Discount is not the whole. We may safely presume that certain other measures were applied of which the world has not yet been informed. One thing, however, is certain. In the second part of 1927 the "export of capital" from the United States was particularly important—a record figure being reached in October. Now this export signifies that America delivered its goods on credit; the buyers were not forced to supply their own currency in exchange for dollars, and so the exchange rate of the dollar was naturally weakened. It happened in the autumn, i.e. the season when, owing to harvest exports, the American rate is normally above par; the case, then, appeared all the more phenomenal. And so a New York bank undertook to ship a million dollars' worth of gold to London—for the fun of it, to show off. But the case proves nothing against my theory. Most palpably it is a manifestation not of a normal but of an abnormal state of things; it is not the rule, but the exception which proves the rule. (Another instance of abnormal gold import is dealt with below, p. 264.)

§ 5. When the Discount Mechanism is Mishandled.

Sooner or later the current of gold and the movement of prices and interest rates is reversed, for the simple reason that it has exhausted itself. As the turn of the tide is bound to follow on a move of the discount rate, this move will be considered as "the" cause. A case in point is the vicissitudes of the French currency and rate of exchange in 1926. After months of rapid depreciation the French franc began to gain ground on the coming of the Poincaré cabinet, an early act of which was the raising of the rate of discount from 6 per cent to 7½ per cent. Is it not a most striking confirmation of the real old theory? It is. It has always happened so. After the discount rate has been raised in four or five successive stages to double its normal height; after the gold reserve and other resources of the country have been reduced to an alarmingly low proportion, and the whole of the people have been roused to a certain degree of readiness to call a halt and to acquiesce in dictatorial measures: something is bound to happen. Most certainly it is not the final turn of the discount screw that produces the change; essentially it is contrary to the change, and the change would be effected at less expense if discount were not raised. Discount is the paramount regulator of the flow of money; but when it is grossly mishandled the mechanism is so much thrown out of gear that the regulator ceases to function. The discount theory has been formed exactly on what is observed when everything happens contrary to normal.

The vicious manner of handling the discount mechanism has lent an extra impetus to and exaggerated a development started for some reason or other. It is easy to understand that such exaggeration in one direction furnishes the impetus for an exaggerated reaction: after many successive reductions of discount have produced a plethora of idle money, as that in 1824 mentioned by Macleod, the reaction can only be what he has to relate of 1825 (II, p. 281):

"After 1824 came 1825. Then wild speculations find favour in the public mind, promising higher profits; and then the community goes through the cycle of bubble speculation, extravagant credit, ending in commercial catastrophe. We may feel sure that if during the various crises this country had passed through, there had been more attention paid to observe the natural rate of discount, instead of thwarting the

course of nature, though the variations would have been more frequent, they would have been less violent and extreme. If specie is coming in with too great speed, it is good to lower the rate of discount quickly to prevent it getting lower; if specie is going out too rapidly, it is good to raise the rate quickly to prevent its being higher."

Macleod thinks that the discount rate ought to have been reduced sooner and more drastically to prevent the rate of interest from dropping to zero. Strange logic! No, one ought not to have reduced it below normal, even though it did seem as if nobody wanted to borrow the accumulated money. What is the psychology of the market for commodities? The public have had it suggested to them that prices are about to fall; the public shun the market and go without even necessary things so as to buy more cheaply later. But as it happens prices do not fall; it was a false alarm. Well, the public will forget their resolution to wait; they will go forth to seek the wares they need. The same in the opposite case. When the public anticipate a rise of prices, they rush forth to buy; they buy for weeks and months ahead. But by some miracle prices stick. Will the public persist in buying beyond the needs of the day? In the case of commodities special circumstances will come into play to assist the expected fluctuations: goods perish when they have to be stored, or the stores may be entirely depleted, or competitors may act treacherously. In the case of money there can be no such complications: money cannot be exhausted, provided we are not so simple as to chain ourselves to a gold standard; money does not deteriorate when left lying at the bank; the bank has no competitors to take account of. In consideration of these advantages it is hard to see what could necessitate or justify alterations in the price of loan money, i.e. the rate of discount. Fluctuations in the demand for money will occur; but it is certainly better not to react against them than to try to obviate them with measures which can only aggravate them.

According to Macleod, all the monetary crises in England were produced because the Bank continued to issue notes when gold was drained off (II, § 57, p. 282), notes being demanded because the rate of discount was kept too low. My theory says: because the rate was raised, did the demand persist and go to excess. How a low rate produces the effect which Macleod expects of a high is neatly illustrated by himself, where he

recounts the vicissitudes of the crisis of 1825. Prices were tumbling, and Macleod remarks (II, p. 114):

"The usury laws, which limited interest to 5 per cent, greatly aggravated the distress; nobody would lend money at 5 per cent, when its real value was so much greater; hence, numbers who would gladly have paid 8 or 10 per cent interest were obliged to sell goods at a difference of 30 per cent for cash compared with the price for time."

If words have a meaning, these words signify that prices fell because the rate of interest was too low. Now Macleod insists that a low rate raises prices. It was because the rate of interest was low—considering the circumstances—that credit was unable to expand; but in order to hem credit in, Macleod proposes to raise discount. Again and again he furnishes, unwittingly, facts and figures which are dragons to his theory. He says (II, p. 368):

"Under the modern system of commerce, discount is as necessary to commercial existence as air is to the life of the body. When the whole commercial community see the very means of their existence rapidly diminishing before their eyes, they naturally rush to obtain notes while they can, and on such occasions no raising of the rate of discount can check the demand. If they cannot get notes, they run for gold."

What, then, is the use of raising the discount rate? What is the good of a remedy that does not work? The passage is grist to my mill. The raising of the discount rate warns people that money is going to get scarcer, and this at a juncture in which their fortune or failure depends on whether they will succeed in procuring money. The measure is a summons to them to lay in a store of money. If the move is really intended to check the demand for money, it puts the cart before the horse. But I am gradually brought round to query: are the managers of the Bank such simpletons as not to stumble upon the truth at last? Might it not rather be that the discount practice is an atavism dating from the time when the banks of issue were more truly profit-making concerns than they are now, and simply tried to improve the opportunity for netting an extra profit by asking higher prices? Atavism would prompt them to persist in a method which is condemned by the logic of altered circumstances; but it would also prevent them from questioning the method, which is considered as much the way of nature as that a man should scratch when he itches.

In instance after instance Macleod mentions the fact of money being withheld, in times of a stringency, by those who were in possession of it. For instance (II, p. 170):

"As the whole of the commercial world knew that the resources of the Banking department were being rapidly exhausted, a complete panic seized them. A complete cessation of private discounts followed. No one would part with the money or notes in his possession. The most exorbitant sums were offered to and refused by merchants for their acceptances."

Again, when the crisis had reached the point at which the Bank was empowered to exceed the legal issue of notes, demand for cash would immediately fall off. It is interesting to note that the condition on which the liberty was granted was usually that the rate of discount should be kept high. (It is even now an unwritten law of the Bank of England that the convertibility of its notes shall not be suspended unless the discount rate is 10 per cent.) The demand did not cease so suddenly because discount was high—it did not have to be raised; the effect would have been the same, nay stronger, if the rate had been reduced from 8 per cent to 4 per cent.

In some cases the development did not go to the final point of a suspension of the regulations. Still the fallacy of the theory is revealed. A rather sudden crisis was declared in 1864; Macleod accounts for its short duration as follows (II, p. 192):

"On the 8th of September the Bank raised its rate to 9 per cent, and this measure stopped the foreign drain, lowered the price of foreign commodities, and strengthened their reserves. The price of cotton was greatly lowered owing to the expected peace in America, and this rise in the rate of discount, striking on a falling market, produced an immense curtailment of business in all directions."

Here two causes are advanced: the crisis was both hanged and beheaded. Which of the two killed it? Nobody would imagine that the raising of discount would have had the desired effect; on the contrary, we may be quite sure that the lowering of it, even without the anticipation of peace in America, would have produced the effect.

The monetary history of England since the foundation of the Bank, as recounted by Macleod, is one continued exhibition of the fallacy of his discount theory, which is *the* theory. His treatment of the matter has the great merit of bringing out

in strong relief the points at issue. But Macleod's theory was all made when he set out to collect and arrange the facts, and he read his theory into the facts instead of deducing it out of the facts. Of course he could not help it, and here I am consciously following the example, because I cannot help it either.

§ 6. A Common Denominator.

Now let us take up another line of attack. The special discovery which Macleod claims to have made concerns the connection between the rates of discount and the rates of exchange. His ideas on this head are set forth in Chapter xvi, and he sums up as follows (II, p. 344):

> "The Bullion Committee thus showed that there are two causes of a drain of bullion—first, the indebtedness of the country; second, a depreciated paper currency. But in the first edition of this work, published in 1856, we showed that there is a third cause of a drain of bullion, and an adverse exchange . . . wholly irrespective of any indebtedness of the country, or of the state of the paper curency. The principle is this—
>
> "That when the rate of discount between any two places differs by more than sufficient to pay the cost of transmitting bullion from one place to another, bullion will flow from where discount is lower to where it is higher."

Such is the accepted theory and practice to this day. As a proof of it I point again to the example of the Bank of England, which in 1925 raised its discount rate from 4 to 5 per cent, when its return to the gold standard was supposed to call for some special protection to its gold reserve. As it is generally taken for granted that the afflux of gold is the sign of a healthy and prosperous economic condition, it is rather odd that the grand means for attracting gold, namely a high rate of discount, is not constantly employed by all countries. The rule does not seem to work in all circumstances. A high rate in one country is neutralized by an equally high one in other countries, and since it has again and again been found expedient for one to lower its rate, there must be reasons for believing that a high rate is not entirely advantageous. Indeed, the same theory of interest which proclaims a high rate to be the all-powerful magnet of the symbol of massive wealth, gold, at the same time proclaims a low rate of interest to be the

true sign of a country's abounding wealth. Contradiction cannot be carried farther. It gives one an uncomfortable feeling to reflect that a doctrine which is branded with Contradiction all over, should have had universal and uncontested sway for seventy years. "Regardless of any indebtedness," we are told, does a high discount rate display its power of attracting gold and improving the rate of exchange! Hence a country on the verge of insolvency may annul the consequences of its debts by giving itself a high rate of discount; for if the debts expel the gold, the high discount will force the gold back again. It is beyond comprehension, though it is the very gist of, and the straight logic from, our time-honoured creed of interest.

Three causes for one and the same phenomenon are impossible. To be sure, a man may be hanged, drawn, and quartered; but he can be killed only once. The three causes must have a common denominator and be reducible to one. Indebtedness, currency depreciation, and the rate of interest must be one organic whole.

1. Indebtedness and the rate of interest. A country which has borrowed liberally abroad and so run into debt, must naturally have a higher rate of interest than the creditor countries. One borrows where money is abundant and therefore cheap; or, more correctly, a spendthrift is charged higher rates. For to borrow abroad is to buy abroad—to buy wares. The import of money cannot be effected otherwise than through the import of goods; the borrower is short of goods, and the lender must have goods to spare. This, then, is the play of forces: gold departs, supposedly in consequence of excessive indebtedness; excessive indebtedness goes with a high rate of interest—hence the drain of gold is a concomitant of a high rate of interest. The logical conclusion agrees with my heretical theory and contradicts the orthodox dogma as first formulated by Macleod.

2. Indebtedness and the state of the paper currency. We shall not succeed in establishing an instance of a currency depreciating in a country with sound finances. Money depreciation is the consequence of a lavish style of living, people consuming more than they produce, which they can only do by borrowing from others. We have devoted considerable space to showing that the debt and the currency are exactly equal;

the currency is the more numerous, and therefore the poorer, as the debt is greater.

3. The rate of interest and the paper currency. If indebtedness goes with a high rate and with depreciation of the paper currency, it follows that a high rate goes with depreciation. Money depreciation and a high rate of interest are one and the same thing. The old dogma has it the other way about.

Now for the practical proofs. On p. 196, II, Macleod mentions a case in which his theory was refuted by the actual facts—curiously enough, he has not a single case to relate in which events happened according to his theory, gold being exported to England from countries with a lower rate than the English. In 1866 the Bank of England experienced a heavy drain of its gold, in spite of the fact that the discount rate was 2–6 per cent higher than the rate of the Banque de France, into which gold was pouring. Macleod calls this an "unprecedented occurrence." In trying to account for it, the only explanation which he can hit upon is that England, at that time, had fallen "into complete discredit." The flow of gold from high-rated England to low-rated France was a natural and normal phenomenon, which, if it happened for the first time then, has repeated itself in countless instances since. To those already indicated above I will add some more recent ones. In 1926 the discount rate of the Swiss National Bank was 3½ per cent; in Italy and France it was 6–7½ per cent: however, the Swiss Bank was all the time hard put to it to keep French and Italian gold from invading and swamping the country. In January 1927 the French Government very proudly announced to an admiring world that they had shipped 20 million dollars' worth of gold to New York. I ask: has one ever read of gold being sent wholesale out of countries with low rates to countries with high rates?[1]

I cannot believe that 1866 was the first case of the sort. But Macleod's representing it as unique again leads me to inquire whether the theory is not a legacy from a time when conditions were actually such as to lend countenance to the fallacy.

[1] I have discussed a case of the kind above, end § 7, which happened after this was written. Here I am reminded that the gold which France exported in January was reimported a few months later, while the French discount rate was still 5½ per cent and the American only 4 per cent. Both the export and the subsequent re-import were acts of a deliberate policy, which was enforced in defiance of the natural laws.

The following passage suggests the possibility that on previous occasions gold might have escaped while the rate of discount was low (II, p. 365):

> "In former times, certainly, when there were multitudes of banks issuing torrents of notes, these notes lowered the rate of discount, and drove bullion out of the country. But under the modern system, when these issues have been happily suppressed, all danger on this score has vanished; and under present circumstances no issues are excessive which do not lower the rate of discount."

Although the orthodox theory, affirming as it does that a low rate makes for an excess of note issues, must be interpreted to imply that an excess of currency depresses the rate, it is impossible that the case should ever have been produced since the time when the issuing of banknotes became the exclusive monopoly of the Bank of England. But when there were competing private banks of issue, the situation was different. Then it may have happened that these banks, by underbidding one another (lowering their lending terms) managed to place an excess of notes. However, a situation so created was unnatural; it can never have lasted for any length of time, and it was unscientific to found a theory on the observations presented by it. Such observations, by the way, are not altogether rare, even now under the monopoly. In *The Interest Standard of Currency* (p. 253) I quoted Mr. Hartley Withers to the effect that in 1921 the note issues of the Bank of England kept on expanding and did not contract again till after the discount rate was reduced. A superficial observer, who is satisfied with a short-range view, may draw the conclusion that discount was reduced in consequence of, or thanks to, increased note issues. It is one of the most prevalent fallacies, and it is inherent in the accepted theory. Had the Bank reduced the rate sooner, expansion would have been stopped sooner; for nobody can wish to borrow on a falling market any more than a cautious dealer can wish to buy on a falling market. It is perfectly certain that if the rate had been maintained high, deflation could not have proceeded farther; the influence of the high discount rate would have reasserted itself. During the last two years (1925 and 1926) we have witnessed deflation in Norway, Denmark, Germany, Austria, and latterly in France. The phenomena in all these cases have been identical: namely,

a gradual descent of the rate of discount along with the fall in prices and the shrinkage of the volume of currency. Let the defenders of the orthodox theory furnish instances of the contrary development, if they can. What this theory demands has never happened: a steady diminution of the volume of currency and a fall in prices, as discount was raised step by step.

§ 7. The Demand for Money.

When the demand for a commodity becomes more urgent, its price must rise, supposing that its output cannot be increased. Money, in a sense, is a commodity which is bought like any other. I agree with Macleod in considering the loan of money as a purchase, and I fully endorse the arguments which he adduces in support of his conception. The banks are money shops; they buy and sell money. But Macleod does not seem to have realized clearly enough the extent to which money is an article of commerce; for he imagined that the money shops do not only buy and sell the article, but that they can manufacture it. Of course, he does not affirm so much of money proper, but only of credit currency. Still, as he also considers money as a mere form of credit (metallic credit) and insists that the functions performed by credit are in every respect the same as those performed by cash, I am doing him no injustice in saying that he attributes to the banks the rôle of money manufacturers. However, even a manufacturer must buy the materials, the labourers, the plant, etc., which go to the making of his wares; nor is the money manufacturer exempt from the necessity. Credit cannot be manufactured out of nothing. Unless we are perfectly clear on this head we are unable to decide what is right with regard to the price of money. Macleod, in discussing the management of the Bank of England, writes (II, p. 366):

> "The duty of a banker frequently conflicts with, and is antagonistic to, the interest of a merchant. A banker's duty is to keep himself always in a position to meet his liabilities on demand; and when there is a pressure upon him, it is his duty to raise the price of his money. But the interest of a merchant always is to get accommodation as cheap as possible."

This is a one-sided presentation of the transaction in so far as it omits to mention the price which the Bank ought to pay

to those of whom it buys. The Bank is credited with the ability of creating money out of nothing. Macleod says it in so many words (see essay IV, § 14). It stands to reason that if he were right the banks would be fully justified in charging a higher price when demand for their article increases; also it would be natural for the customers of the banks to prefer lower rates to higher. But the case assumes a different aspect when we make sure that the banks themselves have to buy the credits or moneys which they sell, and that the merchants who buy the moneys and credits recover their outlay in the price of their goods. Now we no longer see the necessity for altering the price of money, and it becomes fairly evident that money is not an ordinary commodity. The banks can make, theoretically, the same profits on a low rate of interest as on a high, and so can the merchants and manufacturers make the same profits on a high rate. Practically the borrowers stand to gain when the rate is raised, because their prices will go up proportionally, and their turn-over is likely to increase—temporarily. By Macleod's theory of discount the case is reversed, and it is this theory which is at the bottom of the mistake. It says that prices rise when discount is lowered. Naturally borrowers would profit in a double ratio by a lowering of discount: they pay out less and take in more. But what about those who lend to the banks? They would receive less interest and pay more for their cost of living. Who would care to lend out money under the circumstances? Rather than buy debts people with available money buy the goods which are expected to rise in price, and prices would rise all the more.

Macleod compares the duties of the Bank with the interests of the borrowers, which is rather strange By the manner in which the case is presented it would seem as if it were an act of bitter necessity, opposed to natural inclination, for the Bank to ask a higher price for its services What suggested to Macleod this queer idea was, no doubt, his conception of the effects of a higher rate of discount in lessening the demand for loans. The Bank, he thinks, stands to lose more from a diminution of its business than it can gain from the increase of its price. But the keeper of a shop or the manufacturer of goods is not frightened by the possibility of asking a higher price; he knows it comes from increasing demand and is likely to turn out to his advantage. No more need the Bank have any fears; the

raising of the discount rate—up to a certain limit—is sure to stimulate the demand for loans.

Nothing is more natural than that the banks should charge more for their services when demand grows stronger. The situation is declared when there is a shortage of money. Now it would seem that this must be the case when the quantity of goods to be turned over has increased. However, this is the situation in which business people are least eager to buy and most anxious to sell. Money is, indeed, badly wanted, only not money to borrow, but money in payment of sales. No one wishes to borrow, except those who are obliged to buy their own goods, that is to carry them on credit, so as not to sell at a loss. When money is short and the banks are empty, the demand for loans is bound to fall off. The demand for loan money will revive when the banks are full. In the trade of other wares the case is reversed, demand expiring when the shelves are full, and leaping up when the store rooms are empty. If we look upon the banks as money shops, we shall therefore recognize that there is a fundamental difference between money and ordinary commodities: whereas demand for money begins to increase when the article is most abundant, demand for goods begins to wane when they are plentiful. How shall we account for this? Demand for money at the money shops is demand for goods. Business men borrow money—they buy loans—with a view to buying commodities. Such demand naturally sets in with renewed impetus when goods are scarce, which is always the case after a spell of stagnation. It is, then, people's interest in goods that determines the demand for money and the rate of interest. Some money reformers contend that the demand for goods can be governed through money, and that stagnation could not happen if fresh money supplies were introduced into the circulation. I question that, although I admit that in some situations additions of currency do stimulate the demand for goods. Nothing has the same effect under all circumstances. To a hungry market fresh money is food and a stimulus; to a surfeited market new issues are nausea and revulsion. Hence it is impossible to force money on such a market, whatever the terms, even if the money could be manufactured, which I deny. Demand for money is determined, not by the quantity of money available, but by the state of the supply of commodities. When the supply has run down, so

that consumers begin to evince a livelier interest for goods, there is a busy spell ahead. It will be profitable to produce, even though the price of loan money is raised. If, according to the advice of old Macleod and our celebrated contemporaries, the Bank charges a higher rate, it cannot thereby quench, it can only stimulate the thirst for loan money, whereas a lowering of the rate would be cold water on the kindling ardour.

The physical law of quanta is to the effect that movements, once started, reach out to a certain limit and will not stop halfway. Something of the kind seems to rule in economic life: movements will carry on to a certain length; it is a leap, not a creep, and mostly people are disconcerted. It may be possible to forestall the movement, and to prevent the leap being repeated; but the leap cannot be checked in mid-swing. A raising of the rate of discount is accompanied by a rise of the price-level, which will go to a certain length, but cannot be repeated unless discount is raised once more—provided that the rate is not above normal. Why prices are bound to keep on rising if the rate is maintained above normal has been explained above (essay I, § 14). (The "certain length," by the way, is accurately measured by the length of the move of the discount rate. From 4 per cent to $4\frac{1}{2}$ per cent is one-eighth of the whole, or $12\frac{1}{2}$ per cent; supposing the rate is maintained long enough, the level of prices may be expected to go up by $12\frac{1}{2}$ per cent.) The way to stop one movement is to inhibit any kind of movement that goes with it.

It is natural that the banks should take a higher price for their article when it is offered. It is not their business to interfere on behalf of the public. But the interests of the Central Bank of issue are somewhat different and would recommend a different course. It enjoys the monopoly of the note issue, and it has in its custody a large part of the nation's gold. The monopoly makes it incumbent on the Bank to keep business supplied with money; its ability to do so must never be doubted, all its credit depending on it. However, the raising of the discount rate gives rise to a doubt. The measure warns business people that they ought to look out and provide themselves against the emergency of the Bank's means giving out. The measure damages the Bank's credit. But so also do reductions of the rate; for they signify that the Bank is unable to place its ware. If the credit of the Bank is to be really doubt-proof, it

must be unalterable. Now the measure and expression of credit is the rate of interest, and the credit of the Bank is unshakable when it contrives to maintain its rate of discount stable.

However, at the present time this is not yet the usual manner of judging the Bank's soundness. The gold reserve is still considered as the rock of safety. Should the Bank lose its gold, its credit would be destroyed, even though the rate of discount were preserved stable. But it is inconceivable that under a stable discount rate, if fixed at the right point, any harm should befall the gold reserve. This problem is fully dealt with in *The Interest Standard of Currency*; it is also touched upon in the essay on *The Banknote as a Parity Title*. The quantity of gold is a trifle compared to the quantity of debt; it cannot sway, it is sovereignly swayed by, the overpowering might of the latter factor.

§ 8. Conclusion.

In the first chapter on Macleod I discussed the general idea of currency; the present chapter is devoted to an examination of the special question of the regulation of the currency through discount. The general idea I accept, the practical or technical solution I reject. It was necessary to prove that Macleod's principle of currency clashes with his practice of currency regulation.

The principle is to the effect that "where there is no debt, there can be no currency," and that "the amount of currency in a country is the sum total of all the debts due to every individual in it." The practice is to the effect that "the value of money varies directly as discount," a higher rate causing money to appreciate through the fall in prices, and *vice versa*. The contradiction between the two statements is complete and evident. What is the relation between the rate of interest and the magnitude of the debt? Surely the rate must go up as the debt increases. If the debt increases, the amount of currency must increase proportionally, since the theory has it that the two are equal. But when the volume of currency increases, the value of money does not rise; it falls. To bring the two principles into harmony, we have to invert the second one and say: the value of money varies inversely as the rate of discount, so that when the rate goes up, prices move in the same direction.

Taken in conjunction and thus brought into harmony, the two principles are an expression of the fact that interest is the measure of debt and of the value of money. They bear out my doctrine that currency regulation must proceed by way of interest regulation, and currency stabilization demands the stabilization of the rate of interest. The two principles further serve to confirm my contention that capital—that which bears interest, and is born of interest, cannot be increased or diminished any more than currency can. The figures in which capital and currency are expressed may vary, but not the thing itself. Both the capital and the currency are strictly equal to the debt, and the debt is what the community has received from itself and, therefore, owes to itself. If the rate of interest goes now up now down, it is not because its debt, or its wealth, taken as a whole, really increases or decreases, but because the community demands now more now less of itself. In one mood it demands more effort and less leisure and enjoyment; while the mood lasts it is willing to pay a higher rate of interest, the expression of unsatisfied needs; it is as if the community owed itself more. But the mood will give way to another. Effort and abstemiousness result in additions to property, which by and by threaten to become a burden. Naturally, the people's interest in property shrinks, the rate of interest declines, and it is as if the community's debt decreased. However, the debt is still as great as the assets: the community owes to itself all that it owns. The height of the rate of interest, then, is a question of moods. To bring down the rate a community need not produce more "wealth"; the same effect will result if it moderates its wants and demands. However, no community can choose and decree what is to be its mood or its course. The moods come and go mysteriously as they list. And this consideration imposes the query: will it do to fix the rate of interest? I dare not answer this question. Experiment must show what can be done. But I see that fluctuations of interest and of the value of money inflict heavy hardships on men; therefore, I think it worth while trying to obviate them by whatever means may be available. The only means that I can see is my scheme of an interest standard of currency.

§ 9. Appendix: Light from a Contemporary of Macleod's—Bagehot.

In an earlier chapter I quoted from Professor Pigou's *Industrial Fluctuations* a passage containing an allusion to Bagehot. In re-reading *Lombard Street* I found a number of arguments bearing on questions dealt with in these two chapters on Macleod, and seeing that Bagehot is still considered as something of an authority, I will present a few by way of further illustrating the matters under discussion. First as to the problem of credit creation.

> "A million in the hands of a single banker is a great power; he can at once lend it where he will, and borrowers can come to him because they know or believe that he has it. But the same sum scattered in tens and fifties through a whole nation is no power at all: no one knows where to find it, or whom to ask for it. Concentration of money in banks, though not the sole cause, is the principal cause which has made the Money Market of England so exceedingly rich, so much beyond that of other countries" (pp. 5-6).

Is it true that bankers "can at once lend where they will"? They cannot do so any more than manufacturers can always sell at once. For the loan to come about, certain conditions must be fulfilled, and these are outside the range of the banks and the money market, being all of the commodity market. Why else should it so frequently happen that money accumulates in the banks? The money which so collects and stagnates is money which refuses to buy goods, and since it can only be borrowed by those who wish to produce goods, it is impossible that borrowers should be forthcoming under the circumstances. The banks are unable to even stimulate credit out of its languor, or, since what appears as languor is rather a trend in a special direction, they are unable to change that trend: it must exhaust itself first.

Bagehot was well enough aware of this; for in a later chapter he says (p. 145):

> "A new channel of demand is required to take off the new money, or that new money will not raise prices. It will lie idle in the banks, as we have often seen it. We should still see the frequent, the common phenomenon of dull trade and cheap money existing side by side."

Bagehot knew, as our present-day economists know; but like

them, he reasons as if he had not known. A page or two farther on he says:

"When the stimulus of cheap corn is added to that of cheap money the full conditions of a great and diffused rise of prices are satisfied. This new employment supplies a mode in which money can be invested. Bills are drawn of greater number and greater magnitude, and through the agency of banks and discount houses the savings of the country are invested in such bills."

I have already produced the figures to prove that discounts diminish as the rate of interest declines, and I do not care if it is objected that the rate falls because discounts diminish: in either case we arrive at the conclusion that the low ebb of discounts and of business activity is when the rate is at its lowest. As to the idea that cheap food should be a cause of a general rise of prices, I simply cannot reconcile it either with ordinary logic or with the observed facts.

In the sixth chapter Bagehot discusses these changing moods of the spirit of credit, and he comes to pronounce himself as follows:

"In times when credit is good productive power is more efficient, and in times when credit is bad productive power is less efficient. . . . In a good state of credit, goods lie on hand a much less time than when credit is bad; sales are quicker; intermediate dealers borrow easily to augment their trade, and so more and more goods are more quickly and easily transmitted from the producer to the consumer."

We are here furnished with a criterion of the quality of credit. If we apply it to the observations made in recent years, we are led to conclude that credit was at its best during the Great War and the periods of violent inflation, when goods were snatched up before the paint was dry on them. Credit, by this test, is good when prices are rising, and Bagehot says so explicitly (p. 138):

"Times of good credit mean times in which the bills of many people are taken readily; times of bad credit, times when the bills of much fewer people are taken, and even those suspiciously. In times of good credit there are a great number of strong purchasers, and in times of bad credit only a small number of weak ones; and, therefore, years of improving credit, if there be no disturbing cause, are years of rising price, and years of decaying credit, years of falling price."

Rising prices are a depreciation of money, of which Bagehot was no doubt aware. Yet in the next paragraph he asserts

that "a low rate of interest, long protracted, is equivalent to a total depreciation of the precious metals" (p. 139). Taken in conjunction with the preceding quotation, this assertion signifies that as prices go up the rate of interest must stay low. It is the orthodox theory of interest. But it is contradicted by Bagehot himself, as we have seen: depressed business and cheap money existing side by side is "a frequent, the common phenomenon." Bagehot also shared the common belief that credit is good when interest is low. This forbade his understanding and observing that the rate of interest rises with prices and that goods stick on the shelves when interest stays low.

In the closing section of the preceding chapter I briefly touched upon the argument that people are the more ready to lend as the rate of interest is higher. The converse notion is that people are the more eager to borrow as the rate is lower. Not only Professor Pigou holds this idea, it is universally held. It is presented in a peculiarly pronounced, and therefore the more easily refutable, manner by Bagehot. The question crops up in the very first pages, and this is what we read (pp. 8-9):

"The new trader has obviously an immense advantage in the struggle of trade. If a merchant have £50,000 all his own—to gain 10 per cent on it he must make £5,000 a year, and must charge for his goods accordingly; but if another has only £10,000, and borrows £40,000 . . . he has the same capital of £50,000 to use, and can sell much cheaper. If the rate at which he borrows be 5 per cent, he will have to pay £2,000 a year; and if, like the other trader, he makes £5,000 a year, he will still, after paying his interest, obtain £3,000 a year, or 30 per cent on his own £10,000. As most merchants are content with much less than 30 per cent, he will be able to forgo some of that profit, lower the price of the commodity, and drive the old-fashioned trader—the man who trades on his own capital—out of the market. In modern English business, owing to the certainty of obtaining loans on discount of bills or otherwise at a moderate rate of interest, there is a steady bounty on trading with borrowed capital, and a constant discouragement to confine yourself solely or mainly to your own capital."

Now let us consider the implications of the case. The new trader who has to borrow and to pay interest beats his rich competitor. Of course, the thing has happened often enough; but it was not owing to cheap money, but thanks to the superiority of the new trader in ability and energy. However, the point I wish to make is that a low rate of interest is here credited with two effects. It is supposed to enable borrowers

to supply commodities more cheaply; it is a bounty to borrowers and therefore ought to stimulate borrowing. And I ask: has it ever been observed that falling prices have induced business men to borrow freely? On the face of it the argument is fallacious. For the moment let us register the conclusion implied in it that in consequence of a low rate of interest prices are *reduced*.

Where Bagehot examines the forces attracting money to, and repelling it from, the money market, he writes, in dealing with the assumption that the reserve of the Bank has been depleted through some national calamity such as a bad harvest (p. 45):

"That instrument is the elevation of the rate of interest. If the interest of money be raised, it is proved by experience that money *does* come to Lombard Street, and theory shows that it *ought* to come. . . . Loanable capital, like every other commodity, comes where there is most to be made of it. Continental bankers and others instantly send great sums here, as soon as the rate of interest shows that it can be done profitably. While English credit is good, a rise of the value of money in Lombard Street immediately by a banking operation brings money to Lombard Street. And there is also a slower mercantile operation. The rise in the rate of discount acts immediately on the trade of this country. Prices fall here; in consequence imports are diminished, exports are increased, and, therefore, there is more likelihood of a balance in bullion coming to this country after the rise in the rate than there was before."

Prices fall, we are told, thanks to the rise in the rate of discount: the afflicted country, at a stroke, has more to export and needs fewer imports. I have shown the vice of this sort of reasoning, which is exactly the same as Macleod's. But there are a few other points in our quotation which deserve some notice. "Loanable capital comes where there is most to be made of it." Yes, indeed, only I have some doubt whether that place, under the circumstances, is really Lombard Street, the banks. At all events there is a very serious contradiction to the tenet that money is more readily borrowed as interest is lower. For if the banks offer higher rates to their depositors, they must demand higher rates from their borrowers. But this, according to the theory, ought to scare borrowers away—it would do so, if it were true that prices fall in consequence—and what are the banks to do with the afflux which they have attracted? Surely, if the banks raise the rate to their depositors, they do so only because they are assured that higher lending rates do not

deter their customers, and we are brought to understand that a low rate cannot be a stimulant to borrowers.

It is only within recent times that monetary theory has begun to view money as a conveyor of goods. In Bagehot's and Macleod's time it was more largely treated as an independent agent. Thus there is some excuse for the misconception with which we are dealing in the case of Bagehot; but there is less excuse for present-day economics persisting in the repetition of the old error. The opportunities for observing that a high rate of interest, far from attracting money into the banks, rather draws it out of and keeps it away from the banks, have been so plentiful and conclusive that the ancient belief ought to be thoroughly discredited. Bagehot himself was aware that in times of boom money avoids the banks; he says (p. 157):

"Though the money of saving persons is in the hands of banks, and though, by offering interest, banks retain the command of much of it, yet they do not retain the command of the whole, or anything near the whole; all of it can be used, and much of it is used, by the owners. They speculate with it in bubble companies and in worthless shares. . . ."

Those who lend their money when prices are rising just bestow a bounty on the borrowers. Some, of course, are simple enough to be taken in; but the majority pretty soon awake to the facts of the juncture and prefer to acquire real goods. Thus the natural reaction to a raising of the discount rate is to induce the owners of money to use the thing for themselves, realizing, as they do, that if it is worth so much more to others, it must be worth all the more to themselves.

In the quotation from pp. 45-6 the main point is that a higher rate of interest will replenish the reserve of the Central Bank, and I am led to ask: is the gold lent to the Bank at interest by foreigners? The Bank receives gold in exchange for the notes which it issues, i.e. it buys the gold. In so far as the notes are not, as a rule, sent abroad, it appears that the gold is not handed to the Bank direct by the foreign importer; it first goes to some middle-man, who acquires it in payment for exports—an excess of exports over imports, that is to say. Now this assumption clashes with the supposed situation: a bad harvest, an impoverishment of the country. For gold to be prevented from escaping abroad, it would be necessary that

industrial exports are greatly increased. But Bagehot expects the very contrary to happen, and says (p. 152):

"A single bad harvest diffused over the world, a succession of two or three bad harvests, even in England only, will raise the price of corn exceedingly, and will keep it high. And a great and protracted rise in the price of corn will at once destroy all the real part of the unusual prosperity of previous good times. It will change the full working of the industrial machine into an imperfect working; it will make the produce of that machine less than usual, instead of more than usual; instead of there being more than the average of general dividend to be distributed between the producers, there will immediately be less than the average."

How could, under the circumstances, gold be attracted from abroad? Gold seeks, and finds, the land of plenty, where both the agricultural and the industrial harvests have been good. But I need not dwell on this matter any further, having explained above why gold naturally gravitates from places with a higher rate to those with a lower rate, and not the other way about, as by the orthodox theory. I simply refuse to believe that "it is proved by experience that money does come to Lombard Street" at the beck of the higher rate of discount.

Bagehot thinks that the Bank's discount policy, in a panic, can be so devised as to have one effect nationally and the contrary effect internationally. He says (p. 56):

"The foreign drain empties the Bank till, and that emptiness, and the resulting rise in the rate of discount, tend to frighten the market. The holders of the reserve have therefore to treat two opposite maladies at once—one requiring stringent remedies, and especially a rapid rise in the rate of interest; and the other, an alleviative treatment with large and ready loans."

This is the passage referred to by Professor Pigou: the idea of Bagehot is endorsed by the most eminent English economist of our time. Are the international laws of value different from the national? The purpose of the higher discount rate is to bring gold to the Bank; gold will come in exchange for goods exported; goods can be exported if their prices are reduced below the international level; but if the Bank lends freely, according to Bagehot's advice, the owners of goods are enabled to carry their stocks on credit, and goods being thus withheld, prices do not fall: the discount policy defeats its own end. The higher rate does not attract gold from abroad, because it

forces money out of the Bank for the home market: the effect is the same both internationally and nationally.

We have seen that Macleod boasted of having taught the Bank better methods by proving that the remedy against a panic was a rapid and drastic rise in the bank rate. Bagehot attributed the change of policy to advice furnished by Goschen, and he commends the Bank of England for having adopted it: the rate should be raised by a full per cent instead of only ½ per cent. It seems to me a flagrant contradiction to the argument of the closing paragraph of the fifth chapter (p. 121):

"If the dominant banks manage ill, the rate of interest will at one time be excessively high, and at another time excessively low: there will be first a pernicious excitement, and next a fatal collapse. But if they manage well, the rate of interest will not deviate so much from the average rate; it will neither ascend so high nor descend so low. As far as anything can be steady the value of money will then be steady, and probably in consequence trade will be steady too—at least a principal cause of periodical disturbance will have been withdrawn from it."

The dominant banks, Bagehot says. But surely the ruling bank is the Central Bank. Let it but maintain a good medium rate, and the rest will follow suit. The quotation expresses, as near as could well be, my idea of an interest standard of currency. Although there is in this classic much that I would not identify myself with, I am glad enough to quote Bagehot for my purpose.

Sixth Essay

ALFRED MARSHALL'S THEORY OF INTEREST

§ 1. THE ripest and most comprehensive economic thought of the last fifty years is probably contained in the works of Alfred Marshall. A whole school and generation of economists have been reared on his teaching. Hence in challenging his theory of interest, I challenge a creed which there have been but few dissidents to oppose. If I succeed in the attempt to prove his theory mistaken, the work of reconstruction will have to begin in good earnest.

In his *Principles of Economics* Marshall treats of interest rather summarily. He does not find fault with the current theory; he does not seem to think it susceptible of improvement. Indeed, he testifies explicitly to its perfection in this paragraph (p. 667, 4th edition):

"The scientific doctrine of capital has had a long history of continuous growth and improvement in these three directions during the last three centuries. Adam Smith appears to have seen indistinctly, and Ricardo to have seen distinctly, almost everything of primary importance in the theory, very much as it is known now: and though one writer has preferred to emphasize one of its many sides, and another another, there seems no good reason for believing that any great economist since the time of Adam Smith has ever completely overlooked any side; and especially is it certain that nothing which would be familiar to men of business was overlooked by the practical financial genius of Ricardo. But there has been progress; almost everyone has improved some part, and given it a sharper and clearer outline; or else has helped to explain the complex relations of its different parts. Scarcely anything done by any great thinker has had to be undone, but something new has constantly been added."

Of course the theory of capital is the same thing as the theory of interest. If Marshall was satisfied with the theory as handed down to him by his predecessors, he probably was more consistent than they had been in applying it and carrying it to its logical conclusions. In doing so, he may be said to have consummated it, that is—dug its grave. The sufficient refutation of the theory is furnished by the fact that its full application leads to impossible results.

§ 2. The relation between the movements of the rate of interest and of the price-level as conceived by Marshall agrees with the theory of Macleod, which, as we have seen in the first essay, is to the effect that: "The value of Money varies directly as discount." That is to say: the price-level varies inversely as discount. So much is implied in the following passage from the close of the chapter on "Rent on Land." He is dealing with the method of capitalizing the income from land (p. 718):

"The value of land is commonly expressed as a certain number of times the current money rental, or, in other words, a certain 'number of years' purchase' of that rental: and other things being equal it will be the higher, the more important these direct gratifications are, as well as the greater the chance that they and the money income afforded by the land will rise. The number of years' purchase would be increased also by an expected fall either in the future normal rate of interest or in the purchasing power of money."

It is here taken for granted that a fall in the rate of interest and a fall in the purchasing power of money produce the same effect on the price of land: they both raise the price. Two forces which produce the same effect must be of the same order, so that it ought to be possible to reduce them to a common source; they are related. By the manner in which Marshall states the case, the reader is led to infer that the two possible causes are in so far independent, as each can be declared separately: either one or the other—the purchasing power of money may decline while the rate of interest is preserved, or remain unaltered while the rate of interest falls. By my theory this conception is doubly erroneous; for it is to the effect that: (*a*) When the rate of interest changes, the purchasing power of money changes concurrently, so that neither can endure when the other is altered; it is not an alternative—either one or the other—but a strict concurrence—both one and the other.

(*b*) When the rate of interest falls, the purchasing power of money does not fall, but rise; prices move directly as the rate of interest.

§ 3. How does Marshall's own interpretation of the phenomenon of interest agree with this particular aspect of the problem? Does the practical application follow logically from the general theory? The reason why interest exists is set forth in the following statement (p. 665):

"... And thus everyone understands generally the causes which have kept the supply of accumulated wealth so small relatively to the demand for its use, that that use is on the balance a source of gain, and can therefore require a payment when loaned. Everyone is aware that the accumulation of wealth is held in check, and the rate of interest so far sustained, by the preference which the great mass of humanity have for present over deferred gratifications, or, in other words, by their unwillingness to 'wait.' And, indeed, the true work of economic analysis in this respect is, not to emphasize this familiar truth, but to point out how much more numerous are the exceptions to this general preference than would appear at first sight."

A footnote to this passage carries the argument a stage farther and reveals more fully its ultimate implications (p. 666):

"It is a good corrective of this error to note how small a modification of the conditions of our own world would be required to bring us to another in which the mass of the people are so anxious to provide for old age and for their families after them, and in which the new openings for the advantageous use of accumulated wealth in any form are so small, that the amount of wealth for the safe custody of which people are willing to pay exceeds that which others desire to borrow; and where in consequence even those who saw their way to make a gain out of the use of capital would be able to exact a payment for taking charge of it; and interest would be negative all along the line."

The cause of interest, then, is the lack of "capital" in proportion to the demand for it. We pay interest because there is not enough of that on which interest is paid. In other words, there would be no interest if there were more of the things which yield interest, and the height of the rate of interest is determined by the space separating supply from demand. The means to the end of reducing the rate of interest would consist in inducing people to defer the satisfaction of their present needs, i.e. to save, to abstain from buying and consuming, from adding to the demand for capital. In order to speed the growth of capital we must spurn capital, neglect it, cheapen it.

Here we have already reached the point where we may clearly recognize the connection between the movements of the rate of interest and of prices relatively. The capital which we are to abstain from demanding is real capital, goods, commodities. The rate of interest will fall or rise in proportion as the demand for the goods for immediate use diminishes or grows. Now this same demand also determines the price of

the goods, and it does so in a manner on which there can be no two opinions: the price will fall when demand slackens. The same cause which depresses the rate of interest also lowers prices. When the rate of interest falls, it is impossible that the purchasing power of money should decrease; it must increase. The argument advanced by Alfred Marshall to account for the phenomenon of interest confirms to the fullest extent my interpretation of the connection between the relative movements of the rate of interest and the level of prices; it contradicts Marshall's application of the principle of capitalization.

§ 4. It is true that in capitalizing an income the resulting sum is the greater in proportion as the rate of interest is lower —supposing that the income, in terms of money, remains unaltered, although the rate of interest declines. It is likewise true that the resulting sum is the greater when the yearly income, in terms of money, has grown, thanks to money depreciation—supposing that the rate of interest remains unaltered. But the argument with all its conclusions becomes invalid, if it is proved that the money income from property decreases as the rate of interest falls, and that an increase of the money income is normally attended by a rise in the rate of interest.

There is a passage bearing on the problem of capitalization in Professor Pigou's *Economics of Welfare* (p. 40, 2nd edition):

"But the value of instrumental goods, being the present value of the services which they are expected to render in the future, necessarily varies with variations in the rate of interest. Is it really a rational procedure to evaluate the national dividend by a method which makes its value in relation to that of the aggregated net product of the country's industry depend on an incident of that kind? If that method is adopted and a great war, by raising the rate of interest, depreciates greatly the value of existing capital, we shall probably be compelled to put, for the value of the national dividend in the first year of the war, a very large negative figure."

It is, of course, consonant with the current theory of interest that a rise in the rate of interest should lower the value of things in terms of money. However, and it is this that renders Professor Pigou's argument so significant, a few lines farther on he observes this:

"During the period of the war a similar difficulty was created by the general rise, for many businesses, in the value of the normal and necessary holding of materials and stocks, which was associated with the general rise of prices."

This second statement clearly contradicts the first: when owing to the war the rate of interest went up, the value of existing instrumental goods was not depressed, but it rose. What prevented the author of *The Economics of Welfare* from realizing the discrepancy? In the first passage he applied the orthodox theory, in the second he produced an observed fact; the result was the same as in the passages analysed in the essay on the relation between the rate of interest and the level of prices. The theory was so overpowering with him that he did not feel the weight of the conflicting observation. Since the observed fact must be accepted as valid, the theory which contradicts it has to be rejected.

The process by which an income is capitalized furnishes a good illustration of the true relation between price and interest. Twenty years' purchase corresponds to a rate of interest of 5 per cent, twenty-five years' purchase corresponds to a rate of 4 per cent; that is to say, a lower rate goes with a longer period of time, which can only signify that the pace of the economic process is so much slower. The number of years' purchase indicates the length of time in which a capital will exhaust itself: with a rate of 5 per cent it takes twenty years, with a rate of 4 per cent it takes twenty-five years. Consumption is the speedier, as the rate of interest is higher; but when consumption is accelerated, prices must be higher. It is obvious that production, which has to replace what is consumed, must also be more vigorous; the pulse of the economic organism beats faster, activity is heightened, as is always the case when prices tend to rise. But the higher price reduces the real value of the money yield of investments; if your investment bears 5 per cent instead of only 4 per cent, so that the principal is returned to you within twenty years instead of twenty-five years, you do not receive a larger amount of goods for consumption, because anything that you have to buy costs so much more; it is as if your investment lasted only twenty years instead of twenty-five: it is used up, consumed, in a shorter period of time. As I have put it in § 14 of the second essay: the higher rate of interest imparts a higher velocity to the

circulation of money; it accelerates the turn-over and the consumption of goods, inevitably raising prices, and so reducing the value of investments, with the result that they are consumed in a shorter time.

John Stuart Mill insisted that "In all departments of affairs Practice long precedes Science." I have come to believe that when a theory of economic science has had undisputed sway, it assumes the power of practice. It is certain that economic theory, as it has been made accessible to, or has been imposed upon, larger and larger sections of the business world and of public opinion, has invaded the field of practice. It is impossible that a business man of normal business experience and instinct should fail to estimate correctly the effect of an expected fall in the rate of interest; on no account would he admit that it could raise the money value (price) of the property. For what is, by Marshall's own testimony and theory, the necessary condition of a "fall in the normal rate of interest"? That "the supply of accumulated wealth" shall be so increased that the use of it is no longer a "source of gain." Who, then, would consent to pay a higher price for a piece of property to-day on the anticipation that such property will be less and less of a source of gain? The expectation of a fall in the rate of interest cannot but depress the present price of property. However, the people at large have been for such a long time indoctrinated with the notion that a lower rate raises values and should be considered as a gain, that the pressure of public opinion and of mass action often produces a semblance of the effect which the theory demands. For in a time when the man in the street speculates with capital, there is mass action. Again and again has a lowering of the official rate of discount been observed to raise the value of securities the income of which depends on the price of commodities. It raised them because the swarm of petty speculators were taught to expect them to be raised; acting upon the expectation, they bought, and so raised prices. But the move was a false one, and therefore could not last. Soon the prices of the securities relapsed and fell below the former level, to the confusion of the misled speculators. If it is detrimental to the welfare of a nation that its modest capitalists should lose to enrich the rich ones, the theory of interest must be held responsible for the mischief done. The spread of education, on which modern civilization prides itself, has become a

menace, because the education is largely one of error and bad logic, of faulty observation; it is also morally unsound in so far as it advertises in the most brazen fashion the gospel of gain.

§ 5. Changes in the rate of interest stimulate and exasperate the lust of gain and the spirit of speculation; nay, they force people to play the game of profits, as the following observations may demonstrate. There is this difference between the movements of the price-level and the movements of the rate of interest: that the latter proceeds by sudden leaps, while the former is slow and gradual. This difference is important in the matter of capitalization. A move of the normal rate of interest at one blow jerks all capitalized values up or down in the exact ratio of the alteration. Take a concrete case. When in August 1926 the French rate of discount was raised from 6 to 7½, the rates of interest of all public loans were raised proportionally—the normal rate of interest rose by 25 per cent. In applying this higher rate in the capitalization of the yield of capital the resultant sums were reduced by 25 per cent. For an illustration, take the case of an estate. If its net money yield is 600, its price is 10,000, with a rate of interest of 6 per cent; but its price falls to 8,000 when the rate is raised to 7½ per cent. Now this sudden depreciation of real capital is an immediate inducement for people to try and acquire real capital; for it is profitable to buy *after* the fall in prices. The consequence is that, far from falling, prices will rise; nobody cares to sell, while everybody bids for property. Indeed, the rise in prices is the only possible remedy for the enormous damage inflicted on the owners of real capital by such a ruthless execution as is a 25 per cent raising of the official rate of discount. It is the only way in which the proper relation between the price of capital and its money yield can be restored. If the price of our assumed estate is to be maintained at 10,000, the annual yield must be made to amount to 750 instead of only 600; this necessitates that the price of its products shall be raised from 6 to 7½.

A truer understanding of the connection existing between the rate of interest and prices would remove the main cause of the various economic disasters from which our present world is suffering. It is not that the populations as a whole are poorer in material possessions; rather than from poverty,

the misfortune of our time results from a sense of uncertainty, from a lack of confidence, from the shattering of our faith in what is. Our reading of economic life has deceived us, we feel ourselves cheated and fooled; we are, if not materially, then morally and intellectually bankrupt. When we consider how interest pervades economic life to its farthest ramifications, affecting every branch of activity, from the most humdrum pursuit of our daily bread, broth, and beer, to the noblest and rarest endeavours in the field of thought and art, we shall not refuse to admit that a fallacious theory of interest may be at the root of our afflictions. This doctrine has come to be mischievous, a positive danger; its subtle poison is wasting our generation by breeding distrust and despair, in reaction from the false confidence and the deceptive hopes fostered by the theory.

§ 6. Let Alfred Marshall furnish the proofs of the deceptions to which the theory of interest lays us open. In the chapter on "The Demand for Capital" he examines how the height of the rate of interest influences the use of the more expensive means of production and the volume of production. He exemplifies with the hat trade, and says (p. 589):

"A rise in the rate of interest would diminish their use of machinery; for they would avoid the use of all that did not give a net annual surplus of more than 3 per cent on its value. And a fall in the rate of interest would lead them to demand the aid of more capital, and to introduce machinery which gave a net annual surplus of something less than 3 per cent on its value. Again, the lower the rate of interest, the more substantial will be the style of building used for the hat-making factories and the homes of the hat-makers; and a fall in the rate of interest will lead to the employment of more capital in the hat-making trade in the form of larger stocks of raw material, and of the finished commodity in the hands of retail dealers."

The point of this argument is that interest is the grand preventer. For it says: the higher the rate, the more is business hampered, while a gradual fall in the rate tends to encourage and extend economic enterprise, enriching all those engaged in production. This is a conception which is only tenable on the assumption that interest is abstracted from the product of labour, and that the reward of enterprise, which comes out of the prices realized in the sale of the products, need not be, and

ought not to be, affected by what happens to interest. But both these assumptions are false, and it is a marvel to me how such a shrewd and circumspect thinker as Alfred Marshall could have failed to see the fallacy. (The fallacy is a necessary condition of the belief in progress, or general enrichment, and Marshall did believe in progress.)

The full-time and full-steam working of the whole of the productive facilities supposed and affirmed to result from a yielding rate of interest causes the output of goods to be swelled; Marshall himself points to the fact in the closing remark of the passage. The effect of such an increase of output is a matter of course; prices must fall. For it is not only that more is being produced; the decline of the rate of interest is mainly the consequence of diminished and backward consumption. It is perfectly absurd to imagine that in times of falling interest rates and slow consumption—or vigorous "waiting," to use Marshall's favourite term for the creation of capital—an industry which does not happen to be favoured by circumstances peculiar to itself should enlarge its plant and employ more machinery. The mere fact that the rate gives way proves that little capital is being demanded. Interest is weak because the people's interest in goods is weak, which in its turn weakens the producers' interest in loan capital.

It is a fundamental and damaging error to believe that a reduction of the rate of interest favours and encourages the producers. But that is what the current theory of interest implies and explicitly affirms. In a footnote to *Economics of Industry* Marshall insists that "whatever definition of capital we take, it will be found to be true that a general increase of capital augments the demand for labour and raises wages." I maintain that the contrary is true, and remains true till the point is reached when the rate of interest has fallen to its lowest possible level and the losses of the debtor class, i.e. of the active undertakers, cannot be carried any farther. But even then it is not because the rate of interest is low that business recovers confidence and begins to expand again, but because the rate cannot continue to fall. As water cannot be cooled below the freezing-point, so, too, the rate of interest cannot be lowered indefinitely, and the reason why it cannot is that its fall brings down prices, lowers values, destroying the very sense of value. When prices fall, it is no longer worth anybody's while to

produce, products being unsaleable, and unsaleable means worthless, stripped of their capital properties.

§ 7. In order to realize why the fall of the rate of interest cannot proceed beyond a certain minimum, we only need to reconsider Marshall's own argument leading to negative interest. I repeat it here as stated in an earlier chapter, which, rather ominously, is entitled "The Growth of Wealth" (p. 312):

"We can therefore imagine a state of things in which stored-up wealth could be put to little good use; in which many persons wanted to make provision for their own future; while but few of those who wanted to borrow goods were able to afford good security for returning them, or equivalent goods, at a future date. In such a state of things the postponement of, and waiting for, enjoyments would be an action that incurred a penalty rather than reaped a reward: by handing over his means to another to be taken care of, a person could only expect to get a sure promise of something less, and not of something more than that which he lent: the rate of interest would be negative.

"Such a state of things is conceivable. But it is also conceivable, and almost equally probable, that people may be so anxious to work that they will undergo some penalty as a condition of obtaining leave to work. For, as deferring the consumption of some of his means is a thing which a prudent person would desire on its own account, so doing some work is a desirable object on its own account to a healthy person."

It is rather curious that Marshall is not satisfied with interest reduced to nil, but has it swing to negative at one go. Was it that he felt the impossibility of the disappearance of interest? For obviously negative interest is still interest, and essentially not to be distinguished from positive interest. In either case interest is a remuneration for some service, and it is an expression of the fact that one of the parties needs assistance in a situation of economic distress. But how has the fellow managed to get himself into this awkward plight? By accumulating wealth, by deferring the gratification of his desire for leisure and luxuries. The utter impossibility of inverting the rate results from the fact that persons in general are not so foolish as to persist in irksome labour and privations to the point at which they would be penalized for their perseverance—"incur a penalty rather than reap a reward." Imagine it: you toil and deny yourself, only to end by becoming the debtor of the person who has not toiled and denied himself! For surely he who agrees to pay interest contracts a debt and becomes a

debtor; the paying of interest is the acknowledgment of a debt. You give the other party a right of action against yourself. It is too absurd to be conceived. Rather than reduce its temperature below the limit, water will freeze into ice; rather than, by dint of stern effort and unremitting self-denial, bring about his impoverishment and indebtedness, a sane man will turn into a spendthrift. What Marshall, blinded by a theory and the belief in the enrichment of all, considered as possible, nay, as lying within easy reach—"how small a modification of the conditions of our own world would be required to bring us to another" (to wit, one of negative interest)—is impossible because against nature. We may point to periods when the general trend of events did seem to go in the expected direction. But the thing has never happened. There is no way to effect the passage, and we are farthest from our aim in the moment when we suppose ourselves to be grasping and embracing it. The pendulum, after swinging towards it, is repelled away from it by the irresistible force of its own weight.

§ 8. We are led to ask what may be the "capital" which our author has in view. Generally speaking, capital is anything that yields interest. This definition is implied in Marshall's own treatment of the subject, and in *Economics of Industry* he explicitly says that capital is "all wealth or command over wealth which is lent out at interest, whether in money or in any other form." Interest, by the terms of this definition, is the essential condition of the existence of capital: no interest, no capital. Hence, logically, the disappearance of interest would mean the destruction of all capital, while negative interest would be negative capital. But as we conceive capital as being a positive quantity, a good, a boon, a utility, negative capital must needs be felt as a minus, a disutility, an incommodation. And it makes not the slightest difference what objects or services such capital may consist of. In the second passage about negative interest Marshall says "goods"; in the former one he says "wealth of any sort," which includes goods. He was aware that it could not be merely money; still, he ought to have understood that it could not be money at all. However, whether it be money or real goods, the manner in which he supposes the capital to be formed and accumulated is the same: by saving, by waiting, by deferring the gratification of needs and desires. Now to save

means to abstain from consuming, from buying commodities made for immediate use; to defer the enjoyment of such commodities signifies to leave them lying high and dry, to reject them, spurn them. It is impossible to save money without at the same time saving commodities. The money laid by would have no backing to it if its equivalent of real capital were not saved along with it. Money can be laid by without any danger to the material thing money; but not so goods: to keep them is to expose them to all sorts of dangers, so that in their case the term "to save" applies in the etymological sense of the word—it is a rescuing, and a man may have to wet his Sunday clothes, or singe his very skin, in performing the deed. At all events the saving of goods costs money. You have to provide store-rooms in which to stow away anything that you wish to reserve for your enjoyment at a later date: strawberries, newspapers, concerts, mountain-trips, houses, gardens, and what not. Can you visualize it? One of the consequences of the idea of "waiting" for the sake of making for capital is this: if satisfaction of present needs and cravings is deferred, a time must be ahead when we ought to be able to satisfy both the postponed needs and those of the then moment. If that time never comes we shall have cheated ourselves of a great part of possible gratifications. And it is impossible that the time should come. To forgo natural and attainable enjoyments is to atrophy the natural powers of enjoyment, is to create miserly habits and niggardly souls. "If youth but knew" is one half of the adage; "if age but could" is the other half. Also this: "Sufficient unto the day is the evil thereof"—and the good thereof likewise. If most people had not destroyed their capacity for pleasure, they would curse the luck which their self-denial has brought upon them.

Another consequence of this method of saving (by storing up real goods) is that it prevents the very thing which it is intended to bring about: the fall in the rate of interest. For it assumes that no goods are left unsold on the market, but that all are bought up apace to be added to the store (there is some difficulty about the concerts and the mountain-trips). More than this, the store-houses have to be erected, the stores themselves need to be attended to, and they must be insured against fire and theft and dry-rot. All this will absorb vast means; it creates a demand for capital at proportionate rates of interest.

In its effect the procedure is precisely the same as if everything were not only bought up apace, but consumed, too. To be sure the owners of the goods would not be enjoying them, but worrying about them; the treasures would be consuming themselves—they succumb to the attacks of the natural agents of decay. And here we are brought to realize that interest has its perennial source in the perishable constitution of things themselves. The rate of interest is determined by the degree of perishableness of what we term goods, so that if it is 4 per cent in the twentieth century as against 40 in certain epochs of the past, this difference is accounted for by the improvement of our means for preserving goods and replacing them when gone. This is the explanation of interest from the objective point of view. But it remains the same if we look at it from the point of view of the subject. Men will not lend themselves to make, by dint of weary toil, and to preserve at the sacrifice of their natural inclinations, things the mere possession of which imposes fresh trouble and anxiety, and which lose in usefulness in proportion as they are accumulated: a million footballs for a million old men—the idea!

§ 9. Marshall is a representative of marginalism; utility is the foundation of his system. He writes (p. 194):

"The different uses between which a commodity is distributed need not all be present uses; some may be present and some future. A prudent person will endeavour to distribute his means between all their several uses, present and future, in such a way that they will have in each the same marginal utility."

Very well, the elimination of interest or its inversion from a positive into a negative quantity would necessitate that men sacrifice their present to their future, for ever and for ever; they are to live entirely on anticipation and pay homage to the future as their tyrant. I repeat again: it is against nature. The great will refuses to will it. A passage has been quoted above which is intended to demonstrate why "the use of capital is a source of gain." Marshall teaches us that it is want that opens the sluices of this source of gain. It is true that men would prefer not to want; but neither would they forgo the hope of gain. However, want nothing, gain nothing! Here we touch upon the eternal conflict which transforms reason into

unreason and gain into loss. Behold the argument in its utter absurdity: in order to gain we are asked to do that which annihilates all gain, i.e. to accumulate gains to the point at which nothing can be gained by them—no utility, no enjoyment, no satisfaction, but rather fresh trouble and worry. For the truth holds good that where there is no want there can be no enjoyment, no chance of gain. Men who strive for gain must take care to perpetuate want.

The material constitution of things and the natural disposition of men must somehow be in harmony; otherwise the things would either destroy men or be destroyed by men. The inherent "defect" of material things, which is their perishableness, calls forth the virtue of men, which is their readiness to labour. Let but this readiness to labour degenerate to a greed for possession, and nature refuses her consent. For accumulation, if it succeeded, would end want, which would be the end of the necessity to move: sheer parasitism. Bid energy desist from exerting itself? No, indeed! Energy is as much given to what men call destruction as to production, and nature is ignorant of the distinction. Energy will not defeat itself by overcoming want, and the old philosophic formula *natura nihil agit frustra et nihil facit supervacaneum* may be interpreted to signify that nature herself perpetuates want that she may never lack an opening for her energy. Well, man is a piece of nature, and therefore he, too, cannot afford to have his wants overcome. Rather ungraciously we make nature responsible for what is our own desire to want; we call it the parsimony of nature. The economist ought to take account of this strange identity of men's wants and nature's gifts; otherwise he falls a victim to the stupendous delusion of such phrases as the growth of wealth, or the increase of capital, or the enrichment of society, or the gradual and continuous lowering of the rate of interest, or free gifts of nature which are the source of rent.

§ 10. Marshall accepted the traditional doctrine of interest and neglected to put it to the test of his theory of utility. There are numerous passages to be found in his book which contradict his theory of interest and serve to refute it. Let me adduce one (p. 603):

"If the state of knowledge, and of social and domestic habits be given, then the vigour of the people as a whole, if not their numbers,

and both the numbers and vigour of any trade in particular, may be said to have a supply price in this sense—that there is a certain level of the demand price which will keep them stationary; that a higher price would cause them to increase; and that a lower price would cause them to decrease."

I have quoted Marshall to the effect that in any circumstances "a general increase of capital augments the demand for labour and raises wages" (p. 287). I have quoted him also to the effect that the style of living of the hat-makers becomes the more opulent as the rate of interest is lower (p. 286). The present quotation is to the effect that "both the numbers and vigour of any trade in particular" are caused to increase by a higher price. By the terms of the two previous quotations the higher price, and stimulus to enterprise, results from a lower rate of interest, the happy consequence of "a general increase of capital"; and thus the theory of Alfred Marshall—it is the orthodox theory in its purest extract—forces us to conclude that the pace of production must be the briskest, and therefore the degree of employment at its highest, when the rate of interest is at its lowest; that as the rate of interest falls, the pace of production and the degree of employment must improve, the number of bankruptcies must diminish, the clearing-house and other banking figures must swell. Now all these factors are accessible to a statistical treatment. What do the records reveal? They show that in proportion as the rate of interest falls, the number of unemployed and of business failures increases with perfect regularity, without exception, until the point is reached at which the tide turns. A spectacular instance of the phenomenon is the case of Germany in 1925–26. In June 1925, when the rate of discount was 10 per cent, the percentage of unemployed workers was 3·5, of short-time workers 4·4; twelve months later, in June 1926, the discount rate was down at 6 per cent, and the unemployed percentage was up at 18, of short-time workers at 17·2 (see *Wirtschaft und Statistik*, No. 14, 1926). These are the observed and recorded facts; they are in flagrant contradiction to the theory of Marshall, which from a reduction of the rate of interest predicts a stimulus to enterprise, the easing of conditions, the fall of the unemployment figures and of the number of business failures. It is a crazy theory. It amounts to the assumption that a community which has accumulated more than it needs—why

else should the degree of interest in goods decline?—is thereby stimulated to greater vigour and more diligent and sustained efforts. And the theory holds undisputed sway. The experiment so triumphantly carried through in Germany is about to be repeated in France. While there was no prospect of a lowering of the discount rate, France had no unemployed; on the contrary, she was forced to import workers, and within a few years absorbed several million immigrants. But the tide has turned; the rates of interest are yielding, and France is trying to get rid of her foreign workers—the unemployment figures grow at a rapid pace. And what are the rulers of France doing to meet the situation? Yesterday, February 4, 1927, the papers spread the news that the rate of discount was reduced from $6\frac{1}{2}$ to $5\frac{1}{2}$ per cent "with a view to tiding business over its present precarious situation." The precariousness is manifested by the rapid growth of unemployment figures and the number of bankruptcies. Of course the advisers of the measure were prompted by the old theory that lowering the price of loan money must inspire confidence and bring fresh orders to the manufacturers. It is the most pitiful sort of blundering. There is not one instance on record to give countenance to this belief. What was the use of raising the discount rate from 6 to $7\frac{1}{2}$ per cent in August 1926, with the intention of arresting the course of inflation, if within six months the rate is brought down below 6 per cent? Must not, by the terms of the theory, this move cause fresh inflation? It certainly does not seem to be intended to strengthen the forces of deflation, and how is the proceeding to be reconciled with the theory? But it will most certainly cause deflation; everything will happen as it happened across the Rhine. The theory is opposed to the facts; it never was in harmony with the facts. In countless instances it has prompted measures which have produced results the very reverse of what was desired. A theory which is unable to account for the commonest phenomena which come under its head, a theory which predicts events wrongly, is a scandal and sheer error.[1]

[1] It is almost impossible not to go too far in delineating these processes. When the German rate of discount was reduced to 5 per cent in the spring of 1927, it was not long before a revival of business declared itself. What could be more natural than to attribute this turn to the lowering of the discount rate? The superficial observer overlooks the fact that the earlier reductions —from 11 per cent to 10, to 9, to 8, to 7, to 6—had brought about and deepened the depression; he only sees the change succeeding on the last and final move.

§ 11. The passage under review, when scrutinized, reveals the source of the error. What it states of labour is the general law and applies to labour which has assumed the form of capital: a bigger price for its use causes it to increase, a lower causes it to decrease. But it is necessary to keep in mind how the price of goods and the price of capital (the price of present labour and the price of past labour) are related. On one side (at one pole) we have the money capital, the volume of which determines the price of goods or of present labour; on the other side (at the other pole) we have the real capital, the quantity of which determines the price of capital, which is the rate of interest. On the former side it is the claim of the creditors, an abstract right; on the latter side it is the property of the debtors, the concrete utility, to meet the claim with. If the rate of interest, i.e. the price of the money capital, or of the abstract claim, is reduced, the volume of the real capital must be reduced likewise, because otherwise the two poles would be thrown out of their equilibrium and the economic universe would be upset. The volume is reduced through the reduction of the price of goods. If the rate of interest falls, capital is reduced by the fact that many objects cease to be capital, because they are not used, and thereby lose their utility. They are unsaleable: industrial plant lies idle, ships are laid up, houses find no purchasers and remain vacant. The fall in the rate of interest is the consequence of the unwillingness of people to demand capital in order to produce new capital, and this reluctance in its turn is induced by the fact that the price of products is falling, because they are supplied in excessive quantities. The connection between the rate of interest and the price of commodities cannot be severed. Between them they make the living whole; taken singly they are nothing. It is this oneness of the two phenomena which causes the increase of real wealth (so-called) to turn out to the destruction and the

The reduction of the German rate to 5 per cent was accompanied by an emphatic declaration that this was going to be the last in the series: business would have to accommodate itself to the condition thus attained. Well, such a declaration is worth a great deal to business. It amounts to an assurance that calculations are not going to be upset, that later borrowers will not obtain more favourable terms; it removes all sorts of apprehensions, and may well stimulate enterprise. The effect would have been the same if the declaration had been made when the rate was at 9 or at 8 per cent; but without the declaration it is doubtful whether the drop to 5 per cent would not have increased the uncertainty and prolonged the depression. I refer the reader to *The Interest Standard*, Pt. III, chap. iv.

decrease of wealth. In consequence of their increase the things produced lose part of their utility, which constitutes their capital property. If their increase were continued indefinitely their utility would vanish entirely, and capital would be seen to perish by its own growth, through over-feeding.

A good by its own increase turns into an evil, excessive wealth becomes a burden, and unnecessary commodities only incommode us: it seems to contradict the saying that "you cannot have too much of a good thing." But a thing is only good so long as you have not too much of it; a very neat case to show how quantitative and qualitative are related. In order to understand why the apparent contradiction is in reality clear reason, we only need to consider that the same people who wish to save present goods for future use are forced to produce and to preserve them in the present. The toil which the goods demand, the cares which their safe keeping superinduces, the general pressure which they exercise on men's existence—these are the necessities which invert positive into negative and turn wealth into illth. The transformation may be considered under ever so many different aspects, either objective or subjective. A few have been touched upon; I will add one or two more.

§ 12. We have called capital "past labour," and we are led to ask: How is the price of past labour (the rate of interest) related to the price of present labour? Is it conceivable that those two prices should move in opposite directions, the price of present labour rising as the price of past labour falls? That is what the accepted theory implies; for it says that the workers earn the more as the rate of interest is lower. Can it be possible that the incomes of the builders of houses should increase while the revenue from houses already built decreases? It would be strange indeed. Houses are good things to have; but we say: pull down houses that the builders may build. When men who need to labour can find no employment because too much has been accumulated, accumulation appears as an evil, and destruction becomes imperative. Past labour must not be suffered to draw wages (interest) at the expense of present labour; for present labour is necessary lest there should be no labour in the future. The manner in which accumulations are reduced results from the following considerations.

An increase of our possessions is inconceivable without an increase of our dependence on possessions. If we did not depend on them, we should not acquire them; or having acquired them, we should not keep hold of them—they would drop off us as a husk drops off the ripe fruit. Now dependence is certainly felt as a negative force. It is for freedom that we strive. We acquire our possessions in the hope of thereby emancipating ourselves from the hazards of life and the hostility of nature. Alas! in proportion as we fortify ourselves thus outwardly, at the expense of "nature," we dismantle our own "natures," we lose man's sturdier faculties, his primitive stoicism, his readiness to put up with hardships and privation; we grow to be pampered Sybarites. And having reached this stage we are doomed. The first serious jolt in the mechanism unsettles us and upsets us. To talk about emancipation from nature, and to speak of it as enrichment (freedom from necessity) is as foolish as to fly in the face of the moral law. The accumulation of means of subsistence does not lessen our dependence; on the contrary, as the mass gathers weight, its attraction gathers might. Sooner or later the strain becomes unbearable, so that a veritable revulsion takes place and causes men to head for destruction rather than endure the burden any longer.

§ 13. Society is composed of individuals who, in spite of superficial differences, are all tending towards the same goal. They necessarily bump into one another; they must fight one another, hinder one another, damage one another. Just imagine the swarm of these frantic creatures as it gathers into a compact mass in proportion as it approaches the goal—the enrichment of all, and the end of interest—which is a narrow gate, a dot on the horizon: how they jostle, how they trip one another up by the heels! It is all very well—I mean, very foolish—to talk of the beauties and the necessity of a unity of purpose among all men. This unity exists, it is a hard fact, and it is a necessary condition of social life. But it is at the same time the ultimate cause of the myriad forms of conflict. Marshall does not seem to have been aware of this fatality; otherwise he could not have written the following passage without realizing that it invalidates his whole theory of interest and capital (p. 753):

"It remains true, however, that the chief benefit which capital confers upon labour is not by opening out to it new employments, but by increasing the joint product of land, labour, and capital (or of land, labour, and waiting), and by reducing the share of that product which any given amount of capital (or of waiting) can claim as its reward."

Surely this is to expect capital to lend itself for the benefit of the factor of labour exclusively—land being merely a form of capital. Of the increase of the joint product produced with its aid, capital is to receive no share. Nay, worse; for assuming that the increase is carried to the point at which interest disappears entirely, capital would be deprived of any share in the whole product. That is a degree of self-abnegation which is not in human nature. Capital refuses its collaboration on these terms.

The idea of unselfish, of actively altruistic capital is most strange, and a striking instance of the vagaries to which a vicious theory of interest gives rise. It underlies the universally prevalent argument that labour is the better remunerated as the rate of interest is lower. If the argument were true it would imply the following train of reasoning: capital is produced by labour, and acquired through waiting (in Marshall's phrase); the workers and undertakers who are enriched, thanks to the aid of capital, grow to be capitalists, provided that they "wait," i.e. abstain from using and consuming the goods which they produce; the consequence is that competition among the capitalists, the ranks of whom become more and more crowded, grows fiercer, and the reward of capital dwindles, capitalists faring more and more poorly; naturally capitalists cease to be envied, and the workers make every effort to shun the lot of capitalists; they refuse to save the things which yield them nothing, and which they have no personal use for—the game is not worth the candle; for when capital ceases to pay, it does not pay to "wait" either.

The process as suggested by the passage under consideration —capital waiving its share in the surplus product in favour of labour—would be effected by means of an unequal development of the rate of interest on one hand, the price of products on the other hand: interest (the dividend) declines, while prices and wages are kept up. The idea, therefore, tallies with the current theory of interest, according to which "the value of money varies directly as discount" (Macleod's thesis), or

price varies inversely as the rate of interest. It is the idea which suggested to Silvio Gesell his ingenious invention of *Schwundgeld*, shrinking money. It has been much ridiculed by those very people who swear by the orthodox theory of interest, which merely proves that they have not thought out the real bearings of the theory. Gesell, who does not believe in altruistic capital, argues that capital withdraws its support when its reward falls below a certain limit: it goes on strike, and will not serve until interest has been restored to its normal state. His shrinking money is the device to break the strike of money. Assuming that the theory of interest were true to the real facts, Gesell's reasoning would be faultless, and his expedient a most valuable contribution towards the improvement of our economic system. But for this very reason the self-evident impossibility of shrinking money is a direct proof that the theory is a fallacy. Whatever may be urged against the remedy is also an argument against the diagnosis, which is strictly according to the accepted doctrine of economic science. Nobody has ever thought of calling Alfred Marshall a quack, whereas Gesell has never been treated otherwise than as a quack by the professors of economics; yet Gesell has said no more than Marshall said—namely, that interest may be overcome in the manner indicated by Marshall, and he has come to this conclusion by applying consistently the theory of interest as taught in the schools.

§ 14. Prices and wages are not, they cannot be, kept up while the rate of interest—which is the wage of past labour—falls; they fall along with interest. Now we know from much bitter experience that enterprise flags and droops when prices decline. Not so because capital withholds its aid. Why should it do so, seeing that when prices fall even a low rate of interest is profitable—provided the debtor does not become insolvent? It is the undertakers who go on strike, because enterprise does not pay and even entails a loss; in other words, they give in because they are at a disadvantage as compared with the capitalists. Thus it clearly appears that when production is increased, the gain does not go to the producers, as Marshall imagines, and as the orthodox theory would logically force us to assume, but contrariwise it is the providers of the capital (the money capital) who take the lion's share of the surplus joint product.

Marshall composed his *Principles* in the 'eighties of last century—that is, at a time when prices and the rate of interest had been declining for years. The rate of interest declined, but the capitalists gained heavily. On page 15 of his *Tract on Monetary Reform*, Mr. Keynes produces a table to show the development of the value of Consols. The figures under the four heads are as follows:

	Purchasing Power of Income from Consols.	Purchasing Power after Deduction of Income Tax.	Money Price of Capital Value.	Purchasing Power of Capital Value.
1869	87	89	127	111
1883	104	108	138	144
1896	139	145	150	208

These facts must have been known to Alfred Marshall: the gains were entirely on the side of the capitalists. How could he fail to draw the proper conclusions? His judgment was warped by the weight of the omnipotent dogma that interest is a charge on enterprise, and that enterprise is bound to gain by a fall in the rate of interest.

Marshall was thinking of real capital when he wrote that capital confers a benefit on labour by increasing the joint product, and he overlooked the case of money capital. It is, of course, true that during the period of falling prices and falling rates of interest the owners of real capital do receive an ever decreasing share of the joint product. But the owners of real capital are those who owe the money; they are the debtors, and debtors must be workers. I cannot here enter upon a detailed discussion of the problem of capital; I will only state that properly speaking the capitalist is he who supplies the money and owns the money claims: the creditor. If we consider the case in this light, we realize the more easily that the capitalists stand to gain when prices fall, even though their money income may diminish. They gain so long as their debtors remain solvent. But many debtors, under the circumstances, fail, so that the losses of those creditors who lose their stake balance the extra profits of those who are luckier. In the long run all the debtors would fail if prices continued falling. The movement comes naturally to a close, because society cannot

do without the services of the debtors, and therefore must pay them a working price. The point at issue is that when the rate of interest (the share in the joint product) falls, it is the debtors who are the first losers, not the capitalists, and we may say that interest diminishes because nobody can wish to contract a debt, considering what the circumstances are. Money capital is far too dear an article to attract buyers; therefore it lies idle; output shrinks; the unsold stocks of goods are gradually carried off, in spite of heroic acts of "waiting." Vast quantities of capital have been destroyed in the process of making capital (debts) appreciate and reducing the rate of interest. How could interest shrink any further? When are we ready to depress it to zero? The conflict of interests is the eternal preserver of interest, in so far as it (the conflict) destroys the plethora produced by waiting.

§ 15. The point which I have been trying to make is contained in this principle stated by Marshall himself (p. 765):

"We have seen that the national dividend is at once the aggregate net product of, and the sole source of payment for, all the agents of production within a country; that the larger it is, the larger, other things being equal, will be the share of each agent of production, and that an increase in the supply of any agent will generally lower its price, to the benefit of other agents.

"This general principle is specially applicable to the case of land. An increase in the amount of productiveness of the land that supplies any market redounds in the first instance to the benefit of those capitalists and workers who are in possession of the other agents of production for the same market."

The benefit resulting from the increase does not go to the owners of the land and the increasers of its products, but to those who buy and enjoy the products. This proposition must apply all round. For example: an increase in the productiveness of industry benefits in the first instance the landowners and agricultural producers who supply the same market. Always the gain goes to the buyers and consumers of the products rather than to the producers and sellers. In the passage from which this discussion takes its start there is assumed an increase in "the joint product of land, labour, and capital." We are told that this increase is "the chief benefit which capital confers upon labour." Now let us be agreed that land produces

nothing, and that capital (means of production) does not produce anything either. Land and capital are made to produce, and they are produced by labour. Thus the proposition is to the effect that labour itself is benefited by an increase in the product of labour, which contradicts the principle that an increase in productiveness benefits, not the producers, but the consumers. It is of vital interest to decide which of the two propositions is right, or at least more largely right. Our passage (quoted § 13 above) partly decides the question. For it says that the share falling to capital is reduced. Capital is supposed to have contributed to the increase of the product; with regard to capital, therefore, the principle applies. It also applies with regard to land, since that is the very gist of the principle itself. Is it possible that labour should make an exception? If it did make an exception, labourers would be the only gainers from the capitalistic order, which, obviously, they are not.

Admitting the notion of a "joint product," we must apply the principle as follows. The benefit from the increase goes, not to the land (owners), not to the owners of labour, not to the owners of the real capital, but to those who are outside the combination of these three categories. And who are they? I refer the reader to the earlier sections of the fourth essay: they are the owners of money and claims to money, the creditors. In so far as the owners of land, labour, and agents of production are also creditors or owners of money, they are sharers in the profit from increased production. Labourers are not creditors to any appreciable extent; hence it is not they who obtain the main benefit from the increase of their own productivity. And the labourers know, although they cannot explain the fact. They act accordingly. They refuse to furnish the extra effort required to increase the joint product. Who has the heart to blame them, understanding that the whole of the increase only enriches those who do not labour? We here grasp once more the fatal truth that the economic universe is of a polar constitution, divided in itself. Any surplus appearing on either hemisphere is counterbalanced by a corresponding change on the other hemisphere. Reaction cancels the effort of action. Of course the principle works in both directions. An increase of labour enriches the creditors; there are periods when the tides set visibly, or seemingly,

in this direction. But an increase of capital (money and money investments growing in quantity) enriches labour, and there are periods when the tides set, visibly or seemingly, in this direction. In reality the action and the reaction are one and simultaneous: the financial losses of labour are made up to the labourers spiritually, and the money gains of the capitalists are neutralized for them by losses of personality and dignity. The spiritual or personal factor preponderates. By the time when the working class—in which I include the employers and managers—has been consolidated through adversity, and the class of capitalists or creditors has grown hollow through easy gains, the economic tide will turn, and profits will flow back from the erstwhile winners to the erstwhile losers. Thus equilibrium is maintained, and thus the notion of increase absolute is proved an illusion.

The periodicity of these processes is manifested in every one of the various parts of the economic system. Those periods which show the debtor class, i.e. the active workers and owners of the real wealth, on the ascent, are periods of expansion. It is a rising tide showing an increase of the economic waters, the currency. The afflux of money signifies affluence for those who work for money, and a drain on the resources of those who own money, or money claims. It is hard to determine what is cause and what is effect. Would stabilization of the currency end the tides? Evidently so, since fluctuations of the currency are found to be inseparable from the tides. However, the question is whether humanity does not depend on the tides for its very existence, the tides being as it were a function of the social organism. In that case society could not wish to have that stability which a perfectly stable standard of currency would superinduce. The point cannot be settled by argument merely; the problem must be solved by practice, and will not be laid to rest until it has been probed and mastered.

§ 16. The theory of interest proposed by Marshall is undisputed to this day. I have shown in the essay on "The Relation between the Rate of Interest and the Level of Prices" that even those economists who have recognized that the rate of interest and commodity prices are somehow differently connected from what the theory purports, have not really

freed themselves of its dictates.[1] Alfred Marshall was not a reformer, though he was a believer in progress; but he has done more than any of the reformers, except Gesell, towards the undoing of the old theory. By carrying it to its logical conclusions he prepared the way to a final *reductio ad absurdum*. As in the case, mentioned above, of Silvio Gesell, everything that Marshall has to say about the effect of lower interest rates on production, and about the assistance of capital to labour, is correctly deduced from the theory; if the theory were true to the facts of reality, the deductions would apply in practice. For assuming that when the rate of interest falls the prices of goods and services are buoyed up, it is actually impossible to imagine what could check the fall of the rate of interest to zero and below zero. The spirit of enterprise and the zeal of the workers would be constantly stimulated by the prospect of liberal rewards; the state of employment would improve steadily; the full-time and full-power working of all the productive plant would create an ever increasing affluence, and thus the fall in the rate would in itself furnish the energies to accelerate its fall.

A pendulum when it has reached the end of its impetus swings back again. But suppose the impetus to be forever renewed, what then? Well, it must return to its starting-point for all that, unless it flies off at a tangent and is lost in infinite space: it completes a circle. In the same way interest, if it were permanently depressed, would swing round to negative

[1] I cannot forbear to quote another instance. In his *Principles of Economics* Professor Taussig accepts the facts of reality as to the relation between interest and price, where he writes this (chap. 22, § 6): "There can be little question that in fact periods of rising prices are usually periods of higher interest rates, and that during periods of falling prices interest rates are lower. The explanation of this fact has been the occasion of much critical discussion, and cannot be said to be entirely clear."

Professor Taussig passes very lightly over the matter, not deeming it necessary to furnish a real explanation. Nay, he leaves a loophole open for the contrary, the traditional, view by saying this:

"Certain it is that there is no exact or automatic relation between fluctuations in prices and fluctuations in the rate of interest."

That he was in the grip of the dogma is proved by this statement (chap. 38, § 7): ". . . The more likely is it that the savers will get the lion's share and rates of interest tend to be high."

It is a flagrant contradiction of the interpretation contained in the first quotation, where the higher rate of interest is made to go with higher prices, i.e. the discomfiture of the savers, who do not appear as the lions, but as the victims. In spite of what he seems to have acquired from the teachings of statistics, Professor Taussig remains under the spell of the dogma, the atavistic belief, with which he was indoctrinated by the "schools."

and so be restored. For negative interest is undistinguishable from positive: the manifestation of a need, of a shortage of something, of economic dependence. Since such is the inevitable result of ever renewed impetus—entirely negative, that is to say—the reasons why the impetus is not renewed must be legion. To recapitulate the argument of the present chapter, I shall give a list of the most obvious ones:

§ 17. (1) What the producers (workers, undertakers, merchants) gain on the swing they lose on the merry-go-round. That is to say, their earnings, however handsome, cannot be transformed into capital, because capital is being swamped in its own superabundance. They relent in their ardour to oust interest and capital ere yet the rate of interest has been depressed more than a trifle below the level of what Marshall terms "net" interest.

(2) Marshall defines capital as the result of "waiting." Well, the economic process is a current, in which no particle is unconnected with every other particle. Hence when large sections of the community choose to enrich themselves by waiting, the flow is impeded, and instead of a current we get a swamp. Production stops along with consumption.

(3) Supposing that the community as a whole is enriched, it naturally falls into the mental and emotional attitude of rich men: it becomes fastidious, disdainful, and so loses its sense of the value of things That is to say, things lose their value, their utility; they are stripped of their capital property. Furthermore, rich men are apt to develop a disinclination to toilsome tasks. Contempt for the things made combined with contempt for the making of things is destructive. A community which falls a victim to this vice will soon wake up to the fact that the fruit of its previous virtue has turned to ashes, that its capital, both moral and material, has vanished. The economist, if he is to escape from error, has need to be a moralist. Now there is one moral law which has never been at fault: the law that the growth of wealth cannot improve the state of men nor change the order of the universe. The orthodox theory of interest is wrong because it runs counter to this moral law.

§ 18. I am far from insinuating that those who hold a different view are all bad moralists. It is an altogether generous and attractive ethical sentiment which prompts the idea of

a possible general improvement, and I am sadly conscious of the disadvantage of my point of view. How much stronger is the appeal, for instance, of Professor Pigou's attitude in *The Economics of Welfare*? In spite of much circumspection and many shrewd qualifications, he is convinced that an "increase in the real income enjoyed by the poorer classes, at the expense of an equal decrease in that enjoyed by the richer classes, is practically certain to involve an addition to economic welfare" (p. 83). He also inclines to think that what increases economic welfare is more likely than not to increase social or general welfare. In a word, he believes in progress absolute. I have more than once pointed out, in these pages, that the belief in economic progress is bound up with the orthodox theory of interest. Hence if this theory should come to be overthrown, the notion of progress would need to be reconsidered. As to the question of the total gain to be derived from a change in the distribution of the national dividend, there is one point which Professor Pigou seems to me to have overlooked. Either the amplitude of the difference between the incomes of the rich and the poor makes no difference, in so far as a small difference may be as acutely felt and as intensely resented as a very large one—the ragged proletariat and peasantry of Rumania cannot resent the arrogance of their upper classes as hotly as the comparatively opulent and independent Swiss proletariat resent the advantages of their richer compatriots; or else a smaller difference than the one observed in civilized nations all down the ages must be in some way or other detrimental to the efficiency of the productive forces. Positive proofs, of course, cannot be furnished on these questions; they are of a metaphysical rather than an economic nature. I will only remark that it is possible to hold Professor Pigou's view and to be led to abandon it; that is what has happened to me. I may add that such a conversion need not, and probably cannot, alter a man's feelings for his poorer fellow-men; our hearts are impervious to our theories. Even though I have renounced the idea of progress, my zeal to improve the lot of those whom I find to be suffering from *present* conditions has not abated.

§ 19. (4) The obstacles which arise when the theory is pushed consistently towards its ultimate conclusions have

called forth various schemes of monetary reform. There is an irreducible enmity to interest implied in the theory. It is a lack of consistency which has prevented the majority of its exponents from realizing this. Marshall is among this majority; for he explicitly defends the claims of interest and extols the virtues of "capital" (see pp. 668–72), while at the same time he represents, though only implicitly, interest as the grand preventer: the production of wealth is more powerful in proportion as interest is slighter.[1] The reformers are more true to the theory, though they pretend to slight it. They challenge the claims of interest, and they propose to overthrow the obstacles, raised by interest against the enrichment of society, by means of a monetary constitution freed from the fetters imposed by the preventer. Alas, it is an illusion! The idea clashes with the moral law. The impossibility of increasing capital, either by little or by much, is not the fault of money, poor thing; it is the manifestation of the polar constitution of the economic universe. Polar means divided in itself, made up of two halves which must balance each other. Is it possible that the northern hemisphere should encroach upon the southern? Is it possible that the credits should ever be greater than the debts? There can be capital only to the extent that there is debt (Marshall's definition: capital is what is lent out at interest). These two are the poles of the economic planet. Polarity does not suffer capital to encroach upon debt, to usurp the realm of want, of desire, of appetite, of interest, of the joy of activity, of the pride in achievement and gain. The economic universe is a self-regulating machine, in which we small men, who presume to run and regulate it, are mere cogs which the machine uses to serve a higher end not to be fathomed by us. Men are so constituted that they must destroy capital as fast as it tends to encroach on debt. Not only for its creation does capital exact toil and the postponement of needs which clamour for satisfaction, it also exacts toil and denial of needs for its preservation against the hostile elements, and against the competition of new capital. For things are capital only so long as they are in demand, i.e. seen, heard of, in fashion, up-to-date. And accumulation will bury things, crush them, damage them, so that it requires great care and

[1] As a matter of fact he also expresses the very contrary of this, p. 607: "It is only slowly and gradually that the rise in the rate of interest will increase the total stock of capital." The contradiction is complete.

much trouble to preserve their capital qualities: to save, or rescue, capital. Therefore capital is as much an ill as it is a boon, as much a hindrance as a help. Adding to it—if the idea could be conceived—is to add to its negative properties as much as to its positive. There is nothing to be gained except, after a time, a renewed recognition of the moral law. There is a clear loss in so far as men will consider any effort as wasted that does not yield a positive gain. And men, as their activity is bent on gain, on utility, on enjoyment, realizing that there is no gain, that the utility of things diminishes as their quantity increases, that enjoyment verges into disappointment and worry, will desist from working and waiting. From the point of view of the enmity to interest the relapse may appear contrary to reason; but from the point of view of practical expedience and common sense it is perfectly reasonable. It is the enmity to interest which is unreasonable. Now as this enmity is the straight logic from the accepted theory of interest, it follows that the theory itself is opposed to the facts of reality. Of course the animus against interest is the primary factor, from which the theory is derived, so that we are led to recognize the very old truth that our faulty theories are based on our treacherous emotions: *stat pro ratione voluntas.*

§ 20. (5) But, to end up with, let us alight from our airy raid into the realms of metaphysics. In terms of plain economics the case may be stated thus: any capital (real) that exists has been produced with the help of money; capital, therefore, is due to money. Take this statement in its strictest and most literal sense. Money in itself is nothing, but so is capital in itself nothing. Each is the contrary pole and hemisphere of the other; each depends on the other, and each represents a claim to the other. Of course, the term capital is here used to designate real property, all those possessions which are exchanged through the medium of money. This capital, as it yields interest, must be sold at a price, so that whatever interest is paid to capital must also be added to the price. This simple fact is expressed in the statement, which some overwise economists think it necessary to qualify, that interest forms an item in the cost of production. Indeed, it is the primest of all the items. The interest on capital and the price of goods are both determined by one and the same interest,

i.e. the same sense of the utility of things. Therefore they must follow the same course of development: when the rate of interest falls, the price of goods must follow suit. But the consequence of this is that, since production is brought to a standstill when prices fall, the forces which tend to depress interest always liberate the energies which tend to destroy capital, and so preserve interest.

§ 21. I cannot, in this connection, expand upon the farther bearings of my conception of interest. But there is one point which I must at least hint at. As my contention is that interest cannot be depressed below a certain definable limit, and not without the simultaneous and compensating fall of the level of prices, the logical consequence is that capital cannot be increased beyond that limit, nor decreased either. For capital cannot be computed by adding sums; we cannot establish a total of capital by making an inventory and census of objects supposed to constitute capital. Although a community may add to its visible possessions in the shape of the objects considered as capital, it does not thereby increase its capital. If such additions were an increase and permanent, they would permanently depress the rate of interest, which they have not been known to do. An increase is not an increase if it does not produce the effects of an increase, i.e. when counterbalanced by some other change. It is not easy to account for this strange phenomenon to a generation which has been taught to believe in progress absolute, and to flout the moral law that mere material wealth is powerless to lighten the stress and the burden of earthly life. The ultimate explanation of the forces governing the existence of capital must be looked for in the peculiar limitations of men—which, in their turn, are, of course, in harmony with the general order of the universe. Men's capacity to enjoy is as strictly limited as their capacity to labour. Whenever their industry produces a plus, such plus straightway assumes the nature of a surplus, which there is nobody to enjoy, and which therefore causes things that erstwhile were estimated as useful and as capital to be discarded and degraded. It is with our outward possessions as with those of our bodily organism, of which they are merely a prolongation or a projection. Our lungs cannot hold more than just so much air, our arteries so much blood, our "hearts"

so much emotion, and our minds so much "sense of value." Nor is this all. Our lungs are not able to "hold" any air at all; we are forced to give out air as fast as we take it in. It is the same with blood, which is constantly unmade as fast as it is formed. So, too, with our sense of value: although always the same, it must incessantly renew its contents, give out values as fast as it takes in new values. It must do so to escape suffocation. For values exhaust their virtue as blood and air waste themselves; when used up, they have to be turned out of the system if it is not to be poisoned by them, as it would be poisoned by retaining wasted air and blood. This *panta rhei* of the ancient Greek sage, this fury of change, is the fundamental, although unacknowledged, law of economics, as it is the law of the Universe. In defiance of this law the science of economics has chosen for its guiding light a belief in accumulation. The idea of progress has been stultified with the desire for more, whereas it does not allow for anything but change, or renewal. The economics of increase, or usury, as it is contrary to the moral law, must be abandoned for a saner system, if economics is to attain to the dignity of a real science. Economics has got to conform to the fundamental proposition of physics and philosophy, which is the law of the constancy of energy.

§ 22. Closely connected with this fallacy of increase and usury is another departure of economics from the moral law. I am led to touch upon the question by re-reading John M. Robertson's book *The Fallacy of Saving*. Here is a writer who denounces saving as a folly, almost a crime. It might be imagined that he must be opposed to the idea of increase and enrichment. But no; he wrote at the time when the idea of evolution was in its triumph, and so he vies with the best in insisting on the necessity of abolishing want by producing more. The end pursued is the same, though the way proposed is different. Robertson suggests that rather than by parsimony we might enrich ourselves by consuming more liberally. He is opposed to saving on the plea that

"the final sociological truth is that savings in the last resort represent a power to extort the labour of those who have been unable to save, from having to toil for bare life from their childhood, or being ill-fitted for a life of struggle" (p. 93).

That is to say, Robertson sets at nought the law of change. For he wants to abolish inequality, which is the necessary condition of change. The person who is ill-fitted for a life of struggle is to enjoy all the gains of those who are well fitted and do struggle. The wisdom of the ages down to the French Revolution, which proclaimed, for purely selfish ends, the three lies of equality, liberty, and fraternity, knows of one equality only—namely, that the stress and strain of life is the common lot of all. But it has not denounced social inequalities. If economics is to be got into harmony with common wisdom, it must desist from devising means for altering the order of the Universe, and accept social inequality with all its offensive concomitants ("thinking makes them so," and we can learn to think differently). Need I insist that this does not imply that we should harden our hearts to the sufferings of those who come within our range? Or that we should resign ourselves to leaving things as they are? Why, I said that change is the law. Whether we like it or not, we are bound to work for change. As we eject the air which we have exhausted to make room for a fresh wave, so, too, we cannot help demolishing forms and institutions which have exhausted their virtue and reconstructing them so as to suit our fancy. Although my theory of interest and capital has made of me a sceptic with regard to the gospel of increase and accumulation—which is usury—I can remain enthusiastic in the endeavour to make it prevail over the old theory, which has had its day and which I have come to resent as a blemish on the fair face of twentieth-century science.

In some form or other all the economic systems that have been in vogue have been hostile to interest. If they do not express this hostility openly, it is implied in them. The various allegations against the existence of a class of idle rich, against luxurious and unproductive spending and what not, in which the schools have indulged from the physiocrats down to Alfred Marshall, declare war against interest, sometimes called rent. A proper understanding of the nature of interest will make us realize the absurdity of these charges, and it will force us to seek reasons to justify the existence of a class of idle rich, which cannot be helped. In the first place it is not money interest that maintains them; they are supported by the interest which society takes in them, by the admiration of shop-girls and

parlour-maids for counts and countesses, for the butterflies of the human menagerie in general, as depicted in their beloved novels and projected through films; also by the admiration of the better sort of boys for the successful builders of fortunes. These idle rich contribute to the wealth and the variety of the show. Idleness is productive of much that even its detractors recognize as making for a nobler civilization. Our belief in the sanctification by work is a form of sanctimoniousness. Its effect is to cheapen work, to rob work of its distinction. It is unphilosophical and unpractical to boot. For we shall never succeed in overcoming interest, this archetype of the inequality which is the principle of motion and change. My theory of interest is perfectly neutral. It holds forth no promise to any one class; it does not set the producers before the consumers. It says: understand and accept; if there is no hope of progress and gain absolute, neither is there any cause to dread retrogression or loss. And there is a certain promise of release from some silly old obsessions, of a fresh outlook, of a new appreciation of things. Is not renewal something of a gain?

Seventh Essay

INTERESTS THAT DEFEAT THEIR OWN ENDS

§ 1. THE PRINCIPLE EXPLAINED.

THE present chapter is essentially an upshot from the preceding one with its dominant idea that the forces which seem to make for a permanent reduction of interest at the same time create a situation which is directly contrary to this development, and liberates forces tending in the opposite direction and so neutralizing the original trend. It is the law of inertia in economics, which in its turn is nothing but a special aspect of the more general law of the conservation of energy: nothing out of nothing; what is added to one quantity must be subtracted from another quantity. The fact that Marshall's theory of interest overlooks this law has been demonstrated; in what follows, the same oversight is shown in the works of a few other leading economists of our time.

The first case I take from a book published in 1927: Albert Aftalion, *Monnaie, Prix et Change*. The author is Professor of Statistics in the University of Paris and well known by numerous publications, notably a two-volume work on the crises of over-production. I remark this to notify that my illustration is not the product of some hasty scribbler, but the conception of a distinguished economist. Aftalion examines the laws presiding over price. The quantity theory, even in its amended aspect, does not seem to him adequate to account for the phenomena of price. In tracing the more fundamental causes of the fluctuation of prices, he arrives at a theory which suggests that psychological influences should be considered as determining price. Not the mere quantity of money, but the characters of men cause the level of prices to be higher or lower. Aftalion says (p. 221):

> "Probably prices in any given country would be at a lower level if the distribution of characters had been different, if there had been fewer wasteful, unthrifty, and careless purchasers, and instead of them a larger proportion of thrifty and keen bargainers."

Low prices are here presented as the outcome of economic virtues, hence, obviously, as a gain in which we ought to take a proper interest. Let us see. The price of a ware is low when a scant supply of money is face to face with a heavy supply of goods. The general level of prices is the lower as less money is offered for the goods on the market. The supply of money may be, and no doubt is in the first place, limited by the quantity of money in existence—whatever may be understood by money and its quantity. But it may also be limited by the degree of readiness of the people to spend their money for the purchase of goods. Sure it is that in those periods when a nation determines to save, the general level of prices will fall. Less money is being spent because men seek to withhold their cash. Now what becomes of the money so detained? It is a quantity which is withdrawn from some other quantity, which thereby suffers a diminution. What is withheld becomes superfluous and in the course of time will be annihilated: when the level of prices has fallen, some of the cash is crowded out and must disappear. Economy, then, has power to destroy money (money tokens, to be more precise): the lower level of prices is obtained at the cost of a destruction of money.

Now let us try to decide who has an interest in such a development. Goods—and services—become cheaper. The foreigner, scenting his opportunity, appears on the scene to buy cheap goods or to live cheaply in this happy land of money-savers. He brings his money into the country, sheer gold. In doing so he undoes the effect of the effort to reduce prices; for these additions to the stock of money will raise prices. Let those who receive the gold hoard it and count it as their gain; in reality it is a useless hoard and a dead weight.[1] However, there is a hitch. You cannot keep on selling abroad without buying in return, in spite of what certain ready reformers affirm. By and by the foreign purchasers will run short of gold and must needs quit the market. Who is now to take up the goods which they used to carry off? Those who have vowed to be economical cannot, since that would be a relapse from virtue. Well, the goods fall to the lot of those who have not vowed, the ne'er-do-wells, the easy-livers, the spendthrifts; these have all the profit from the abstinence of the virtuous abstainers. The loss

[1] The case is considered in the same manner by Professor Pigou in *Industrial Fluctuations*, p. 265.

must be shouldered by the producers of the goods, who are forced to make extra exertions in order to satisfy the higher standards of their exacting customers, and besides have their receipts cut down by the reduction of their sales.

I pass over a number of points which clamour for consideration to stress the fact that only those who do not intend to live economically can have an interest in the thriftiness of the many; they are the only ones to be benefited. Although the many do not understand the logic of the case, they realize its practical bearings. They refuse to save and deny themselves that others may live the more splendidly and lord it over them. They flout the vaunted virtue of thrift and fall to buying, consuming, enjoying—prices rising or not rising. The interest in economy defeats its own end by virtue of the fact that the advantage does not accrue to those who practise the interest, but to those who disregard it. The consequence is that thrift has its limits. This limit also puts a stop on the fall of prices: the "lower" price is found not to be the more advantageous price.

If the people as a whole would but save more, prices would be lower, says Aftalion. Alfred Marshall teaches that if people would but practise a little more economy, the rate of interest would be lower; still more economy, the rate of interest would fall to zero; and again a step farther, interest will be negative. How is it that interest is not ousted? Why do not people persist in a virtuous effort? Is not the lower rate of interest more advantageous than a higher? What is it that impedes the second step on the road to an increase of capital, let alone the further step? It is the same impediment which our first example has revealed: those who save abstain only for the benefit of those who do not save. Saving must have this effect in all circumstances, so that economy defeats its own end. The interest in saving conflicts with the interest in producing. In proportion as more is saved, savings perish in the bankruptcy of enterprises in which they are invested; for enterprise lives on the consumption of its output, and when thrift hinders consumption, enterprise succumbs and gives out. The producers have every reason to loathe economy.[1] The majority of them prefer to spend their pence as soon as got. A penny saved is a penny

[1] "If the rich got as much out of life as folks who run in debt, wouldn't business hum?" queries Abe Martin. (From an American magazine.)

got, says the adage. The contrary is no less true. In the same way as the economies of those who save are found to benefit, not the savers, but the spenders, the productive efforts of the industrious, if carried beyond a certain limit, i.e. beyond the measure of their own consumption, present and future, only benefit those who abstain from effort. In all domains of social life the wicked enjoy the advantages resulting from the virtuous action of the righteous. It does not pay to be more righteous, more industrious, more abstemious than the average, unless you are satisfied with virtue as its own reward. Economically speaking, virtue is under the law of diminishing returns, which is a special aspect of the law that interests will defeat their own ends.

However, some economists claim to know of yet another way of making for general enrichment. Aftalion and Marshall approach the problem from the point of view of spending and consumption: spend less, spend judiciously. Their voice should be received with applause in the camp of the consumers' co-operative societies, where low prices are considered as the "Open Sesame" to the cave of riches. Beside the consumers' co-operatives, we have the organizations of the producers, the trade unions, and they, too, promise their members, if they will but be faithful and zealous fighters for the cause, material gain and enrichment. Not, to be sure, through the reducing of the cost of living, but through a policy of high wages. Their point of view has also found support in the science of economics. I quote from the work of one of the leading German economists of our time, Professor Robert Liefmann, *Grundsätze der Volkswirtschaftslehre* (I, p. 600):

"Perhaps the culminating point of capitalism will be reached by the time when the workers themselves become capitalists to an increasing degree, thanks to their securing such high wages as will enable them to participate more largely than hitherto in the formation of capital."

It is rather unfortunate that Professor Liefmann leaves us in the dark as to the manner in which this general enrichment of the working class is supposed to be brought about. However, his hypothesis is nothing but an inversion of the assumptions of Marshall and Aftalion. For high wages are only conceivable in conjunction with high prices, hence, also, increasing wages with rising prices. So soon as one realizes this necessity, one

cannot help the apprehension lest the high prices should neutralize the high wages, in exactly the same way as a fall of prices is no advantage to the wage-earners if wages fall in the same proportion. It may be objected that wages might gain in purchasing power and so become more substantial if, thanks to an increase in the general productiveness of industry, there were more goods to distribute. Now this assumption is ruled out by our law of the self-defeating of interests; for it says that in the distribution of wealth the creators of wealth are served last and in general obtain no share in any increase that may take place. At all events an increase of the general product of labour is powerless to raise wages unless the consumption of products is equally increased. This raises a fresh difficulty. For the workers to become capitalists, they must economize, and so they cannot spend their increase in earnings. What, then, becomes of the increase in the product of labour? Used and consumed it ought to be, and if the producers refuse to acquire it, it must fall to the lot of those who do not labour and do not save. The enjoyers of the goods, of course, are bound to consume their fortunes, i.e. use up their investments, because otherwise the new savings of the wage-earners would find no opening for investment. Indeed, the dissolution of invested wealth is a necessary condition of the hypothetical increase in wages. We should, then, have a state of things in which savings are formed only just in the proportion as savings are dispersed, and there is no general increase in the capital or wealth of the community.

Who is to benefit by the high wages of the workers? Oh, the workers, of course. It is obvious enough that high wages can only be realized at the expense of the owners of money: money investments must be dissolved and pass into wages. This process demands that money itself should be disintegrated, weakened, through inflation and depreciation, which is the only means of forcing the owners of money to spend it. But who would acquire savings in the form of money investments at a time when money depreciates? He who does so makes a present to his debtor. The workers will not save, these being the conditions; they will consume away freely. The hey-day of wages is of short duration. It exhausts the national wealth. We shall realize this consequence easily enough if we consider the case from the point of view gained by the analysis of the

argument of the advocates of economy. If wages are to increase and wage-earners are to raise their status, it is necessary that people in general shall save less, that they shall not be exacting as to the price and quality of the goods they purchase; they must be wasteful householders. And further, in the same way, as owing to increased saving the workers find less employment, more opulent consumption will thrust increased occupation on them—let us assume, for the sake of argument, that they will like the prospect. Exacting and discriminating customers call for attentive, accommodating, and skilful producers; careless and wasteful customers induce the producers to relax in their efforts and to grow slack, inefficient, overbearing: what need is there for them to exert themselves? Just remember what happened in the years after the war, when inflation was rife: wage profiteering was general and the efficiency of labour was at its lowest level. Thriftless purchasers, careless producers: a community of good-for-noughts; the foreigner, whom a desire for thrift and gain attracts to the country of good work and sound morality, will shun such a community; for not only is life here dearer and less agreeable, but business is likely to be untrustworthy and dishonest. As to those members of the community itself who do not suffer themselves to be debauched, they will take care to shift their capital abroad by acquiring foreign securities (all this has been observed to happen in real life, and I need not go into a discussion of the necessary conditions). Inflation drains the wealth of the savers and rentiers; if the development is carried to a certain limit, they are forced to retrench on their expenditure. When this point is reached high wages have defeated their own end. No formation of capital has taken place; at most there has been a transfer of wealth from the erstwhile creditors to the erstwhile debtors, the debtors having cancelled their liabilities and become free owners of the real wealth. The workers themselves are taught to understand by the inevitable reaction that high wages will not enable them to become capitalists. High wages absolute are no more possible than high or low prices absolute, for the very obvious reason that wages are prices, so that the "high wages" of every individual are balanced up, cancelled out, and rendered ineffectual by the equally high wages of every other individual, in exactly the same way as the advantage of the low price of goods which you pay is neutralized for you by the

disadvantage of the low price which you are paid for the goods of your own production. How is it possible that the science of economics, even in its high performances, has not yet got rid of this strange fallacy, the belief in absolute high or low, so many generations after John Stuart Mill pointed it out and Macleod heaped scorn on it?

The workers are to become capitalists? But who is to assume the place of their debtor? For by our theory, as elaborated in an earlier essay, capital is the reverse of debt and the capitalist the counterpart of the debtor. Workers acquiring shares in the enterprise in which they are employed are capitalists; but their shares, if they are to have any value at all, must be somebody's debt, and the debtor has to pay the dividend. Who, then, could the workers' debtors be? In other words, since the main implication of a debt is that the debtor shall work for the creditor, who is to work for the workers? Like all those economists who dream of general enrichment through the increase of capital, Professor Liefmann is not aware of the polar nature of capital: that it is one pole and not conceivable without the other pole.

I have remarked that the assumption made by Professor Liefmann simply inverts the assumption of the other two authors. However, our analysis of the case has taken quite a different course. The interest in question does defeat its own end, but it happens in quite another way. In a certain sense the economy hypothesis cannot be inverted at all, and the reason of this is not very far to seek. The reverse of economy and self-denial and thrift is ready consumption, self-indulgence, unthrift. Now it is possible for a man to economize for others, to leave for others to consume what he himself abstains from enjoying; but you cannot enjoy, consume, "blow in your money," on behalf of others. He who spends his income and fortune on himself surrenders nothing, and nothing is withheld from him. But he who abstains, saves and grabs money, gains nothing by his accumulation, except the joy of gloating on his ducats and his bonds; the real gain falls to the lot of the consumers and users of the goods. The glorifying of economy is no less foolish than the condemnation of liberal ways. According to the advocates of economy, wealth would consist in ownership, in the mere presence and having of goods, or in the legal claim to goods. The contrary assumption

must necessarily seek enrichment in the immediate enjoyment of things, i.e. in their consumption, which is their annihilation. In the former case enjoyment is entirely looked for in the future; in the latter case enjoyment must needs be a thing of the past. The present is cheated in either case: the miserly saver looks back on a joyless, hard, and lean past, unable to take any satisfaction in the present, because the sense of joy and the capacity of enjoyment have been atrophied in him; the fast liver, on the other hand, even though he may seem to be giving himself a good time, is haunted by the dread of an impoverished and precarious future. If even the interest in the virtue of providence defeats its own end, how much more the vice of thriftlessness! It is not that those who practise this vice are taught to repent and mend their ways: the vice is defeated by ruining the vicious person.

Here I must refer the reader to Professor Pigou's *Economics of Welfare* (ii, §§ 3–7), where it is contended that welfare suffers a diminution through the weakness of people in resisting the temptation of immediate satisfaction. I quote from p. 27:

> "The practical way in which these discrepancies between desire and satisfaction work themselves out to the injury of economic welfare is by checking the creation of new capital and encouraging people to use up existing capital to such a degree that larger future advantages are sacrificed for smaller present ones."

Evidently this is intended as a commendation of the virtue of thrift. The arguments in support of the idea are very ably chosen, and no doubt carry conviction to a reader who shares the prevalent, and Professor Pigou's, conception of interest. In order to see the other side of the medal, one needs to conceive interest differently. Considering how much the welfare of men depends on their estimate of human virtues and vices, how much dissatisfaction, mutual chiding, and recrimination is caused by mistaken ideals, it is not saying too much to contend that a faulty notion of interest is antagonistic to welfare. I feel the greatest and sincerest respect for the humane and generous sentiment in which Professor Pigou's great work is conceived; but I think that a good many of his conclusions and recommendations are unsound, if judged by a truer theory of interest.

Meanwhile, a new conception has obtained credence, especially in the United States, which is diametrically opposed to the creed of thrift. America is fairly seething with the idea that consumption, even beyond present means, is the true way to prosperity. The beauties of instalment payment, in other words, the extension of bank credit to the consumers of commodities, are being extolled in books (Professor Seligman) and glowing articles. At the same time Americans boast of the growth of their earnings in wages, salaries, profits, dividends. It would seem that in proportion as incomes grow and the gospel of high wages is put in practice, earnings become less and less sufficient to absorb the current output, so that credit sales have to be had recourse to at an increasing rate. The natural consequence is that prices are the higher, and so a justification of high prices has to be supplied by science. Economists are very obliging, always ready to justify the ways of men to men and prove that practice is right. In a collection of papers published under the title *America as a Creditor Nation*, by the Academy of Political Science, I find Professor James W. Angell, of Columbia University, affirming this (p. 62): "Rather, we shall have *higher prices* than we would have had without this unfavourable balance of trade, and *greater prosperity*." So, then, I close this section with a statement the exact contrary of the statement from which I took my start. In either case the statement is made by a professor of economics; but there is a significant difference: it is a Frenchman who is for economy, an American who is in favour of the opposite. It does not appear that the science of economics has yet found its bearings in the familiar region of getting and spending.

§ 2. How Far is the Law Known and Recognized?

Has the law been understood? Have men learnt to heed it and apply it so as to guard themselves against error and misdirection? Certain moralists have understood it well enough. At bottom it is one of those age-old truths which have been handed down to us from the earliest thinkers and interpreters of life; it is a commonplace of experience. However, science likes to disregard and override commonplace, and when it stumbles upon notions which, if clothed in naked and ordinary words, would be recognized as commonplaces, science will choose such expressions as to make the simple, familiar truth

appear steeped in an atmosphere of remoteness and rarity, which is the cause why people fail to recognize the truth and understand the range of its application; we forget about it in junctures in which it would be invaluable as a guide to theory and, even more so, as a guide to action.

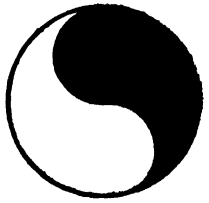
In Biblical ethics this law of ours appears couched in such phrases as: "He who exalts himself shall be abased," or: "He who seeks his life shall lose it." In the philosophy of the ancient Chinese sage Lâo-tsze, no theme crops up more frequently or insistently than the idea of our law. Here is a small selection of passages, which I translate from the German edition by Richard Wilhelm.

> "To wish to keep hold of a thing while filling it too full: it is not worth the attempt" (9).
>
> "A thing which you wish to contract you must first of all allow to expand properly;
>
> A thing which you wish to abolish you must first of all allow to display itself properly;
>
> A thing which you wish to weaken you must first of all allow to gather strength properly;
>
> Where you wish to receive, you must first of all give properly" (36).

All these phrases imply that interests will cancel out, defeat their own ends, as soon as they have begun to exceed their due bounds.

> "For beings are either increased through diminution or reduced through augmentation" (42).
>
> "He who accumulates many things must needs lose important things" (44).
>
> "No greater mischief is there than the quest of gain" (46).
>
> "Where goods are found in excessive abundance, the ruling principle is robbery, not sense" (53).
>
> "In the governance of men, in the service of Heaven, there is no better thing than moderation. For it is only moderation which teaches us to yield in good time" (59).
>
> "It is the sense of Heaven to reduce abundance, to supply want" (77).

The idea that movements and tendencies are rounded up, curbed, and forced to return to their base, and that phenomena will defeat themselves is the foundation of the graphic symbol of the *Tao-te-king*. It consists of a circle with two semicircles



inscribed in it and shows how each of two quantities, which between them make a whole, will shrink in proportion as the other is swelled. Richard Wilhelm remarks that the ancient Chinese perverted the emblem in fanciful speculations without end. I am not going to emulate them, and will leave the reader to decide whether the illustration is able to assist him in visualizing the points of my argument. At all events the quotations from the *Tao-te-king* express, though in their own very peculiar fashion, the idea of our economic principle: interests cancel out, reduce themselves to nought; they cannot expand indefinitely, because there is not space for all, because the crowding out of the opposite, on which the interest depends for its very existence, draws the ground from under its own position and causes its own collapse. Practical economy is an exchange of goods; exchange demands that there should be goods on either side. Narrow and straightened means on one side, and ample, copious means on the other side, signifies that ample has been encroaching and luxuriating; but overgrowth comes to an end when the victim of its battening has nothing more to yield up, and the fate which overtakes a luxuriating plant when its soil begins to give out must also overtake interests which have spread themselves out at the expense of other interests: not only can they not go on growing, but they must shrink, dwindle, recede.

To us Europeans this philosophy of moderation and restraint is not congenial. We are all for expansion—expansion, that is, in the sense of a steadily pursued, and supposed profitable, push forward, or upward, which we are pleased to term Progress. We are out to overcome the law of gravity which rivets us to

the surface. Owing to our lust for conquest we hate the idea of renouncing far removed and never attained ends; we aim beyond ourselves, and albeit we, every man of us, in moments of self-scrutiny and introspection, perhaps also of lassitude, and with a secret misgiving, happen to press on ourselves the query whether the saws of the wise men might not be true after all, we stoutly refuse to admit this harsh and troublesome law into our scientific research. Science will not make common cause with ordinary wisdom. Its own knowledge of practical wisdom it will disguise in a garb of strangeness, remoteness. For scientific search is a manifestation of the spirit of conquest; it points and tends beyond the boundaries of yesternoon and to-day; its strength is in faith rather than in wisdom (but there is also wisdom in faith), and thus it comes to pass that it will fail to apply the most obvious and simplest of its recognized truths when the need of it is most urgent.

I am not going to shun the unusual and unapproved course of drawing on the teachings of common wisdom, to find in them reasons in support of my argument and to establish on them my conclusions. Denounce, if you must, the method as unscientific and inadmissible in a treatise on economics. The principle which I am trying to elucidate has an ethical issue and cannot be demonstrated or proved except in so far as its ethical content is recognized.

I am far from blaming the science of economics. The economic thought of the last two generations was inevitably swayed by the influence of evolutionism. Possibly, too, rather than science it is pseudo-science which thus runs counter to the teachings of wisdom. Still, my analysis proceeds from ideas and conceptions which are contained in the works of recognized and highly esteemed authorities. These men of science do talk of moderation, but moderation to what purpose? Not that men shall manage with fewer things, but that they may have, own, possess more; not for the sake of the better balance, but for reasons of greed. No teacher of economics has exercised a more extensive and profounder influence than Alfred Marshall, his *Principles* having been the manual of two generations of economists. If within these last years the countries have been flooded with books which preach the gospel of infinite enrichment, those who speak in the name of science are in an awkward situation in their attempt to shake off the brood; science cannot

wash its hands of it, seeing that it prepared and nourished the essential error on which this pseudo-science is fed. I shall briefly mention a few of the more outstanding publications; it may serve to bring out the more clearly the purpose of my examination. Still, my criticism is not aimed at them, but will attack current science in its own stronghold.

John Law is the saint of our own time. With the help of an improved monetary system the great universal wealth and enrichment is to be brought about. In Germany this gospel is preached by the Free-Money theory of Silvio Gesell; England has its Credit Control Movement started by Major C. H. Douglas, as well as the school of Mr. Arthur Kitson, with their monthly war-cry of "The Age of Plenty." In the United States everybody, of course, believes in Prosperity, only with this difference, that whereas Europe is only going to start prosperity, America has reached the stage at which "Stabilizing Prosperity" appears as the problem of the day. Merely because the wealth of the country has been visibly increasing, Americans think that this kind of growth ought to be possible all the time and everywhere. This conception finds a ludicrously naïve expression in the book on *Profits* by Foster and Catchings, which was produced and published under the auspices of a foundation whose only purpose is to create a "scientific" doctrine in support of the creed of enrichment absolute (Pollak Foundation for Economic Research). The book of *Profits* examines the question why it is that periods of prosperity will be interrupted by economic crises and depressions, the Seven Lean Years devouring the fruit of the Seven Fat Years. Its answer to the question is to the effect that it is all the fault of the monetary system, and it is hinted that these set-backs might be avoided by a more scientific apparatus, providing facilities for the creation of fresh supplies of money, whenever the wolf Slump threatens to come prowling among the homes of Plenty: it is pronounced to be possible to make prosperity, a steady growth of savings, of accumulated wealth, of production, a normal and lasting condition—"it can be done," the authors assert in the most confident tone.

The book on *Profits*, more than anything that I had seen previously, made me realize that it cannot be done. It led me to recognize that every gain must be somehow, somewhere, counterbalanced by a loss of equal magnitude, so that there

can be no general enrichment, no profit absolute. I believe it is in *Industry and Trade* that Alfred Marshall discusses this question; his conclusion is that only the profits of the petty profit-seekers are counterbalanced by the losses of their victims, but that there are profits which benefit all society at once: economic progress is a reality. The present study is intended to demonstrate one of the ways in which the effort at general enrichment is frustrated.

I have set forth the main points of the German Free-Money theory in *The Interest Standard of Currency*. Its chief aim is to remove the obstacles which money opposes to the growth of national wealth. Its originator, Silvio Gesell, is a man of real genius, although a visionary. He evolved his ideas while he was engaged in building up a successful business of his own—in this respect his case is similar to that of Ricardo. A shrewd observer of things and practical business man, he hit upon the law of self-defeating interests. He understood that forces will perish from their own superabundance, and he set about devising a method for "drowning capital in an ocean of capital," and stifling interest in "accumulated economic fat." It is our law, no doubt about it. Only it is not the whole law, or rather, it is the law wrongly applied. For the law really signifies that any continuous current is "turned awry" and forced to flow back. The forces which tend to overcome capital and displace interest, they too are overcome, they too are paralysed, by their own success, as are the forces which tend in the opposite direction. Properly interpreted, the law signifies that forces are not to be overcome, not reduced to the point of perdition, but only kept within bounds, tamed to moderation, so that they may live and keep active in a fair and just equilibrium of an ordered Universe. It is in the application of laws much more than in the discovery of laws that the real difficulty resides.

§ 3. The Law of Self-defeating Interests in Alfred Marshall's *Principles*.

In the light of what has been shown in the preceding section, the following principle of Alfred Marshall's will bear a renewed consideration:

"We have seen that the national dividend is at once the aggregate net product of, and the sole source of payment for, all the agents of

production within a country; that the larger it is, the larger, other things being equal, will be the share of each agent of production, and that an increase in the supply of any agent will generally lower its price, to the benefit of other agents."

"This general principle is specially applicable to the case of land. An increase in the amount of productiveness of the land that supplies any market redounds in the first instance to the benefit of those capitalists and workers who are in possession of the other agents of production for the same market."[1]

The passage has been analysed above (VI, § 15). Its import is that the increase in productiveness does not benefit the owners of the land nor the increasers of its products, the workers, but those who buy and consume the products while they themselves do not contribute to the increase of the national dividend. It is the main content of our law: the reward of special effort falls to the lot of those who have not exerted themselves, while the creators of the new wealth go empty-handed. Marshall qualifies his statement by the remark "in the first instance," which seems to imply that it will be made up to them in the course of further developments. In some way or other the balance will be restored; the only question is whether this adjustment will end by raising the level generally, so that all will get more, or whether the initial profit will vanish again. The first alternative would seem to demand that those who are favoured in the first instance should in their turn make a special effort in order to contribute an increase of their own products and not be outdone in usefulness. I am

[1] Professor Pigou, in *The Economics of Welfare*, enunciates the law as follows (pp. 616–17):

"The analysis relevant to this question has been developed by Dr. Marshall. Subject to certain important qualifications, which do not affect the present argument, this analysis shows, first, that every factor of production, including entrepreneurs' work, tends to be remunerated at a rate equivalent to its marginal net product of commodities in general. It shows, secondly, that, other things being equal, the marginal net product, in this sense, of every factor diminishes as the supply of the factor increases. This proposition expresses what may be called *the law of diminishing returns to individual factors of production*—the law, namely, that the increase of production due to the increase, by a small increment, of any factor of production, will, in general, be smaller, other things remaining the same, the greater is the supply of that factor already employed. . . . There is no law of increasing returns to individual factors of production corresponding to it. The ground of it is the general fact that, as the supply of any factor increases, it pushes forward an irregular boundary along a great number of routes. The more of it there is, the smaller is the quantity of other factors, with which to co-operate and from which to derive assistance, that each new unit finds available. Consequently, as the quantity of any factor increases, its marginal net product in terms of commodities in general continually falls."

afraid it is asking too much of human nature. Such action would have to be one of deliberate collective altruism and of free will; but in economic matters there is no such thing as deliberate sacrifice for the common weal—adjustments happen in the same way as in the physical world: inequalities are levelled both down and up. The balance is restored through a redistribution of the productive agents of labour and capital. Agricultural workers will migrate into the industries so as to have a share in the benefit. This is to reduce the supply of the products of land, to increase the supply of industrial labour, and to depress the price of this labour. Urban rent on land grows, thanks to the growth of the populations, while the rent on agricultural land decreases. Securities at a fixed rate of interest go up in price, thanks to the general fall of prices, which in its turn must prevent industry from expanding. If the higher productiveness of the soil is maintained in spite of these changes, what will happen is that which alleviations of the burden of existence have always brought in their wake: more children are born and more mouths press to the feast. In this way the initial enrichment is cancelled out by virtue of the law of self-defeating of interests.

I have already stressed the point that any increase in productiveness is the result of human effort. Whether the industrial suppliers of the market in question do or do not vie with the agricultural suppliers, those who are sure to profit by the increased supplies are the pure capitalists. And, whoever may be favoured in the process, the inevitable reaction is that the favoured camp is invaded by avid seekers of gain. If the main advantage is with those who merely own without labouring, more and more people will cease to labour, so as to enjoy the full advantage of ownership. It is easy to see that the increase in productiveness merely swells the ranks of the rentiers, the idle class, which cannot fail to reduce the productiveness again. And even if this relapse could be averted, the gain would vanish. It does so through a change which takes place in the economic subject: people lose the sense of gain so soon as a condition has become stabilized; they learn to exact more, they forget how it was before the increase, and are as ready to grumble as ever.

The idea of an "increase of wealth" is too problematic. Wealth is not a measurable quantity like, say, temperature.

We know at what temperature a given metal will melt, but we cannot tell how much wealth is required to satisfy an individual or a community—we cannot, because we do not know what sort of things will be considered as wealth. Certain it is that to keep individuals and communities satisfied a given quantity is not sufficient. However, Marshall and Aftalion and Liefmann believe in an "increase of wealth." Though, in the first instance, the increase adds to the comfort of one section only, in the last resort the increase is supposed to redound to the benefit of all, "in widest commonalty spread": interest may be permanently depressed, prices may be definitely lowered to all consumers, wage earners may all rise to the estate of capitalists. Marshall knew the law of self-defeating interests; but he did not apply it, he was blind to its implications. The fact that a gain in productiveness is necessarily one-sided, and goes to the wrong side at that, should have taught him, and should teach us, that it cannot endure; it is cancelled by the loss resulting from the cost in energy of restoring equilibrium.

I next refer the reader to the passage concerning the benefit conferred upon labour by capital (see VI, § 13). I have pointed out that capital, on these terms, would refuse its collaboration and go on strike. Marshall did not draw this conclusion, although it is certainly inherent in his assumption. He did not draw it, because he had not observed the thing to happen. The assumption is wrong. It is not true that the workers are benefited by an increase of capital. They are the producers of capital, and, according to our law, those who furnish and supply the increase receive none of it, the gain going to those who own, or are owed, the money, i.e. the creditors; in other words, those who laboured and saved in the past or have inherited savings. The dead hand receives what the live hand creates and, for the sake of economy, forbears to carry to the mouth. Money capital, therefore, will never go on strike, however low the rate of interest may fall.

Marshall does not say that capital ever uses the strike as its weapon; but he also failed to see that it really ought to, considering what the circumstances implied in his premises are. If it is proved that benefit is one-sided and wrong-sided, the inevitable consequence is that the other side will withdraw from the partnership, which means that the mechanism ceases to function: the interest in increase has defeated its own end.

How could Marshall fail to see this? How is it possible that this simple truth should have escaped the science of economics? Marshall had come very near it; he had it within his grasp when he established the principle that any increase benefits in the first instance, not the increasers, but the consumers. A fuller application of the principle was shut out because it runs counter to a fallacious theory of interest and price. For properly speaking, our law does not contain anything that is not already contained in the law of supply and demand. Any increase on one side redounds to the benefit of the other side through a change in price, a change, that is, in the value of money. As Marshall has it, "an increase in the supply of any agent will generally *lower its price*, to the benefit of other agents." Saving—since any increase in supply is in the last resort the result of saving—causes a diminution of demand, and, consequently, damages those who supply the goods, the producers and the owners of the goods. They have only one remedy against this damage: they reduce their output (goods already finished must as a rule be supplied). As much as is added to the stock of goods by the abstinence of the consumers is necessarily subtracted from it through the abstinence from the supply of productive labour. But there is no ground in reason for making a grievance of this; for after all, we do not produce goods merely for the sake of having them; they are intended for use and consumption. Left unused, they consume themselves, for all our efforts to preserve—to save—them. So soon as the general level of prices sinks, it is a proof that too many goods are supplied, really and truly too many, not only seemingly. For anything that finds no purchaser and cannot be put to any use is in excess. (For so long as the owner of a merchandise believes in its utility, he will keep on purchasing it of himself rather than cast it away; this is particularly the case with inventions, works of art, scientific writings which are slow to find any recognition.) What has been said of prices holds good of interest: falling rates of interest signify that too many capital goods are being supplied—not merely relatively, but absolutely, too many. More have been produced than are called for; but one does not persist in making things which are not in demand: production is stopped. And this is the reason why the rate of interest cannot fall indefinitely down to zero. It could do so only if price, too, fell to zero; for the

law of interest and the law of price are one and the same law. It is this truth that economic theory has not yet grasped: it makes the law of interest the reverse of the law of price.

§ 4*a*. GUSTAV CASSEL'S CONCEPTION OF THE PRINCIPLE.

I shall undertake a detailed criticism of Professor Cassel's theory of interest, and therefore must show what this writer knows of the law of self-defeating interests. The passages dealing with the problem are all to be found in the chapter on "The Wages of Labour," of his *Theoretical Social Economics* (I translate from the German original, *Theoretische Sozialökonomie*, 2nd edition). He says (p. 271):

"In reality an increase in productiveness which is brought about by an increased contribution of labour does not necessarily fall entirely to the lot of labour in the form of increased wages, but in general will also benefit the other agents of production. It is only when the contribution of labour can be increased without a simultaneous increase in the demand for land and capital that the increase in productiveness can wholly fall to the lot of the workers in the form of increased wages. As a general rule, however, an increase in the productiveness of labour will bring about a new situation which is characterized by a relatively heavier demand for the remaining agents of production, and therefore a relatively worsened position of labour. Labour, then, is unable to secure the full amount of the increase in productiveness. Thus wages do not depend only on the amount of labour contributed, but also on the other agents of production."

This agrees fairly well with Marshall's principle and with my own interpretation of the matter. But the idea is presented in a halting fashion, with mental reserves and verbal circumlocutions. I do not admit the one qualification which Cassel introduces, namely, that labour would be exclusively benefited if the demand for land and capital were not increased. There is surely bad logic in this assumption. For if land and capital are more urgently demanded, the implication is that they contribute to the increase; why, then, should they not obtain a share in the product? While it is a question of determining how labour is remunerated for an extra effort, we must eliminate any extra efforts of other agents. It will then appear that labour is the more "exploited," cheated, that is, of the product of its efforts, as it does more thoroughly without the

other agents—provided, of course, that its products are marketed in the ordinary fashion. What Professor Cassel seems to mean can hold good only in a primitive state without division of labour and without a market. He forgot about the law of price, about the curious action of money. His statement of the principle is vastly inferior to Marshall's, and he is much farther from the truth than the English economist. In subsequent passages he makes matters worse by relinquishing his feeble hold more and more. For instance (pp. 279–80):

"Considering that the aggregate demand is determined by the aggregate supply, and the latter, in its turn, depends on the aggregate labour furnished, rising with it and falling with it, it is obvious that a general reduction of the collective contribution of labour may in certain circumstances cause the relative share in the aggregate product falling to the lot of labour to increase; but in general it must curtail the absolute share of labour. In studying the problem of wages it is particularly important to stress this general dependence on the aggregate result of production of the reward of individual agents of production, considering that the aggregate collective contribution of labour is not determined by the mere number of workers, but also depends on the will of the workers. It is because the dependence of wages on the aggregate result of production is not clearly understood that the policies of organized labour are only too often influenced in the wrong direction."

Professor Cassel here introduces the factor of will, by which he means conscious volition, the spontaneous willingness of workers to exert themselves for the benefit of the whole community. Will is, indeed, an essential factor and the foundation of our law of the self-defeating of interests: interests come to grief when the individual will is warned that its efforts benefit other individuals. The closing sentence of the quotation is evidently aimed at the endeavour of organized labour to limit the workers' contribution (it need not be carried to the point of sabotage or ca'canny). Professor Cassel hints that this policy defeats the real interests of the workers. He overlooks the fact that man does not live by bread alone, but cherishes some other interests besides, such as his personal pride, which forces him to safeguard his dignity and ward off any curtailment of his just claim. Even though the workers, thanks to generally increased effort on their own part, may obtain larger quantities of goods, they will not feel this as a gain, if they happen to observe that those who labour not gain even more than they.

For they compare their gain with their sacrifice and discover that the latter exceeds the former—since part of the total gain, due to their sacrifice exclusively, goes to others. Their increased effort (sacrifice) is in the line of diminishing returns. The sense of doing more for others than for themselves is unendurable; they resist this "exploitation" by giving themselves an easier time, by desisting from extra effort, by moderating their zeal—and they are impenetrable to the theory of the most famous of professors.

Most strange appears to me Cassel's proposition as to the relation between demand and supply on the one hand, and between supply and the contribution of labour on the other hand. Superficially considered, it might seem obvious enough that supply should rise and fall with the contribution of labour; however, the facts of reality do not bear out the assumption. There is such a thing as speculation in commodities, which will withhold stocks in periods when production is at its busiest, and force stocks on the market when production is already at a standstill. One conclusion from the statement is to the effect that demand grows along with output. It is not easy to see how, if this were true, stagnation could ever paralyse industry. There seems to be a sort of unconscious reminiscence, a ghost, of the wage-fund theory in the argument: in proportion as the means of subsistence are increased in quantity, more means of subsistence can be and are produced—the wage fund being considered in much the same light as the farmer looks upon his store of fodder. It is the exact reverse of our law, and I ask: do men, such as they are, grow more industrious as they grow wealthier and become conscious of their wealth? If that were so, the mother of invention would not be necessity, it would be ease, and the sturdiest workers would spring from the lap of plenty. Surely Professor Cassel flouts the wisdom, not only of the sages, but of everyday observation and common knowledge. He reiterates the assumption in the following passage (p. 290):

"Any circumstance which heightens the efficiency of collective production will strengthen the general demand for labour and so tend to raise the general level of wages. Consequently 'labour' is vitally and collectively interested in a maximum efficiency of the entire productive process being maintained, however often this interest may be disregarded in actual life."

It is true enough that more labour is demanded when production is to be increased. But Cassel represents aggregate production as determining demand: first of all you produce away without any regard to demand;[1] demand will suit its pace to supply. A few lines farther on he says: "If the volume (intensity?) of aggregate demand is determined by the aggregate yield of collective production." This can only be interpreted to mean that more labour is demanded after production has been increased, and the more the workers achieve, the more are workers sought after. Yes, indeed, after quantities of new productive facilities—workshops, factories, fields, ships, schools, hospitals—have been set up, more workers are required to man and run them. But as a regular rule what happens in actual life is that in just this situation workers are dismissed in great numbers, and aggregate earnings of labour shrink away. The process ends in the discomfiture of labour, masters and men alike. This being the case, the appeal on behalf of the common weal leaves the workers adamant. For, as a matter of fact, the gain is not common to all, not collective; it is a very particular gain of the owners of money and claims to money. Cassel admits that the workers can improve their relative share in the wealth produced by limiting their relative contribution (p. 290):

"The case is different if it is a question of a reduction of the aggregate contribution of, say, bodily labour. A reduction of this kind will yield to bodily labour, as compared to the other agents of production, a relative advantage; but at the same time it causes a considerable diminution of the national dividend, and consequently a weakening of the purchasing power of aggregate demand, which must materially impair the labour market. It is always to be expected that this damaging effect may overbalance the former favourable effect."

If it is true that a reduction of the contribution of labour increases labour's share, albeit only relatively, it must be equally true that an increase of the contribution decreases labour's share. If, furthermore, it is true that the common

[1] It is an erroneous conception of the nature of capital that has vitiated Professor Cassel's argument. He considers capital and goods, money wealth and real wealth, as distinct and separate quantities: after more money wealth has been created, real wealth must also be increased; or, in other words, the creation of mere money out of nothing, gratuitously, will bring in its wake the creation of real wealth. Translated into terms of human behaviour: when men have well-filled purses, they shun amusements and treats to scramble for jobs!

ruck of men, in their capacity as business men (buyers and sellers) cannot be brought to persist in activities which benefit others more than themselves—in proportion to the contribution of each—it follows that activity is suspended as soon as the situation is declared.

We have discussed Marshall's idea of the relation between capital and the income of labour: this idea represents capital as conferring a benefit upon labour. Here is Professor Cassel's view on this question (p. 296):

"An increase in the wealth of capital (*Kapitalreichtum*) increases the efficiency of collective production, and therefore also the aggregate dividend, thus strengthening demand generally. An increased supply of capital, while the supply of labour remains unaltered, causes the situation of labour to be relatively improved. Both these circumstances combine to raise the wages of labour. From this point of view the working class is undoubtedly always strongly interested in the maintenance and augmentation of the collective wealth of capital."

This agrees with our law in so far as, according to it, those who are not capitalists must be benefited by an increase of the "wealth of capital." The only question is whether this favoured class really comprises the workers, that is, the producers or creators of the wealth. For by "wealth of capital" only one thing can be meant: available means of subsistence. The wages of labour can be increased by such wealth only if it is spent and diminished, to fall, in growing shares, to the lot of the workers. But while it is being formed, or increased, the wages of labour must be damaged, suffer a diminution; for it is formed out of the products of labour which are abstracted from the income of labourers. This necessity is very neatly demonstrated by our author in his section on "Interest in a Socialistic Society"; so I need not go out of my way to prove the case. It follows that the workers have nothing to gain from an increase of the volume of capital, considering that it is they who furnish the increase and make the necessary sacrifice. At best their descendants may come to enjoy some little remainder of it, supposing that they take care not to multiply their numbers. At all events we have to keep in mind that the maintenance of wealth demands as much labour as does its creation. In so far as capital consists of means of production, an increase of it will demand more labour; it calls for a greater sacrifice on the part of the workers; the com-

modities, meanwhile, which are turned out from these additional means of production in increasing quantities go to those who have contributed the money, while the workers themselves must go empty-handed. If it is here objected that the standard of living of the working classes has been materially improved, I shall raise some counter-objections. Has it been improved in all countries—in Germany, Austria, Rumania, Italy, Russia, China, India, no less than in England and the United States? If it has improved, it was at the expense of other sections of the community; in many countries the wealth of those who had saved before the war has been wiped out. And further: have the workers become more contented? They will not learn to compare their own opulence with the indigence of "old, unhappy far-off times"; they compare their portion with the aggregate wealth produced, and are fired with wrath if they find that the ratio is becoming less favourable: their will to work shrivels away, and the interest of the increasers in the increase of capital wealth is defeated.

So, then, Cassel does not really accept the law; he refuses to submit to its behests. The conclusion from his theory is that the workers have it in their power to keep the wheels of industry turning and to attract the gain to themselves. This attitude has led him to a very peculiar conception of economic progress. He says (p. 305):

> "Any economic progress depends on whether or no the supply of labour in its ratio to the supply of capital shall be more and more limited. A more equal distribution of the national dividend in itself is not enough to upraise the working classes. It is only on condition that a sufficient increase of capital takes place, while at the same time the growth of the population is duly held in check, that any permanent gain can be secured for the working class."

Surely the question here imposes itself how an increase of capital is to be brought about while the supply of labour is being more and more limited. Who is to run the plants of which capital is composed, if not the workers? But what Cassel designates as progress implies that people shall work less and less while productive facilities are becoming more and more plentiful. Society cannot, as a whole, have any interest in this kind of progress, which is nothing but a lure bred from a fallacious theory. Better not talk of progress at all. There is no such thing. It is only a see-saw, which raises or depresses now one

side, now the other. The increase of capital—but really I feel guilty in adopting this stupid, senseless phrase—is brought about at the expense of the workers; the enrichment of the working class is only possible if the owning class, the creditors, cede part of their wealth and so consent in the diminution of this precious capital.

Professor Cassel is a determined believer in progress. He is convinced of the reality of progress to the extent of having measured its pace, 3 per cent per annum being the exact figure arrived at. Rather curiously his one criterion of progress is the amount of gold that is rendered available from year to year. The case which he makes out is of the poorest sort, worthy at best of the pseudo-science alluded to above: more gold, more money, and more "wealth"! We are to believe that it is all a matter of quantities. I maintain that nothing of the kind is true. Either the increase in the volume of gold is absorbed by a proportionate increase in the populations, or else by a proportionate rise of the price-levels—unless, indeed, the gold be consciously immobilized in the cellars of banks or in Indian hoards. Shall we call these developments progress? The growth of populations gives rise to very serious evils and is bound to end in destructive wars; inflation is an evil whether it is 3 per cent or 30 per cent a year; the hoarding of gold is a form of fetishism. Surely progress which is measured in terms of gold and which depends on gold is an illusion; true science cannot entertain the idea.

§ 4*b*. Professor Pigou's Interpretation.

Professor Pigou in *The Economics of Welfare* makes a very detailed and searching analysis of the matter under discussion.[1] On the whole, his conclusions agree with those of Marshall and of his Swedish colleague. He says (p. 620):

> "It is not, in present conditions, practically possible that a cause . . . operating to expand the national dividend by increasing the supply of capital generally should at the same time lessen the real income of labour. Similarly, of course, it can be shown that a cause operating to contract the dividend by diminishing the supply of capital generally, cannot at the same time increase the real income of labour."

I do not affirm that an increase in the supply of capital lessens

[1] Pt. IV, chap. iii, *The Supply of Capital and Labour.*

the real income of labour; but it may lessen the relative share of labour, and is sure to do so while the quantity of capital, in terms of "instrumental goods," is being enlarged: labour—in which mental and moral effort is, of course, included—does all the work and so makes all the sacrifice, while part of the product goes to those who have not laboured. If the share of labour is thus proportionally lessened, those who have made the sacrifice are bound to resent this as an injustice; their satisfaction is lessened, and nothing can soothe them into contentment. I fail to see where welfare could come in when contentment goes out.

According to Professor Pigou it is not only an increase in the supply of capital that adds to the dividend making the portion of labour, but also (p. 625):

"an increase in the supply of labour, whether through an increase in the number of units of labour of given efficiency that the average workman provides, or through an increase in the number of workmen providing, on the average, a given number of units of labour, must increase the absolute quantum of dividend that labour in the aggregate receives."

The antagonism between capital and labour is thus obliterated, since an increase in either one or the other has the same effect on the dividend that labour in the aggregate receives. There is, however, no real fault of logic involved, for the simple reason that capital, in the sense in which the term is employed, comes out of labour, so that an increase of capital is the result of an increase of labour. The argument becomes faulty, because it leaves out of account the existence of the negative hemisphere of the economic universe: debt, and its necessary counterpart or reason of being, namely those sections of the community which do not contribute anything positive to the dividend, in so far as they consume more than they produce. Apart from this oversight, there is in the case which Professor Pigou makes a curious partiality. He says (p. 626):

"When, however, the increase of supply comes about through an increase in numbers, the absolute share *per man* is lessened, despite the fact that the absolute share of the group as a whole is increased."

From this one would naturally conclude that labour is a loser in the bargain; but no, the conclusion is to this effect:

"Hence, in all senses, the diminution of real wages per head of the working classes would be very small. Consequently, it seems reasonable to conclude that an increase in the absolute share of labour, even when it results from an increase in the numbers of the population, will carry with it an increase in the economic welfare of working people."

What powers of persuasion might be needed to make working men swallow this doctrine! It strikes me as sheer prejudice, and if the chief reason advanced is that the goods which constitute the real income of English workers are mainly imported, I venture to object that it makes matters all the worse: it is special pleading to screen prejudice. I do not charge Professor Pigou with having consciously stultified his conclusion; but surely he is a victim to a preconceived idea—progress through more work at any cost—which, in its turn, must impose itself on any one who accepts and consistently applies the current theory of interest.

It is the same biased attitude which has prompted Professor Pigou's treatment of "the difficult problem of capital investment abroad." He thinks that in the long run working people are rather benefited by the export of capital; he says (p. 622):

"Thus, freedom to export capital at one time exercises a twofold influence in enlarging the aggregate real income of the country at a later time. It follows that, other things being equal, the amount of new capital that can be created there at a later time will be enlarged. This effect will repeat itself cumulatively year after year. In the end, therefore, if we suppose the amount of capital exported to remain constant, the extra capital created on account of past exportation must, it would seem, exceed the amount withdrawn by contemporary exportation. This means that, in the end, labour as a whole will be benefited and not injured."

If this is correct, what must be the consequence when the export of capital comes to an end, and the inevitable turn of the tide sets in, capital being returned to the lender country? Unless the capitalists, i.e. the investors whose foreign loans are repaid, consent to consume their substance, the workers will suffer from unemployment. For it cannot be imagined that industry, under the circumstances, will expand, or even maintain its previous activity, notwithstanding the fact that the traditional theory of interest would seem to demand this, in so far as it teaches that an afflux of capital seeking investment and depressing the rate of interest is a stimulant to enterprise.

The export of capital is an excess of exports of goods over imports; hence the repayment of foreign loans must be an excess of imports over exports, and that means a fall of prices all down the line. Professor Pigou does not envisage this eventuality, and I surmise that he was prevented from doing so, unconsciously, by the awkward conclusion to which the case would have forced him—the admission, to wit, that an economic gain which a country realizes in one period has to be paid for by a loss in another period, which is contrary to his general economic creed. And so he represents the export of capital as an unmixed advantage, a sure means of enrichment to the nation which has once captured the good opportunity. There is in his book nothing that could be cited as not betokening a kindly disposition to the world at large; he is not an imperialist. But imperialist politicians cannot but make use of his argument to foster in the people the spirit of commercial expansion, the lust for markets. It will not do to examine and present only one side of the medal, and it certainly is an error to imagine that what benefits one party in a special way does not injure the other party. The interest in exporting capital must also defeat its own end, if it is carried to excess. Either the loans are never repaid, or they are consumed in paying for a war that is brought about by the tensions resulting from capital export, or their repayment creates a chronic state of unemployment. All of these effects we of the present generation have had occasion to experience. When is the science of economics going to learn the great lesson?

There is one more point which I should like to raise in this connection. On p. 616 we read this:

"Capital, or to put the same thing in concrete terms, capital instruments are the embodiment of labour itself, waiting for the fruits of labour, and uncertainty-bearing. Consequently, apart from inventions and improvements . . . an increase in the supply of capital instruments can only mean that people have been willing to undertake more waiting for the fruits of labour and more exposure of those fruits to uncertainty. In other words, the supply of waiting, or of uncertainty-bearing, or of both, has been increased. It is obvious that a cause of this kind will make for an increase in the national dividend as a whole."

Labour (exertion), waiting (subduing one's desires, denying oneself), uncertainty-bearing (worry and sleepless nights) are the factors which must be supplied in increased quantities if

the national dividend is to be increased and economic welfare advanced. The gain has to be bought at the price of sacrifice; men must undergo hardship that society may be enriched. But there are always those who will not share the burden of hardship, and they benefit directly by the effort of the more virtuous members of the community. The generation which furnishes the extra exertion makes a free gift to the survivors of the preceding generation and to those who are born to the increased wealth, i.e. to the old, who have retired from active work, and to the young, who have not yet begun to work; as also to those who, though neither too old nor too young, do not choose to work. In fairness to Professor Pigou, I must remark that in spite of his zeal for increase in wealth and welfare, he is in favour of all sorts of good things for the workers and the poorer classes: more leisure, better houses, freedom from uncertainty as to employment and income. That is to say, he does not want them to work harder, to wait longer, to help in bearing uncertainty, which are the three requisites to an increase in economic welfare. But where, then, is the increase to come from? His mighty book has not convinced me that it can be done. The promises which it holds forth are all contained in the premises; but when it comes to proving the point, they resolve themselves into a caution, a vague possibility. In the concluding paragraph of the chapter "Direct Transferences from the Relatively Rich to the Relatively Poor," he says: "The general result of this analysis is, unfortunately, very nebulous." It is a brave confession. It fits the whole no less than the part. But that does not imply that it is a wasted effort, far from it. This book goes a long way to prove that the problem of the wealth of nations and its increase is the perpetual motion illusion of economics and had better be dismissed from the list of possible subjects.

§ 5. Once More the Relation between Interest and Price.

An increasing supply of capital along with a decreasing supply of labour—or, in other words, falling rates of interest in conjunction with rising wages: that is what the last quoted proposition of Professor Cassel amounts to. But we have found that certain principles of Marshall's are based on the same conception (see essay VI, §§ 6 and 13). It is the theory of Macleod

and all the rest, as I have shown in the first of these essays. But since both Marshall and Cassel make it more particularly a question of wages, and since "the will of the workers" is called into court, I must here return to the subject once again. First of all I would remark that wages are inseparably bound up with prices. The relation of wages to interest cannot be different from the relation of prices to interest. Both Marshall and Cassel teach that wages are the more substantial as rates of interest are lower. Here, now, is the testimony of one who for a long time was considered as the great authority on the problem of interest, Böhm-Bawerk. His most easily accessible utterance on the subject is the treatise on interest (*Der Zins*) in the third edition of the *Handwörterbuch der Staatswissenschaften*. Here we read as follows:

"It is furthermore certain that a progressive fall of the rate of interest is likely to cause a not inconsiderable redistribution of the national dividend in such a way as to reduce the relative share of the owning classes and to augment the share of the working classes. . . . The direct influence of the rate of interest itself, however, must be looked for in the field of the distribution of the product as between the capitalist and the worker, and in this respect a low rate of interest should assuredly be looked upon as a welcome cause of the improvement of the economic status of the mass of the population."

The fundamental fallacy in this contention shines out from the following consideration. If a fall in the rate of interest benefits the mass of the unpropertied labouring classes, those periods in history which show a falling rate of interest—"progressive"—must be distinguished by a marked improvement of the standard of living among these sections; one would expect them to have been in a condition of comfort and contentment. According to the same treatise of Böhm-Bawerk's, periods of falling rates of interest in the nineteenth century were the years from 1815 to 1845 and the years after 1871. Were these really times in which the wage-workers, farmers, debt-ridden landowners, tradesmen, entrepreneurs, dealers were specially favoured? They were for them times of distress. Need I remind the English reader of Charles Dickens's and Kingsley's denunciations, of the earlier riots and the later Chartist Movement after 1815? Need I remind Professor Cassel of the *Sozialistengesetz*, the Bismarckian repressive statute against the German socialists after 1871? The masses

of the people were in such dire distress that their sufferings found vent in violence which was met by violence. A progressive fall in the rate of interest, while it lasts, does not favour those engaged in productive work; it oppresses them.

A progressive fall of the rate of interest might be expected to favour the working population, if another assumption of the theory of interest held good, to wit, that the fall stimulates enterprise. Böhm-Bawerk expresses this idea as follows:

"Thus everywhere a practically unlimited need of capital for productive purposes is face to face with a supply which, represented as it is by the actual wealth of capital, is in any case limited, and hence inevitably insufficient to satisfy to the full the existing demand."

From this shortage of supply results, in the first place, the fact that interest has to be paid, and, furthermore, that not everything can be supplied that happens to be desired. Claims to the assistance of capital have to be submitted for selection, they must be approved by the "ballot of the dollar," as Americans have ingeniously styled the process.

"Selection in our assumed case will necessarily come about in the following way: the more profitable uses of capital in production, thanks to the superior backing by investors, will be preferred to the less advantageous uses."

The gist of this statement is that not until interest has fallen does it begin to pay to construct railways in the remoter regions of the country. Can it be conceived that the height of interest should decide whether the first railway line is going to be laid in a densely or in a sparsely populated region? Evidently not. The proposition of Böhm-Bawerk amounts to the idea that when some new departure in enterprise is put into operation, the rate of interest must be high; in proportion as more and more railways are set up—along with all that goes with railways, such as an expansion of trade and industry—the rate of interest must fall so as to render new enterprises remunerative: such is one of the deductions from the proposition (although Böhm-Bawerk was careful not to make it). No branching out of the tree of enterprise would take place if the rate of interest did not fall. It is the logic of perpetual motion: as a cause produces its effects, it becomes all the more effectual; the more it spends itself, the more has it left to spend. With a

reduced rate of interest—while it is being "progressively" reduced—more and more enterprises are set on foot, more than would be possible with an unreduced rate; the reduction, however, is a consequence of the enterprises started when the rate was higher. Every new enterprise adds to the aggregate yield of enterprise; the addition causes a further fall in the rate of interest, which in its turn again is a stimulus to renewed enterprise. Uninterruptedly does the effect lend increasing impetus to the cause. By the time when everything has been made and interest has fallen to zero, industrial activity will be infinite; for if a falling rate stimulates industry, the vanishing of interest must . . . must what? Can you conceive the thing? According to Böhm-Bawerk, and Marshall, and Cassel, and Gesell, it must intensify the desire for, the interest in new things, and the pace of production, to an unheard-of degree.

We find Professor Cassel holding the same view as Böhm-Bawerk: he says (p. 186):

"The rise of the rate of interest, of which business men complain so vehemently and which politicians ascribe to all sorts of maladjustments, has a very definite and very important economic function: among all the desires which put in a claim to the assistance of capital, natural selection must take place. Only the most important claims can be satisfied; it is necessary to exclude all the others, at least for the time being. . . . The most important are those that have the greatest power to pay, and that means, in the present case, those which are able to bear the highest rate of interest."

"How, then, is this demand held within bounds? The limitation is brought about by the fact that the disposal of capital demands the payment of a price, to wit, interest. The necessity of paying interest at a definite rate cuts off a quantity of possibilities of satisfying human needs through the use of durable goods. The demand for capital, therefore, is heavily compressed, and has a considerable degree of elasticity. There is always in existence a fund of latent possibilities for the profitable use of capital for the purpose of exploiting durable goods. As soon as the rate of interest is ever so little reduced, a certain part of this fund is liberated and the possibilities in question are realized. Every further reduction of the rate of interest liberates an increasing quantity of capital investment."

I do not deny that interest is the governing force in the choice of enterprises; on the contrary, I know of no other ruling principle. What I do contest is the opinion that a higher rate of interest should inhibit what a lower is supposed to liberate. Cassel overlooks that the high rate of interest which frustrates

the wishes of those who have to pay it also raises the income of the people who are paid interest and so enables them to satisfy their desires the more freely. As much as is taken away from one set is added to the other set. The higher rate of interest is considered as the preventer, because the relation between the rate of interest and prices is not rightly understood. So soon as you concede the patent fact that the level of prices will rise with the rate of interest, the conception of a higher rate being the preventer is defeated.

We have found Alfred Marshall upholding the same notion as Böhm-Bawerk; he teaches that the hat industry will branch out into more and more machinery and opulence in proportion as the rate of interest is lowered.[1] I shall now quote two more authors to the same effect. Frederick Bendixen, a prominent Hamburg banker and author of a number of widely recognized books on questions of monetary theory, says in *Das Wesen des Geldes* (p. 58):

"The high rate of interest signifies that the available liquid capitals are finding such remunerative employment that enterprises which promise a more modest yield cannot, for the time being, be operated."

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[1] Professor Pigou, the successor of Marshall and his very able interpreter, remarks in a footnote to his enunciation of the law as quoted above, p. 327:

"In illustration, it may be noticed that, as the rate of interest falls, instrumental goods come to be built more solidly and to be repaired and renewed more readily when need arises."

I take this to signify that as instrumental goods yield less and less to those who own them, more and more work and care is expended on them. The assumption is stripped of its last shred of plausibility if we remember that those who make it affirm, at the same time, that prices go up as the rate of interest goes down. At that rate the cost of production would grow in a double proportion—more labour and dearer labour—and there would be two deterrents in the place of one—besides the prospect of an inevitable fall of prices and the consequent depreciation, in terms of money, of the object after completion. However, by my theory prices go down with the rate of interest; in this case the more money cost of production is actually low when interest is low, and this constellation would constitute a real inducement to the assumed course. But do not let us jump at a hasty conclusion. What is a low price? It is a subjective feeling which, like all feelings, does not last. After the price has remained the same for a certain period it is no longer felt as low, and there is no special gain for those who have sunk money in uncommonly substantial instruments of production. Practical business men, unlike theoretical economists who reason from an untried dogma, look both ways before they make a decision: they compare cost with probable yield. A low rate, say, a bottom rate, of interest is a positive inducement of the indicated kind in so far as it is the surest safeguard against a further fall of prices and a fairly safe promise of a rise of prices with consequent appreciation of the object after completion. Thus my theory furnishes valid reasons in support of the contention of the marginalists, which their own theory certainly does not. Still I do not support the contention; it is not a low rate of interest that produces the happy effect, but a stable rate insuring stable prices. The influence of interest becomes operative through its action on prices.

Obviously what the author means to say is that in consequence of a high rate of interest many enterprises are excluded which would be possible if the rate were lower. Hence, in times of high interest rates, enterprise must be languishing. But what is it that has raised the rates and is keeping them high, if not the fact that business is particularly active? Although it is true that enterprise does begin to droop when the rate of interest has reached a maximum and cannot rise any higher, it remains equally true that a really poor state of business never coincides with rising and high rates, but always with falling and low rates.

The same idea as Bendixen's is implied in an incidental remark which I find in a review in a leading German economic periodical. It is to the effect that "certain enterprises cease to pay when the rate of discount is raised."[1] No doubt, the statement is correct; only it needs to be interpreted rightly. The raising of the rate of discount is the manifestation and, at least in the initial stages, the driving force of an economic expansion and inflation. Many new enterprises spring up, which attract raw materials, labour, credit. They withdraw these agents from the total supply, which is not increased. However, there are enterprises which are not favoured by the development, so that their products are not able to participate in the general rise of prices, while they themselves have to pay higher prices for materials and higher wages. Naturally, they cease to pay; they fall behind and become derelict. The higher discount does not mean that less is being undertaken, even though certain enterprises perish in the process; it means the contrary. The weak enterprises drop out of the bottom of profitableness, because the bottom is raised, or, in other words, because the average profits of enterprises grow bigger. Shall we say thanks to the higher rate, or in spite of the higher rate? It makes no difference: the higher discount rate is the expression of increased activity and higher average profits—real profits in the first instance, mere money profits later on.

Another writer of high repute, Knut Wicksell, writes in *Geldzins und Güterpreise* (p. 82):

"An easing of credit (i.e. the lowering of the bank rate) always creates a tendency to enlarge production, or rather business operations in

[1] *Schmollers Jahrbuch*, vol. 51, No. 6.

general. This, however, does not imply that an increase of output will actually take place. . . . However, this increase of activity is far from being an obstacle to a rise of prices; much the reverse. The fact that in consequence of the easier lending terms the demand for raw materials, for labour, for land . . . as well as, directly and indirectly, for consumption goods exceeds the supply, is the decisive factor which forces prices to rise."

A lowering of the rate of interest is described as an easing of credit, and an easing of credit is of course tantamount to an easing of business, a stimulus to enterprise, a help for industrialists and workers and, finally, a special source of gain for producers, thanks to the rise of prices which is supposed to result from the fall in the rate. That is where economic science stands at present with regard to its understanding of the connection between the rate of interest and the level of prices, and of the forces which make now for the slump, now for the boom.

I have furnished the reasons to prove that this theory is fallacious and has been disproved by events most conclusively. When "capital is increased," the rate of interest falling in token of it, it is not only the rate of interest that gives way, the working incomes too are weakened. The current theory of interest overlooks this fact; nay, it inverts it and supposes wages and profits to rise as interest falls.[1] Look at Böhm-Bawerk's argument. In examining the manner in which a fall of the rate of interest influences "the distribution of the national dividend," he contends that the fall does not imply that the sums actually paid out as interest should thereby suffer any diminution. In proportion as the rate decreases, the sums of the investments bearing interest are increased: there are now two milliards where there was only one milliard, and two milliards at 2 per cent yield as much as one milliard yielded at 4 per cent. It is the kind of arithmetic that boys are made to do at school. What does it all signify? Böhm-Bawerk imagines that the price of capital goods is not affected

[1] I know of only two utterances which contradict this theory. In the newest edition of the *Handwörterbuch der Staatswissenschaften* the author of the article on "Börsenwesen," in discussing the factors determining the price of shares, says: "As, however, rising rates of interest as a rule go with rising prices and rising profits. . . ." This agrees with my theory; but in my quest of further confirmation up and down the tomes of this cyclopædia of economics I have only found passages which contradict it. The case of Professor Taussig has been quoted above, VI, § 16, footnote.

by a fall of the rate of interest, so that double the number of houses, of factories, of railways, of ships, of fields, and farms are worth double the sum in terms of money. All while the number of the population, i.e. of consumers, is assumed to remain stationary. This condition, to be sure, is not mentioned in the argument; however, it no doubt is an essential condition of the fall in the rate of interest. The science of economics knows that in the commodity market a doubling of supply will cause prices to fall, and to fall fast and far. How is it that the most famous specialist of his time on the problem of interest could have vented, in a cyclopædia of economics, views which, if properly reasoned out to their logical conclusion, subvert the law of price? It is because the science of economics has not reasoned out its theory of interest; it has not yet come to understand how alterations in the rate of interest and alterations in the level of prices stand to one another. I refer the reader to the paragraph on the problem of capitalization in the preceding chapter. The error of Böhm-Bawerk is the same as that of Marshall there criticized.

Böhm-Bawerk raises the question how far the rate of interest could fall without the owners of money being impelled to withhold their funds. He thinks that 2 per cent would not be the last limit. As we have seen, Alfred Marshall does not approach this question at all; he thinks negative interest possible. Which of them is right, or less wrong? It seems to me that if a fall in the rate of interest does produce the effect assumed by Böhm-Bawerk and by Marshall, to wit, a curtailment of the capitalist's share in the aggregate dividend, the withdrawal of capital would needs set in as soon as the rate of interest begins to flinch. Marshall observed no such consequence and therefore did not see what could stop the development. He was right in so far as this sort of obstruction does not take place. Böhm-Bawerk is surely wrong in supposing that the obstruction would not become effective till the rate had fallen below 2 per cent. The true logic of the assumption is furnished by Silvio Gesell. But that does not save him from error; for the premises themselves are untenable. Gesell observed that when the rate of interest declines, the circulation of money slows down. He blames the capitalists, whom he accuses of the felonious manœuvre of withholding and withdrawing their funds, simply because the interest offered does

not satisfy them. It is the same argument as Böhm-Bawerk's, and I have already explained the very ingenious device by which Gesell proposes to overthrow the forces of capitalism: the shrinkage in value of the money tokens is to compel the owners of money to lend their funds, immediately and unconditionally, so that business shall not run short of its liquid energy and prices be prevented from falling. Gesell does connect the development of the rate of interest with the development of the level of prices—and in the true manner at that; in this particular this outsider is ahead of all the authorities of the schools. For the rest, his argument is so topsy-turvy and self-contradictory as to defy analysis. Still, something may be gained from an examination of his errors.

The first fallacy—which he shares with Böhm-Bawerk and most of the theories of interest—is the assumption that a fall of the rate of interest induces capitalists to lend the less readily. This idea of course is on all fours with the parallel assumption, which is even more universally accepted, that money is lent the more eagerly as the rate of interest rises.[1] In the first instance the rate of interest gives way because too much money is offered for investment; even a slight falling off in this supply would steady the rate. In fact, the rate of interest could never drop more than once, only to rebound again very soon, if things happened according to this theory. But it drops bit by bit three or four or five times in succession. The well-authenticated fact that in periods of falling and low rates of interest the banks overflow with the deposits of investors is a proof that those who have available funds do not withhold them. What Gesell proposes to frustrate by his shrinking money—the strike of the money-owners—never happens in the juncture in which, according to the assumption, it ought to happen, that is when the rate of interest has dropped below the limit; it is the phenomenon which is observed when the rate of interest is at its highest—which also disproves the belief that a higher rate is an incentive to more ready lending.

Another fallacy of Gesell's argument consists in the idea that the rate of interest would keep on falling if additions to the supply of money were to prevent the price-level from falling. This view agrees with the current theory in so far as it too supposes additions to the supply of money to depress

[1] This question has been discussed above, IV, § 15.

the rate of interest. This conception is implied, though not expressed, in the argument of Böhm-Bawerk—I doubt whether he was conscious of the implication. He imagines that the aggregate of capital, in terms of money, would be doubled by the time when the rate of interest has been halved. Now obviously this would necessitate a doubling of the volume of money; for it is impossible that an unaltered volume of currency should suffice to sustain a heavily increased supply of capital. A full explanation of this important matter would require a whole chapter (I have dealt with one of its aspects in essay IV, § 14). Here I will only remark this: a numerically unaltered sum of currency may very well carry varying quantities of goods; but then an increased quantity of goods will require more substantial monetary units: the value of money must be proportionally greater. The consequence of this necessity is that one milliard will not grow to two milliards, as Böhm-Bawerk rather thoughtlessly imagines. The directest approach to an understanding of the case is found by remembering that a doubling of the supply of goods, the number of consumers remaining unaltered, must reduce the price of goods to one half; in other words it must double the value of the monetary unit. It is not possible, under the circumstances, to force any new currency into the circulation: the market simply rejects it. This consideration leads by the shortest way to the fundamental truth that whatever halves the rate of interest also halves the index of prices, or, more generally speaking, that prices move in the same direction as interest, the two being at bottom one and the same phenomenon.

The fallacy with which we are dealing derives from the failure to distinguish between the rate of interest and the real yield of interest. I have already criticized the manner in which Marshall, and Irving Fisher, Wicksell, Pigou, Keynes, and others after him, conceive the notion of a "real rate of interest." Only supposing that the real yield of money investments decreased with the rate of interest, would capitalists be provoked into defensive measures, and only if prices did not fall when the rate of interest does fall would a low rate of interest favour the workers. But the whole case assumes a different aspect when it is realized that the level of prices moves in the wake of the rate of interest. Gesell, so far as I know, was the first to see and admit that such is the relation. Only his

emotional enmity to interest forbade him to apply this fundamental discovery rightly. Nay, he has betrayed it, falsified it, and consciously so, I should say; for he has gone out of his way to show by a diagram that the current rate of interest and the rate of discount move in opposite directions, which must be contrary to the facts.

A strike of the owners of money would be a deliberate act of free volition. But there is no such thing as free volition where large collective action is concerned. Everything happens under constraint, from necessity. The question must be stated differently from the way of Böhm-Bawerk: at what point of the interest curve has the supply of goods, owing to reduced output such as will result from a fall in the level of prices, been so weakened as to create a situation in which entrepreneurs can again venture to resume their activities? The turning-point is a focus in which a number of minima coincide: production (output) and turnover, degree of employment, level of prices, profits of enterprise, wages, rate of interest. Other features, of course, must be at a maximum; they are: consumption (not absolutely speaking, but relatively: stocks of goods are dwindling, personal outfit is wearing out, plant has suffered from disuse and from neglect of necessary repairs and renewal, etc.), supply of labour, cost of production (this in spite of low prices and wages—plant is only partially employed, which means excessive overhead charges), real yield from investments at a fixed rate of interest. If the development were to continue, it would cause positive destitution with its inevitable reactions: the army of unemployed would resort to desperate means of self-help, enterprises would go bankrupt, the interest on the public debt could no longer be paid. The turn of the tide is brought about by the inherent necessities of the state of things. Böhm-Bawerk mentions war as the all-powerful restorer of want and interest; but I think he is wrong. War comes when interest has been high and shows signs of declining; it is sedition that puts in an appearance at the end of a period of depression. However, it is not necessary to consider such political events as war and revolution as the only means to bring about the turn; it is caused by the coincidence of the various forces which I have enumerated—only, and most certainly, not by the strike of the owners of money.

From these considerations it follows that the current theory of interest is fallacious. Fallacious is its assumption that the rate of interest is at its lowest when the country is most plentifully stocked with real goods. As a rule the rate of interest is at its lowest when want begins to make itself felt, and this is not to be wondered at if we are mindful of the fact that, owing to the depressed level of prices, the real yield of money investments is at its highest. Fallacious, too, is the assumption that a low rate of interest should favour the workers; for a low rate of interest is always coupled with a high real yield of interest, which means a heavy drain on enterprise, low profits, and poor wages—enough has been said on this subject in the preceding chapter.

The work of Böhm-Bawerk which has been the subject of my criticism dates from the end of the last century. I do not think that I have been unjust to the theory of interest as taught to-day. I have shown, in the first essay, Professor Pigou adhering to the traditional conception, and he is a fair representative of present-day thought. I am about to deal with the theory of Professor Cassel, of whose standing I need say nothing. I have considered a passage from the work of Professor Robert Liefmann. We are now prepared for some further remarks on it. The passage does not mention interest, but it speaks of the formation of capital, which no doubt is a question of interest. Liefmann believes in general, never to be defeated, enrichment; the workers themselves are to acquire capital and become capitalists. This can result in general enrichment on the assumption only that the wealth of the workers shall be superadded to the wealth of the wealthy, one pile to stand beside the other, not one pile to displace the other. It is the idea of Böhm-Bawerk's second milliard. Had Liefmann reflected on the effect either on the rate of interest or on prices of such an increase, he would have dismissed the notion. He fell into his error because he accepted and applied the traditional theory of interest—which is altogether at odds with his own fundamental, and I believe very valuable, economic principle. He pays homage to the old theory by affirming that it suffices to explain the phenomena of interest. He says in *Grundsätze der Volkswirtschaftslehre* (p. 4):

"We are accurately informed as to the effect produced on the money market and the capital market by higher or lower rates of discount,

and we know all about the causes of the rise in the rate of interest within the last twenty years. But as to the reasons why interest is paid at all, the most incredible theories are still taught and new ones are constructed every year."

I suppose Professor Liefmann knew what "we are accurately informed" on; but I maintain that there is nothing on which economic science is less accurately informed than the process of the fluctuations of interest.

The traditional theory of interest has explored one corner of the law of self-regulating interests; but at no point have economists learnt to apply rightly, so it seems to me, what little they do know about it. In truth, the prevalent idea of interest is to this day as set forth by Böhm-Bawerk:

"He who owns capital is, as a rule, able to derive from it a permanent net income. . . . Thus the phenomenon of interest presents the curious spectacle of lifeless capital putting forth a ceaseless and inexhaustible stream of goods. . . . Whence and wherefore does the capitalist obtain, at no personal effort, this endless afflux of goods? These words express the theoretical problem of interest."

But I ask: who has ever seen the capital which yielded interest "permanently," "inexhaustibly," "endlessly"? Where may one meet this Ahasuerus? Simply because we always see round us objects which we term capital because they yield interest, it is believed that the same object will always bear interest. With the same right we might say: because we always see living men about us, every man lives for ever. We know it is otherwise. What is capital to-day is passing away, and along with the object must vanish the investment. The classical example of the theory of interest, the carpenter's plane as capital and the plank as interest, is the quaintest of fables. From father to son and to greatgrandson the same party is supposed to remain the creditor, the same party also the debtor. The observation of life teaches a different lesson. Americans have found out that "from shirt-sleeves to shirt-sleeves" it is only two generations, and poets have long known about the whirligig of time. You remain a creditor only for so long as your debtor gets on tolerably well, so long, that is, as the exploitation by interest benefits him; but so soon as this state of affairs comes to an end the capital of the creditor is jeopardized. The creditor depends on the prosperity of the

debtor. In order to demonstrate the awfulness of interest and compound interest—or its beauties—your propagandist will gravely inform you of the magnitude of the sum to which a penny lent at interest the first year of our era might have grown. There were no doubt certain pennies at interest nineteen hundred and twenty-eight years ago; the fact that we do not see the fortunes resulting from them proves the harmlessness of compound interest. Fortunes, for a multitude of reasons, cannot be preserved. Interest, like any other interest, defeats its own end as soon as it attempts to encroach. Men do not live on interest; it only seems so: they spend their substance. The more capitalists try to evade this fatality, the more sure they are to be overtaken by it. If they consume their substance, their debtors earn sufficient to pay interest and depreciation; if they seek to avoid the inevitable by dint of economy, debtors do not make enough to pay interest: they cease to produce, they go bankrupt, and that is the death of the creditor's capital.

§ 6. Gustav Cassel's Theory of Interest.

In examining the theory of interest of our celebrated contemporary, I shall have an opportunity of throwing further light on and grappling more closely with the points dealt with in the preceding section. As regards the relation between the rate of interest and the level of prices, Professor Cassel is a stanch upholder of the orthodox view. He says (*op. cit.*, p. 435):

"This increased supply of capital for investment must, sooner or later, call forth a proportionate demand, and consequently an increased production of real capital. If by these means (i.e. by a reduction in the rate of interest) the banks succeed in circulating fresh credits (*Bankzahlungsmittel* = banking currency), and if in consequence the volume of currency in circulation is increased at a greater ratio than production and the turnover of goods, the general level of prices must necessarily rise." And again, p. 437: "If the bank rate is kept so low as to cause the value of money to decrease . . ."

I have already taken exception to Cassel's notion that a heavier supply should call forth a heavier demand. It seems to be at the bottom of, or to result from, the theory of interest, and the patent fallacy of the assumption also proves the theory at fault.

Cassel attacks with much zeal the idea that interest might be defeated and ousted. Whether he was thinking of the argument of Alfred Marshall, I do not know. He considers interest as necessary. Some of his reasons appear from the passage already quoted in a previous section: interest is needed to prevent unprofitable enterprise and to keep the creation of wealth within bounds. Here is another utterance to this effect (p. 211):

"All these complaints . . . betray a lack of insight as to the economic function of interest, which consists in limiting the entire economic activity demanding a share in the available capital investments. In such junctures as these the rate of interest is intended to bridle or damp the spirit of enterprise and put a brake on economic progress."

As the rate of interest goes up higher and higher, this repression becomes more and more effectual. Let us pause one moment to reflect on the implications of the case. According to Cassel and the old dogma, the rate of interest goes up and stays high when the supply of wealth is insufficient, when the country is poorly stocked. It seems very strange that this should be the time when the spirit of enterprise needs to be held in check. We have here a very neat case to show what preposterous conclusions the dogma leads to when followed out. Far from having the effect indicated by Cassel, a high rate of interest is the very thing to stimulate the spirit of enterprise; to say the least, it ought to do so on the assumption that a high rate spells poverty.[1] However, it is the low rate which Cassel supposes to stimulate the desire to be up and doing. As to the manner in which he conceives the production of wealth to be stimulated by a low rate, it is explained in the following disquisition (pp. 380–1):

"It is the function of interest to regulate the demand for new capital investment in accordance with the supply, that is to say, with the newly-formed savings. However, seeing that interest in general has little influence on saving, its rôle as a regulator of the capital market consists more essentially in providing the needed limitation of the demand for capital investment, hence in giving a definite direction to the productive process. If the market rate of interest is maintained too low, this fault must manifest itself in giving production a trend demanding larger quantities of fixed capital: the production of capital is relatively

[1] See above, essay VI, § 19, Marshall's inadvertent confirmation of this.

increased. Such extraordinarily increased production of capital, however, is bound gradually to limit the possibilities of profitable investments of capital. In normal conditions it would cause the rate of interest to fall. As matters stand, i.e. the rate of interest being already at a low figure, the effect of increased capital production is gradually to bring the conditions of the capital market into harmony with the current low rate of interest. The capital market therewith has recovered its equilibrium. The disturbing influence of the bank rate ceases to make itself felt, this rate having come to be normal. But this also marks the end of the special competitive advantage which the banks had gained through their low rate, and the cause of the extraordinary increase in banking currency becomes inoperative. It is only if the banks once more reduce their rate below the rate of the capital market that they are enabled to resume these increasing issues of their banking currency. This, again, activates the forces of reaction, with the result just described. Supposing that the banks retain the rate at which the capital market has found its equilibrium, the effect of the first reduction of the rate of discount amounts to having shifted the capital market from one state of equilibrium to another which is characterized by increased wealth of capital and a lower rate of interest, an increase of the volume of banking currency having taken place as a concomitant. The artificial reduction of the rate of interest has led to an artificial increase in the production of capital, which is equivalent to a forced increase in collective saving."

Let us recall that the author of this passage desires to demonstrate the necessity of interest. Necessary is what is beneficent. I am utterly unable to comprehend what Cassel's argument could prove against the possibility of a persistent fall and final disappearance of interest. The consequences of "too low" interest—"a fault," it is termed—of which we are warned are exclusively favourable, beneficent: increased production of capital, "greater wealth of capital." The people have been economical, they have been industrious, the wealth of the country has grown: who could object to such a development? It is with exactly the same arguments as Cassel's that Silvio Gesell, who is a powerful propagandist, tries to prove that interest might be suppressed, provided only that currency never comes to run short, a provision which Cassel takes for granted. In order to convince us that too low a rate of interest is a fault and impossible, one would need, I should think, to show that its effects are harmful: a fault must involve a penalty. What happens in consequence would have to be the contrary of what Professor Cassel expects: a stoppage of production and an impoverishment of the country. It is my

theory of interest which demands this; for it says that a reduction of the rate of interest weakens economic activity—or, if we prefer to leave causality out of the case, is a feature of a state of depression—until the point is reached at which it would cease altogether if the tendency were not reversed. But anyone who, obedient like Cassel to the traditional theory, attributes to the reduction of the rate of interest a stimulating effect, is cut off from any possibility of proving the necessity of interest; his arguments will inevitably prove the contrary—in exactly the manner that has happened to Cassel in the above passage.

Now let us try to discover the vice of the argument. At first the rate of interest was low, "too low," low to a fault; but it is no longer too low after new capital has been produced, thanks to the application and the abstinence of the people. One might conclude that there is now enough of good things. No, says Cassel, one only needs to lower the bank rate once more and a fresh burst of production will be liberated: notwithstanding all the abundance already in existence, there is no fear lest the disposal of products should meet with obstacles. For—and here we are probing to the bottom of the fallacy—owing to the low rate of interest there has been a steady irrigation of business with new waves of currency: "an increase in the volume of banking currency has taken place," which, as Cassel points out in a passage to be quoted by and by, should be considered as final and permanent.

I have already pointed out, in criticizing Böhm-Bawerk, that this assumption flies in the face of the law of price; the argument of Cassel enables us to see this very clearly. People have not only worked hard and produced much, they have also saved to good purpose—albeit, as Cassel remarks, under compulsion. Demand, then, must have been feeble. And what happens to prices, under the circumstances? According to Cassel, prices cannot be assumed to fall, because otherwise there would be no opening for the new currency, mere banking currency (credit) though it be. He says explicitly (p. 385) that "an abundant supply of currency in itself has a tendency to maintain prices at a higher level," and he attributes such supply to a low rate of interest.

Cassel carries the discussion of our problem a step farther

in a later chapter, § 58, "The Regulation of the Level of Prices through Bank Rate." He says:

"We can now answer the question as to the means by which the general level of prices is influenced by the bank rate. A reduction of the rate of the banks signifies an increasing competition of the banks in the capital market, newly created banking currency competing with real savings."

Here we are once more up against the inveterate problem of credit creation. I refer the reader to the closing section of the fourth essay above, where I have tried to dispose of the idea. The argument furnished by Cassel is another proof of the impossibility of such creation; for it ends in utter contradiction. According to what we have been taught above, a low bank rate enforces economy; now we are given to understand that a low rate competes with economies. The outcome of this competition between the already existing savings and the newly created banking currency or credit arising out of a deliberately reduced bank rate would therefore be a further increase of savings. We are asked, then, to believe that people will save all the more eagerly as "a profitable use" of their savings is rendered more and more difficult: the interest in saving is not defeated by the success of saving; on the contrary it is strengthened, and indefinitely strengthened without end, provided only—see the long quotation above—that the bank rate is lowered afresh. Such is not the way of ordinary competition. In the case of ordinary goods, so soon as competition comes in and begins to encroach, production will cease to be profitable; producers are warned that they must moderate their output. And I ask: what can the savings in question consist of, if not in real goods? Can savings grow while there is no growth in real wealth, because excessive competition spoils the market so that production comes to a standstill? We are face to face with a very serious contradiction. I shall have occasion to quote a passage in which Cassel roundly affirms that with "too low" a rate of interest, savings not only do not grow but are reduced, consumed, given up—which is the exact contrary of the present assumption. Let us try to get at the root of the conflict.

In the first place it may be pointed out that "banking currency" cannot be created at will by the banks. Credit is

not like potatoes and hats, which, at least theoretically, can be produced whether the people want them or not. Credit, even theoretically, does not come into existence until it is demanded and accepted by someone. It is created by the borrower rather than by the lender; at all events it is only born out of the union, the marriage, of supply with demand. The low rate demanded by the banks is an expression of their readiness to lend; but no union takes place under the circumstances, because the lowering of the rate scares the other party off. Nor do the banks ever act in the manner of Cassel's hypothesis—it would be sheer fraud if they did. They do not compete with "real savings" by lowering their rates while savings still command a higher rate. Why should they, and how could they? They cannot, because they can only lend what is lent to them, the savings (real) which are placed at their disposal; in other words, because they are unable to create credit. The idea of credit creation out of nothing is a mischievous conceit, one of the fumes from the corrupt theory of interest.

Cassel continues thus:

"In this way the whole capital market is influenced, the rate of interest for long loans is adjusted to the rate for short loans. The increased supply of capital investment must, sooner or later, call forth a proportionate demand and, consequently, an increased production of capital."

For the third time I contest that a large supply will call forth a proportionate demand. If it did, it could not happen that crops are left to rot in the fields because it does not pay to reap them; nor that corn and wheat are used as fuel, or cargoes of rice and coffee are thrown overboard: the abundance of supply would be met by more urgent demand. And currency obeys the same law as food-stuffs. The mere fact that money is to be had "cheap" is far from stimulating business to new ventures and enterprises. For whether or no the venturer will make a profit depends entirely on whether or no he shall be able to dispose of his products properly. Cassel is bound to assume this as probable, thinking, as he does, that prices will rise; for this would indeed be an expression of increased urgency of demand. Obviously borrowers, under the circumstances, realize double profits: they pay out less in interest,

and they obtain higher prices. The fact that prices are expected to rise is stressed by Cassel a little farther down the paragraph from which I have quoted; its closing sentence is to this effect (p. 436):

"This rise of prices prepares an opening for the new banking currency; it is retained in circulation and the rise of prices becomes final, permanent."

Notwithstanding the increase of real wealth of every description—for surely the productive facilities newly produced must end by giving forth goods for consumption—prices rise! Can that be? It is the correct conclusion from the theory, the universally accepted dogma, that a low rate of interest swells the stream of currency in circulation. The conclusion is manifestly, palpably absurd, and the theory from which it derives is a scandal.

How utterly wrong it is I shall let another argument of Cassel's demonstrate. He examines the conditions presiding over the supply of capital for investment, and this is the conclusion arrived at (p. 205):

"A fall in the rate of interest below the limit hitherto observed as customary would superinduce a general consumption of savings."

Here at last we are offered a plausible reason to repel the assumption that interest might be defeated; for no doubt the disappearance of savings would restore interest. The pity of it is that it is a flat contradiction of what Cassel teaches in the passages discussed above. However, he does not seem to realize this. In order to support his view, he considers the case of a capitalist and millionaire who is living on interest. If the rate of interest falls, his income shrinks away. At first he may adapt himself to the state of things and compensate the deficiency by retrenching on his cost of living. But finally he is driven to desperation, and instead of trying to live on a pittance of 5,000 marks—the rate having fallen to one-half per cent—he deliberately sets about drawing on his substance. For, says Professor Cassel: "Supposing that the rate of interest falls sufficiently low, the income from investments even of the greatest capitalists must dwindle terrifically."

Now we have learnt from Cassel himself about the manner in which the rate of interest can be made to go down: namely

by an increase in the national wealth, thanks to busy work and strict economy. If the millionaires are impoverished in the process, somebody must be all the more enriched. And who can that be but the workers, the producers of the new wealth? However, this assumption clashes with our law, even in so far as Cassel recognizes it; therefore he contradicts himself. The question is whether the law is right or whether his concern about the plight of millionaires is justified. We have found that, according to the law of price, prices under the circumstances must sink; for supply exceeds demand. Cassel supposes that only the rate of interest will fall, while he expects prices to rise. A little bit of statistics might serve to settle the point; but I shall spare myself and the reader the trouble; for the case is altogether too self-evident. If the rate of interest falls in consequence of exceeding supply, so does most assuredly the level of prices. It follows that although the money yield of investments may shrink, the real yield does not diminish: 5,000 marks income from an investment of one million with a general rate of interest of $\frac{1}{2}$ per cent will buy at least as much as 40,000 marks at 4 per cent.

I need not enlarge on the details of the assumption. Having represented our law as a question of ethics, I am induced to consider Professor Cassel's opinion on the ethics of interest. He says (p. 210):

"The problem of interest has often, or even mostly, been treated as an ethical rather than as an economical problem, and therefore the question why capitalists should be remunerated has been given an undue prominence. Capitalists have been charged with plundering society by their insisting on being paid interest, or, to say the least, capitalists have been admonished to be satisfied with a lower rate. All this manner of reasoning becomes invalid as soon as the problem of interest is treated as a purely economical problem. It then becomes evident that the capitalists themselves have very little influence on the actual development of the rate of interest. . . . Capitalists draw interest at the actual rate not because, thanks to any coercive measures or exercise of power, they extort this interest, nay, not even because they have any such intention, but simply because it is an economic necessity to limit the demand for capital investment."

To me, it seems that Professor Cassel has here evaded the ethical issue. For the ethical problem is there and insists on a solution, even though it seems more convenient to consider interest as a purely economic phenomenon. It is poor science,

poor economic science in particular, which is reduced to eliminating the ethical issue in order to safeguard its own special tenets. Cassel is unable to do justice to the ethical aspect of the question because his conception of interest is not sufficient. He represents interest as essentially a preventer of wealth, exactly as does the rabid hater of interest, Silvio Gesell, and like the doubter of the necessity of interest, Alfred Marshall. Once it is recognized that with a low rate of interest the prices of goods are also low, we are ready to grasp the obvious fact that capitalists have no reason to fear the fall of the rate of interest, just as *vice versa* they have no reason to rejoice in a rise of the rate, since the things whereby they live become simultaneously dearer. Considered in the light of this truth, the ethical meaning of interest in its traditional aspect fades away (another aspect taking its place), and all the more so if we further come to realize that any interest which is paid to the capitalists is also paid to the producers of the goods in so far as it must and will pass into the prices and wages of those who pay it. He who wishes to condemn interest must condemn the inequalities in the distribution of wealth and challenge the right of the stronger individual. For I contend in opposition to Cassel that interest is a question of might and the exercise of power: those who have the power do extort the tribute. The individual who is economically and socially favoured receives interest, either thanks to his superior efficiency as a worker or thanks to his superior property. Efficiency and property are power, and they may be combined in the idea of "fortune," that sort of fortune, that is to say, which commands interest. The German word *Vermögen* signifies both capacity and fortune in the sense of wealth: the capable person and the wealthy person are blessed with the talisman of *Vermögen*, might, power, and what is power but that compelling force which extorts tribute from others? Sound ethics and a sentimental repudiation of force are not the same thing.

By the manner in which Cassel presents the matter the capitalist appears as the instrument of prevention, of the limitation of demand and the satisfaction of legitimate needs. We can poke fun at this conception with the same right as Senior's "theory of abstinence" has been ridiculed. What would become of the demand for goods if the recipients of interest ceased to be demanders? Surely, interest could limit demand only on the

assumption that the sums which are paid out as interest were permanently withdrawn from and lost to the body economic. But we know that they are not. By all means let us consider interest as "unearned income." It is none the less fully justified; nay, it is its only justification. The justification results from the fact that an economic system based on interest is a necessity in a society which finds it good and expedient to support a considerable number of unemployable members. This interpretation of the case might furnish a body of thought sufficient for a special chapter.

There is an ethical point implied in Professor Cassel's idea, discussed in the earlier pages of this section, that the fault of too low interest gives rise to a process of adjustments ending in positive gain and a situation in which the fault can be repeated with equally happy consequences. I am well aware that one lie will often beget another lie and yet another; but sooner or later the fault will come home to roost. Besides, the two cases do not bear a comparison. If too low a rate of interest is a fault, a departure from the state of fair equilibrium and equity, its effect must be such as to inhibit a repetition of the fault; for this Universe of ours, also the economic universe, depends on equilibrium and will maintain it. It is a self-regulating system, to make use of a phrase from physical science. Our law of the self-defeating of interests is, after all, only an expression of the universal tendency of forces to maintain a tolerable degree of equilibrium and stability. Ethically speaking, a fault is whatever disturbs this equilibrium, and its consequence cannot be a better equilibrium. Such, however, is not the philosophy of Professor Gustav Cassel. He says that the fault is rectified, not by remedying it, but by an adaptation of the other agents: "the conditions of the capital market are brought into harmony with the current low rate of interest": the fault ceases to be a fault merely be persisting. I am old-fashioned enough not to believe in this sort of ethics; I hold the ancient notion that sins are visited on the sinner and that amends must be made. The unfair competition which, according to Cassel's hypothesis, the banks wage against the savings of the people at large and the millionaires in particular, by my ethical creed cannot turn out to the ultimate and definite advantage of the banks; something must happen to undo the treason of the traitors. Quite certain it is that in actual life things take a course widely

different from that indicated by Professor Cassel. I think that a keener ethical sense, the recognition of the claim of ethics in "social economics"—this being the title of his book—might have sharpened his perception of actual facts and straightened his logic.

I have no intention of ridiculing Professor Cassel's work. He is a victim of the orthodox theory of interest, which he has tried to prop as best he could, even at the sacrifice of the most universal ethical truths. Like Marshall and Gesell, he has carried this old dogma into its farthest consequences, where its utter futility blazes out. It cannot require any very great feat of intellect to deal it the death-stroke. For the moment it is not a question of making out what interest is and what its functions are, but merely of establishing the true relation between the rate of interest and the level of prices. When this question has once been fairly settled, it may be possible to find an approach to the more fundamental problem of recognizing the nature of interest.

One mistake we have to guard against in wrestling with the task of studying this relation. I am led to mention the subject because Cassel has fallen into this error. He says (p. 213):

> "It is in the changing demand for durable goods, that is to say, in the changing production of fixed real capital, that we have to look for the cause of the ordinary fluctuations of the rate of interest. But considering, on the other hand, that the rate of interest in its turn regulates this demand, the whole movement of economic life will appear as a continued reciprocal action between the rate of interest and the production of fixed capital."

It has long since been recognized in philosophy that the notion of reciprocal effect is inadmissible (see, for instance, Schopenhauer, *Satz vom Grunde*, § 20). The exact sciences have emancipated themselves from it most thoroughly; they will treat an object in which anything has changed, even though it were only its position in space, as an entirely new phenomenon. To say that interest regulates demand and is regulated by it, is the same as to say that the locomotive engine moves the train and is moved by it. It may be true enough that the train covers the last quarter of a mile without the help of steam or electric current, because the impetus of its movement drives it on; but the impetus is still due to the power of the engine. In

much the same way it may happen that prices keep on moving in a given direction after interest has ceased to impel them; the impulse is none the less caused by interest, and so if the rate of interest were not allowed to move from its base, prices could not move either.

§ 7. The Standard of Currency as a Natural Controller of Interests.

Of the three speculations from which this study takes its start, the one concerning interest has been more to the fore than the others about prices and wages. It is only in the radically communistic systems that prices and wages are dispensed with along with interest. Yet interest, too, is a price, and it is subject to the same law as the price of goods. There is only one difference. Whereas the price of goods is attached to the material of money, interest is not attached to any material thing in particular; it is an altogether spiritual phenomenon. The consequence of this is that interest, although it fluctuates with the variations of the level of prices, is not determined by the height of the level of prices. In other words, the level of prices is a purely arbitrary or accidental quantity, whereas interest is a "thing in itself," a natural and necessary quantity. Accidental the level of prices is because it is the result of an arbitrary monetary unit; there are as many price-levels as there are standards of currency. Interest is everywhere the same, and it has been the same all down the ages—by which I mean to say that it has oscillated round an unalterable figure.[1] It might even be con-

[1] This constancy of the rate of interest is not generally recognized. Some economists affirm that interest has been decreasing in the process of the ages; thus Fr. von Wieser, in his *Theorie der gesellschaftlichen Wirtschaft*, § 67, says: "In the general course of economic evolution the rate of interest has a tendency to sink, because the progressive increase of capital . . . reduces the marginal yield." Naturally the belief in an increase of capital would lead to this general conclusion; indeed, the majority of present-day economists should really endorse Wieser's view. However, a glance at the figures collected by the historians suffices to dispose of the notion of increase absolute. I quote from Taussig, *Principles of Economics*, chap. 39, § 5: "The steadiness of the rate of interest during the vast changes since the industrial revolution of the eighteenth century is a remarkable phenomenon. Even before that era, interest had fallen to rates such as we consider normal. In Switzerland during the seventeenth century the rate had fallen so far that legislation was enacted, oddly enough, to check the decline . . . laws making void all loans at *less* than 4 per cent. Nevertheless the rate went down to that figure, and even lower. . . . Holland and England were able in the middle of the eighteenth century to borrow at about 3 per cent." But, alas, Professor Taussig's idea of interest is of such a nature as to make him believe in the possibility of "the marginal supply price sinking in the course of the next fifty years to some such rate as 2 per cent."

tended that interest proper has not fluctuated at all, the departures from the base being caused by extraneous admixtures necessary to compensate the lender for special risk (loss or depreciation of principal). This intrinsic permanence of the phenomenon of interest ought to teach us that it is a thing which is not amenable to being controlled either in one direction or the other, partially, that is, with a view to favouring now the debtors, now the creditors. Any deviation from the base immediately liberates the forces which drive the rate of interest back to it again. Thus, when interest has been "too low" the reactions are of a kind that will not allow it to be further depressed, as in Professor Cassel's argument, but enforce its restoration to the proper figure. It is futile for anyone to try to devise means of benefiting the people by damaging interest. As for economic science, it can recognize only one task with regard to interest: to determine with the greatest accuracy possible what is the medium, the normal rate of interest—and by normal I do not mean the same thing as Cassel, who uses the term to designate any rate which he supposes to correspond to the temporary and accidental condition of the market. The rate of interest is for the economic organism what the temperature of the blood is for the animal body: there is only one normal temperature, and so, too, only one normal rate of interest. To determine it is a practical problem of the greatest moment. It cannot be said that the science of economics is contributing its due share to the health of the economic organism, so long as it fails to solve this problem. One is alarmed to find, so late in the day, economists of high reputation upholding views such as those quoted in the course of this criticism. Professor Cassel has been liberal enough with his advice all these experimental and trying years of monetary convulsions; it is my opinion that his prescriptions, in so far as they have been applied in practice, have done far more harm than good.

Interest (economic, that is) is interest in a specific form. Every interest strives to reach out to its farthest limit; but

Marginalism, interpreting the facts of history in this way, must be a poor doctrine indeed.

Silvio Gesell lays great stress on this phenomenon of constancy; he uses it as an argument against the traditional monetary system, which he imagines to have prevented the overcoming, through uninterrupted increase of capital, of the forces of interest. He quotes from Gustav Billeter, *Die Geschichte des Zinsfusses im griechisch-römischen Altertum*, to show that classic antiquity had interest rates not very far from those prevailing in our modern times.

every interest, in the pursuit of this aim, reaches the point at which its effect neutralizes itself, whereby it is curbed and thrown back. We have got to understand that there is one universal, supreme interest which consists and fulfils itself in reconciling and co-ordinating all the special interests. Now the main content of our law of the self-defeating of interests is that a special interest is not so much defeated by an encroachment of other interests as by its own excess, through its own fault—faults not resulting in positive gain. Entrepreneurs will sow the seeds of their own undoing by undertaking too much in trying to profit too recklessly by the favour of a moment. Wage-earners will lend themselves to assist in this exaggeration by working overtime, if baited with the promise of extra pay. Investors are instrumental in the depreciation of their own holdings by demanding higher interest and increasing their expenditure in the anticipation of an improved money income. Savers expose themselves to the risk of losing their savings in the bankruptcy of their debtors by "waiting" too determinedly and so impeding or interrupting the process of production to the detriment, or the ruin, of the enterprises in which the savings are invested; those remnants which survive the collapse are overtaken by depreciation, which must result from the diminution of supply in consequence of the widespread stoppage. All these exaggerations are attended by changes in general prices, price being the ultimate prosecutor and avenger. Depreciation is visited upon those who first exploited a juncture by heightening their claims at a time of shortage: they demanded —or perhaps more correctly, they allowed themselves to be enticed to accept—more interest and bought unduly. The appreciation of money hits those most severely who previously exploited the distress of the community by accumulating stocks and withholding them from the market. If, in periods of falling prices and stagnation, those who have profited from the preceding boom—entrepreneurs, workers, dealers, farmers—employed their purchasing power to the full bent of their capacity, that is to say, if they spent their abundance of cash in the purchase of commodities instead of investing it at interest, no fall of prices would need to take place to the detriment of these very same people. And similarly, if those who have profited from the slump, that is the creditors, preserved their holdings of securities from depreciation by sticking to them instead of

selling them in order to acquire real property or shares as soon as a new revival announces itself, there would not be any rise in commodity prices and shares and therefore no depreciation of money. When thus carried too far, the tension of interests is invariably further advanced by those who expect to gain by betraying the special interest to which they are pledged. What I mean by this observation requires some explanation.

The individual interests of which I have spoken are not individual in the sense of individual persons; they are the special collective interests of classes and sections such as entrepreneurs and workers (debtors) on the one hand, capitalists (creditors) on the other hand. However, there are also special interests of particular persons. The individual member of a class has interests which are opposed to the collective interest of the class. Hence the treachery. Let us consider a few instances. The holder of State securities who sells his bonds at the highest price—and this peak can only be reached through the purchase and sale of the article—betrays the interests of his class, the community of bondholders; for he deserts from the camp, as it were, and abandons the cause. But his own private interest is benefited by the act, as indeed is, for the time being, the interest of bondholders generally, in so far as the higher quotations are communicated to all bonds equally: at a blow all these securities are "worth" so much more. However, it is only very few that can sell at the top price; that is to say, only few succeed in realizing the gain. In doing so, they spoil the chance of the others, who must be satisfied with merely nominal gains, which cannot last; those who cannot sell in time, fall a victim to the depreciation which will set in when too many begin to sell and to accept lower prices. Such treason, of course, is not always deliberate: many are forced to sell out. The same thing happens among the workers. There are always men who will lend themselves as blacklegs, or underbid the union wage, or secretly work overtime. It is not otherwise among the entrepreneurs: undercutting, spoiling the market, are familiar tricks. The dictionaries record the pet names which have been invented for these various types of traitors to the cause of solidarity. Solidarity is fine enough, but it means a degree of constraint, limitation: the advantage has to be bought at a price. He who sins against solidarity may make himself hateful to his fellows; but he is an instrument of the law which causes

interests to be defeated and held within bounds. Somebody must lend himself, and we are brought to recognize the necessity of "bad" actions and "bad" characters. For the organized efforts intended to prevent collective interests from being damaged by an exaggeration of services rendered would also have a damaging effect, if they were allowed to triumph too completely; they, too, are interests which must somehow be defeated from within.

After having established the fact that the interests in question are collective sectional interests, we are enabled to understand why the sections incline to impose restrictions on their members with a view to constraining the free play of forces which will give rise to those exaggerations and over-tensions. Solidarity is to be organized and made compulsory. The practical economists of the Middle Ages, having become aware of the law of the self-defeating of interests, evolved their guilds, a system of restrictions for the purpose of safeguarding the trades from the danger of over-expansion. However, the guilds overdid their special interests on the side of restriction and so prepared the way which led to their disruption. The limitations came to be felt as onerous, and they were gradually relaxed. After a time the resulting difficulties were attributed, not to the loss of the original order and restraint, but to the persistence of regulations. And truly, at first it might well seem as if the various evils that were observed were due, not to an excess, but to a lack of liberty. However, a century of liberty and *laissez-faire* has sufficed to refute this error, practically, if not yet theoretically. Have we not been informed in the year 1927 that Italy was having a statute imposed upon her to the effect that new enterprises requiring a staff of workers above thirty should be prohibited? The theoretical repudiation of the principle of economic liberalism we have in the book *Laissez-faire*, by Mr. J. M. Keynes, the liberal English economist. In all domains we observe a tendency back to the old restrictions. It is a manifestation of the desire to ward off an excess of service. The first to resort to this expedient were those who suffered the most from economic liberty: the industrial workers. They organized themselves in trade unions, they set up rules as to the amount of labour to be performed in a normal working day, they educated their members to an effectual use of the means for moderating their efficiency, they fought for a reduction of

the working hours. This policy of the greatest number of the smallest units is now being imitated by the small number of the greatest units: industrial enterprises are organized or amalgamated into trusts, syndicates, cartels—again for the purpose of forestalling an excess of service and the treachery of individual members. The twentieth century is reverting to the position held in the tenth century: it is returning to the institution of guilds, an order of *numerus clausus*. We have already reached a point at which the endeavour not to exaggerate is being exaggerated.

Restrictions, i.e. order and organizations, are necessary. I have already observed that excessive tensions have regularly been attended by fluctuations of the level of prices—and with fluctuations of the rate of interest. If one could succeed in preventing the hypertrophy of interests, those revolutions in the realm of prices would by that very fact be avoided. But we can also invert the proposition and say that if the structure of prices were able to withstand the pressure of interests, interests would thereby be held in check: the restriction and order would be assured. Hence we see that price provides an opening by which it might be possible to get at our problem, the establishment of a system of effectual checks. Considering the multitude and the magnitude of the forces which have to be controlled, the problem is no doubt a formidable one. However, it is by no means an unfamiliar problem. On the contrary, it is well on its way to a solution. In the surging sea of prices, there is one price which is believed to be immune from the impact of interests and not susceptible to any change: it is the price of gold, fixed and settled by the currency laws of sovereign States. The originators of the idea of a metallic standard of currency were intent on creating an order and rule comprising all economic forces equally. However, experience has proved that this method does not fully meet the requirements: under the gold standard prices have fluctuated no less considerably than they did before. This order has not been a sufficient substitute for the system of guilds which it replaced, and the last vestiges of which were not abolished until the time when the metallic standards were instituted. It is, I should venture to suggest, owing to this failure that order was finally sought again in a restoration of the trade organizations. The constraint imposed by the gold standard is not hard-and-fast enough. If our

economic system is to be preserved from falling a prey to the rigid constitution of guilds or to an absolute State control down to minute detail, after the communistic or the Fascist pattern, it will be necessary to replace the gold standard by the much austerer and more exacting system of an interest standard of currency.

A very welcome confirmation of the idea here set forth concerning the influence which sectional contracts (collective bargaining) produce on the course of price formation I find in an article by the vice-president of the board of directors of the German Reichsbank, F. Dreyse, on *Questions of Monetary Policy* (in *Das Bankarchiv*, October 1, 1927). The author examines the reasons why the traditional methods of controlling the currency by means of a discount policy are no longer effectual. First and foremost he stresses the fact that the wage tariffs and the all-in contracts of the producers' associations retain prices for a certain length of time. Thus the policies of the Central Banks are frustrated and prices obey the behests of these private, though all inclusive, organizations rather than of the central authority.

We are bent on devising a way to force interests into measure and harmony. They shall be curbed and brought round before they have transgressed the bounds of utility. All sectional interests alike: those of the debtor class (industrialists, owners of real property, workers) and those of the creditor class (savers, rentiers, owners of money and money claims). Very well, the phenomenon, or the quantity, in which the interests of debtors and creditors are focused, whether in friendship or in enmity, is interest. For economic interest is the extract and essence of interests. To control interest is to control, regulate, bridle the interests. During the hey-day of the guilds, interest was controlled, that is to say suppressed, controlled out of existence and recognition. An orderly and well regulated economic system somehow depends on a control of interest. But suppression is not the proper kind of regulation; the forced elimination of interest rendered a substitute for the controlling force imperative, and it was found in the rigours of the guilds. In proportion as interest came into its own again the guilds lost their usefulness and reason for being. Between an organization and control of interest and an interdict of interest there is a world of a difference. Interest, when recognized, absolved

from the taint of a pernicious hostile element, reduced to a controllable and properly controlled natural phenomenon, is an active power which may be trusted to achieve that which, in a system of banned and suppressed interest, has to be supplied by rigid restrictions on the trades. Economic liberalism, if it is not to degenerate into licence with destructive internecine strife among the interests, demands a control of interest—control at the same time implying the recognition, the confirmation, the right of existence of interest.

The demonstration of the case as here attempted is a mere sketch which only shows the broad outlines. The execution of the full picture will necessarily require a much larger canvas than the present book can provide, even if it is taken in conjunction with the volume on *The Interest Standard of Currency*. One more detail I must indicate before I dismiss the subject. The quotation from Aftalion and the passage by Marshall on the elimination of interest referred to in the opening section of this chapter say that a certain economic factor produces the same effect both on the rate of interest and the level of prices. I have proved that the conclusions which these authors draw from their premises are untenable, namely the idea that a low level of prices and a low rate of interest, considered from the point of view of the whole of economic life, are an advantage. However, this does not signify that the assumption in itself is fallacious. It is no doubt correct: when more people economize and at the same time produce more goods, both the level of prices and the rate of interest will fall. It is my theory, the heresy which separates me from all those who have written on the subject, even including Silvio Gesell. But a combination of the two assumptions of these two recognized authorities (Marshall and Aftalion) confirms my theory, and so it appears that its truth is proved by them: it is not wholly outside the pale of orthodox science. It further follows as a direct consequence of this combination that a measure capable of controlling the rate of interest will control the level of prices equally: a stable rate of interest, if fixed at the right level, signifies stability, within reasonable limits, of the level of prices.

The problem of the stabilization of the currency has been widely discussed these last years; a variety of proposals for its solution have been put forward. Leaving out of account the differences as to the practical methods, they all differ from

my proposal of an interest standard mainly by the extravagant promises which their authors credit them with. Of course I, too, expect some good from a stabilization of the currencies; otherwise I should not have given ten of my years to the study of the problem, nor feel prepared to devote myself to it further; but I am no longer able to believe that general enrichment, the end of all economic distress and social strife, would be the fortunate result of a successful currency reform. Silvio Gesell, Irving Fisher, John M. Keynes, Frederick Soddy, to mention only the more eminent authors of stabilizing schemes, all of them are for removing the restrictions imposed by the old order, the gold standard. They propose to eliminate gold from the currency (more or less thoroughly), because they believe the metal to be the impeding obstacle, the curber of interests. Their aim is, not to strengthen the restraining forces, but to loosen their hold, so that interests may display themselves the more freely for the purpose of an increase in economic production. I am of opinion that they have not realized what an inexorable constraint, what relentless compulsion, the idea of a stable currency entails. Whatever the method by which the work is achieved—but there is only one practicable method—the effect must be the same in all cases: interests are hemmed in and curbed. Rather than say that a stable currency will prevent the economic crises with all their hardship and loss, I say that it prevents the boom with all its spurious prosperity. It puts fetters on the forces of expansion. Industry is at no time to produce more goods than can be disposed of and usefully employed. No increase of wealth, of "capital," but only a fair assurance that production shall balance consumption—which allows for progress in so far as there is no obstacle to more liberal consumption, provided that people are prepared to work correspondingly more. The only thing which is excluded is accumulation. A stable currency is a hard taskmaster, who insists on being paid full value for his benefactions. It leaves no scope for profiteering either from the appreciation or the depreciation of money. In so far it does provide a safeguard for acquired property in any shape; but it does not thereby enable the happy owners to indulge in easy sloth; for it does not safeguard their particular property against the onslaught of the pushful competitor. In a word, a stable currency promises no land of Cockaigne, no golden age. The one great boon which

it seems to me to bring within our reach is a more assured duration of the goods which have proved their worth, a fuller enjoyment of the wealth once created. The unrest of our age is no doubt connected with the fluctuations of money, which seem to have been more and more intensified from decade to decade. I forbear to decide whether the unrest is caused by or the cause of the fluctuations. I am inclined to think that the practical realization of the idea of a stable currency depends largely on whether or no our present humanity really desires more steadiness and is attaining to that degree of self-control which is required if it is to submit to stabilization. Indeed, for a nation to bend its head under this yoke it must have a great courage and a mighty power of forbearance. At bottom the idea amounts to an act of renunciation. That which the generations of the recent past have valued the most highly, their belief in progress absolute, in evolution, we have to relinquish in exchange for the boon of a stable standard of currency. For, as I have hinted above, the conception of the world as a whole, not susceptible of increase and incorrigible, suggests that the supreme interest of equilibrium will force interests back to their base again as often as ever they have exceeded their due bounds; it suffers no part to be atrophied. What men are wont to extol as progress—Progress, mind you!—from the point of view of the Whole and of a stable standard of currency is only excess, if it is not merely change, an exchange of goods of equal worth. A stable standard of currency bars excess; but it leaves the highway open for change, this dearest and most welcome of good spirits; for it is nothing but a system of the exchange of goods of equal worth on the basis of a fixed-unalterable and universal measure.

SUMMARY OF THE ARGUMENT CONCERNING THE RELATION BETWEEN INTEREST AND PRICE

THIS general survey is intended as an aid to those readers who desire to obtain an orderly impression of the body of thought contained in the book. Intensely conscious as I am of the essential unity of the conception—all the various arguments being derived from one central and fundamental notion—I should like to enable my readers to obtain at least a glimpse of this consistency and oneness.

A. THE TRADITIONAL THEORY AND PRACTICE

1. THE PRINCIPLE: THE RATE OF INTEREST AND PRICES ARE INVERSELY CORRELATED—
   - (*a*) Statements of the principle: 1–6, 11, 27, 78, 94, 96, 104, 108, 110
   - (*b*) How applied in practice: 11, 37, 96, 104
   - (*c*) How it works: xii, 11, 58
   - (*d*) How accounted for: 6–8, 29, 42, 104, 232, 234, 241; my explanation, 10
   - (*e*) The observed facts contradict the theory: statistics, 12, 46, 97; general statements: 4, 13, 18–19, 23–4, 39, 45, 260, 264, 293, 347

2. CONTRADICTIONS AND ABSURDITIES TO WHICH THE THEORY LEADS—
   - (*a*) Contradictions in the authors dealt with. Marshall: principle as stated in quotation 286 contradicted by principle as quoted 307 (note); Pigou: principle as quoted 3, is contradicted by arguments in quotations 4, 18–19, 282–3; Taussig, 304 (note); Bagehot, 274; Macleod, 249, 270–1; Böhm-Bawerk, 342; Cassel, 360
   - (*b*) Interest appears as the preventer of wealth and the exploiter of labour; hence enmity to interest: 118, 124, 286, 307–8, 311, 344, 355
   - (*c*) The theory gives rise to a belief in general enrichment, the increase of wealth, progress absolute (*see* references under these heads in the Index), and in the possibility of reducing interest: 193, 281, 286, 288, 298, 301
   - (*d*) It clashes with the fundamental ethical standards: 286, 290, 292, 297, 305, 316, 318, 321, 361
   - (*e*) It induces mistaken policies: currency managing by discount, discount being raised in times of distress (war, failure of

crops): 156, 246, 250, 254, 262–3; of gold, open market operations, arbitrary measures (*see* under these heads); damaging fiscal policies, such as public finance by borrowing and debt repayment, the accumulation of insurance funds, State interference in matters of currency (*see* under these heads).

(*f*) It induces mistaken theories of money and currency, of capital, of profit, of value, of labour and wages, of the relation between bonds and shares, of rent (*see* under these heads).

(*g*) Particular points: lenders and borrowers, or capitalists and producers: 9, 175, 242, 248, 287, 349; dearer money or credit is supposed to be less in demand, less vigorously used, less readily produced: 47, 79; industry—the producers—supposed to be favoured by falling rates of interest, i.e. by failing interest in goods, the theory being founded on the assumption that interest on loans and interest on real goods are differently determined: 171, 235, 286, 293 (further points are indicated below under B 1 (*c*)); if high interest goes with low prices, the signs of penury and of plenty appear simultaneously, 34

3. Dissenting Opinions: 2 (note 1), 15, 19, 23, 304, 347 (note), 350–1; and departures from traditional practice, 33

B. THE INTERPRETATION PROPOSED IN THIS BOOK

1. The Principle: the Rate of Interest and Prices are Positively Correlated—

(*a*) Statements of the principle: 2, 7, 23, 24, 40–43, 50, 86, 111, 187, 270–1, 280, 295, 341, 361

(*b*) Observation and statistics (*see* above 1 (*c*))

(*c*) Special arguments:

Borrowing and buying: 7–8, 10, 22–23, 28, 45, 103, 106, 145, 232–3, 242, 265, 267–8, 276

Debtors and creditors: 8–9, 242, 248

Interest an element of cost: 30, 44, 105, 108, 242, 308

Past labour and present labour, 295

Currency and debt: 149, 263 (*see also* under these heads)

Output of money stimulated by higher rates: 47, 106, 243, 245, 250

Velocity of circulation (rate in terms of time): 45, 98, 245

Price of securities and of commodities: 243

Capitalization: 283, 348

Interest is demand for goods, high interest is strong demand: 51, 99–102, 281, 371

High prices must go with high interest, because each is a manifestation of insufficient supply, 34, 372

2. IMPLICATIONS OF THE PRINCIPLE: IT CAN BE UNIFORMLY AND CONSISTENTLY APPLIED WITHOUT RESULTING IN CONTRADICTION: 95, 262, 364

(*a*) Interest appears as the governing factor: 12, 14–16, 85, 115, 150, 156; its fluctuations are proportionate to those of prices and precede them: 17–19, 23–5

(*b*) The natural and historically proved constancy of interest is accounted for: 365

(*c*) Interest is an absolute quantity: 365, the normal rate comparable to the normal temperature of a living body: 75

(*d*) The principle opens a way to an understanding of interest: its spiritual nature: 224, 288, 309, 365; the natural outcome of inequality: 312; of the perishableness of goods: 291, and also of men: 181; it is a focus of all the economic interests, its permanence an expression of the permanence of human needs: 366–71

(*e*) It agrees with the accepted moral standards and the wisdom of the ages: 321–4, 361, and absolves interest from the taint of passing as a hostile influence: 118, 345; hence no enmity to interest and the recipients of it: 311–12, 353, 363

(*f*) In its practical application the principle naturally leads to a recognition of an interest standard of currency.

C. THE INTEREST STANDARD OF CURRENCY

(1) The principle stated: 36, 51, 54, 69, 77, *95*, 129, 234, 251, 269, 271, 278, 372–4

(2) The fixed rate of discount: 2, 36–8, 53, 55, 75, 95, 142, 243; how to stabilize the rate: 70, 128; readjustment of rate: 109

(3) Money rate and real rate of interest: 14–15, 19–20, 30, 350

INDEX

Academy of Political Science, 164
Aftalion, Albert, 2, 24, 27, 104, 167, 171, 313
America, xii, 58, 96, 321
analogies with other sciences: astronomy, 221; constancy of energy, 310; inertia, 143, 313; perpetual motion, 341, 343; temperature, 111, 366
Australia, 61, 110, 120, 254

Bagehot, 95, 272
bank of issue (central bank), 32, 55, 64–6, 78, 104, 107, 233, 260, 265, 269
banknote, Essay II *passim*, 53, 56, 61, 66, 78, 103, 216, 239; relation between and gold, 73, 86
banks, banking, 11, 106, 221, 266, 272
Bastiat, 206
Bendixen, Friedrich, 345
bill of exchange, 61, 63, 73, 102, 103–5, 106, 110, 139, 211, 216, 273
bi-metallism, 89, 142
Böhm-Bawerk, 342, 247, 251, 257
bonds (securities at a fixed rate of interest), 3, 30, 41, 49, 54 (note), 56–7, 124, 128, 243
British Committee: on Currency, 94; on National Debts, 150
Bullion Report, 239

Cannan, Professor, 231
Carey, 216
Cassel, Gustav, 14, 37, 88, 331, 354
Capital, Essay IV *passim*, 289, 353; and currency, 179, 185; the price of goods, 186; reverse of debt, 188, 307; money and real, 123; a constant quantity, 195, 271; increase an illusion, 184, 191, 305, 307, 309; may become a burden, 308; export and import of, 252, 257, 263, 339; supply of, 348, 360
capital levy, 132
capitalism, 183
capitalist, 179, 300, 328
capitalization, 280–4
change, law of, in economic life, 300
Chartist movement, 342
cheap and dear, notions of, 113
communism, 183
consumption, 127, 321
convertibility, 239, 261
co-operative societies, 316
credit, IV *passim*, 106–8, 190, 273; and debts 145, 182; control, 241; creation of, 173, 202, 218, 231, 266, 358; expansion, 145; rationing, 28; bank credit, 172; cash credit, 202
creditor, 115, 123, 182, 302
crises, 125, 259
currency, IV *passim*, 119, 204; as capital, 179, 185; and credit, 209, 218; experiments, 76; embodiment of interest, 186; managing (*a*) through discount, 2 (note), 25–7, 34–6, 77, 79, 91, 104, 241; (*b*) through open market operations, *see* under this head; (*c*) through gold, 89; (*d*) arbitrary measures, 34, 67, 93, 95, 257; automatic, 77, 84; stabilization, 31, 75, 126, 133, 137, 162, 303; supply of, 91, 104; and public property, 199; and the State, 119
customs duties, *see* tariffs

Dawes Plan, 143
debt, IV *passim*, 146–8, 181, 195; how affected by changes in the rate of interest, 100, 129; real and numerical, 125–6, 140, 142, 146, 154; measure of, 145; and currency, 177, 263; and division of labour, 145; public debts (*a*) no burden, 119, 144, 168; (*b*) formation causes inflation, 125, 138, 145; repayment causes deflation, 38, 120, 125, 130, 138–41, 223; (*c*) as indirect taxation (taxation by stealth), 144
debtor, 109, 115, 120, 127, 152, 300, 354
deflation, 38, 68, 82, 101, 107, 152
demand and supply, 51, 99, 102, 113
devaluation, 109, 114
discount, *see* interest
dividend, national, 301, 337
Douglas, C. H., 325

economic hemispheres, zones of, 197
economics, science of, 38, 47, 75, 116, 149, 276, 299, 310, 321, 324, 366
Economist, the, 149
Edgeworth, 195
energy, 292

enrichment, general, 148, 161, 289, 307
equations, 178
equilibrium, 303, 363
evolutionism, 324
exchange, rate of, 49, 134, 252, 256
exports and imports, 134, 251, 275
export duties, 136

Federal Reserve System, xii, 58
finance, 154, 167
fiscal policies, 38, 117, III *passim*, 167
Fisher, Irving, 14–23, 53, 75, 187
Foster and Catchings, 113, 325
France, 34, 97, 112, 167, 294
free trade, 134
free will, 181, 328, 351
funds, 157

Germany, 120, 254, 293
Gesell, Silvio, 75, 130, 299, 304, 325, 348
gold: considered as a ware, 67, 73, 77, 84, 87; raw material of coins, 71; coins, why necessary, 80–3, 114; an auxiliary in the currency, 89–91; standard, (*a*) old order, 54, 69, 72, 79, 93, 118, 229, 370, 373, (*b*) new order, 80, 85; demonetized, 72, 80, 84; stabilizing function of, 66, 68, 71, 74, 76, 80, 83; and interest, 53, 66, 69, 72, 85; price of, and how to influence it, 82–4; at a discount, 68; value of, 71–3; parity of, 72; and bills of exchange, 88; opposition to, 75, 81; flow of, 5, 72, 76, 85, 244, 253, 263; world supply of, 88, 142, 337; reserves, 66, 70, 270
Great Britain, 138
Gresham's law, 83, 242
Guernsey market hall, 223
guilds, 369, 271
guinea (gold coin), 83

Hahn, Albert, 235
Harvard Committee for Economic Research, 12
Helfferich, Karl, 2

index number, 54
index standard, 229
inertia, law of, in economics, 143, 313
inflation, 33, 65, 106, 109, 133, 145, 153, 187, 317
instalment payment, 312
insurance; unemployment, 157; old age, 159
interest, *see* above summary
Interest Standard of Currency, 2, 26, 32, 58, 89, 131 177, 238, 265, 295, 372
Italy, 97, 369

Jahrbücher für Nationalökonomie, 14
Jevons, Stanley, 73, 91

Keynes, John Maynard, vii, 3, 19–24, 26, 75, 78, 81, 132, 230, 369

labour, 181, 183, 191, 295, 298, 302, 329; all value derived from, 214–18; division of, 184
laissez-faire, 369
Lâo-tsze, 322
Law, John, 224, 325
Layton, W. T., 164
League of Nations, 117, 163
Leake, P. D., 150
Liefmann, Robert, 316, 352
loans, 122, 172, 184, 268, 274; how they affect the currency, 153, 154
Lowenfeld, Henry, 75

McKenna, Reginald, 96; duties, 133, 165
Macleod, H. D., 1, 4–11, 25, Essays IV and V *passim*
marginalism, 291
market, psychology of, 259
Marshall, Alfred, 14–16, 32, 106, 230, Essay VI *passim*, 315, 326, 332, 344, 345, 348, 350, 355
mercantilism, 227
Mill, J. S., 98, 113, 116, 284
monetary reform, 118, 307
money (*see also* currency), 132, 146, 162, 183, 314; raw material of, 71, 212; supply of, 104, 109, 112, 225; demand for, 266; substitutes of, 105; purchasing power of, 112, 116, 240, 350; and capital, 184, 308; and credit or debt, 190, 219, 241, 244; and goods, 211, 268; the soul of economic quantities, 201, 226; idle, 273–4
moral issues, 286, 290, 297, 292, 305, 316, 318, 321, 361

Nation, the, xii, 81
nations and individuals, 122
necessity (*see also* free will), 297

open market operations, 32, 58, 85
Oswalt, H., 193
ownership, division of, 180, 182, 191

panics, 94, 261, 277
parity, the notion of, 48; title, the mechanism of, 53
perpetual motion, 341, 343
Pigou, A. C., 3, 11, 18, 26, 28, 37, 39, 91, 158, 167, 231, 282, 320, 337, 345
polarity, polar relations, 16, 191, 201, 211, 218, 225, 302, 307, 319

price, 51, 106, 144, 313, 348, 357, 367; generally high or low, 100; in terms of size, 99; movements, 108, 212; basic, 125; taxes an element of, 130; as capital, 188
production, 192, 287, 299
products, division of, between producers and consumers, 299, 301, 327, 330
profit, 20, 184, 187, 210, 240
profiteering, 153
progress, 195, 236, 306, 309, 310, 325, 336–7
prosperity: through low prices, 314; through high prices, 321; craze for, 325

quantity, law of, 269
quantity theory of money, 43–4, 145, 180, 212, 225, 229, 247, 313

rent, 214–15
reparations, 115, 121, 126, 143
returns, diminishing, 316, 327
Robertson, John M., 124, 143
Ruskin, John, 148

saving, 121, 147, 163, 170, 233, 281, 289, 305, 310, 314, 358
Scotland, 202
Schacht, H., 34
Schopenhauer, A., 364
Schumpeter, J., 236
Schwundgeld, 299, 326, 349
securities (*see also* bonds and shares), 49, 55, 60, 85, 99, 102, 218
Senior, N., 362
shares, 55, 128, 171
sinking fund schemes, 174
society, 183, 297, 311, 363
Soddy, F., 227, 236
Sozialistengesetz, 342
speculation, 284, 333
State control, 119
Statist, the, xiii, 60
stock-in-trade, 197, 205
subjective factors, 291–2, 309, 328
supply, 192, 320, 337, 359
Switzerland, 33, 59, 68

tariffs (customs duties), 131, 133, 163
Taussig, Prof., 193, 304, 365
taxes (taxation), as an element of price, 129, 150; and business, 130, 170; direct and indirect, 131; shifting of, 150; to finance war, 153, 172
trade-unions, 316, 369
trusts, 370

unemployment, 124, 157, 293
utility, 195, 308

value: in terms of size, 103; labour theory of, 211; sense of, 305, 310

wages, 125, 150, 188, 296, 316, 342; fund theory, 333
wares, 179–80
wealth, 147, 190, 202, 219, 236, 328; how divided, 123; not susceptible of increase, 448, 295–6; public property not, 200
welfare, economic, 306
whole, 121, 163, 182, 189, 19[illegible]
Wicksell, Knut, 13, 15, 25, 346
Wieser, Friedrich, 194, 365
Wirtschaft und Statistik, 293
Wirtschaftstheorie der Gegenwart, 186, 193
workers: cannot be taxed, 144; as capitalists, 316