

Part 5

THE FREE-MONEY THEORY OF INTEREST

1. A STORY OF ROBINSON CRUSOE.

To introduce the theory of interest here expounded, and to facilitate the removal of old prejudices, which are nowhere stronger than in connection with the subject of interest, I shall begin with a story of Robinson Crusoe.*

Robinson Crusoe, as is well known, built his house, from motives of health, on the south side of the mountain, whereas his crops grew on the damp but fruitful northern slopes. He was therefore obliged to carry his harvests over the mountain. To eliminate this labour he decided to construct a canal around the mountain. The time required for this enterprise which, to avoid silting, would have to be continued without interruption, he estimated at three years. He had therefore to lay in provisions for three years.

He slaughtered some pigs and cured their flesh with salt; he filled a deep trench with wheat, covering it carefully with earth. He tanned a dozen buckskins for suits and nailed them up in a chest, enclosing also the stink-glands of a skunk as a precaution against moths. In short, he provided amply and, as he thought, wisely, for the coming three years.

As he sat calculating for the last time whether his "capital" was sufficient for the projected undertaking, he was startled by the approach of a stranger, obviously the survivor of a shipwreck.

"Hallo, Crusoe!" shouted the stranger as he approached, "my ship has gone down, but I like your island and intend to settle here. Will you help me with some provisions until I have brought a field into cultivation and harvested my first crops?"

At these words Crusoe's thoughts flew from his provisions to the possibility of interest and the attractions of life as a gentleman of independent means. He hastened to answer "yes."

"That's splendid!" replied the stranger, "but I must say at once that I shall pay no interest. I would prefer to keep myself

* To save space I have not subjected the loan-contract here described to the regulating effect of competition. If the conditions of the loan were determined by competition in the form of several loan-givers (Crusoes) to one loan-taker (the Stranger) the contract would be still more favourable to the loan-taker. It is also assumed that both parties are guided by the principles of Free-Land, for otherwise the outcome would be, not a loan contract, but a fight.

alive by hunting and fishing, for my religion forbids me to pay, or to receive, interest."

Robinson Crusoe: An admirable religion! But from what motive do you expect me to advance you provisions from my stores if you pay me no interest?

Stranger: From pure egoism, my dear fellow, from your self-interest rightly understood. Because you gain, and gain enormously.

R.C. That, stranger, you have yet to prove. I confess that I can see no advantage in lending you my provisions free of interest.

S. I shall prove it in black and white, and if you can follow my proof, you will agree to a loan without interest, and thank me into the bargain. I need, first of all, clothes, for, as you see, I am naked. Have you a supply of clothes?

R.C. That chest is packed with buckskin suits.

S. My dear Crusoe! I had more respect for your intelligence. Just fancy nailing up clothes for three years in a chest — buckskins, the favourite diet of moths! And buckskins must be kept aired and rubbed with grease, otherwise they become hard and brittle.

R.C. That is true, but I have no choice in the matter. They would be no safer in my clothes-cupboard—less safe, indeed, for it is infested by rats and mice as well as by moths.

S. The rats and mice will get them in any case. Look how they have already started to gnaw their way in!

R.C. Confound the brutes! I am helpless against them.

S. What! A human being helpless against mice! I will show you how to protect yourself against rats and mice and moths, against thieves and brittleness, dust and mildew. Lend me these clothes for one, two or three years and I agree to make you new clothes as soon as you require them. You will receive as many suits as you have lent me, and the new suits will be far superior to those you would have taken from this chest. Nor will you regret the absence of the particular perfume you have employed! Do you agree?

R.C. Yes, stranger, I agree to lend you the chest of clothes; I see that in this case, the loan, even without interest, is to my advantage.*

S. Now show me your wheat; I need some for bread and seed.

R.C. It is buried in this mound!

S. Wheat buried for three years! What about mildew and beetles?

R.C. I have thought of them and considered every other possibility but this is the best I can do.

S. Just bend down a moment. Observe this beetle crawling on the surface of the mound. Note the garbage and the spreading patch of mildew. It is high time to take out the wheat and air it.

R.C. This capital will be my ruin! If only I could find some method of protecting myself against the thousand destructive forces of nature!

S. Let me tell you, Crusoe, how we manage at home. We build a dry and airy shed and shake out the wheat on the boarded floor. Every three weeks the whole mass is turned over with wooden shovels. We also keep a number of cats; we set mouse-traps and insure against fire. In this way we keep the annual depreciation down to 10%.

R.C. But the labour and expense!

S. Exactly! You shrink from the labour and expense. In that case you have another course. Lend me your wheat and I shall replace it, pound for pound, sack for sack, with fresh wheat from my harvest. You thus save the labour of building a shed and turning over the wheat; you need feed no cats, you avoid the loss of weight, and instead of mouldy rubbish you will have fresh, nutritious bread.

R.C. With all my heart I accept your proposal.

S. That is, you will lend me your wheat free of interest?

R.C. Certainly: without interest and with my best thanks.

S. But I can use only part of the wheat, I do not need it all.

R.C. Suppose I give you the whole store with the understanding that for every ten sacks lent you give me back nine sacks?

* This obvious fact has been overlooked by every writer upon interest up to the present day, even by Proudhon.

- S. I must decline your offer, for it would mean interest—not indeed positive, but negative interest. The receiver, not the giver of the loan, would be a capitalist, and my religion does not permit usury; even negative interest is forbidden. I propose therefore the following agreement. Entrust me with the supervision of your wheat, the construction of the shed, and whatever else is necessary. In return you can pay me, annually, from every ten sacks two sacks as wages.
- R.C. It makes no difference to me whether your service comes under the heading of usury or labour. The agreement is, then, that I give you ten sacks and that you give me back eight sacks?
- S. But I need other articles, a plough, a cart and tools. Do you consent to lend them, also, without interest? I promise to return everything in perfect order, a new spade for a new spade, a new, unrusty, chain for a new chain, and so forth.
- R.C. Of course I consent. All I have at present from my stores is work. Lately the river overflowed and flooded the shed, covering everything with mud. Then a storm blew off the roof and everything was damaged by rain. Now we have drought, and the wind is blowing in sand and dust. Rust, decay, breakage, drought, light, darkness, dry-rot, ants, keep up a never-ending attack. We can congratulate ourselves here upon having, at least, no thieves and incendiaries. I am delighted that, by means of a loan, I can now store my belongings without expense, labour, loss or vexation, until I need them later.
- S. That is, you now see the advantage you gain by lending me your provisions free of interest? *

* Knut Wicksell, *Wert, Kapital und Rente*, p. 83, "Boehm-Bawerk asserts that present goods are at least equal to future goods, since, if need be, they can simply be 'stored for use in the future.' This is certainly a great exaggeration. Boehm-Bawerk does, indeed, mention that perishable goods, such as ice, fruit, etc., are an exception. But this exception applies more or less to all foodstuffs. Perhaps, indeed, all goods except precious stones and precious metals, if kept for future consumption, require special labour and attention—to which must be added the danger of loss through accidents such as fire."

(Banks now provide, for private use, special store-rooms for gold, precious stones and securities. For the use of these rooms, however, rent must be paid. The "present goods" are here inferior to the "future goods," by at least the amount of this rent).

- R.C. Of course I do. But the question now occurs to me, why do similar stores of provisions at home bring their possessors interest?
- S. The explanation lies in money which is there the medium of such transactions.
- R.C. What? The cause of interest lies in money? That is impossible, for listen to what Marx says of money and interest: "The change of value of money that converts it into capital cannot be derived from the money itself, since money in its function of medium of payment does no more than pay the price of the commodity it purchases, and, as hard cash it is value petrified, never varying. Just as little can the change occur in the second act of circulation, the re-sale of the commodity. [For in both cases] equivalents are exchanged, and the commodity is paid for at its full value. We are therefore forced to the conclusion that the change originates in the use-value of the commodity, after its purchase and before its sale." (Capital I. VI).
- S. How long have you been on this island?
- R.C. Thirty years.
- S. I thought so! You still appeal to the theory of value. My dear sir, that theory is dead and buried. At the present day it has no defenders.
- R.C. What? Marx's theory of interest dead and buried. Even if no one else defends it—I defend it!
- S. Well then, defend it not only with words but also in practice—if you wish, in relation to me! I hereby break off the bargain we have just made. From their nature and destination your goods are the purest form of what is usually called capital. But I challenge you to take up the position of a capitalist towards me. I need your stuff. No worker ever appeared before a capitalist as naked as I stand before you. Never has there been so clear an illustration of the relation between the owner of capital and the individual in need of capital. And now make the attempt to exact interest! Shall we begin our bargaining again from the beginning?
- R.C. I surrender! Rats, moths and rust have broken my power as a capitalist. But tell me, what is your explanation of interest?

- S. The explanation is simple enough. If there were a monetary system on this island and I, as a shipwrecked traveller, needed a loan, I should have to apply to a money-lender for money to buy the things which you have just lent me without interest. But a money-lender has not to worry about rats, moths, rust and roof-repairing, so I could not have taken up the position towards him that I have taken up towards you. The loss inseparable from the ownership of goods (there is the dog running off with one of your—or rather my—buckskins!) is borne, not by money-lenders, but by those who have to store the goods. The money-lender is free from such cares and is unmoved by the ingenious arguments that found the joints in your armour. You did not nail up your chest of buckskins when I refused to pay interest; the nature of your capital made you willing to continue the negotiations. Not so the money-capitalist; he would bang the door of his strong-room before my face if I announced that I would pay no interest. Yet I do not need the money itself, I need it only to buy buckskins. The buckskins you lend me without interest; but on the money to buy buckskins I must pay interest!
- R.C. Then the cause of interest is to be sought in money? And Marx was mistaken?
- S. Of course Marx was mistaken, and as he was mistaken about money, the nervous system of economic life, he was mistaken about everything. He and his disciples excluded money from the scope of their enquiry; he was fascinated by the shining metal disks, otherwise he could never have written: "Gold and silver are not by nature money, but money is by nature gold and silver, witness the coincidence of their natural properties and its functions."
- R.C. Practice certainly doesn't confirm Marx's theory—that has been clearly shown by our negotiations. For Marx money is simply a medium of exchange, but money does more, it seems, than "merely pay the price of the commodities it purchases," as Marx asserted. When the borrower refuses to pay interest, the banker can close the door of his safe without experiencing any of the cares which beset the owner of goods—that is the root of the matter.

- S. Rats, moths and rust are powerful logicians! A single hour of economic practice has taught you more than years of study of the text books.

2. BASIC INTEREST

Orthodox and Marxian economists are agreed that interest is an inseparable concomitant of private ownership of the means of production. "Those who reject communism, community of property, and desire liberty in economic life, must accept an economic system founded upon interest, that is, capitalism." So say all who have hitherto investigated the problem of interest. The investigators differ, indeed, widely in their moral judgment of interest, but that is a matter of secondary importance which does not help to clarify the problem. Whether interest, as the socialists aver, is the result of forcible appropriation, of an immoral abuse of economic power, or whether, on the contrary, the orthodox economists are right in ascribing it to the economic virtues of order, industry and thrift, is of little importance to the dispossessed workers, to the proletariat which has to bear the burden of interest.

In conformity with the above doctrine Marx and his followers are compelled to seek the origin of interest (surplus-value) in the factory or, at least, in the separation of the workers from the means of production; and there, in fact, they claim to have found it.

Nevertheless I shall now proceed to prove that interest has no connection with private ownership of the means of production; that interest is found where no mass of dispossessed workers (proletariat) exists or has existed; that interest has never been determined by thrift, order, industry and efficiency. I shall reject the above theories of capital and show that interest springs from the ancient form of money handed down to us from the times of the Babylonians, Hebrews, Greeks and Romans, and that it is protected by the physical, or legally acquired, advantages of that form of money.

Curiously enough Marx also began his inquiry into the nature of interest by investigating money.* But unfortunately at the critical

* The reason why, in the following pages, I frequently probe weak places in Marx's theory of interest, is simply that, of all the socialistic theories, his is the only one which has any influence upon the political struggles of

moment, in spite of Proudhon's warning, he made a false assumption. Like the orthodox apologists of interest he assumed that money and commodities are equivalents.*

Through this fatal mistake Marx went astray at the outset.

Marx finds nothing to criticise in money. Money, as adopted by us from the Babylonians, Israelites, Greeks and Romans, is a complete and perfect medium of exchange which has from the beginning brilliantly fulfilled its function. The fact that during the Middle Ages an economic system founded on money, and consequently the division of labour, could not develop, because of scarcity of the money-material; that the prohibition of interest by the Popes paralysed an economic system founded on money—although this prohibition was simply the forcible establishment of the equivalence of money and commodities assumed by Marx—is not sufficient to shake Marx's belief that money is a perfect medium of exchange, that it is a true, universal "equivalent." Needless to say, therefore, that Marx recognises no special form of power founded on money; he is forced to deny that mankind is exploited by a golden "International," composed of speculators and usurers. A speculative scheme on the Stock-Exchange is to him mere cheating, not robbery with violence. The speculator operates by fraud, not force; he is only a thief. Robbery requires the use of force, and force is the attribute, not of the money-magnates, but of the owners of the means of production. Money and commodities are, in short, at all times and in all places equivalents, and it makes no difference whether the money is held by a purchaser buying for his own consumption, or by a purchaser buying as a merchant. In Marx's own words "Gold and silver are not by nature money, but

our time. Marx's theory is for the proletariat a dangerous apple of discord, witness the two sections of the German Socialistic party, both holding Marx's theory of interest as a dogma, and at present settling their differences with rifles and hand-grenades.

* Two commodities are "equivalents" if neither is in a privileged position in relation to the other, and if they can be exchanged without profit. If, for example, usurers, savers or misers, when considering whether it is more advantageous to hoard commodities or money, are always forced to the conclusion that it is immaterial for their purpose which they choose, then a dollar's worth of gold and a dollar's worth of commodities are equivalents. But if savers and speculators conclude that a dollar's worth of money is for their purpose preferable to a dollar's worth of commodities, then the equivalence assumed by Marx does not exist.

money is by nature gold and silver, witness the coincidence of their natural properties and its functions."*

Dies Kind, kein Engel ist so rein,
Lasst's eurer Huld empfohlen sein !

This Marxian hymn in praise of gold and of the gold standard has completely diverted the attention of the proletariat from money, and has placed speculators, usurers and rogues under the direct protection of the dispossessed classes. Hence the present tragic farce wherein, throughout the world, "the watchmen at the gates of Mammon's temple have been replaced by the Red Guard."

It is a remarkable fact that in the social-democratic press and propaganda literature the words "interest" and "money" never occur !

It is still more remarkable that although Marx's own formula for the normal process of exchange $M-W-M'$ (Money, Wares, Surplus-Money; buying in order to sell at a profit) is a contradiction of the equivalence he had affirmed between wares and money, he seeks the explanation of the contradiction elsewhere, namely in the long chain of intermediate stages.

This "long chain" is simply the process of production; the chain begins and ends in the factory. The employer is not, says Marx, one of many exploiters, he is *the* exploiter. Exploitation takes place nowhere but in the pay-office.†

To explain the contradiction felt by Marx between the formula $M-W-M'$ and the alleged equivalence of money and commodities I shall not require this chain of intermediate stages; I shall dangle my hook before the mouth of interest and draw it directly, visible to all men, from its element. I shall reveal that the force expressed

* Marx, Kapital I.II

† "True commercial capital is the purest expression of the circuit $M-W-M'$ (Money, Wares, Surplus-Money; buying in order to sell at a profit). And the movement takes place wholly within the sphere of circulation. But since it is impossible to deduce from the circulation alone the conversion of money into capital (the formation of surplus value), it would appear that merchants' capital is an impossibility as long as equivalents are exchanged, that it can therefore originate only through the two-fold advantage gained over both the selling and the buying producers by the merchant who pushes himself parasitically in between them. If the transformation of merchants' money is to be explained otherwise than by the producers being simply cheated, a long chain of intermediate stages is necessary." Capital I.V.

by the formula $M-W-M'$ lies directly in the act of exchange; I shall show that money in the form we have blindly adopted from antiquity is not an "equivalent"; that it can circulate only according to the formula $M-W-M'$; that every nation which, to stimulate the division of labour and to facilitate the exchange of commodities, adopted this form of money, was inevitably forced into capitalism, into an economic system based on interest.

The force that makes money circulate according to the formula $M-W-M'$, that is, the capitalistic quality of money, originates as follows:

1. Money is the essential condition of a highly developed division of labour.

2. The physical properties of the traditional form of money (metal money and paper-money) allow it to be withdrawn indefinitely from the market without material cost of storage; whereas producers (workers), to whom money is essential for effecting exchanges, are compelled, by the constantly increasing losses connected with the storage of wares,* to create a demand for money.

3. The merchant can therefore force the possessors of wares to make him a special payment in return for the fact that he refrains from arbitrarily postponing, delaying, or, if necessary, preventing the exchange of wares by holding back his money.

* Wares decay, at different rates indeed, but with some unimportant exceptions (precious stones, pearls, precious metals), they all decay. Care bestowed upon the wares can retard, but cannot prevent their decay. Rust, rot, breakage, damp, drought, heat, frost, worms, flies, ants, moths, beetles, fire, etc. join in the work of destroying wares. If a merchant closes his store for a year, he must write off 10-20% of his capital because of this decay, in addition to the outlay for rent and taxes. But if the possessor of money closes his safe for a year he suffers no loss. Gold treasure found among the ruins of Troy has not lost demonstrably in weight and is worth 2790 marks per kilogram at the counters of the Reichsbank to-day.

It is often stated in this connection that as wine becomes more valuable during storage, it is therefore, apparently, an exception to the general rule that the storage of wares always means a loss. Wine, however, (like a few other products) is not a manufactured product but a natural product which, at the beginning of the storage period, has not reached the stage of development at which it becomes fit for human consumption. The juice that flows from the wine-press into the casks is must which only gradually becomes wine. It is this process of converting wine into a finished product that increases its value, not the storage itself. If this were not so, the increase in value would continue, which is not the case. The storage itself causes, as always, expense: rent for storage space, casks, bottles, years of care, breakage, etc.

4. Interest on commercial capital is composed of this regular payment which, distributed over the total annual transactions, amounts, as we know from thousands of years of experience, to about 4 or 5% per annum of the capital sum involved.

This special payment, sharply to be distinguished from commercial profit,* cannot of course be exacted by the ordinary purchaser impelled by his bodily wants (also called consumer), for here the possessor of money can as little postpone or renounce the purchase of wares as the producer can postpone or renounce their sale. Only the merchant approaching the market as owner of money can exact this tribute—the man who buys as a merchant, that is, with the purpose of selling again; the man who is free to buy, but can, if he thinks fit, abstain from buying, without incurring the pangs of hunger; the man, in short, who buys a cargo of wheat although one sack of wheat may suffice for his personal consumption. The merchant is of course in need of commercial profit, and he can obtain it only through the purchase of commodities. The impulse stimulating the merchant's purchases of commodities is not, however, physical necessity, but the wish to obtain the commodities as cheap as possible and, with this object, to use as a weapon every turn of the market and every weakness discoverable in the seller. If the seller's position is weakened by waiting, the merchant lets him wait. In general the merchant does all he can to increase the embarrassment of the seller (producer, worker) and the facts set forth under the above three headings are a constant source of embarrassment. The consumer, under the pressure of personal wants, cannot wait, although his money would allow him to do so; neither can the producer wait, although his personal wants would in many cases allow him to do so. But the possessor of money coming forward as a merchant, the holder of the universal, essential medium of exchange, can wait and thereby embarrass both producer and consumer by holding back the medium of exchange. And in commerce one man's embarrassment is another man's capital. If producers and consumers were not separated by time and place they

* Commercial profit is what remains over for the merchant after he has paid the interest on his capital. The profit of a merchant dealing exclusively in merchandise bought on credit is pure commercial profit, for he must hand over the interest spoken of above (No. 3) to his capitalist. He is thus a sort of bank-messenger for his capitalist.

would be able to manage, as still happens in barter, without the merchant's money; but as things stand at present, the intervention of the merchant, and consequently interest, is, for by far the largest part of production, a necessity.

Because of the latter fact we can leave the consumer's money quite out of our calculation. All commodities and all money pass through the hands of the merchant. For this reason we need here consider only the laws of circulation of the merchant's money.*

Having established these facts I shall next answer the question: What circumstances limit the amount of interest that money can exact for performing the function of exchange? The reason for considering this question at once is that the answer best reveals the true nature of interest on money.

If money is capital because it can arbitrarily interrupt the exchange of commodities, it will be asked why interest does not rise by the full amount of the advantage we derive from the use of money in our economic system; an advantage measurable by the difference in efficiency between division of labour and primitive production. Similarly the question is justified, why landowners, when fixing their rents, do not in every case apply the law of the "iron wage"; or why the shareholders in the Suez Canal, when fixing the canal dues, are not exclusively influenced by competition of the sea-route around the Cape of Good Hope.

But the tribute which money claims for its use follows other laws than those governing the use of land; it more resembles the tribute exacted by the robber barons of the Middle Ages. Merchants who were forced to use a road which passed the baron's castle were thoroughly plundered; dues of 30, 40, 50% were exacted. But if the merchant had a choice of other roads, the baron became more modest, he guarded his road, improved its surface, built bridges, protected it from other robbers and, if need were, even reduced the toll, to prevent the merchant from avoiding the road altogether.

It is the same with money; money also knows that competitors will appear if it sets its tribute too high.

* Readers with any difficulty in recognising that merchant's money and consumer's money obey different laws of circulation should reflect a moment upon the mechanism by which savers' money is drawn back into circulation as a medium of exchange.

(I shall prove later than in money-lending there can never be competition. The competitors just mentioned make their appearance, not when money is being lent, but when it is being exchanged for wares).

It is clear that the division of labour could be much further developed than at present. The gold standard is a world standard, so when considering it we must consider the economic system of the whole world. But three-quarters of the inhabitants of the world still cling to primitive production. Why? Partly because the exchange of commodities by money is too heavily burdened by interest. This expense must cause producers to forego the production of commodities for exchange (wares) in certain branches of their activity, or even in general, and to continue the primitive system of production. The choice between production of goods for home use and wares for market depends on an arithmetical calculation, and the interest with which the production of wares is burdened may often enough lead to preference being given to primitive production. Many German small farmers for example, may prefer to feed pigs with their potatoes and to kill the pigs for their own use, if meat is slightly increased in price because of the interest exacted by the agent of exchange. The small farmer will then produce fewer wares (potatoes for the market) and more goods for his own consumption. For this reason he will require less money.

This part of production must not, even in Germany, be underestimated, and here money must moderate its demand for interest, to avoid forcing modern production back into primitive production. In Asia and Africa the bulk of the population acts like the German small farmer described above.

If, now, the possessors of money demand too large a tribute from the wares, that part of present-day production which oscillates about the marginal utility of the division of labour is abandoned, and primitive production takes its place.

The demand of too large a tribute by money reduces the production of wares (commodities for exchange) and correspondingly increases primitive production. This means that the supply of wares decreases. Prices therefore rise.

For the present we simply register this fact.

Barter has the same effect upon the demand for money, for the medium of exchange, if money claims too high a rate of interest. Money indeed owes its existence to the difficulties of barter. It was invented to overcome these difficulties. But if money claims too high a tribute for performing the work of exchange, barter can often successfully resume competition with it, especially when, as in many parts of Asia and Africa, producers and consumers are not separated by time and place. The more the exchange of products is burdened with money-interest, the easier it is for barter to challenge the supremacy of money. Products sold by barter reach the consumer without the payment of interest. For which of the parties should pay interest? * It is clear, therefore, that if money is to replace barter, it cannot demand any tribute it chooses, especially as the owners of products can overcome the main obstacle to barter, their separation in time and place, by arranging to meet on certain days in certain places (market-days).†

In this way they demolish the foundation upon which money is built, namely the demand for the medium of exchange embodied in the wares. Commodities reaching the consumer by barter are lost to money, just as a gipsy in his cart is a customer lost to the railway.

For our present purpose we need not calculate what fraction of the world's production oscillates between barter-sales and money-sales, what quantity of commodities is excluded by too high a demand for interest from using the medium of exchange. It is sufficient if we have demonstrated that barter is a competitor of

* If potatoes are bartered for fish, and each party burdens his product with 10% interest, the two demands for interest cancel each other. But this by no means excludes the possibility of interest derived from loans, as distinct from interest derived from barter.

† Barter is not quite so difficult as is usually represented. The difficulty that those who hold the products I need, do not always need my products, or do not need them in just the quantity corresponding to the quantity (often indivisible) of products they have to offer, has been much exaggerated. In reality this difficulty is resolved by the appearance of the merchant. For a merchant who buys everything can sell everything. He can always pay me with what I need. If I bring him an elephant-tusk I can obtain any of the commodities in his shop, and in just the quantity I require. At the present day commerce is carried on in this manner among the German colonists of Southern Brazil. These German colonists seldom receive money for their produce.

money whose chances of success increase in proportion to the amount of interest demanded by money. If interest rises, many commodities are diverted from money-sales to barter-sales, and the demand for money decreases. Prices therefore rise, exactly as with an increase of primitive production. This fact also, we are content for the present simply to record.

Bills of exchange have the same effect as primitive production and barter, if the claims of money are raised too high. Commodities sold by means of bills of exchange also escape the interest-tribute to money—and a high rate of interest stimulates a more extended use of bills of exchange.

Bills of exchange are not, indeed, as safe and convenient as money; in many cases they cannot replace money at all, as is apparent from the fact that they are frequently exchanged (discounted) at the bank for money, although they suffer thereby a deduction. This would not happen if the bill of exchange could always replace ready money. Nevertheless, bills of exchange, particularly in wholesale commerce and as a reserve, have often only small disadvantages in comparison with money. A slight rise in the rate of interest can in such cases cause a preference for bills of exchange.

Money-interest affects the use of bills of exchange as an increase of railway fares affects the use of canals. The higher the rate of interest, the greater is the stimulus to avoid this tribute to money by the use, in commerce, of bills of exchange. For the same reason everything that artificially increases the natural disadvantages of bills of exchange (in comparison with money) must strengthen the position of money and increase the tribute it demands. If the rate of interest is lowered to 5% by the competition of bills of exchange, it will rise to $5\frac{1}{4}$ — $5\frac{1}{2}$ —6%, if the use of bills of exchange is made difficult by alarming news or by a stamp-duty. The greater the insecurity of bills of exchange, the higher is the rate of interest demanded by money; the more heavily bills of exchange are burdened by stamp-duties, the higher are the claims of its competitor, that is, the higher the rate of interest. If we burden bills of exchange with a tax of 1%, the deduction made by the bank when changing a bill of exchange (discount) will rise 1%. If bills of exchange are taxed

5%, the deduction will rise from 5% to 10%. (Unless the other competitors of money, barter and primitive production, intervene).

(For this reason the State is illogical in proposing to increase its revenue by a stamp-duty upon bills of exchange when at the same time it complains of being able to place its loans only at a high rate of interest. The State, as a debtor, should, on the contrary, abolish the tax upon bills of exchange in order to reduce the interest upon its loans. What the State lost in stamp-duties it would gain a hundred-fold by the decrease of interest upon its loans. At the same time the burden of interest upon the whole nation would be lightened).

If, now, instead of a tax, we imagine a premium (of any kind) upon bills of exchange, it is clear that, with such a premium, the circulation of bills of exchange could also be stimulated or retarded; stimulated by raising the premium, retarded by lowering it.

But is not the saving of interest afforded to commerce by the circulation of bills of exchange such a premium, rising and falling with the interest upon money? The circulation of bills of exchange increases, therefore, in direct proportion to the increase of interest upon money.

But wherever bills of exchange circulate, corresponding quantities of commodities circulate in the opposite direction. These commodities also, are lost to the demand for money. Money has been deprived of them by bills of exchange. There is thus a corresponding decrease in the demand for ready-money. Prices therefore rise in proportion to the increase in the circulation of bills of exchange, and the circulation of bills of exchange increases with the increase of interest upon money. This fact, also, we at present simply record.

Money is not, therefore, an absolute monarch of the market. It has competitors, and for that reason it cannot set the rate of interest as high as it chooses.

The objection may here be made that money is often, particularly in modern cities, indispensable, that in most cases it could even claim the larger share of commodities as payment for performing the function of exchange without causing a return to barter or primitive production. Even if the deduction (discount) were 50%, money could not, in many cases, be replaced by bills of exchange.

And bills of exchange pass only from one trusted hand to another.

They are not sufficiently divisible for the needs of retail commerce. They are subject to certain laws and bound to certain times and places. All this greatly restricts their radius of action.

These facts could be used in support of the objection that in all such cases payment for the function of exchange would be much higher than at present, if money really exacts interest because it can arbitrarily postpone the exchange of wares.

But this objection leaves out of account a fact which we learned in the third part of this book, namely that a general rise of prices forces money into the market. A general rise of prices of commodities means for the possessor of money a loss exactly proportionate to the rise of prices, and the only way of avoiding this loss is to offer the money in exchange for commodities. A general rise of prices means, for our traditional form of money, a compulsory circulation similar in many of its effects to the compulsory circulation of Free-Money. During a rise of prices everyone endeavours, by purchasing commodities, to avoid the loss which threatens his money—by passing on the loss to others.

We can therefore say that to raise the tribute claimed by money above a certain level automatically liberates the forces which again reduce the tribute.

The reverse is true when money-interest falls below this limit. Owing to the lessened cost of commerce, the division of labour is introduced where primitive production was hitherto profitable, and money-sales take the place of barter. At the same time bills of exchange lose their attraction (with money at 0% they would disappear). These circumstances, namely an increase in the production of wares (at the cost of primitive production) and a simultaneous increase in the offer of wares for ready money (at the cost of the circulation of bills of exchange) would depress prices and impede the exchange of wares. And the resulting embarrassment of producers would again bring money into use with increased interest.

The forces liberated by money-interest (through its effect upon the interest-free competitors of money, and consequently upon prices) have thus an automatic regulating effect upon interest itself, so that the upper limit of money-interest is also its lower limit. (The fact that the rate of interest on bills of exchange [discount] is

subject to great variations, is not, as we shall show later, a proof to the contrary).

Interest upon money must therefore always fall back to the point at which it stimulates or restricts primitive production, barter, or the circulation of bills of exchange.

There is even at the present day a general opinion that the rise or fall of interest is determined by competition among those who lend money.

This opinion is wrong. There is no such thing as competition between money-lenders; competition is here an impossibility. If the money offered for loan by capitalists is drawn from the existing circulation, the capitalists, by lending this money, merely fill the holes they have dug by withdrawing it. Ten, a hundred or a thousand money-lenders mean ten, a hundred or a thousand holes dug by these money-lenders in the path that money has to pursue. The greater the amount of loan-money offered, the larger are these holes.* Thus, other things being equal, a demand for loan-money must always arise exactly equal to the amount of money that the capitalists have to lend. Under these circumstances we can no longer speak of competition capable of influencing the rate of interest. If this were competition, the fact that changes of residence take place at Martinmas should influence rents. But rents are not influenced, since the increase in the number of those seeking houses is balanced by the increase in the number of vacant houses. These changes of residence in themselves have no influence whatever upon rents, and it is the same with the competition of money-lenders. Money is here merely taking part in a general Martinmas flitting.

But if the money offered for loan is new money, say from Alaska, this new money will drive up prices, and the increased prices will force all who are obliged to borrow money for an enterprise to increase the amount of the loan demanded, by the amount of the rise of prices. Instead of 10,000 dollars, a builder

* In the celebrated crisis which swept over the United States in 1907, it was Morgan who "hastened to the rescue" of the Government with a loan of 300 million dollars. Where did these dollars come from? They were urgently needed dollars. Morgan had previously withdrawn them from circulation and thereby brought his country into trouble. When the slump in stocks had taken place and the differential gains been pocketed, the rogue generously, out of pure patriotism, offered them to the Government.

will need 11—12—15,000 dollars to build the same house, so the increased supply of loans due to the new money will automatically cause a corresponding increase in the demand for loans. In this way the influence of the new money upon the rate of interest is soon cancelled. The fact that an increase of the quantity of money in circulation (due to discovery of gold or issue of paper-money) not only does not cause a fall but actually causes a rise in the rate of interest will be explained later.

Competition between money-lenders which could affect the rate of interest does not, therefore, exist; such competition is an impossibility.

The only competition which can restrict the power of money is competition in the three forms already enumerated; primitive production, barter and bills of exchange. An increase in the tribute claimed by interest automatically causes an increase of primitive production, an increase of barter and an increased circulation of bills of exchange. The result is a general rise in the price of commodities which makes the possessors of money more accommodating. (For the better understanding of this sentence we refer the reader to a later chapter "Components of Gross Interest").

Only one straight line can be drawn between two points; the straight line is the shortest, and the shortest — translated into economic terms — is the cheapest.

The shortest and therefore the cheapest road between producer and consumer is money. (With primitive production, goods do, indeed, make a still shorter journey, namely from hand to mouth. But this form of production is less fruitful than the production of wares which results from the division of labour).

The other roads (barter, bills of exchange) which commodities can use to reach the consumer are longer and more expensive. If it were otherwise, if ready money had no advantages, as a medium of exchange, over bills of exchange, why would anyone give \$105 in bills of exchange for \$100 in money?

But the shortest and cheapest road can be closed by the possessor of money, and he never leaves it open unless he is paid for the advantages of the straight road, money, over the devious roads. If he demands more than this difference, commodities choose the longer road; if he demands less, money is overburdened,

that is, commodities which would otherwise have been sold by means of bills of exchange and so forth, now claim ready-money. The demand for money increases, prices fall, and when prices are falling, the whole circulation of money is arrested.

Money claims interest for each time it is used, somewhat as a cab claims a fare. Interest is counted among the general expenses of commerce and collected with these—it is immaterial whether as a deduction from the price paid the producer or as an addition to the price demanded from the consumer. As a rule the merchant can estimate by experience the price which he can obtain from the consumer. From this price he deducts the costs of commerce, wages for his own work (net profit of commerce), and interest. Interest is calculated by the average time, known to the merchant by experience, which elapses between the purchase and the sale of his merchandise. What remains is for the producer. If, for example, the retail price of a box of cigars in Berlin is ten marks, the cigar-manufacturer in Munich of course knows that he cannot claim the full ten marks for himself. He must reduce the price to the cigar-merchant in Berlin sufficiently to enable the latter to pay for carriage, shop-rent and his own services, from the difference between the factory price and the retail price. And something more must remain, since the cigar-merchant is obliged to “put money into his business.” This money usually comes directly or indirectly from the banks or savings-banks which of course give it only for interest. The cigar-merchant must obtain this interest from the above mentioned difference in price. If that is not possible with present prices, he waits; and while he waits, the manufacturer and consumer must also wait. Not a single cigar can pass from the factory to the lips of the smoker without paying a tribute to money. Either the manufacturer must moderate the price asked for, or the consumer must increase the price offered. The capitalist regards the outcome with indifference, for in either case he receives his tribute.

Interest is therefore simply added to the other costs of commerce. These are, in general, the reward for work done. The carter feeds his horse, greases the axles, sweats and curses; it is only just that he should be paid. The merchant keeps his shop, pays his rent, broods and calculates; he, also, should receive something. But the banker, the savings-bank, the money-lender—what is their service?

A king stands beside the barrier; he obstructs the stream of commerce across the frontier and says “The tithe is mine!” A money-lender stands beside his safe; he obstructs the exchange of commodities which requires its contents, and says “Interest is mine!” King and money-lender render no service, they exact a tribute simply by obstruction. Interest is thus, like import-duties, a tribute, with the difference that the king uses import-duties to pay State-expenses, whereas the capitalist keeps the money-interest for himself. Money-interest is our payment for the activity of the capitalist—and this activity consists of putting obstacles in the way of commerce.

Of the three competitors of money that set the limits to money-interest, which is the most important? In commercially developed countries and in ordinary times, the bill of exchange, in less developed countries, the other two competitors. Suppose, for example, Germany were a self-contained economic State with its own paper-money standard. Without bills of exchange money would then be able to exact a very high tribute before primitive production and barter could intervene with sufficient force to cause the rise of prices necessary for the liberation of money.* One is even justified in assuming that without bills of exchange, (including, of course, credit sales, deferred payments and so forth), money would, under such conditions, raise the interest-tribute until it very nearly equalled the advantage derived from the division of labour—as is strikingly proved by the abandonment of work in times of crisis. Primitive production and barter are only quite exceptionally, and to a small extent, of use to the unemployed. An unemployed worker can mend his trousers, shave himself and cook his own meals. He can bake his own bread, perhaps teach his own children and, instead of going to the theatre he can write a comedy for his family—if hunger leaves him so disposed.

But if bills of exchange are with us the most important regulator of interest, primitive production and barter are the chief regulators of interest in undeveloped countries such as Asia and Africa, where bills of exchange are little used. That primitive production and barter must be effective regulators in such countries is plain from

* For the better understanding of this statement I again refer to the chapter at the end of this book on “The Components of Gross Interest.”

the fact that in earlier times, when the division of labour had been adopted only by a fraction of the population, for example under the Romans, or in England under Queen Elizabeth, the rate of interest was about what it is at the present day. (The facts are set out at the end of this book).

The constancy of the rate of pure money-interest is most remarkable and justifies the assumption that the three totally different regulators of interest, adapted to such totally different stages of culture, are interdependent and supplementary. For example, a highly developed division of labour, not capable of great further extension, makes barter and primitive production impossible, but produces the degree of culture, the social, legal and commercial organisation, under which the circulation of bills of exchange expands and prospers. The 36 billion marks of bills of exchange which circulated in Germany in 1907 are a better measure of the development of German commerce than the network of railways and other external signs of progress.

On the other hand where the stage of culture excludes the substitution of bills of exchange for money, primitive production and barter are the faithful guardians that prevent money from raising its claim for interest above a certain level.

Let us summarise what has been said in this section:

Money-interest is the product of an independent capital, namely money, and is comparable with the tolls exacted in the Middle Ages by robber barons, and until lately by the State, for the use of the roads. Interest on money is not influenced by interest on so-called real capital (houses, factories) though the converse, as we shall see later, is true. The competition of money-lenders has no influence upon money-interest. Money-interest is limited only by the competition of the other forms of exchange, namely barter and bills of exchange, and of primitive production.

When money is lent, the ownership of the money is changed, but nothing is changed in the money itself; just as nothing is changed if the toll-gate is closed and the toll collected, not by the toll-keeper himself, but by his wife. The substitution of bills of exchange and barter, on the contrary, is not an ineffective personal change of this kind, for it means effective competition to money through the provision of other roads for the exchange of commodities.

Through the rise of prices caused by bills of exchange, primitive production and barter, the circulation of money is subjected to an economic compulsion which prohibits the abuse, beyond certain limits, of the power of money, even in relation to commodities which cannot be exchanged by way of barter or bills of exchange. It is here the same as with wage-earners whose wages are determined by the proceeds of labour of emigrants even although they themselves do not all threaten to emigrate. (See Part I, Distribution).

Money-interest is exacted from the wares, that is, directly from the circulation of wares and money. (We have already noted that Marx denied this possibility). Interest upon money is quite independent of the existence of a proletariat deprived of the means of production; it would be no whit less if all the workers were provided with their own instruments of production. Interest on money would in that case be levied by the merchant (possessor of money) from the workers when they were handing him over their produce. It would be levied because the merchant, by withholding his money, could prohibit the exchange of the wares produced by the workers—without direct loss to himself, and with direct, inevitable loss to them, since all wares, with a few unimportant exceptions, lose daily in quantity and quality and, in addition, cause considerable expense for storage and caretaking.

Interest upon money we shall call from now on “basic interest.”*

3. TRANSFER OF BASIC INTEREST TO THE WARES

If a commodity is to be burdened with basic interest it must of course be capable of bearing this burden; that is, it must meet with market conditions permitting the payment of its cost price, plus basic interest, out of its selling price. The market conditions must allow the circulation of money in accordance with the formula Money—Wares—Surplus Money.

This is obvious. For if it were not so, money would refuse to act as the intermediary of exchange, and the consequent embarrassment of producers would cause them to increase the difference between the cost price and the selling price of wares until the selling

* The use of the term basic interest for money-interest, in contrast to the interest on “real” capital (houses, factories, and so forth) will serve to emphasise the distinction between the two forms of interest.

price, besides the other costs of commerce, could bear the cost of basic interest.

This whole process is automatic. For our traditional form of money, our medium of exchange, being by nature capital, allows no wares to enter commerce without its brand, so wares must necessarily always find the market conditions which permit them to appear as interest-exacting capital—at least to the consumer, since he pays the price which the producer receives, plus interest. To the producer, on the contrary, wares (his produce) must appear the reverse of capital (negative capital) since he receives the price paid by the consumer, less interest. Money has wrested this part of his produce from him. But a thing that must pay interest cannot properly be called capital. If commodities were capital, they would also be capital in barter, and can anyone imagine how interest could be exacted in barter*? Two forms of true capital, when confronted, neutralise each other. Rented land and money, for example, exchange for one another without interest. Each taken separately is capital, but they cannot meet each other as capital. Money, however, is always capital in relation to wares.

It should be noted that even to the consumer wares have only the appearance of capital; if he examines the matter more carefully he soon finds that wares are simply the quarry of money-capital.

Every producer is also a consumer, and just as in barter each party receives the other party's whole product, so every producer must at present regard the full price paid by the consumer as the return service for his own product. If he does this, wares must seem to him negative capital. Wares then appear in their true character namely as bank-messengers for money-capital. Wares collect basic interest from the consumer, not for the producer but for the possessor of money (medium of exchange), somewhat as a postman collects the price of a cash-on-delivery parcel. The weapon with which money arms its messenger is the power of breaking the connection between producer and consumer by withdrawal of the medium of exchange.

If the mediator of exchange, the capitalist, is deprived of the power of interrupting the exchange of wares for the purpose of

* Marx does indeed deduce capital in some mysterious way from barter !

exacting basic interest—as is achieved by Free-Money—money must give its services free of cost and the wares can be exchanged as in barter, without the payment of interest.

To facilitate the free exchange of commodities, the State at present charges the owners of bullion nothing for the conversion of their metal into coin. If the State substituted for this free coinage an annual payment for coinage of 5%, money would really act free of charge as the instrument of exchange.

4. TRANSFER OF BASIC INTEREST TO SO-CALLED REAL CAPITAL

A commodity is bought with money and sold again to the consumer loaded with interest. When the commodity has been sold, money is again free for a new foray.* This is the true meaning of Marx's formula Money—Wares—Surplus Money.

Basic interest thus exacted by money from the wares is not booty snatched on one occasion only, it is a perpetually flowing fountain and the experience of thousands of years permits us to estimate it on the average at 4% to 5% annually of the money sum involved. The interest that the merchant exacts directly from the wares as they pass through his hands is the true and full basic interest. What the merchant delivers to his capitalist is basic interest less the cost of collection†; just as the tolls which the toll-collector delivers to the State are not the full toll-money.

But if someone with his money-capital buys bricks, lime, wheelbarrows, not in order to sell them again but to build a tenement house, he voluntarily puts an end to the periodic return of the money; he gives up the perpetually-flowing fountain of interest. He has then a house but no money, no source of interest. Obviously he will give up such a valuable possession only on condition that the house brings him in the interest which, experience shows, the

*According to this, the consumer must always spend more money than as producer he receives. The difference, consisting of basic interest, the producer obtains by producing and selling more commodities than he buys. The surplus so delivered by the producers is bought by the money-capitalists for their personal use with the money which they receive as interest. It is the same with the cost of commerce paid by the consumer.

† We shall see later that the cost of collection is not inconsiderable. The chief item is the devastation caused in economic life by commercial crises.

money necessary for its construction can always exact in commerce. If money in the course of a year can exact 5% interest from the wares, the house must be able to exact the same tribute from its tenants, the ship from its freight, the factory from wages;* otherwise money simply remains in the market with the wares, and the house is not built.

Money therefore lays down this obvious condition for the construction of a house, or factory, or ship, that the house must be able to exact from its tenants, or the factory from its workmen, or the ship from its freight, the same interest that money itself can at any time exact from the wares. No interest means no money for houses, factories, ships. And without money how could anyone collect and put together the thousand different articles necessary for the construction of a ship, a factory, a house? Without money it is inconceivable that a house or ship or factory could ever be constructed, so the foundation capital of every capitalistic undertaking consists of a sum of money. For the millions of factories, ships, rented houses, it may be said, "In the beginning was the money."

But if no money is given for the construction of houses unless they can exact the same interest that money itself exacts from the wares, building is suspended and the consequent scarcity of houses raises rent; just as the scarcity of factories reduces wages.

Houses, ships and factories, in short all so-called real capital, must therefore necessarily yield interest equal to the tribute which money can impose as basic interest upon the exchange of wares.

Houses, factories, machinery are capital. They do not, like the wares, collect interest as bank-messengers in order to hand it over to the possessors of money; they collect it for the owner of the house or factory. This power does not, however, lie in the characteristics of such things, but in the fact that money here, precisely as with the wares, prepares the market conditions necessary for the collection of interest. The ratio of houses to tenants, of ships to freights, of workmen to factories is regularly, artificially and

* I use this expression unwillingly, as it is ambiguous. It is better to speak of the price which the employer pays the workmen for their produce, since it is for this, the completed, tangible achievement, not for the activity of the workman that the employer pays.

inevitably so constituted by the present form of money that demand (tenants and workers) is always faced with an insufficient supply.

The traditional form of money (medium of exchange) provided by the State protects all existing houses from the interest-reducing competition of new houses. Money takes jealous care that its creatures shall not degenerate; it is given only for the construction of as many houses as can be built without causing the yield of interest to fall below basic interest. This fact is confirmed by thousands of years of experience.

So-called real capital is therefore anything rather than "real." Money alone is true real capital, basic capital. All other capital objects are completely dependent upon the characteristics of the existing form of money; they are its creatures; they receive the title of nobility, the title of capital, from money. Deprive money of the privilege of forbidding the workers to build new houses, tear down the barrier raised by money between the workers and real capital, and the supply of such things will increase until they lose the characteristics of capital.

The statement sounds monstrous, and one must be very sure of one's reasoning to make it, that the houses, factories, ships, railways, theatres and power-stations, in short, the whole dark and mighty ocean that one can overlook, say, from the Kreuzberg in Berlin, is capital, and must necessarily be capital, only because money is capital. Is it possible that this mighty ocean of capital, at least 100 times as great as money-capital, yields interest only because money yields interest? The statement sounds improbable.

But the apparent improbability at once decreases if we reflect upon the antiquity of money, upon the fact that for three or four thousand years money has by artificial means regularly and automatically restricted the construction of houses, so that demand has always exceeded supply, and houses, for this reason, have remained capital.

And the improbability disappears if we recall to mind the economic glacial period (as we have named the Middle Ages) and the thousand economic crises caused, since then, by money. Real capital worth billions of dollars would have been constructed but for forced unemployment; it is the absence of this real capital, due to money, that permits the existing real capital to exact interest.

The scarcity of houses, ships, factories, revealed by the fact that these things yield interest, is the result of a cause which has been uninterruptedly at work for thousands of years.

If during the years of crisis 1873–1878, the starving and unemployed masses had been allowed to build houses and machinery, would not house-rent have been forced down by this addition to supply? And those were but five years! Nor must it be forgotten that the other causes of economic crises, unconnected with interest (as described in the third part of this book: “Money as it is”) act in the same direction, that is, restrict or prevent exchange.

Clearly, therefore, so-called real capital produces interest because it can be created only by spending a sum of money, and because this money is capital. So-called real capital has not, like money, the power of extorting interest. Real capital, just as the wares, merely makes use of a state of the market forcibly established for its own ends by money, namely an artificial limitation of the production of real capital with the aim of keeping the supply of it constantly below the demand.

By forced unemployment our traditional form of money, stamped and managed by the State, inevitably creates the homeless and destitute mass of workers, the proletariat, essential for the continuance of the capitalistic character of houses, ships, and factories.

Money is indispensable for the formation of this real capital, and without interest there is no money. But real capital cannot exist without a proletariat.* Consequently the indispensability of money must produce the proletariat necessary for interest upon real capital and for the circulation of money.

Money creates a proletariat, not because the burden of interest deprives the masses of their property, but because it forcibly prevents the masses from constructing property for themselves.

To account for the existence of the proletariat we need not have recourse to the facile expedient of the alleged historical explanation; for the proletariat is a regular concomitant of the traditional form of money. Without a proletariat; no interest upon real capital; without interest: no circulation of money; without the circulation of money: no exchange of commodities—the result of which is impoverishment.

* Proletariat: workmen deprived of their own means of production.

In former times, no doubt, the sword was a powerful factor in the production of a proletariat. The throne (legislation) and altar also helped. Even in our time attempts are still made to put land-rents under the protection of the law; wheat-duties are devised to deprive the people of the weapons they have forged against rent, namely ships, railways and agricultural machinery. A right to exact rent is set up against the right to work and the right to eat. But even without this aid, capital would not have been the poorer by a single proletarian. A few more economic crises, a few more thousand superfluous workers, would have been effective substitutes for legislation and the sword. Even without the sword and legislation money-capital has sufficient intrinsic power to create the proletariat necessary for real capital. With the impetus of a natural agent money creates a proletariat. Metal money and a proletariat are inseparable.

So-called real capital consists, no doubt, of very real and indispensable objects, but as capital these objects are anything rather than real. The interest at present produced by them is the creature of basic capital, of money.

5. COMPLETION OF THE FREE-MONEY THEORY OF INTEREST

We have called money basic capital because it prepares the road for so-called real capital, and asserted in this connection that real capital owes its interest-earning capacity solely to the fact that money, through forced crises, forced unemployment, that is, through fire and sword, prepares the market conditions which enable real capital to exact interest equal to basic interest. But we must also be able to prove that interest upon real capital is so governed by basic interest that it must necessarily again conform to basic interest if, for any reason, it temporarily deviates therefrom.

For we assert that demand and supply determine interest on real capital—and thereby recognise that interest is subject to many influences.

What we have to prove, therefore, is this: That if from other causes interest on real capital rises above basic interest it must inevitably, from the nature of things, fall again until it reaches the level of basic interest. And conversely, if interest on real capital

falls below basic interest, it will be automatically raised again to this level by money. Basic interest is therefore always the maximum and the minimum return usually to be expected from real capital. **Basic interest is the point of equilibrium about which interest on all forms of real capital oscillates.**

But if this is so, we must also be able to prove that if the artificial obstacles to the formation of so-called real capital, caused by the present form of money, are removed, the supply of such capital, resulting from the now untrammelled work of the people, will sooner or later, without the intervention of any other agent, cover demand in the sense that interest throughout the world, wherever there is free-trade and freedom of movement, will fall to zero.

(Capital interest is an international quantity, it cannot be eliminated by one country alone. If, for instance, houses in Germany yielded no interest, and such interest were still obtainable in France, no houses would be built in Germany. German capitalists would send their surplus across the frontier by purchasing French bills of exchange with the proceeds of which they would build houses in France).

We must therefore prove:

1. That the power and means exist of drowning interest in a sea of real capital, within a reasonable time.
2. That the impulse or will to produce real capital, such as tenement-houses, factories and ships, does not decrease when such things no longer yield interest.

That interest on real capital can at any time deviate in an upward or downward direction from basic interest is easily proved as follows:

Let us suppose that three-quarters of mankind are carried off by the plague. The present ratio between proletariat and real capital would be fundamentally changed; to every tenant there would be four houses, to every farm labourer four ploughs, to every gang of workmen four factories. Under these circumstances real capital would no longer yield interest; the competition of house-owners would depress rents, and the competition of employers would reduce profits to such an extent that probably not even the full costs of upkeep and amortisation could be recovered.

During the years of crisis from 1890 – 1895, for example, it was possible to inhabit, rent-free, the finest houses in the provincial capital of La Plata in Argentina. The house-owners were unable to obtain even enough rent to cover repairs.

Under such circumstances only one form of capital would continue to exist, namely money. For although all other capital objects would have lost the power of exacting interest, money would have no need to reduce its claim for interest, even if 99% of the population had died out. The produce of the interest-free instruments of production, the wares, would still be compelled to pay the same interest for their exchange, just as if nothing had happened.

The case we have supposed throws a vivid light upon the nature of money and upon the relation of money to real capital.

If we assume that the quantity of money in circulation was unaffected by the plague, the disproportion between money and commodities would cause a rise of prices, but the relatively large stock of money would not reduce interest, since, as we have proved, competition between money-lenders is impossible. Gross interest would even be increased by the rise of prices. (See later, Chapter 7, "The Components of Gross Interest").

Under the circumstances we have imagined it is obvious that no one would give money for the construction of a factory. Money would be given for that purpose only when, partly through an increase of population, partly through fires and other accidents, to which must be added the passage of time, the supply of real capital had so decreased that the original ratio of real capital to population, and with it the level of basic interest, had been reached. Why this must happen we have already explained.

Thus interest on so-called real capital can at any time, as the result of exceptional circumstances, fall below basic interest; but the natural agents of destruction to which real capital is subject (see the annual statistics of shipwrecks and ships broken up, railway accidents, fires, and the sums annually written off for depreciation in every factory), in conjunction with the circumstance that money permits no production of new real capital until the interest upon existing real capital reaches the level of basic interest, necessarily re-establish the former relation between the demand and supply of real capital.

But we must also prove that interest upon real capital cannot permanently rise above basic interest.

That it can rise above basic interest under special circumstances, and that it has actually done so for decades at a time in countries with relatively large immigration, we readily admit. For this is a conclusive proof of the theory of interest whereby demand and supply alone determine whether real capital produces interest, and the amount of interest it produces.

The amount of capital in houses, instruments of production, shops, railways, canals, harbours and so forth that falls to each workman's family in the United States is unknown to me. It may be \$5,000 or it may be \$10,000. Suppose it is only \$5,000. To provide shelter and means of production for the 100,000 immigrant families annually landing in America, the Americans would then have to provide 500 million dollars annually in new houses, factories, railways, ships.

If all German workmen were to emigrate to the United States, everything needed to employ and house these masses would be wanting. The want of factories, machinery and houses would depress wages and at the same time enormously increase house-rent. Interest upon real capital would rise high above basic interest.

Usually this process is completely concealed from immediate observation, since capital goods rise in price with the rise in the yield of interest. A house which can be sold for \$10,000 because it brings in \$500 interest, rises in price to \$20,000 if interest on the house rises to \$1,000. Arithmetically the house then yields only 5%. For it is basic interest that serves as the basis for calculating the price.

We must next be able to explain the fact that every rise in the rate of interest upon real capital above basic interest inevitably, naturally and automatically causes a steadily increasing new production of houses, factories, etc., and that, under pressure of this supply, the interest on such things soon falls back to the point of equilibrium or limit, namely basic interest—as automatically as, in the opposite case, it rises to this limit. We must prove that there are no economic or psychological obstacles to interfere with this process. The will to work, the power of working and natural resources must at all times and in all places suffice to provide capital

in such quantities that the supply of this capital is bound to reduce interest to the limits of basic interest.

(Flürscheim's* statement that "Interest is the father of interest" is no absurdity. Flürscheim means that the burden of interest prevents the people from producing the amount of real capital necessary for the elimination of interest; just as rent prevents peasants from buying the rented land they occupy.

But the statement that "Interest is the father of interest" also implies that rising interest must cause an unlimited further rise of interest. If, as Flürscheim claims, the law of falling bodies is applicable to interest when interest begins to fall, the law must apply in the reverse direction when interest begins to rise. This contradiction was insoluble by the methods of investigation employed by Flürscheim).

That such quantities of real capital are forthcoming we see from the fact that the United States, in a comparatively short period of time, have passed from demand to supply in the international capital market; that they have carried out the great undertaking at Panama with their own resources; that they have rescued many a princely house in Europe from ruin with their daughters' dowries; that they are seeking other outlets abroad for their surplus capital. This proof is all the more convincing, first because the great influx of destitute immigrants into the United States created an abnormal increase of demand for real capital, and secondly because the formation of real capital was frequently interrupted by devastating economic crises. Such is the fact; we now need the explanation.

The interest produced by so-called real capital stimulates saving, and the higher the interest, the greater is the stimulus to saving. It is indeed true that the higher the interest, the greater also is the burden of interest, and the more difficult it is for those who have to pay interest to create, by saving, a capital of their own. But in the present order of things new capital is only to a small extent formed from the surpluses of the earning, interest-paying classes.†

* "The Economic Problem," Michael Flürscheim, 1910.

† Savings-banks deposits, the capital of the proletariat, were in Prussia:

Year.	Number of savings books.	Amount saved. Million Marks.	Average amount for each book. Marks.
1913	14,417,642	13,111	909
1914	14,935,190	13,638	913

New capital is chiefly formed from the surpluses of capitalists, and these surpluses naturally increase with the increase of the capitalists' income, that is, with the increase of interest upon capital.

We must here keep the following fact in mind:

The income of the earning class increases if interest falls, whereas the income of the capitalistic class increases if interest rises. Employers' income consists partly of the wages for their work, and partly of interest upon capital; in their case, therefore, the effect of changes in the rate of interest depends upon what proportion of their income is derived from interest, and what proportion from wages for their work.

The earning class is, therefore, better able to save when interest is falling, and the capitalistic class when interest is rising. It would be a fallacy, however, to conclude from this that the function of saving, as a whole, and the increase of capital, is unaffected by the fact that interest rises or falls.

For in the first place an increase of income has an effect upon the spending, and therefore upon the saving of a capitalist, different to its effect upon the spending and saving of a worker. With the capitalist the increase of income does not meet so many wants awaiting satisfaction, often for decades. The capitalist finds it easier to save the whole increase of his income, but the worker's impulse to save only comes after the satisfaction of many other needs.

Again the capitalist's only method of providing for his children is saving. With the birth of the third child he must increase his capital if he wishes to make the mode of life possible for his children, for which, by his example, he has educated them. The worker has no such cares, he need not bequeath anything to his children, for they will support themselves by work.

The capitalist therefore must save; he must increase his capital (although this increase depresses interest) to provide his increasing offspring with the life of ease befitting their station. And if, as a rule, he must save, we can assume that he will also, as a rule, employ the surplus derived from an increase of interest to create new capital.

From this we can conclude that an increase of interest, though it always takes place at the expense of the workers and small savers, must nevertheless increase, rather than diminish, the sums available in a country for the creation of new real capital. An increase of interest increases the forces that depress interest. And the higher the interest, the greater is this pressure.

We cannot indeed give examples of this; statistical proofs of what we have just stated are not possible, for the statistics available under the gold standard are unsuitable. If Carnegie had given his workers 20% or 50% more wages he would probably never have reached his first million. In that case would the steel-factories (built by Carnegie from his savings) which increased the supply of real capital, drove up wages and depressed interest, have been built from the savings of the workers? Would not the workers, perhaps, have preferred to spend the 20% or 50% increase of wages on sufficient food for their children, on healthier houses, on soap and baths? In other words, would the workers, collectively, have brought together as great a surplus for the construction of new steel-works as Carnegie alone, with his modest personal wants? (To preserve the existing ratio between the demand and supply of real capital, the workers would even have to produce a much greater mass of real capital. For their present scanty wages cause an appalling infant mortality which the increase of wages would have reduced. The resulting great increase in the number of workers would have increased the demand for means of production).

We are at first inclined to answer the above question with a categorical negative—and thereby to commit a gross error. For what did Carnegie achieve by the multiplication of real capital, by his personal thrift? He again and again reduced the interest on real capital below basic interest and thereby caused crisis after crisis. The good man in this way destroyed or prevented the formation of as much real capital as, by wise management, he brought into existence. If Carnegie had distributed the surplus of his undertakings to the workmen in the form of increased wages, it is true that only the smaller part of these increased wages would have been saved for new real capital; the rest would have been dissipated in orgies of pork and beans, or soap. But on the other hand the intervals between one crisis and the next would have lengthened.

The workers would consequently have lost less by forced unemployment, and would have made up for the greater sum spent. The effect upon interest would have been the same; that is, without Carnegie's thrift, the supply of real capital would have been the same to-day as with his thrift.

The difference between what Carnegie could personally save and what the workers could have saved is regularly and inevitably destroyed by economic crises.

The capitalist's impulse of self-preservation and the fact that he must assure the future of his children force him to provide a surplus and, what is more, an interest-bearing surplus. He must provide this surplus even if his income decreases; indeed, his impulse of self-preservation bids him increase the strictness of his saving in direct proportion to the decline of interest. If, for example, a capitalist wishes, by increasing his capital, to compensate the loss of income caused by a fall of interest from 5 to 4%, he must increase his capital one-fifth by economising on his personal expenses.

If interest rises, capitalists can save; if interest falls, they must save. In the first case the amount saved will, indeed, be greater than in the second case, but that does not limit the importance of the fact for the determination of interest. It remains true that the greater the fall in interest, the more the capitalist must, by reducing personal expenses, draw on his income to form new real capital—even although it is precisely the increase of real capital that has caused his difficulty.

We who assert that in the nature of things real capital must multiply until it destroys itself or, in other words, until interest disappears completely, can see in the above fact a conclusive proof of what we have yet to show, namely that when interest falls, the will and need to create new interest-depressing capital enterprises must continue to exist—on condition, of course, that we remove the obstacles to the creation of such enterprises, caused by our traditional form of money.

If the rate of interest falls from 5 to 4%, the capitalist must, by reducing his personal expenses, raise his capital from 8 to 10. If interest falls from 5 to 4%, the capitalist will therefore renounce

his plan of a summer residence for his family and build, instead, a tenement-house in the city. And this new tenement-house will still further depress the interest upon house-capital. For capital in general it would be better if the capitalist built the summer residence and not the tenement-house. For the individual capitalist, however, the opposite is true.

If interest (under the pressure of the new tenement-house) falls further from 4 to 3%, the capitalist must still further reduce his expenses. Instead of paying, as he had contemplated, the debts of a princely son-in-law, he must give his daughter to a building-contractor. The tenements erected with the dowry would then produce interest, but at the same time still further depress the rate of interest. And so on.

The nature of the capitalist, his impulse of self-preservation—the impulse in which the human will is strongest—makes it certain that the greater the fall of interest, the greater must be the percentage of the capitalist's income set aside by him to create new real capital which, in its turn, still further depresses interest.

Expressing what has been said in figures we have the following picture:

	Billion Marks
The interest paid by the workers in Germany amounts annually, at 5%, to - - - - -	20
Of this the capitalists devote 50% to new capital enterprises - - - - -	10
spending the remainder on their personal requirements.	
The rate of interest then falls from 5% to 4% and the yield of interest therefore falls from 20 to - -	16
The capitalists therefore lose - - - - -	4
This loss of income, equivalent to a capital loss of 100 billions, forces the capitalists to set aside a larger part of their income for the creation of new capital enterprises. Instead of 50% they now set aside 60% of their income (which has meanwhile fallen from 20 to 16 billions) for new capital enterprises. The amount set aside is, therefore, instead of 10 billions - - - - -	9 2/3

But the capitalists' loss of income means a corresponding gain of income to the workers. If the workers, through the savings-banks, invested the whole of the surplus in new interest-bearing enterprises, the decrease of interest of - - - - 4 would increase the sum set aside for the creation of new capital enterprises (given by us above as 10 billions) to - - - - 13^{6/10} or 4 billions from the workers and 9^{6/10} billions from the capitalists.

But we have assumed that the workers will save only part of the remitted burden of interest, perhaps about one half. Even in this case a decrease of interest from 5 to 4% would increase the sum annually available for new capital enterprises from 10 to - - 11^{6/10} and the greater the fall in the rate of interest, the greater is the sum destined for new capital enterprises which depress, and finally eliminate, interest. Capitalists would save from necessity, and workers would save because they could now at last satisfy the impulse of saving. Thus the nature of new real capital forces it, as it were, to commit suicide.

The greater the fall in interest, the greater the amount of real capital created which, in its turn, depresses interest. Possibly the physical law of falling bodies is applicable to interest—but only, of course, after removal of the obstacles which the traditional form of money opposes to the creation of such masses of real capital.

The objection has here been raised that if real capital were free from interest no one would build a tenement-house, factory, brick-oven, etc. Savings would be spent upon pleasure-trips instead of upon flats in which others would live in rent-free dissipation.

But more is here asserted than the expression "free from interest" implies. House-rent is only partly composed of interest. Interest on the building capital is a component of house-rent, but there are other components such as: ground-rent, repairs, depreciation, taxes, insurance, the expense of cleaning, heating, care-taking, furnishing, and so forth. Interest is often 70 or 80% of the rent, but often, in the centre of a city, as little as 20 or 30%. Even when

interest disappeared completely from house-rent there would always remain expenses enough to prevent everyone from claiming a palace.

It is the same with the other forms of real capital, which cause their users, besides interest, other expenses such as upkeep, depreciation, insurance, ground-rent, taxes, etc.—expenses which generally equal or exceed the amount of interest. House-capital is here, indeed, in a relatively privileged position. In 1911 2,653 German limited liability companies with 9,201,313,000 marks capital wrote off 439,900,475 marks as depreciation, that is, on the average about 5%. But for the annual renewals (in addition to improvements) nothing would be left of such capital in 20 years.

But quite apart from this, the objection does not hold good, especially in the case of persons who have up to the present lived from unearned income.

These persons will, as we saw, be forced to greater thrift by the decrease of capital-interest, and they will be still more careful, when interest disappears entirely, to consume as slowly as possible their remaining investments, which will then no longer be capital. And this they can achieve by spending for their personal requirements only part of the sum annually written off their capital as depreciation, and by devoting the remainder to the construction of new houses, ships, etc. which will, indeed, yield no interest, but will at least give them security against immediate loss. If they keep the money (Free-Money) they will, in addition to receiving no interest, suffer an actual loss. By building new houses they will avoid this loss.

A shareholder in the Norddeutscher Lloyd, for example, who, under the Free-Money reform, will receive no dividends, will not ask the company to pay out his full share of the sums set aside for depreciation (with which the company at present builds new ships). He will content himself with part of his share in order to postpone as long as possible the day on which the last dollar of his investment will be repaid him. New ships will always, therefore, be built, even although, instead of interest, they only produce the sums written off for depreciation. It is true that even so the last ship of the Norddeutscher Lloyd would in time fall to pieces if others did not take the place of the ex-capitalist living from the amounts

written off his capital; that is, if the workers, relieved of the burden of interest, did not assume the function that the ex-capitalist could no longer fulfil. New savers would replace the part of the depreciation consumed by the ex-capitalist—though only, indeed, with the same purpose of being able to live upon and consume in old age the sums written off for depreciation.

Houses, factories, ships, etc. need not, therefore, produce interest to attract from all sides the means for their production. After the introduction of Free-Money these things would prove to be the best means of storing savings. By investing their savings in houses, ships, factories, which bring in no interest but resolve themselves again into sums set aside for depreciation, savers would avoid the expense of storage and caretaking—and that too from the day they made the surplus to the day on which they consumed it. As decades often lie between these two dates (for example in the case of a youth saving for old age) the advantages of such investments to the savers are obvious.

Interest is, no doubt, a special attraction for the saver. But this special attraction is not necessary, for even without it the impulse of saving is sufficiently strong. Interest, again, may be a great incentive to saving, but the obstacles to saving caused by interest are also great. Because of the burden of interest, saving at present means, for the majority of mankind, severe privation, renunciation, hunger, cold, semi-suffocation. Precisely because of the interest which workers must raise for others, the proceeds of labour are so reduced that for most workers saving is an impossibility. So if interest is an incentive, it is still more an obstacle to saving. Interest limits the possibility of saving among workers to small classes, and the capability of saving to the few individuals in these classes with courage enough to face continual privation. If interest falls to zero the proceeds of labour rise by the whole amount of the burden of interest, and the possibility and capability of saving are correspondingly increased. It is certainly easier to save \$5 from \$200 than from \$100. If with \$100 wages a man, partly because of the stimulus of interest, deprives his stomach of \$10 for his own and his children's benefit, with \$200 wages he could probably, from the natural impulse of saving, set aside, if not \$110 at any rate much more than \$10.

Saving is practised throughout nature without the incentive of interest. Bees and marmots save, although their stores bring them no interest and many enemies. Primitive peoples save although interest among them is unknown.* Why should civilised man act otherwise? Men save to build a house, they save for marriage, illness, old age; and in Germany they even save for masses for the repose of their souls and for a burial fund, although burial brings the corpse no interest. And when did the proletariat begin to save for the savings-bank? Did the money formerly hidden in mattresses yield interest? Yet such a form of saving was customary until 30 years ago. Winter provisions, too, bring no interest but much annoyance.†

Saving means that the saver produces more wares than he consumes. But what does the individual saver, or the population, do with this surplus of wares? Who keeps the wares and who pays the cost of keeping them? If we answer here: "The saver sells his surplus produce," we merely transfer the problem from the seller to the buyer. To the population in general this answer does not, obviously, apply.

If a person saves, that is, produces more wares than he consumes, and finds someone to whom he can lend his surplus on condition that after a certain period his savings are to be given back without interest but without loss, the saver has concluded an extraordinarily advantageous bargain. For he avoids the expense of upkeep of his savings. He gives 100 tons of fresh wheat as a young man and receives 100 tons of fresh wheat, of equally good quality, in his old age. (See the Story of Robinson Crusoe, p. 365).

The simple restitution, without interest, of the borrowed savings represents, therefore—if we leave money out of the account—a considerable piece of work done by the debtor or borrower, namely the payment of the expense of upkeep of the borrowed savings. The saver himself would have had to bear this expense if he had

*African negroes, Red Indians, Hottentots, have never obtained interest from their savings, yet none of them would exchange these savings (provisions) for the savings of our proletariat (savings-bank book).

†That the prohibition of interest by the medieval Popes prevented the growth of an economic system based on money (the scarcity of the precious metals was a contributing cause), shows that the impulse of saving was obeyed even without interest. The savers hoarded the money.

found nobody to take charge of his savings. True, the borrowed goods do not cause the borrower any expense of upkeep since he consumes them in his undertaking (example: borrowed seed-wheat). But when loans are made without interest, the borrower transfers this advantage, which is really his, to the lender, without receiving any return service. If lenders were more numerous than borrowers, borrowers would claim payment for this advantage in the shape of a deduction from the amount of the loan (Negative interest).

Thus from whatever view-point the problem of loans without interest is examined, no obstacles of a natural order can be discovered. On the contrary, the greater the fall of interest, the greater the incentive to the multiplication of houses, factories, ships, canals, railways, theatres, crematoria, tramways, lime-kilns, blast-furnaces, etc.; and the work upon such enterprises reaches its highest intensity when they produce no interest at all.

To Boehm-Bawerk it is obvious that a "present good" must be more highly valued than a "future good," and upon this assumption his new theory of interest is based. But why is this assumption supposed to be obvious? Boehm-Bawerk himself gives the somewhat strange reply: Because wine can be bought which becomes annually better and dearer in the cellar.* But because wine—and among all commodities Boehm-Bawerk discovered no second with this wonderful property — automatically, it seems, without labour or costs of any kind and without, therefore, costs for storage, becomes annually dearer and better in the cellar, do the remaining commodities, potatoes, flour, powder, lime, hides, wood, iron, silk, wool, sulphur, ladies' costumes, also become annually better and dearer. If Boehm-Bawerk's explanation is correct, we have here a complete solution of the social problem. We need only pile together sufficient products (the inexhaustible fertility of modern production and the army of unemployed workers provide an excellent opportunity), and the whole population can, without work of any kind, live from the proceeds of these commodities which will constantly become better and dearer (a difference in quality can always, in economic life, be traced to a difference in quantity). It is indeed not easy to see why one should not make the opposite deduction: Because all commodities, with the exception of money and wine, soon fall into decay, therefore wine and money fall into decay! Yet up to the time of his death (1914)

* Compare footnote p. 374.

Boehm-Bawerk was the foremost authority on interest, and his works were translated into many languages.

The anxieties of savers do not in themselves concern us, as our sole purpose is to establish the fundamental theory of interest; but it may perhaps contribute to the elucidation of our theory if we examine these anxieties more closely.

Let us assume, therefore, that after gold has been removed from the path of circulation of commodities someone wishes to save in order to live without work or care in his old age. The question at once arises: What form will he give his savings? The plan of piling up his own produce or the produce of others may at once be dismissed; and a hoard of Free-Money is also impossible. The first practicable solution would be loans without interest to employers, artisans, farmers and merchants who wished to enlarge their businesses; and in the case we are considering, the longer the term of repayment, the better. The saver of course runs the risk of not being repaid his money. To eliminate this risk, however, he can compel his debtor to pay a special contribution to cover risk, such as is added to the interest on every loan at the present day. But if the saver wishes to be quite secure from such loss he will use his savings to build, say, a house for letting. With the sums annually written off for depreciation, which are at the present day also included in house-rent, the tenants will gradually repay the whole cost of building. And the form of building chosen will be determined by the amount of depreciation the saver wishes to receive annually. He will build a stone house if he wishes to receive 2% depreciation annually; he will put his savings into shipbuilding if 10% depreciation suits him better; or, if he needs his money soon, he can buy a powder-factory, when the sum set aside for annual depreciation will be 30%. In short, he will have ample choice.

Just as the toil that the children of Israel, 4,000 years ago, put into the building of the Pyramids becomes living again to-day, without loss, if the stones are rolled from the summit, so the savings built into an interest-free house will appear again, undiminished, in the rent, in the form of sums annually set aside for depreciation. The saver will not, indeed, receive interest, but he will retain the priceless advantage of carrying his surplus without

loss, through the period in which he does not require it, to the period in which he desires to use it.

A person who builds a tenement-house with the purpose of letting it free from interest is thus in the same position as a person who lends money without interest against a pledge and stipulates for repayment by instalments.

In practice, no doubt, small inexperienced savers, to avoid trouble and anxiety, will hand over their savings to life-insurance companies which will build the houses, ships, factories, etc. With the sums set aside for depreciation on these objects, the insurance companies will then pay each saver a life-annuity; healthy men 5% of the deposit; old people or invalids 10% or 20%. Under these circumstances there will be no expectations from wealthy uncles. The coffin-lid will be nailed down with the last nail of the property. The saver will begin to consume his property when he ceases working, and at his death it will be consumed completely. Under such circumstances, however, no one is forced to provide for his posterity. It is provision enough to liberate their work from the burden of interest. An individual liberated from the burden of interest no longer needs an inheritance, just as the widow's son at Nain no longer needed crutches. Everyone earns his own goods and chattels, and finances, with his surplus, the aforesaid insurance-companies. Thus the annual depreciation upon houses, ships, etc. paid to the old will be constantly replaced, through new construction, by the savings of the young. The expenditure of the old will be met by the savings of the young.

A worker at present pays interest upon about \$12,500 in houses,* means of production, national debt, railways, ships, shops, hospitals, crematoria, etc. That is, he has to pay \$500 annually either directly, as deduction from wages, or indirectly in the prices of commodities, as interest upon capital and rent upon land. Without interest upon capital, the proceeds of his labour would be doubled. If such a worker, with \$1,000 wages, at present saves \$100 annually, it would be a long time before he could live on his capital, especially as his saving, in the present order of things, causes periodic

* Germany with about 10 million workers (that is, those who live from the proceeds of their work) pays interest upon a capital of about 500 billion marks (including the land). A single worker therefore pays interest upon about 50,000 marks or \$12,500.

crises which again and again force him to have recourse to his savings, or possibly even result in their total loss, through the failure of his bank in the crisis his saving had provoked. But if, through the elimination of interest, the worker's income is doubled, he can, in the case we have supposed save annually \$1,100 instead of \$100. Even though his savings are not "automatically" increased by interest, the difference, at the end of the years of saving, between the amount he will have saved, without interest, and the amount he could have saved, with interest, will be so great that he will rejoice at the disappearance of interest. For the difference will not be simply in the ratio 100 (plus interest) to 1,100; it will be much greater, since the worker will not be compelled, in times of unemployment, to have recourse to his savings.

One more objection which has been raised against the possibility of equalising demand and supply in the capital market we have still to refute. It is objected that, since production can be cheapened by more or better machinery, every employer will make use of the fall in the rate of interest to enlarge and improve his factory. From this the deduction is made that the fall of interest and, still more, the complete absence of interest, would create in the capital market a demand from employers too great for supply ever to cover, with the result that interest could never fall to zero.

Otto Conrad * says for example: "Interest can never completely disappear. For suppose a piece of machinery, say a lift, is to replace five workmen with a total annual wage of 4,000 kronen. With interest at 5%, the cost of the lift must not exceed 80,000 kronen. Now suppose that the rate of interest falls, say to 1/100%. The lift could then be profitably installed even if it cost 40 million kronen. If interest sinks to zero or near zero, the utilisation of capital would increase to a degree that cannot even be imagined. The most complicated and expensive machines could be installed to save the smallest piece of manual labour. Interest could be kept at zero only by the existence of infinite capital undertakings. No special proof is needed that this condition is not fulfilled to-day, and that it can never be fulfilled."

To this argument against the possibility of loans without interest

* Jahrbuch für Nationalökonomie und Statistik, Jena, 1908.

we reply as follows: Among the expenses of a capital undertaking must be reckoned, in addition to interest, the cost of upkeep, which is always, especially in industrial undertakings, extremely high. A lift which cost 40 millions would certainly cost, for upkeep and depreciation alone, 4-5 millions. The lift would thus have to replace, not, as Conrad imagined, five workmen but 4,000 workmen with wages at 800 kronen—even if not a penny of interest were required. With 5% for upkeep and 5% for depreciation, the lift, to replace five workmen with wages at 800 kronen, must not cost more than 40,000 (instead of 40 million) kronen in interest-free money. If the cost of construction exceeds this amount, the cost of upkeep is not covered, the lift is not built, and there is no extra demand upon the loan-market.

Where little or no depreciation takes place, as for example with certain forms of permanent land-improvement, the indefinite increase of demand for interest-free loans will be prevented by the wages claimed by the workers. The problem here merges into the problem of rent upon land. Nor will any private individual undertake to blast rocks and clear forests if this work brings him no advantage. If he builds a factory or tenement-house, he has the advantage of gradually receiving back his money in the sums annually set aside for depreciation. The expectation of receiving back the money was, in fact, the motive for building the tenement. Being mortal he wishes to reap before his death what he has sowed in the sweat of his brow; he can therefore undertake only such works as resolve themselves into depreciation. If he and his works disintegrate at the same rate he has judged correctly from the individual standpoint. Works of eternal value are not for the individual, who is mortal, but for the people, which is eternal. The people, which exists eternally, counts upon eternity and blasts the rocks, although this work yields no interest and does not resolve itself into depreciation. At death's door the old State-forester draws up a plan for the reafforestation of a waste. Such works are for the State. But the State will undertake them only to the extent to which interest-free money is placed at its disposal. Such undertakings are not, therefore, an obstacle to freedom from interest, they are the consequence of it.

Those who raise this objection also forget that a simple extension

of an undertaking (10 lathes instead of 5; 10 brick-moulders where 5 were at work) requires a corresponding increase in the number of workmen employed. An increased demand for money for extending a factory therefore always means a simultaneous increase of demand for workers who, by increasing their claims for wages, cancel the gain expected by the employer. An employer cannot by simply extending his factory expect any special advantage from loans free of interest, so the disappearance of interest will not stimulate him to create an unlimited demand for loans. The limits to such loans will be set by the wages claimed by the workers, who alone profit by the decrease of interest. And this is natural; for the relation between employers and workmen is fundamentally the same as the relation between those who lend money (pawnbrokers) and those who borrow money (their customers) against a pledge.* Here also the fall of interest is to the advantage of the borrowers.

The employer does not buy work, or working hours, or power of work, for he does not sell the power of work. What he buys and sells is the product of labour, and the price he pays is determined, not by the cost of breeding, training and feeding a worker and his offspring (the physical appearance of the workers is only too conclusive a proof that the employer cares little for all that), but simply by the price the consumer pays for the product. From this price the employer deducts interest on his factory, cost of raw material, including interest, and wages for his own work. The interest always corresponds to basic interest; the employer's wage, like all wages, follows the laws of competition; and the employer treats the raw material he intends his workmen to manufacture as every shopkeeper treats his merchandise. The employer lends the workmen machinery and raw material and deducts from the workers' produce the interest with which the raw material and machinery are burdened. The remainder, so-called wages, is in reality the price of the product delivered by the workmen.

Factories are simply, therefore, pawn-shops. Between a pawnbroker and Krupp there is no difference of quality but simply a difference of size. With wages for piece-work the nature of the

* Eugen Dühring said long ago: "Employers let their factories to the workmen for a certain charge." Dühring calls this charge for letting, profit. Marx calls it surplus-value. We call it simply interest.

contract is obvious. But all wages are fundamentally wages for piece-work, since they are determined by the piece of work the employer expects to obtain from the individual worker.

But as well as simple extension of enterprises, which increases the demand for workmen, we must consider improvements of the means of production, which result in the production of more commodities with the same number of workmen. If a farmer, for example, doubles the number of his ploughs he must also double the number of his ploughmen. But if he buys a steam-plough he may be able to plough double the number of acres with the same number of labourers.

Employers always aim at such improvements in the means of production (sharply to be distinguished from simple multiplication of the means of production). For what affects an employer is net profit,* and this is larger when his means of production are superior to those of his competitors. Hence the competition among employers to improve the means of production; hence the demand for loans from employers who have not themselves the means necessary for scrapping obsolete machinery and building well-equipped factories, as they desire.

Nevertheless it does not follow that the demand for interest-free loans for the improvement of the means of production must at all times be unlimited; it does not follow that supply can never overtake the demand caused by the absence of interest. And the reason why this deduction cannot be made is that the money necessary for carrying out such improvements in the means of production is only of secondary importance.

Show someone how to bind a broom and he can bind a hundred. But offer him money, free of interest, on condition that he improves his means of production and produces more or better brooms with the same amount of labour, and he will have no answer to give you. Improvements of the means of production are the fruit of intellectual effort which cannot be bought like potatoes at so much

* Net profit—employer's profit—proceeds of the employer's labour—is what remains over for the management of the business after payment of the cost of production, including interest, and is to be regarded as the profit of management. It has nothing to do with interest. In corporations and trusts the patent-rights of the inventors, or the "shameless" salaries and wages claimed by exceptionally efficient or irreplaceable directors and workmen, absorb this net profit.

per hundredweight. Improvements of the means of production cannot be turned out to order—no matter how "cheap" the money available. Anybody could at any time earn millions by thinking out new patents—but for the fact that he lacks the necessary intelligence.

It may be that after 10 or 100 years the means of production will be so improved that every workman will perform twice, five times or 10 times his present work. Employers will hasten to adopt such improvements. But contemporary employers are forced to use whatever machinery is offered them by the contemporary, backward, technical arts.

Apart from this, however, let us assume that a costly machine is discovered with which everyone can double his present production. This would cause an unprecedented demand for loan-money to purchase the new machine. Everyone would install it and scrap the old machines. Even if interest upon loan-money had disappeared, this enormous new demand would cause its re-appearance. Under these circumstances (the conversion of all existing machinery into scrap-iron) interest might even reach an unprecedented height. But this condition of affairs could not last long. Commodities would become 50% cheaper (not cheap in the sense of a fall of prices, but cheap because everyone could double the quantity of his produce and use this double quantity for exchange) and this would allow the population to make extraordinary savings. And the supply of these savings would soon overtake the extraordinary demand for loan-money.

One can therefore conclude that the demand for loan-money for the improvement of the means of production must itself produce a supply of loan-money much more than sufficient to cover this demand.

Thus from whatever side we consider the problem of covering the demand for loan-money so completely that interest would disappear; whether we approach the problem from the side of demand or the side of supply, we find that there are no natural obstacles to such covering. Except for the traditional form of money, the road is free for loan-money without interest, as well as for houses and means of production without interest. The elimination of

interest is the natural result of the natural order of things when undisturbed by artificial interference. Everything in the nature of men as in the nature of economic life urges the continual increase of so-called real capital—an increase which continues even after the complete disappearance of interest. The sole disturber of the peace in this natural order we have shown to be the traditional medium of exchange. The unique and characteristic advantages of this medium of exchange permit the arbitrary postponement of demand, without direct loss to its possessor; whereas supply, on account of the physical characteristics of the wares, punishes delay with losses of all kinds. In defence of their economic welfare both the individual and the community have been and are at enmity with interest; and they would long ago have eliminated interest if their power had not been trammelled by money.

We have now studied this new theory of interest from so many sides that we can finally put and answer a question which should logically have been asked at the beginning of our inquiry, but which we have purposely postponed till now, since knowledge and insight which can only be assumed to exist at the end of our inquiry are necessary for its complete understanding.

We said that money is capital because it can interrupt the exchange of commodities. From this the deduction can be made that if, by the proposed change of form, we deprive money of the power of interrupting exchange, money as a pure medium of exchange is no longer capital, that is, money can no longer exact basic interest.

Against this deduction no objection can be raised; it is correct.

But if it is further deduced that, since money can exact no interest from commodities, we may count upon interest-free loans from the day that Free-Money is introduced—this deduction is not correct.

As medium of exchange, in direct relation to commodities, that is, in commerce. Free-Money will not be capital, just as commodities are not capital when exchanged for one another. With Free-Money, commodities will be exchanged free of interest. But when Free-Money is introduced it will meet with the market conditions created by its predecessor, gold, for the purpose of exacting interest upon loans; and as long as these conditions continue to exist, that is, as

long as demand and supply permit the exaction of interest in the loan-market (in all its branches), interest will have to be paid also upon loans contracted in Free-Money. Free-Money will find before it world-wide poverty, the result of which is interest. This poverty must disappear, and it will not disappear in the course of a few days. Work is here the remedy. Until this poverty is removed, the instruments of production and commodities will continue to yield interest in all forms of loan-transactions (not, however, in exchange-transactions). But Free-Money does not make interest the condition of its services, it will allow our economic system, as the result of work uninterrupted by crises, to put on fat; and it is this fat which is to eliminate, and doubtless will and must eliminate, interest. Interest feeds upon the sweat and blood of the people, but it has no liking for fat or, in other words, economic prosperity. For interest, fat is poison.

It is quite certain that the disproportion between the demand and supply of real capital, which is the cause of interest, will continue to exist for some considerable time after the introduction of the money-reform, and that it will only gradually disappear. The effects, accumulated through thousands of years, of the traditional form of money, namely the scarcity of real capital, cannot disappear as the result of twenty-four hours' working of the lithographic press. The scarcity of houses, ships and factories cannot be eliminated by gaily-printed slips of paper, in spite of the belief to the contrary held by the paper-money lunatics of all times. Free-Money will permit the building of houses, factories and ships in unlimited quantities; it will permit the mass of the population to work as much as it pleases, to sweat and curse the pauperism that gold has left behind. But Free-Money will not itself provide a single stone for the missing cities. The lithographic presses upon which Free-Money is printed cannot themselves contribute a drop to the ocean of real capital necessary to drown interest. Freedom from interest can be realised only by years of dogged and uninterrupted toil. Lasting freedom must always be striven for; freedom from interest must also be striven and fought for. Bathed in sweat the people must cross the threshold of their first interest-free dwellings, their first interest-free factories; bathed in sweat they must organise the interest-free State of the future.

The day on which gold is driven from its throne, the day on which Free-Money assumes the function of exchanging commodities, will see no great change in interest. The interest upon existing real capital will remain for some time unchanged. Even the new real capital which the people can now produce with untrammelled labour will yield interest. This new real capital will, however, depress interest in direct proportion to its own increase in quantity. And if beside a city like Berlin, Hamburg, Munich, a second, larger, city is built, the supply of dwellings will perhaps cover the demand and bring interest upon houses down to zero.

But if real capital is still producing interest and it is possible to buy with money commodities which can be assembled into new, interest-bearing, real capital, it is clear that anyone seeking a loan of money must pay for it interest equal to the interest yielded by real capital. That is obvious from the laws of competition.

Loans of Free-Money must therefore pay interest as long as real capital yields interest. Real capital will long remain capital because metal money allowed it to exist only in insufficient quantities, so its component parts, namely, money and raw materials, will also long remain capital.

Up to the introduction of Free-Money interest on real capital depends on basic interest; after the introduction of Free-Money basic interest will disappear, and interest on loans will be exactly determined by interest on real capital. Borrowers of money will no longer pay interest because money can exact a tribute from the wares, but because the demand for loans, for the time being, exceeds the supply.

Basic interest is not interest on a loan; the exchange of money for wares and the tribute thereby exacted have nothing in common with a loan. Basic interest is not, therefore, determined by demand and supply. In exchange for the money the producer gives his produce. This is an exchange-transaction during which basic interest is exacted because the possessor of money can prohibit, or allow, the exchange. Basic interest corresponds to the difference of efficiency between money and the substitutes for money (bills of exchange, barter and primitive production) as media of exchange. No offer of loan-money, however large, could eliminate this difference, and upon it depends basic interest.

With the interest on real capital, on the contrary, we have, not an exchange, but a loan. The landowner lends his land to a farmer, the house-owner lends his house to a tenant, the manufacturer lends his factory to the workmen, the banker lends money to his debtor—but the merchant who exacts interest from the wares lends nothing; he makes an exchange. Farmer, tenant, workman, debtor, give back what they received; but the merchant receives for his money something totally different from money. For this reason exchange has nothing in common with lending, and for this reason, also, basic interest and interest upon real capital are determined by totally different causes. We ought really to cease designating two so fundamentally different things by the same word, interest.

Interest on real capital is determined by demand and supply; it is subject to the laws of competition and can be eliminated by a simple change in the ratio of demand to supply. With basic interest this would never be possible. Interest on real capital has up to the present been protected from such a change—the condition for the production of real capital being that it should be able to exact interest equal to basic interest.

Free-Money will deprive real capital of this protection, but the disproportion between the demand and supply of loans of every kind, loans in the form of tenement-houses, factories and machinery, as well as loans in the form of money, will continue to exist.

The material for the interest upon these money-loans will, however, no longer be drawn from commerce (Money-Wares-Surplus Money) but from production. It will consist of the increase of the product obtained, without increase of the cost of production, by the employer with the aid of a loan—and claimed by the loan-giver for himself, because the ratio of demand and supply temporarily permits him to do so.

Basic interest is exacted during exchange, not during production. It is not a share in the increased quantity of wares produced with the help of a loan, but a share in all the wares dependent upon the medium of exchange. Basic interest would still have been exacted even if all workmen had possessed their own, precisely similar, means of production; if all debts had been paid; if everyone paid for his purchases in cash; if everyone lived in his own house; if the loan-market had been closed; if loans in every form had been

prohibited; if the exaction of interest had been forbidden by law and religion.

The demand for loans, especially in the form of means of production, is caused by the fact that more or better wares can be turned out with these means of production than without them. If the worker creating this demand finds an insufficient supply, he must surrender to the loan-giver part of the surplus he hoped to realise with the desired means of production—for no other reason than that the ratio between demand and supply so decrees. And this ratio will continue to exist for some time after the introduction of the Free-Money reform.

As long as the means of production are capital, the produce of labour will also, even after the introduction of Free-Money, be capital—not however as a ware, not in the market, not where men bargain about the price. For there the claims for interest upon the wares would cancel one another. But outside the circulation of wares, where the question is, not a price, but the conditions of a loan, not for purchasers, but for borrowers; the produce of labour can remain capital and indeed must remain capital as long as the means of production are capital. The opposite is true of our traditional form of money which exacts its interest, not from borrowers, but from the circulation of wares. It has plunged its snout into the very blood-circulation of the people. Free-Money will deprive the medium of exchange of its present leech-like characteristics. Free-Money is for this reason not intrinsically capital. It cannot under all circumstances extort interest. It shares the fate of the means of production, which can exact interest only as long as demand does not overtake supply. If interest on real capital falls to zero, interest-free loan-money will also have become a fact. With the Free-Money reform basic interest disappears from the moment Free-Money meets the wares. Free-Money as a medium of exchange is on the same level as the wares. It is as if we had inserted potatoes as medium of exchange between iron and wheat. Does anyone imagine that potatoes could exact interest from wheat or iron? But the disappearance of basic interest after the introduction of Free-Money is no reason for the immediate disappearance of interest upon loan-money. Free-Money will only clear the road for interest-free loans; more it cannot do.

In this distinction between basic interest and interest on loans, everything we have hitherto said about interest is focussed to a point. Basic interest has up to the present escaped observation because it was concealed behind its offspring, ordinary interest upon loan-money. When a merchant borrows money and adds the interest he pays, with his other general expenses, to the price of his wares, this was, up to the present, assumed to be interest upon a loan. The merchant was supposed to advance the money to the wares, to lend them something; and the producer was supposed to pay the interest upon this loan. Such was the explanation. And those who let this fallacy pass were not necessarily superficial thinkers. For appearances are here indeed deceptive. Only the closest observation could discover that the interest paid by the merchant for loan-money is not the beginning but the end of the whole transaction. The merchant uses money to exact basic interest from the wares, and as the money does not belong to him, he delivers the basic interest to his capitalist. He acts here simply as cashier for the capitalist. If the money had been his own he could have exacted basic interest just as easily and put it in his pocket. In this case where is the loan? With a loan, service and return service are separated in time. The interest upon a loan is wholly governed by the time that elapses between the service and return service. But when money is being exchanged for wares, when basic interest is being exacted, service and return service are at precisely the same point of time. A loan-transaction leaves a debtor and creditor; an exchange-transaction leaves no trace. A person goes into a shop, buys something, pays and goes away. The transaction is then completed. Each party gives and receives in the present the whole amount agreed upon. Where is, in this case, the loan? Loans often mean poverty, distress or burdensome debt; and they always mean incapacity to pay at once for the thing desired. A person who buys bread on credit because he cannot pay ready money receives a loan and pays interest in the form of an increased price. But when a farmer brings a cart-load of fat pigs to market to exchange them for money, there is no poverty, no distress and no burden of debt. A loan-giver gives from his superfluity; a loan-taker takes because of his want. But in exchange each party has simultaneously superfluity and want; want of what he asks for, superfluity of what he offers.

Basic interest, therefore, is in no way related to interest upon loans. Basic interest is, as we have said, a tribute, a tax, an extortion; it is many things, but it is not a return service for a loan. Basic interest is a unique phenomenon which must be considered by itself; it is a fundamental economic conception. A merchant is willing to pay interest upon a loan of money because he knows that he can recover the interest from the wares. If basic interest disappears, if money loses the power of exacting basic interest, merchants will no longer be able to offer interest for loans to buy wares.

Here again a comparison with barter will be useful. In barter wares are exchanged for one another without interest. But if at the time of barter someone desires wares, not in exchange for his wares, but as a loan, the ratio between the demand and supply of loans determines absolutely whether, or how much, interest can be exacted. If a house can be let for a rent greater than the amount of depreciation, it is obvious that anyone who rents a house in its component parts (in the form of a loan of wood, lime, iron, etc) will have to pay interest.*

6. FORMER ATTEMPTS AT EXPLAINING CAPITAL INTEREST

Readers who now understand to what circumstances houses, means of production, ships, etc. and money, owe their characteristics as capital, will also wish to hear something of the attempts hitherto made to explain interest. Those who desire thorough information on the subject will find the theories of interest very fully described in Boehm-Bawerk's "Capital and Capital-Interest." The following classification is taken from that work. The author puts the question: Whence and why does a capitalist receive interest? and groups the answers as follows:—

1. Theories of Fructification.
2. Theories of Productivity.
3. Theories of Utility.
4. Theories of Abstinence.
5. Theories of Work.
6. Theories of Exploitation.

* The frequent repetitions in this chapter were necessary in order to avoid the danger of confusing basic interest upon money with interest upon loans.

As Boehm-Bawerk does not confine himself to criticising the different theories, but also proposes a theory of his own, he is inevitably guided by his own theory when examining the theories of others, and his attention is attracted by evidence which speaks for or against it—at the cost of other evidence which, considered from another standpoint, gains greatly in importance and deserves a more thorough investigation than that accorded it by Boehm-Bawerk. I find for instance on p. 47 the following remarks:—

"Sonnenfels,* influenced by Forbonnais,† sees the origin of interest in the interruption of the circulation of money by money-collecting capitalists out of whose hands money can be enticed again only by a tribute offered in the form of interest. He ascribes various evil effects to interest: that it increases the price of commodities, that it diminishes the reward of diligence (by this is meant probably the proceeds of labour) of which it allows the owner of money to partake. He even calls capitalists a class of non-workers who live by the sweat of the working classes."

For us a man advancing such opinions is an attractive personality, but Boehm-Bawerk does not examine this theory in detail; he dismisses the originator of it with a few words about "contradictory eloquence." But it may be that if these early writings on interest were studied from the point of view of basic interest they would be found to contain many remarkable statements. Possibly the independent interest-creating power of our traditional form of money has not had to await discovery and proof until the present day.

We shall now give a greatly condensed summary of the above six theories, referring all who wish to study the history of the theories of interest more closely to the above-named excellent work of Boehm-Bawerk.

A detailed examination of these theories is unnecessary, as anyone, with the help of the theory of basic interest, can discover the point at which the theorist, lured from his course by a siren in the shape of a theory of value, runs full-sail upon some reef of error.

1. The Theory of Fructification, by a flight of fancy, deduces

* Sonnenfels, *Handlungswissenschaft*. Vienna, 1758.

† No reference.

interest from rent on land. Because a field that yields interest can be bought with money, money and everything that can be bought with money must yield interest. True, but this theory proves nothing at all, for it fails to explain why money, which is expressly declared to be unproductive, can buy a field that produces interest. Among those who adopted this theory we are surprised to find Turgot and Henry George—honest men in doubtful company. But probably we have here simply opinions held without deep conviction and passed on to provoke discussion and to call the attention of others to the problem of interest.

2. **The Productivity Theory** explains interest by asserting that the means of production (capital) assist production (labour). And this is true, for what could the proletariat do without means of production? But this theory asserts, further, that the resulting increase of produce must obviously and naturally belong to the owner of the means of production. This is not true and certainly not obvious, as is shown by the fact that work and the means of production cannot be separated; that it is impossible to say what part of the product is due to work and what part to the means of production. If interest were due to the fact that a proletarian worker can produce more with instruments of production than with his naked hands, nothing whatever would in most cases be left over for the worker. An agricultural worker without a field and a plough, or an engine-driver without an engine is helpless. But work and the means of production cannot be separated, and division of the product between owner of the means of production and worker must be determined by circumstances other than the amount of assistance rendered to production by the instruments of production. What are these circumstances?

Our answer is: The ratio in which the workers share the product with the owners of the instruments of production is determined by the demand and supply of these instruments, quite independently of their efficiency. The means of production assist labour, hence the demand from the proletariat. But this demand alone cannot determine interest; supply has also a word to say. In the division of the product between capitalists and proletariat everything depends upon the ratio of demand to supply. The capitalist can expect interest on his means of production only as long as demand exceeds

supply. And the better, the more efficient the instruments of production placed at the disposal of the workmen by the capitalist, the more the produce of these instruments will help to swell their supply, and thus to depress interest. But according to the productivity theory, the contrary should be true: interest should increase in proportion to the efficiency of the means of production. If there were a universal ten-fold increase in the efficiency of the means of production, the productivity theory would expect an enormous gain for the capitalist, whereas in reality such an event would soon cause the supply of means of production to overtake demand, with the result that interest, under pressure of this supply, would disappear (on the supposition that money was not able to prevent such a development).

The productivity theory is unable to explain interest because it treats capital statically (as matter) instead of dynamically (as a force).^{*} It sees only the demand caused by the usefulness of the means of production and fails to consider supply. The productivity theory treats capital simply as matter; it overlooks the forces necessary to convert this matter into capital.

3. **The Utility Theories** are the offspring of the productivity theory, says Boehm-Bawerk. But Boehm-Bawerk obscures the simple train of thought which leads to the productivity theory by converting the problem into a problem of value—without saying upon which theory of value his proof is based. When he speaks of the value of the product we may think of the ratio in which commodities exchange for one another. But what can we make of the expression “value of the means of production”? The exchange of instruments of production is exceptional, yield of interest, not price, being here spoken of. If the exception occurs, if an employer sells his factory, the price is determined entirely by the yield of interest, as is proved by the daily fluctuations of industrial shares and by the fact that the selling price of a field is the sum which yields interest equal to the rent. And what theory of value could be applied to the field? If the factory to be sold is resolved into its component parts, that is, into commodities, and the value of these commodities is established, we have commodities and prices, not

^{*} See Dr. Christen: *Absolute Währung, Annalen d. Deutschen Reiches*, 1917, p. 742.

means of production and interest. Commodities are produced for sale, means of production for personal use or as capital to lend. Is there any theory of value in existence which applies simultaneously to commodities and means of production, to price and interest? An impenetrable fog overhangs this region.

Our author says for example on page 131:

"It should be obvious that even if we have proved that capital has a power of producing goods or of producing more goods, we are still not justified in assuming as proved that capital has a power of producing more value* than would otherwise have been produced, still less of producing more value than it possesses.† To substitute the latter conceptions for the former in the train of reasoning would clearly be equivalent to pretending that something had been proved which in reality had not been proved."

It may be that everything here said of so-called value, of intrinsic value, of production of value, of stores of value, of extracted or petrified value is obvious to those who hold the same opinions as Boehm-Bawerk. But how can he possibly assume that all his readers hold these opinions? Does "the problem of value" no longer exist? For many of us it is "obvious" that when the fog of value condenses into a "conception of value," what the author really means is simply a product in a certain quantity and of a certain quality, which can be exchanged. But to those who understand value in this sense it is quite obvious that the power of capital to produce more goods includes the power of capital to produce more value. If, for example, the general use of the steam-engine doubles the product of labour, everyone will obtain, in exchange for his doubled produce, double the quantity of goods he obtained formerly. If, now, he calls the "value" of his produce what he obtains in exchange for it, he obviously obtains in exchange for his produce (doubled by the use of the steam-engine) exactly double the quantity of "value."

4. **The Abstinence Theory**, proposed by Senior, begins well by seeking the explanation of interest in the existing disproportion between the demand and supply of means of production. But the

* Again the machinery of value!

† Again intrinsic value!

abstinence theory stops halfway. Senior regards mankind as confirmed spendthrifts, who prefer to live a few days in dissipation and for the remainder of the year to pay interest upon a loan, rather than to renounce an immediate enjoyment. Hence the scarcity of the means of production, the disproportion between demand and supply; hence interest. The few persons who practice abstinence are rewarded for their rare virtue by interest. Even these few persons are abstinent, not because they prefer future enjoyment to present prodigality, not because as youths they wish to save for marriage, as men for old age, as fathers for their children; but because they know that their savings will yield interest. Without this reward of virtue they, also, would live from hand to mouth, they, also, would save no seed-potatoes but squander the whole harvest in one mighty potato feast. Without interest no one would have any motive for producing and preserving capital. Present enjoyment is always and obviously preferable to future enjoyment. For no one knows whether he will be alive in the future to enjoy the goods he saves!

If such is human nature (how abstemious in comparison are bees and marmots!) is it not astonishing that mankind continues to exist and that anyone ever makes a loan in money? Human beings who are such reckless managers of their own property must, when entrusted with the property of others, be under still greater temptation to sacrifice future enjoyment to the sweets of the present. How can they ever pay interest or repay borrowed capital? And if our ancestors always consumed their winter provisions before the winter began, it is difficult to account for the fact of our existence. Or did our forefathers renounce immediate enjoyment because the provisions in their cellars yielded interest, that is, became more valuable, more abundant and of better quality? Yet there is some truth in Senior's theory. Doubtless interest owes its existence to scarcity of capital, and scarcity of capital must be due to thriftlessness. But, strangely enough, the spendthrifts are not those who pay the interest, but those who exact it. It is true, indeed, that what the capitalists spend does not belong to them, but to others; for the unemployment they cause for the purpose of exacting basic interest through the interruption of the monetary circulation, is at the expense of the workers. Capitalists spend the

property of others, namely the power of work of the toiling, thrifty masses. To prevent over-production of capital and a fall in the rate of interest, they allow produce worth billions of dollars to be destroyed, at the expense of others, as over-production during economic crises. Hence the scarcity of capital, hence interest. Sermons about abstinence should therefore be addressed to the capitalists, not to the workers. The workers have shown that they can practice abstinence even unto death by starvation to snatch back a small fraction of the capitalists' booty. Such heroic abstinence they have shown in a thousand strikes; so if they could be persuaded that to abolish interest they need only save—chew no tobacco, drink no brandy—presumably they would do so. But under present conditions what would be the result? The moment interest upon real capital fell below basic interest, a crisis, an economic catastrophe, would rob the workers of the fruit of their abstinence.

But in any case the abstinence theory leads straight to the following contradiction: Work, toil, sweat, to produce and sell many commodities, but buy as few commodities as possible. Starve, freeze, abstain, buy nothing of what you produce (that is, of what you have destined for sale)—in order to gain the largest possible surplus of money for the formation of new real capital.

The originators of the abstinence theory would have come upon this complete contradiction if they had followed up their original line of argument, for they would have discovered the defects of our present monetary system. Probably the same line of reasoning taught Proudhon that gold blocks the road between commodities and real capital, and prevents the conversion of an over-production of commodities, which depresses prices and leads to an economic crisis, into an over-production of capital, which depresses interest and stimulates exchange.

5. The Theories of Work declare that interest is the product of the capitalist's labour. Rodbertus calls the reception of interest an office; to Schaeffle coupon-cutting appears an economic profession, his only criticism of which is that its "services" are expensive; and Wagner calls stockholders "public functionaries for the formation and employment of the national fund for the means of production." Yet Boehm-Bawerk does these persons the honour of numbering them among the investigators of interest!

6. The Theories of Exploitation explain interest simply as a forcible deduction from the product of labour, which the owners of the means of production are able to exact because the workers must live by their work, and cannot work without instruments of production.

But does this particular theory deserve the ill-epithet of "exploitation?" Does not the abstemious man, in the abstinence theory, also exploit market conditions, when he makes use of the scarcity of capital in the market to exact interest?

According to this theory—its chief upholders are the socialists—the owner of the means of production measures the deduction from the product of labour, strangely enough, not by commercial principles of trade and exchange, but by historical and moral standards. Marx says: "A moral and historical factor enters into the determination of the value of labour, in contrast to other commodities." (Capital, Vol. I. VI).

But what has the maintenance of labour to do with history and morality, with certain countries and certain times? For the average amount of food required to maintain labour is determined by the labour itself! It may vary with the difficulty of the task, with race, with the strengthening or weakening of the digestive organs, but it can never vary because of moral and historical causes. If morality is allowed to be a factor in this, the central point of Marx's doctrine, he can no longer speak of the "labour" contained in a commodity. With such spongy terminology anything can be proved.

According to this theory the capitalist makes careful inquiries: how the workman's mother, grandmother and great-grandmother fed themselves, what these foodstuffs cost, and how much of them a workman consumes in bringing up his children; for the capitalist is greatly concerned that not only "his" workmen, but workmen in general shall remain strong and healthy. This minimum the employer leaves to the workers. The remainder he removes, unobtrusively, for himself.

This division of the product of labour between employer and workman which is Marx's easy method of evading the whole problem of interest (for in this manner the theory of wages includes the theory of interest and rent) is the weak point in the theory of

exploitation. The preliminary assumption of this theory, that wages are determined by the cost of breeding, training and feeding workmen and their offspring, is unsound, as is the subterfuge that whenever wages go above or below this limit, the feeling of the community as to what a workman needs determines the amount of wages!

"During the last five years wages have risen to such an extent on East-German estates that they are hardly distinguishable from West-German rates, and the seasonal migration of labourers (*Sachsengängerei*) has greatly diminished." This was recorded in the newspapers in 1907. It is remarkable how suddenly the feeling of the community changes in respect to what a worker needs for living! The change of prices on the exchanges is, indeed, even still somewhat more sudden. Nevertheless a period of five years is not long enough to be called a "historical" development.

In Japan wages have risen 300% within quite a short period—but surely not because the feeling of the community about hunger and repletion has so suddenly changed to this extent. This explanation of the contradictions with which the theory of exploitation bristles, bears every mark of an argument advanced, for want of a better, by someone driven into a corner.

One would be equally justified in stating the theory of exploitation as follows: The capitalist takes from the product of the worker everything he requires for living up to the standard prescribed for his class by history and the feeling of the community, and for bequeathing suitable legacies to his children. The rest he throws, without taking the trouble to measure or count it, to the workers. This statement of the theory has, indeed, several advantages over the form chosen by Marx. It certainly sounds more plausible, for the capitalist would first, obviously, think of himself before inquiring whether the workers could manage upon what remained. The introduction of wheat-duties by the German agrarian party gave wide publicity to this obvious fact.

The explanation, put forward by this theory, of the origin of the proletariat essential for interest is also extremely arbitrary. That large enterprises have often advantages over small enterprises does not prove that these advantages must necessarily accrue to the

owners of the large enterprises. This would first have to be established by a sound theory of wages. At the present day capital, whether in the form of a machine of 10 or of 10,000 horse-power, produces the same interest, namely, on the average, 4-5%. Even if large enterprises had always advantages over small enterprises this would still not prove that the owners of the small enterprises must be reduced to the ranks of the proletariat. Artisans and farmers need not always remain so dull-witted as to fold their arms and let themselves be supplanted by large enterprises—nor, as a matter of fact, have they done so. They defend themselves—they combine a number of their small enterprises into one large enterprise and in this way often succeed in uniting the advantages of a large enterprise with the thousand minor advantages of small enterprises (co-operative creameries and steam-threshers, village bulls, etc). Nor is there any reason, founded on the advantages of a large enterprise, why its shares must be held by capitalists rather than by the workers themselves.

It is not, in short, so easy to explain the origin of the proletariat. One may invoke the laws of rent or forcible expropriation by the sword. But this does not explain why a proletariat is evolved in the colonies. The sword is there unknown, and freeland lies before the gates of the cities.

In the German colonies in Brazil (Blumenau, Brusque) many industries, especially weaving factories, have been founded, and in these factories the daughters of the German colonists work under wretched conditions for low wages. Yet the fathers, brothers and husbands of these proletarian women have unlimited quantities of the finest land at their disposal. Hundreds of daughters of German colonists also work as domestic servants in Sao Paulo.

It is not easy to explain the continued existence, still less the increase, of the proletariat at the present day, when movement is free, when the proletarian can emigrate to uninhabited countries and there obtain land*, when everyone can easily, by co-operation, enjoy the advantages of a large enterprise—especially as modern

* For the journey from Europe to Argentina the Norddeutscher Lloyd in 1912 charged 25 dollars, or only about a week's wages of a German harvest worker.

liberal legislation tends to protect the proletariat from economic brigandage.

But as well as the sword, as well as the advantages of large enterprises, as well as legislation devised to protect rent, there is another cause at work that can explain the existence of the proletarian masses—a cause that has hitherto been overlooked by the investigators of interest. Our traditional form of money is capable, unaided, of reducing the mass of the population to the condition of a proletariat; to do so it needs no allies. The proletariat is an inevitable regularly-appearing concomitant of our traditional form of money. The proletariat can be deduced directly, without subterfuges, without arbitrary reasoning, without ifs and buts, from the present form of money. Our present form of money must always be accompanied by mass-poverty. In former times the sword was an efficient weapon for separating the people from the means of production. The sword, however, cannot hold the booty won. But from money the booty can never be torn. Interest cleaves closer to money than blood or rent to the sword.

Many, in short, may share in the plundering of the workers, and may, for this purpose, make use of divers weapons, but all these weapons rust. Gold alone never rusts, gold alone can boast that neither the division of inheritances, nor legislation, nor any form of co-operative or communistic order, has power to deprive it of interest. Interest upon money is proof against legislation and against the anathema of the Church. The diversion by legislation of rent on land into the coffers of the State is possible and compatible with private ownership of the land. Here and there an attempt of this kind is being made. But no law can deprive our traditional money of even a fraction of the interest it exacts.

Our traditional form of money has produced the proletarian masses, the existence of which gives rise to the theory of exploitation; and it has successfully counteracted the natural forces tending to dissolve these impoverished masses. To be complete, the theory of exploitation must go back a step and seek interest, not in the factory, not in private ownership of the means of production, but in the exchange of the produce of labour for money. The separation of the people from their means of production is merely a result, not the cause, of interest.

7. THE COMPONENTS OF GROSS INTEREST

(Basic Interest, Premium for Risk and Hausse-Premium) *

Those who seek to test the correctness of the above theory of interest by statistics will frequently come upon apparent contradictions. The reason is that besides basic interest the rate of interest usually contains components which have nothing to do with interest.

In addition to insurance against risk, the rate of interest often contains a peculiar component dependent upon variations in the general level of prices of commodities. To emphasise the connection with rising prices, and to provide a term which can be used outside Germany, I shall call this component a Hausse-premium. This means the share of the profit from an expected rise of prices (Hausse) falling to the giver of money.

To understand the nature of this component of interest one need only observe the conduct of borrowers and lenders of money when a general rise of prices is expected. A characteristic feature of a general rise of prices is that borrowed money can be paid back with part of the commodities that have been bought by means of the money and then sold. An extra profit, over and above the legitimate profit of commerce, a surplus, therefore remains. This surplus must of course provoke a universal appetite for buying proportionate to the probable amount of the surplus and, above all, to the degree of certainty with which the continuation of the rise of prices can be expected.

Those who work with borrowed money then increase their requests for money from the banks to the extreme limit of their credit (which, as a rule, increases, since the rise of prices favours debtors); and those who have previously lent money prepare to start business independently, foregoing their intention only if borrowers, by raising the rate of interest offered, make them sharers in the expected gain.

Through the general rise of prices (trade-boom, business prosperity) the possessor of ready money and claims to ready money

* I have substituted "Hausse-premium" for "Ristorno," the word formerly used by me, as it better expresses the meaning: the money-giver's share in an expected rise of prices.

(Government loans, mortgages, etc.) is threatened with loss, since he receives less and less commodities for his money. The only way in which the possessor of money can protect himself against this loss is to sell the threatened securities, and with the money realised to buy industrial shares, commodities, houses, as the prices of these things, it is commonly expected, will increase. After this double transaction the trade-boom can no longer injure the individual in question; the loss falls on the purchaser of the threatened securities. But as these purchasers also understand the situation, they buy the Government securities only at a reduced price, and they increase the deduction (discount) which they make when buying bills of exchange. In this way a kind of equilibrium is established.

But now suppose some clever person says to himself: "I have, indeed, no money, but I have credit. I shall borrow money upon bills of exchange and buy commodities, industrial shares and the like. And when the bills of exchange fall due, I shall sell, at the higher prices, what I have bought, and pay my debt, keeping the difference for myself." Clever persons of this kind are plentiful, and they are all to be found at the same time, in the same place, namely in the banker's waiting-room. Small manufacturers, small merchants and the richest in the land are there in company. They have all an insatiable appetite for money. But the man of money sees the throng and knows that his money is insufficient to satisfy them all. (If he did satisfy them, they would return next morning and ask for double the amount). To reduce the throng he raises the rate of interest (discount) and he keeps raising it until the clever persons are uncertain whether the profit from the transaction they have planned can cover the increased amount of interest. Equilibrium is then established; the appetite for money disappears; the throng in the waiting-room of the man of money melts away. What the possessor of money loses through a rise of prices has then gone over into the rate of interest.

Thus the rate of interest must replace what money-capital loses through a rise of commodity prices. If, for instance, the expected rise of prices amounts to 5% annually, and basic interest is 3 or 4%, the interest upon loans must rise to 8 or 9%, to leave money-capital unaffected. If the capitalist deducts from this 9% the 5% corresponding to the rise of prices and adds it to his capital, his

position is as strong as before the rise of prices. $105=100$, that is, for 105 he now receives the same amount of commodities as he used to receive for 100.

It would not be surprising if a closer examination revealed that in spite of the higher dividends and the higher rate of interest during the last 10 or 15 years, German capitalists (with the exception of landowners) had received, on the average, an abnormally low rate of pure interest. Prices during this period have risen sharply. 1,000 marks fifteen years ago purchased quite as much as 1,500 marks at the present day. If a capitalist makes the above calculation, what becomes of the profit from the high dividends and the increase in the price of shares? Where is the so-called increase of value? And a capitalist must so calculate, for the amount of his money, expressed in figures, is immaterial, otherwise a millionaire would only have to travel to Portugal to become a multi-millionaire.

The greatest sufferers from a rise of prices are the holders of securities bearing a fixed rate of interest; for if they sell such securities they lose through the fall in the selling-price, and if they keep them, they receive less commodities for the interest. If the great rise of prices had been foreseen fifteen years ago, the price of consols would have fallen still further perhaps to 50.*

It is therefore clear that the expectation of a general rise of prices will increase the requests for loans of money, and that the owners of money will consequently be in a position to exact a higher rate of interest.

The rise in the rate of interest is therefore caused by the universal, or almost universal, belief that prices are about to rise, and it depends ultimately upon the fact that borrowers hope to meet their liabilities with part of the commodities that owe their existence to the borrowed money. During a rise of prices the rate of interest admits a foreign component that has nothing to do with capital interest. We call this component a *hausse-premium*, that is, the money-giver's share in the profit expected from a rise of prices.

This component of the rate of interest disappears of course at once when the expected general rise of prices has been realised.

*All this was written before the war. See also: Gesell, *Die Anpassung des Geldes an die Bedürfnisse des Verkehrs*. Buenos Aires, 1897.

It is not the realisation of a rise of prices, but the hope of a future rise of prices that stimulates people to purchase commodities, to invest their money in new enterprises and to besiege the bank with requests for loans. When the hope of a further rise of prices has dwindled away, there is no stimulus to purchase, and money returns to the banks. The rate of interest then falls; the hausse-premium withdraws from the rate of interest. Obviously when a general fall of prices is expected every trace of hausse-premium disappears from the rate of interest.

The amount of the hausse-premium depends of course entirely upon the amount prices are expected to rise. If a sudden large jump of prices is expected, the claims of the banks will advance at the same pace and there will be a sudden large jump in the rate of interest.

When a general rise of prices was expected in Germany a few years ago, the rate of interest rose to 7%. Shortly afterwards a fall of prices was expected and the rate of interest fell to 3%. The difference can be ascribed with certainty to the hausse-premium. In Argentina the rate of interest sometimes stood at 15%, namely at times when the continuous increase of the stock of paper-money drove prices up by leaps and bounds. When, afterwards, the increase of paper-money ceased, interest fell to 5%. We have here a hausse-premium of 10%. Henry George states that there was a time when 2% monthly was not considered an exorbitant rate of interest in California. This was during the great Californian gold discoveries.

As there is no limit to a general rise of prices (a pound of candles at one time exchanged for 100 livres in assignats at Paris), there is no limit to the hausse-premium. It is easy to imagine circumstances in which a hausse-premium would drive the rate of interest up to 20, 50 or 100%. The increase in the rate of interest is determined simply by the amount prices are expected to rise before the date of repayment. If, for example, a rumour gained currency that gold deposits of immense richness had been discovered under the ice-fields of Siberia and if, in confirmation of this news, great shipments of gold were reported, the inevitable result would be a universal zest for buying which would increase to infinity the requests for loans made to the owners of money. Such

a discovery of gold would cause an unparalleled rise in the rate of interest. The hausse-premium could never, of course, quite equal the surplus expected from the general rise of prices, since in that case, the expected gain would at once be completely absorbed by the discount. But the more reliable and certain the estimate of the expected rise of prices, the more nearly would the hausse-premium equal the surplus.*

In consequence of pressure from the creditor-class laws have been passed from time to time in many countries with the purpose of reducing the prices of commodities to an earlier lower level. (By the withdrawal from circulation of paper-money which had been issued overabundantly, or by the demonetisation of silver, for example). A few years ago (1898) such a law was passed in Argentina by which the general level of prices was reduced from 3 to 1.

If any country at the present day were, on the contrary, to yield to the wishes of debtors and to drive prices step by step upwards by increasing the stock of money in such a way that prices annually increased 10%, the certainty of the expected surplus would bring the hausse-premium very near this 10%.

The recognition of the hausse-premium as a special component of the rate of interest is essential for the explanation of most phenomena in connection with interest. How, for instance, can we otherwise explain the fact that the rate of interest and the amount of savings-bank deposits as a rule increase simultaneously—unless we abandon the theory that interest is deducted from the proceeds of labour?

The division of the rate of interest into interest, premium for risk and hausse-premium gives a completely satisfactory explanation of what appears to be an inexplicable anomaly. For only pure capital-interest is deducted from the proceeds of labour; the hausse-premium is resolved into the higher prices. The worker, whose wages also follow the rise of prices, is consequently unaffected by the higher rate of interest. He pays higher prices and receives a higher wage; equilibrium is here established. The borrower pays a high rate of interest but receives a higher price

*At the end of the German paper-money swindle (1923), interest was paid at the rate of 100% per diem; the capital doubling in this way daily!

for what he sells; here also equilibrium is established. The capitalist receives back his money scourged and mutilated, but is compensated by the higher rate of interest. Here again there is equilibrium. Only the explanation of the increase of savings is wanting, and it must be sought in the fact that during a general rise of prices (a trade-boom) unemployment disappears.

It is only the rate of interest, therefore, not interest itself, that increases simultaneously with savings-banks deposits.

8. PURE CAPITAL-INTEREST A FIXED MAGNITUDE

We have just shown that when a general rise of prices (trade-boom, trade-prosperity) is expected, the rate of interest contains, besides capital-interest and a premium for risk, a third component, a hausse-premium. (The money-giver's share in an expected rise of prices.) From this it follows that if we wish to determine the variation in capital-interest, we cannot at once compare the rates of interest at the different periods. To do so would be as futile as to compare money-wages in different countries, at different times, without at the same time taking into account the prices of commodities.

But as the hausse-premium occurs only during a rise of prices and at once disappears when the rise of prices comes to an end, we can assume that the rate of interest during periods of falling prices, many of which are recorded in history, consists only of pure capital-interest and a premium for risk. The rate of interest during such periods is therefore a reliable index of the movements of capital-interest.

A continuous general fall of prices occurred, as is well-known, during the period from about the century before the birth of Christ to about the year 1400*. During this long period the monetary circulation was confined to gold and silver (paper-money did not yet exist), and the mines of these metals, especially the Spanish silver mines, were exhausted. Partly owing to prohibitions of interest (though these were often inoperative) the gold handed down from former times circulated with difficulty and was

* In the cities of France, Italy and Spain which lowered the monetary standard or, in other words, which practised so-called debasement of the coinage, the fall of prices came to an end sooner.

gradually lost. This general fall of prices has been proved by well-known facts and is, indeed, nowhere denied.

In Gustav Billeter's "History of the Rate of Interest in Greece and Rome up to the Reign of Justinian" the following facts are recorded:

p. 163: "At Rome from the time of Sulla (82 B.C. to 79 B.C.) we already find the rate of interest fixed in its chief types, namely 4% to 6%."

p. 164: "Cicero writes at the end of the year B.C. 62 'Persons of repute, with good credit, find money in plenty at 6%'. " Billeter adds "This tacitly expresses a falling tendency and, in fact, we find shortly afterwards a lower rate."

p. 167: "The rate of interest at the time of the civil wars (about the year 29 B.C.) was 12% and even persons with good credit were obliged to pay this rate. From 4-6% the rate of interest had thus reached 12%. But it soon sank back to the old level of 4%."

(The temporary rate of interest of 12% in war time is perhaps sufficiently explained by an unusually high premium for risk. We must also take into account the possibility that in spite of the general scarcity of money, prices may occasionally have increased from local or temporary causes, and that the rate of interest may therefore occasionally have contained a hausse-premium. A change in the rate of circulation of money, caused possibly by a change in the administration of the laws against interest, would suffice to explain such phenomena.)

p. 180: In the Roman Empire before the reign of Justinian: "For safe investments we find 3-15%, but 3% is extremely rare; this rate appears plainly to be the lowest even for investments resembling annuities. 15% is altogether rare; 12% is not exactly rare, but not typical; 10% is rare. The typical rate lies between 4 and 6%. Within these limits we can find no differentiation due to place or time; the only differentiation is due to the nature of the investment, 4% being a low rate, 6% quite the normal rate, and 5% the intermediate rate for very safe investments; these rates being also normal for ordinary security. The normal rate of interest when expressly stated is 4-6%, never 12%. The rate of capitalisation is 4% and 3½%."

p. 180: The time of Justinian (527-565 A.D.) "The conclusions to be drawn are therefore that under special circumstances the rate of capitalisation can rise to near 8% and fall to about 2% or 3%. Examination of the average rates gave 5% as probably normal, generally a little too high; 6%-7% also as an average rate but somewhat high, so that this rate could not be considered quite normal. We can probably assume that a rate a little below 5%, to about 6%, was the true average."

Billeter's researches here come to an end. Let us recapitulate his results:

In Sulla's time (82-79 B.C.) the rate of interest was 4-6%. In Cicero's time (62 B.C.) money was plentiful at 6%. After a short interruption caused by war (29 B.C.) the former rate of interest, 4%, reappeared. During the period of the Roman Empire before Justinian, the usual rate was 4%-6%. During the reign of Justinian, 527-565, the average rate of interest was 5-6%.

What is the meaning of these figures? They mean that during a period of 600 years the rate of interest tended to remain at almost exactly the same level as at present, 1,500 years later. The rate of interest of 4-6½% was perhaps slightly higher than at the present day, but the difference can be ascribed to the premium for risk which, in classical times and during the Middle Ages, was higher than at present when legislation, morality and the Church have extended their protection to interest.

These figures prove that interest is independent of economic, political and social circumstances. They give the lie to all the economists who have hitherto attempted to explain interest, particularly to those who hold some form of the theory of productivity (the only current theory with even the semblance of truth). That the same interest is paid for modern means of production such as steam threshing-machines, self-binders, double-barrelled guns and dynamite, as was paid 2000 years ago for reaping-hook, flail, cross-bow or wedge proves plainly enough that interest is not dependent upon the usefulness or efficiency of the means of production.

These figures mean that interest is due to circumstances that made their influence felt 2,000 years ago, and that this influence continued during a period of 600 years in almost exactly the same

strength as at the present day. What are these circumstances? Not one of the current theories of interest gives even a hint in answer to this question.

Billeter's investigations unfortunately end at the period of Justinian and, as far as I know, there is no trustworthy investigation of the following period up to the time of Columbus. It would, indeed, be difficult to obtain reliable data relating to this period, at any rate in Christian countries; for the prohibition of interest became more and more strict, and the monetary circulation, and with it commerce, decreased in consequence of the progressive scarcity of the precious metals. From 1400 onwards begins the depreciation on a large scale, of the monetary standard, and the recognition of pure capital-interest in the rate of interest becomes impossible. For this period Billeter would have had to combine his investigations with statistics of prices, to separate the *hausse-premium* from the rate of interest.

(The fact that Pope Clement V at the Council of Vienne (1311) could threaten with excommunication lay princes who passed laws favourable to interest shows the weakness of commerce at that date and the infrequency of loan-transactions. It was possible to treat isolated sinners with severity; but if commerce had been brisk and the breaking of the prohibition a daily occurrence, the Pope could not have dared to use such a threat. The proof of this is that when commerce increased, the opposition of the Church to interest at once fell away).

With the expansion of base coinage in the fifteenth century (which had the same effect on prices as the invention of paper-money) and with the opening of the silver mines in the Harz mountains, in Austria and in Hungary, an economic system based on money became possible in many parts of Europe; and with the discovery of America began the great price-revolution of the sixteenth and seventeenth centuries. Prices rose steadily and the rate of interest was burdened with a heavy *hausse-premium*. It is not surprising, therefore, that during this period the rate of interest was very high.

From Adam Smith's "Wealth of Nations" I take the following figures: In 1546, 10% was fixed as the maximum legal rate of interest. This law was renewed by Queen Elizabeth in 1566, and 10% remained the legal rate until 1624.

At the latter date the price-revolution had almost come to an end and the general rise of prices proceeded more quietly. Simultaneously the rate of interest fell. The legal rate was reduced in 1624 to 8% and, shortly after the restoration of the Stuarts (1660), to 6%. In 1715 it was reduced to 5%.

Adam Smith remarks that the legal regulation of the rate of interest appears always to have followed, not to have preceded, the market rate.

Since the time of Queen Anne (1703-1714) 5% seems to have been above, rather than below, the market rate. This is natural, since at that period the price-revolution was complete. The rate of interest now consisted solely of pure capital-interest and a premium for risk.

"Before the last war," writes Adam Smith, "the Government borrowed at 3%, and private persons with good credit borrowed in the capital and in many other parts of the kingdom, at 3%, 4 and 4½%."

That is, exactly the conditions which we have at the present day.

Are further facts necessary to prove that pure capital-interest is a fixed magnitude; that it never falls below 3%, or rises above 4-5%; that fluctuations in the rate of interest are not due to fluctuations in the rate of basic interest? When has the rate of interest risen in modern times? Only in conjunction with a rise in the prices of commodities. After the Californian gold discoveries the rate of interest rose to such a height that, in spite of the increased price of wheat, German landowners with debts drew public attention to their plight. The increased prices of wheat were absorbed by increased demands for wages. And when the Californian mines became exhausted, prices fell, in company with the rate of interest. Then came the war-indemnity from France, high prices and a high rate of interest. After the great collapse in 1873 both prices and the rate of interest fell. During the last periods of economic prosperity, 1897 to 1900, and 1904 to 1907, the rate of interest rose. Prices then fell and with them the rate of interest. At present prices are slowly rising; so is the rate of interest. In short, if one deducts from the rate of interest the hausse-premium due to the general rise of prices, what remains, namely pure interest, is a fixed quantity.

But for variations in the price-level, the rate of interest would have remained at 3-4% during the last 2,000 years.

Why does interest never fall below 3%? Why does interest never, even temporarily, even for one day in the year, even for one year in the century, even for one century in two thousand years, fall to zero?

The answer has been given in this book.

I now conclude my exposition of The Natural Economic Order, my aim being, not to furnish detailed solutions of separate economic problems, but to indicate the formulae by which such problems can be solved. No separate economic problem, however, has hitherto been brought to my notice which could not be satisfactorily solved by application of the formulae, Free-Land and Free-Money.

Those who raise objections to The Natural Economic Order should begin by asking themselves whether they do not belong to the numerous class of persons who profess the following creed: "I hate disturbance, I hate civil strife and international warfare. I am steeped in pacifism and only ask to be allowed to live in peace with my fellow-countrymen and all the world — **on my income derived from rent and interest.**"

To the criticism of these good people I reply: "With your objections you are merely searching for some means of escape, whereas in reality there is no escape. Nothing that I say has any effect on you, for your personal wishes, unconnected with the subject under discussion, again and again block the road to understanding. Your perverted impulse of self-preservation resists acceptance of my theory and prevents you from finding the answers to your own objections. Consider the young man to whom Jesus said: 'Go and sell what thou hast and give to the poor, and come and follow me.' But the young man went away sorrowful, for he had great possessions."

Everyone would of course like to enjoy the blessings of civil and international peace, and at the same time live on capital-interest. But those who have discovered that the possibility of doing so is a

Utopian fantasy, an illusion of naive minds; those who recognise that war and interest are inseparable, must choose one or other of these alternatives: Either interest and war, or earned income and peace. Such persons, if really animated by peaceful, Christian feelings, will accept with enthusiasm the latter alternative; such persons have the right inner preparation for understanding The Natural Economic Order; it is for them that the book has been written, and it is they also who, undeterred by opposition, will carry through the reforms it proposes.

LIST OF WRITINGS BY SILVIO GESELL

1891. Currency Reform as Bridge to the Social State. (Buenos Aires. 45 pages).
Contains most of Gesell's ideas in outline, including his proposal for non-hoardable money.
1891. Nervus Rerum. (Buenos Aires. 84 pages).
Motto on the title-page: "With our present form of money, the slightest alarm causes the withdrawal of money from circulation. At any moment, consequently, the exchange of commodities may be arrested; at any moment the most important of all means of intercourse organised by the State may refuse its services."
1892. The Nationalisation of Money. (Buenos Aires. 105 pages).
Motto on the title-page: "The currency should be, like railways, simply a public organisation for mediating the exchange of commodities; those who use it should be obliged to pay freight."
In an economic parable Gesell describes an island settlement which adopts an acorn currency. At first the commodities are exchanged by weighing the acorns (non-hoardable currency, as the acorns shrink). Later, payments are made by counting the acorns (hoardable currency, leading to interest).
1897. The Adaptation of Money to the Needs of Modern Commerce. (Buenos Aires).
1898. The Argentine Currency Question. (Buenos Aires. 36 pages). On the disastrous consequences of deflation.
1901. The Monopoly of the Swiss National Bank. (Bern. 30 pages).
A warning about the danger of inflation latent in the proposed charter of the Bank.
- 1902-4. A monthly periodical for currency- and land-reform. (Bern).
Advocating individualism and *laissez-faire* in contrast to State-control, "the religion of slaves." The economic parable, praised by J. M. Keynes, with which Gesell introduces his analysis of interest (p. 365) is reprinted from this periodical.
1906. The Natural Economic Order. (See back of short title).
1907. Active Currency Policy. (Leipzig. 80 pages).
In collaboration with Ernst Frankfurth—a currency policy under the gold standard with price-stabilisation as aim, including central-bank discount policy and open market operations.
1916. Gold and Peace ? (Bern. 20 pages).

1917. Free-Land, the Essential Condition of Peace. (Zürich. 23 pages).
Two lectures on peace, reprinted in the German and French editions of *The Natural Economic Order*.
1920. A German Currency Office: Economic, Political and Financial preliminaries for its establishment. (Berlin. 30 pages).
A memorandum addressed to the National Assembly at Weimar.
1920. International Valuta Association (IVA).
On stabilisation of the exchanges. See p. 359.
1922. Memorandum for the German Trade Unions for use in action concerning Currency, Foreign Exchanges, Reparations. (Erfurt. 96 pages).
1927. Dismantling the State. (Berlin. 94 pages).
German title: Der abgebaute Staat. A plea for elimination of bureaucracy in every sphere of life, and a forecast of the resulting society.

For the German titles of Gesell's works see the German edition of *The Natural Economic Order* (Zitzmann Verlag, Lauf bei Nürnberg, Germany). A biography of Gesell by Werner Schmid was published at Bern (in German) in 1953.

Six of the above works have been translated into English.

METHODS OF APPLYING THE PRINCIPLE OF FREE-MONEY

(Translator, 1958). There are many methods of applying the principle of Free-Money, the most important being: **Tabular Free-Money, Stamped Free-Money, Serial Free-Money, and Supplementary Free-Money.**

Tabular Free-Money was the earliest proposal. In *Currency Reform as Bridge to the Social State* (1891), Gesell suggests letting the face-value of the Free-Money notes ("rusting banknotes" as he then called them) decrease from 100 at the beginning to 95 at the end of the year, the current value of the note being shown in a table printed on it. This plan, which has advantages from the banker's standpoint, was retained in the first edition of the present work (1906).

Stamped Free-Money, suggested by George Nordmann, a Swiss merchant, was adopted by Gesell in the second (1916) and subsequent editions. The Free-Money notes, instead of losing 5% of their face-value in the course of the year, would be kept at their full face-value by weekly or monthly stamping at the holder's expense.

With weekly stamping, shown in schematic form on page 270 the number of stamps (52) on each note could be reduced to 13 by grouping the stamps in quarters (13 stamps to each quarter) and cutting off each fully-stamped quarter when the note was passing through a bank or public treasury, with the mention: "First (or Second, or Third) Quarter fully-stamped." Or the notes could be re-issued at 6-monthly or quarterly intervals, instead of annually. With monthly stamping and half-yearly note-issues, six stamps would be the maximum number attached to a note.

If the currency stamps were used only for stamping the notes (and not also as small change), they could be printed on cellophane rolls like the self-adhesive tape used for fastening parcels. Or, instead of adhesive stamps, machine stamping could be adopted, as at present with letters and parcels.

Stamped Free-Money has advantages in the market, outside the gathering places of money. In almost all the practical realisations of Free-Money (in Germany by Hans Timm in Gesell's lifetime, and

by the mining entrepreneur Hebecker, using Timm's "Wära," at Schwanenkirchen in 1931, in Austria by the Mayor of Wörgl in 1932, and in the many later experiments throughout the United States) stamped Free-Money was the form adopted.

With Serial Free-Money each denomination of the currency notes is issued in four or more series distinguished by a number and bold marking, for example 1-4 red bars across the note. At determined intervals one of the series, drawn by lot, ceases to be legal tender but is exchanged for a fresh series by the Currency Office—after deduction of the legal depreciation for *all four series*. With some modifications this plan could be applied to small-change coins. Serial Free-Money has the merit of reducing interference with the currency to one-quarter; three-quarters of the currency continues to circulate undisturbed.

With Supplementary Free-Money the legal depreciation is compensated in each transaction by a supplementary payment by the holder of the note, as at present in many countries with the purchase tax (sales tax).

Theoretically the principle of Free-Money could be applied by a continuous regular inflation of prices of 5% annually, with, to protect creditors, a corresponding modification of all long-term money contracts. (For 18 years the continuous *irregular* inflation, without modification of money contracts, practised by almost all countries, has realised one aim of Free-Money: the elimination of depressions and unemployment—but at the expense of creditors, and with many grave economic disturbances).

During the great American depression of the thirties, when the United States currency, in spite of liberal credit policy, failed to circulate, legislation was introduced in the Senate and House of Representatives (Bankhead-Pettengill Bill, 1933) directing the Federal Treasury to issue \$1,000 million in \$1 stamped notes. To each of these notes it was proposed to attach *weekly* a 2-cent stamp, a depreciation charge of 100% which would have made the whole issue self-liquidating within a year, through sale of the stamps.

In Switzerland a plan for applying the principle of Gesell's Free-Money was proposed in 1948 in the Federal Parliament as an amendment (Bernoulli-Schmid) to the charter of the Swiss

National Bank. To forestall depressions, this plan proposes to empower the Bank to counteract any statistically observed slackening of velocity of the currency circulation, by cancelling some or all the higher denominations of the notes, the cancelled notes to be immediately exchanged for fresh notes after a deduction not exceeding, in any one year, 6% of the value of the note.

Gesell rejected the plan of 5% compensated inflation and he also rejected proposals to raise the legal depreciation rate of the notes above what is needed to load money with the carrying costs to which, by their nature, the wares are subject—estimated at about 5% annually. But Gesell did not advocate exclusively any of the other proposals; he held that the technique of Free-Money, like all technique, must be determined in practice, by trial and modification. *

* See Professor Irving Fisher: Stamp Scrip (1933); Fritz Schwarz: Das Experiment von Wörgl (1950); Karl Walker: Die Technik der Umlaufsicherung des Geldes (1952). The New York Public Library has an immense collection of material relating to the American local realisations of Free-Money.

PUBLISHED REFERENCES TO GESELL'S THEORY

Dr. Ernst Hunkel, Deutsche Freiwirtschaft (April, 1919):

"Gesell is not an academic economist laboriously compiling foot-notes and bibliographies, and adding statistics to statistics in partial economic investigations. He has two advantages over the vast majority of experts hall-marked by the State; first, long experience as a merchant, importer, landowner and farmer; but above all the genius that penetrates and grasps economic principles. I have studied economics under such sterling investigators and teachers as Wagner, Schmoller, Sering and Neumann, and remain their grateful pupil, but I confess that in spite of this piled-up learning the real nature of economic and social problems remained for me a book with seven seals until I became acquainted with Gesell's ideas. When I understood them and made them my own, economic science became as clear as crystal."

Dr. Oscar Stillich, Lecturer, Berlin University: Das Freigeld, eine Kritik (Berlin, 1923):

"The Natural Economic Order is a great independent achievement such as few contemporary economists can claim; in contents and expression it is a constructive work which stands mountain-high above the average products of modern economic literature. The literature on the currency question hitherto published in Germany was unintelligible to those without previous economic training, and for this reason it was never read by the masses. Then appeared Silvio Gesell and his school with a series of brilliant writings which threw new light on the currency problem and acted as a powerful stimulant. Gesell's works are models of clear and stimulating exposition; they contain a noble wine, excellent for the palate though perhaps for many somewhat heady. But these works include much that is fruitful and of scientific value, much that will not disappear from economic science. Gesell has destroyed the illusion of gold and given a theory of paper money that can claim to be considered final. The whole theory of metal covering for money is closely examined and completely rejected. Here where nominalists such as Knapp failed, Gesell has succeeded. To sum up, Gesell has produced the most fundamental analysis of the currency question that we possess."

Gustav Landauer, revolutionary socialist: Aufruf zum Sozialismus (Berlin, 1919):

"Of great value is Silvio Gesell's proposal to introduce a medium of exchange that does not, as at present, gain in value from year to year, but, on the contrary, loses value progressively, so that anyone who has obtained possession of the medium of exchange has no other interest than to exchange it again as soon as possible for the produce of others. Gesell is one of the very few who have recognised Proudhon's greatness, and while learning from him, have succeeded in developing his theories along independent lines."

John Maynard Keynes: General Theory of Employment, Interest and Money (1936):

"Gesell's main book is written in cool, scientific language; though it is suffused throughout by a more passionate, a more emotional devotion to social justice than some think decent in a scientist. The purpose of the book may be described as the establishment of an anti-Marxian socialism, a reaction against *laissez-faire* built on theoretical foundations totally unlike those of Marx in being based on an unfettering of competition instead of its abolition . . . I believe that the future will learn more from the spirit of Gesell than from that of Marx. The preface to *The Natural Economic Order* will indicate to the reader the moral quality of Gesell. The answer to Marxism is, I think, to be found along the lines of this preface." (p. 355).

"The idea behind Gesell's stamped money is sound." (p.357).

Professor Irving Fisher, Yale University:

Booms and Depressions (1933) p.142.

"If only buying could be started first, business borrowing would follow. For this purpose (of directly stimulating the buyers), a unique 'stamped dollar' plan has been devised—a sort of tax on hoarding. This plan did not come to my attention until after this book had been finished. The plan offers the most efficient method of controlling hoarding and probably the speediest way out of the depression."

Stable Money (1934) pp. 9, 11.

"One of the most interesting examples of monetary manipulation is to be found in the silver 'Bracteates' of central Europe

between 1150 and 1350 . . . Recoinage was periodical . . . A ruler would call in all outstanding coins twice or three times a year and exchange them for new ones after deducting a seignorage fee of about 25% . . . It is said that trade, handicrafts and the arts received a stimulus from the eagerness of the people to get rid of their money . . ."

"This first example of something akin to velocity control is of particular interest in the history of stabilisation. After the bracteates had disappeared about 1350, this principle was forgotten until it reappeared definitely in the writing of Silvio Gesell. After his death velocity control was in some instances applied in the form of Stamp Scrip during 1931 - 33 in Germany, Austria and the United States."

Stamp Scrip (1933) p.67.

"There are some of us who believe Stamp Scrip to be more than a temporary auxiliary currency for the present emergency, believing that if its volume and stamp intervals were regulated according to various conditions, it would be the best regulator of monetary speed, which is the most baffling factor in stabilising the price level."

H. T. H. Gaitskell, later Chancellor of the Exchequer: What everybody wants to know about Money, by nine economists from Oxford. Edited by G. D. H. Cole (1933).

"Gesell has a great deal in common with John Bright . . . this remarkable suggestion presented by its author with such clarity and literary grace . . . Theory would anticipate and practice has shown that given certain conditions the adoption of Free-Money must improve a trade situation . . . good policy for depression in countries where notes are used freely . . . theoretically perfectly sound. It is one of the few attempts which have been made to deal with what is undoubtedly one of the intractable elements in industrial fluctuations. The prolongation of the depression in face of vigorous expansionist monetary policy can only be ascribed to a further fall in velocity. Any method for dealing with this must merit attention."

Subhas Chandra Bose (1897 - 1945) sometime Mayor of Calcutta, member and sometime President of the Indian National Congress:

"We have no use for the teachings of the former generation

regarding land-tenure and money. New teachings on money-interest have come to the forefront, as those evolved by Silvio Gesell. Free India will not be a country of capitalists, big landowners and castes, but a true social and political democracy." (Undated quotation from *Freedom and Plenty*, Los Angeles).

Mahmout Abu Saud, economic adviser, Moroccan Government; economic expert, Arab League; external Professor of Law, Rabat University. (Formerly Prof. of economics, Kabul University, and economic adviser, State Bank of Pakistan).

"No great investigator of the social and economic structure has so long been denied recognition as Silvio Gesell. His masterpiece, *The Natural Economic Order*, is a key to economic problems and a challenge both to capitalism and to Marxian socialism. Gesell's theory of interest is in harmony with the teaching of the Koran and should be welcomed in all Islamic countries. His plan for an interest-free economy is a solid basis for constructive attempts to liberate man from the slavery of his own illusions, from the tyranny of mistaken tradition, and from exploitation by his fellow-man." (Mitteilungen der LS. Partei der Schweiz, Bern. February, 1958).

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