

PART FIVE

Free-Money Theory of Interest on Capital

Chapter 1.

A STORY OF ROBINSON CRUSOE, TOUCHSTONE OF THE THEORY

As touchstone for the theory of interest developed below, and to facilitate the removal of ingrained prejudice that still obfuscates readers' mind on this issue, let me begin with the following Robinsonade.¹

Robinson Crusoe decided to build a canal, towards the construction of which he estimated three years of uninterrupted work. He had therefore to lay in provisions for three years.

He slaughtered some pigs, cured their flesh with salt, filled a deep trench with cereals and covered it carefully with soil. He tailored a pair of buckskin trousers and nailed them up in a chest, enclosing also the stink-glands of a skunk as a moth repellent.

He provided amply and wisely, he thought, for the next three years.

As he sat down calculating for the last time whether his "capital" was enough for the project, he was startled at the approach of a stranger striding towards him.

"Hallo!" shouted the stranger as he approached, "my ship has run aground here, and here am I on this island. Will you help me with some provisions until I have brought a field into cultivation and harvested my first crop?"

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

"How splendid!" replied the stranger, "but let me tell you at once that I shall pay no interest, preferring hunting and fishing. My religion forbids me to pay, or receive, interest."

Robinson Crusoe: What an admirable religion! But on what grounds 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. You gain, and hugely at that.

R.C.: That, stranger, you have yet to prove. I must say I see no advantage in lending you my provisions interest-free.

S.: I shall prove it at once. If you can follow my proof, you will agree to an interest-free loan, 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 them.

¹ 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 lenders (Crusoes) to one borrower (the Stranger) the contract would be still more favourable to the borrower. 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.

S.: But Crusoe! I had more respect for your intelligence. Fancy nailing up clothes for three years in a chest! Buckskin trousers, the favourite food of moths! And buckskins must be kept aired and rubbed with fat, otherwise they become hard and brittle.

R.C.: That is true, but what else could I do? They would be no safer in my cupboard: on the contrary, for it is infested with rats and mice besides moths.

S.: Rats and mice would get them also in the chest. Look how they have already started to gnaw their way in!

R.C.: How true! One doesn't know what to do against these creatures.

S.: You don't know how to protect yourself against mice, and assure that you know how to count? Let me tell you how people like you at home protect themselves against mice, rats, moths, thieves, against brittleness, dust and mildew. Lend me these clothes for one, two or three years and I promise to make new ones for you as soon as you require them. You will receive back as many pieces of clothing as you have lent me, and the new suits will be far superior to those from the chest. On top of that you will not stink of skunk glands. Do you agree?

R.C.: Yes, stranger, I will lend you the chest full of clothes; I see that in this case the loan, even at no interest, is to my advantage.²

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

R.C.: I have is buried it in that hole in the ground.

S.: Wheat buried for three years in a hole? What about mildew and beetles?

R.C.: I have thought of it, but what could I do? I have considered the thing from all angles and found nothing better.

S.: Bend down. Do you see beetles crawling on the surface? Do you see the dirt? And this spreading patch of mildew? It is high time to take out the wheat and air it.

R.C.: This capital will ruin me! If only I could find some way of protecting myself against the thousand destructive forces of nature!

S.: Let me tell you, Robinson, 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 mousetraps and insure against fire. In this way we keep the loss down to 10% per year.

R.C.: But the labour, and the expense!

S.: You shirk work and want no expense? Let me tell you then what to do. 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 suffer no loss of weight, and instead of stale corn you will have fresh, nutritious bread.

² This obvious fact has been overlooked by every writer on interest up to now, even by Proudhon.

R.C.: I accept wholeheartedly.

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

R.C.: Certainly: at no interest and with my heartfelt thanks.

S.: But I can use only part of the wheat; I don't 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?

S.: I must decline your offer, for it would mean interest - not indeed positive, but negative. 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 wages of two sacks, annually, from every ten sacks. Do you agree?

R.C.: It makes no difference to me whether your service comes under the heading of usury or labour. I give you then ten sacks and you give me back eight. Agreed!

S.: But I need other articles: a plough, a cart and hand tools. Do you consent to lend them, also, at no interest? I promise to return everything in perfect order, a new spade for a new spade, a new, rust-free chain for a new chain, and so forth.

R.C.: Of course I consent. All I get 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 rain damaged everything. Now we have drought, and the wind is blowing sand and dust in. Rust, decay, breakage, drought, light, darkness, dry rot and ants keep up a relentless attack. We can congratulate ourselves here upon having, at least, no thieves or arsonists. How delighted I am that by means of a loan I can now store my belongings without expense, labour, loss or vexation, until I need them.

S.: That is, you now see the advantage of lending me your provisions interest-free?³

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.: You must seek the explanation in money, which acts there as intermediary for such transactions.

R.C.: What? The cause of interest lies in money? That cannot be. Listen to Marx on money and interest: "The capacity for work is the source of interest (surplus value). The interest, which converts money into capital, cannot be derived from money. If it

³ 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, not to mention the danger of fire and such like." Also banks provide, for private use, special storerooms for gold, precious stones and securities. For the use of these rooms, rent must be paid. The "present goods" are here inferior to the "future goods" at least by the amount of this rent.

is true that money is a medium of exchange, it does no more than pay the price of the commodity it purchases. If money remains unvaried, its value does not change. Hence the surplus value (interest) must come from the commodities bought, as they will be sold dearer. Such change cannot take place either when buying or when selling; in either case equivalent values are exchanged. We are therefore forced to the conclusion that the change originates in the use of the commodity after its purchase and before its re-sale." (Capital I, 6).

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 Robinson, that theory is dead and buried. No one supports it today.⁴

R.C.: Marx's theory of interest dead and buried? It isn't true. Even if no one else defends it, I will.

S.: Well then, defend it, not in words but in deeds against me. I hereby break off the bargain we have just made. You have here, in your supplies, from their nature and destination, 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 has ever appeared before a capitalist as naked as I stand here before you. Never has there been so clear an illustration of the relation between the owner of capital and the individual in need of it. And now try to exact interest! Shall we begin our bargain all over again?

R.C.: I give up! Rats, moths and rust have broken my power as a capitalist. But tell me, what is your explanation of this whole thing?

S.: The explanation is simple enough. If there were a monetary system on this island and I, as a shipwrecked sailor needed a loan, I would have to apply to a moneylender for money to buy the things that you have just lent me at no interest. But a moneylender has no worry about rats, moths, rust and roof repairing, so I could not have taken up the position towards him that I have taken towards you. The loss inseparable from the ownership of goods (look, there goes a dog running off with one of your - or rather my - buckskins!) is borne not by the moneylenders, but by those who have to store them. The moneylender is carefree, unmoved by the arguments that found the chinks 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 bargaining. Not so the money-capitalist; he would bang the door of his strong room on my face if I dared say 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 at no interest, but I must pay interest on the money I borrow to buy buckskins!

R.C.: Then the cause of interest is to be sought in money? And Marx was mistaken? Even where he says: "In real commercial capital, the circuit (money – wares – excess money) = purchases, i.e. buying so as to sell dearer, appears most clearly. On the other hand all the movement takes place within that circulation all by itself. It is therefore impossible to explain how money becomes commercial capital except by

⁴ [Gesell must turn in his grave on seeing the theory of value still taught in quite a few schools of economics.]

that circulation. The exchanged products are equivalent. The surplus comes from the double swindle by the parasitic trader, who buys from the producers to sell to consumers. If the exploitation of commercial capital cannot be explained in terms of naked cheating by the producer, it belongs to the large line of middlemen.” (Capital, 6th Ed. Chapter I).

S.: He is utterly in error as much as before. And as he was mistaken about money, the central nervous system of economic life, he must be mistaken about everything else. He committed the error, as did all his disciples, of excluding money from the scope of their inquiry.

R.C.: Our negotiations have convinced me of this. 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 he asserted. When the borrower refuses to pay interest, the banker can close the door of his safe without experiencing any of the cares that beset the owner of goods. The banker owes this privilege exclusively to the intrinsic superiority of money over goods. That is the root of the matter.

S.: Rats, moths and rust are powerful logicians! How convincing they are!

Chapter 2.

BASIC INTEREST⁵ OR USURY

Bourgeois and Marxian economists are agreed that interest is an unavoidable concomitant of the private ownership of the means of production. "Those who reject communism, i.e. community of property, and desire liberty in economic life, must accept an economic system founded upon interest, i.e. capitalism." So say all who have investigated the problem of interest up to now.

The investigators differ, and widely at that, in their moral judgement of interest, but that is a matter of trivial importance, which does not help in the slightest 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 bourgeois economists are right in ascribing it to the economic virtues of order, industry and thrift, is of little importance to the dispossessed workers, the proletariat that has to bear its burden.

According to the above doctrine, Marx and followers are compelled to seek the origin of interest (which they call surplus-value) in the factory, or in any case in the separation of the workers from the means of production; that is where they imagine to have nailed it.

I shall now prove that interest has nothing to do with the private ownership of the means of production; that interest exists where no mass of dispossessed workers (proletariat) exists or ever did; that thrift, order, industry and efficiency have never crucially influenced it. Contrary to the above theories of capital, I will 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 privileges 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 moment, despite Proudhon's warning, he made a false assumption.⁶ Like the orthodox apologists of interest, he assumed that money and commodities are equivalents.⁷

Through this unfortunate mistake Marx went astray at the outset.

Marx finds nothing wrong with money. Money, as adopted by us from the Babylonians, Israelites, Greeks and Romans, is a complete and perfect medium of exchange, which has brilliantly fulfilled its function from the beginning. The fact that during the Middle Ages an economic system founded on money, and consequently on the division of labour, could not develop because of scarcity of the money-material; that the papal prohibition of interest paralysed an economic system founded on money - although this prohibition was quite simply the forced equivalence between money

⁵ [*Urzins* in the original. *Ur-* is a German prefix akin to the Greek *archaeo-*. "Basic" is a good, albeit not absolutely perfect, English rendering of the idea.]

⁶ The reason why in the following pages I frequently probe the weaknesses in Marx's theory of interest, is simply that, of all the socialistic theories, his is the only one with any influence upon the political struggles of our time. Marx's theory is for the proletariat a dangerous apple of discord, witness the two sections of the German Socialist party, both holding Marx's theory of interest as a dogma, but at present settling their differences with lead and hand-grenades.

⁷ Two commodities are "equivalent" if neither is in a privileged position in respect of the other. If, for example, usurers, savers or misers, in considering whether it was more advantageous to hoard commodities or money, were always forced to the conclusion that the choice was immaterial, then a dollar's worth of gold and a dollar's worth of commodities would be equivalents. If however savers and speculators conclude that a dollar's worth of money is for them preferable to a dollar's worth of commodities, then the equivalence assumed by Marx does not exist.

and commodities postulated by Marx - is not sufficient to shake Marx's belief that money is a perfect medium of exchange, a true, universal "equivalent". It is obvious that Marx fails utterly to recognise the particular form of power that money has; he is forced to deny that mankind is exploited by a golden "International", by money manipulators and usurers.

Speculative robbery on the Stock-Exchange for him does not exist. It is to him mere cheating, not robbery with violence. The speculator is a mere thief. Robbery requires the use of force, and force is the attribute, not of the finance magnates, not the heads of the Stock Exchanges, 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 personal consumption, or by a purchaser buying as a merchant. In Marx's own words, "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."⁸

Dies Kind, kein Engel ist so rein,
Lasst's eurer Huld empfohlen sein!⁹

This Marxian hymn in praise of gold and of the gold standard has completely diverted the attention of the proletariat from money, placing robber stockjobbers, speculators, usurers and rogues of every hue under the direct protection of the dispossessed classes. Hence the present tragic farce in which, throughout the world, "Red Guards act as watchmen at the gates of Mammon's temple."¹⁰

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 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) contradicts the equivalence he had asserted between wares and money shortly before. He seeks the explanation of the contradiction elsewhere, namely in the long chain of middlemen.

This "long chain" is none other than the process of production, which begins and ends in the factory. The employer, says Marx, is not one of many exploiters; he is the exploiter par excellence. Exploitation takes place exclusively in the pay-office.

To uncover the contradiction between Marx's formula M-W-M' and the alleged equivalence of money and commodities, I shall not require this chain of intermediaries; I shall dangle my hook before the mouth of interest and draw it directly, visible to all, from its element. I shall reveal that the force expressed by the formula M-W-M' lies directly in the act of exchange; I shall show that money in the form we blindly adopted from antiquity is not at all "equivalent"; that it can circulate only according to that formula; 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, an economic system based on interest.

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

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

⁸ Marx, Kapital I. 2

⁹ Nothing is purer than this baby; let your charm be recommended! [I have left it in the original, not to cripple it with a graceless translation.]

¹⁰ *Die Freistatt*, 30th May 1918, Berna-Bümplitz.

2. The physical properties of the traditional form of money (metal or paper) allow it to be withdrawn indefinitely from the market without material costs of storage. Producers (workers), on the other hand, to whom money is essential for effecting exchanges, are compelled, by the ever-increasing losses connected to the storage of wares, to create a demand for money.¹¹
3. The merchant can therefore force the possessors of wares to pay him a special tribute in return for the money he has been hoarding, thus arbitrarily postponing, delaying, or if necessary halting, the exchange.
4. Interest on commercial capital is but this regular tribute, which thousands of years of experience tells us reaches, spread over the total yearly transactions, about 4 - 5% per annum of the capital sum.

This special remuneration, sharply to be distinguished from commercial profit,¹² cannot of course be exacted by the ordinary purchaser (also known as consumer) impelled by his bodily wants, for the possessor of money cannot postpone or give up purchasing wares any more than the producer can postpone or give up selling them. Only the merchant approaching the market as owner of money can exact this tribute. He buys as merchant, i.e. so as to sell again, not to consume; he is the one who is free to buy, but can, if he thinks fit, abstain from buying without feeling the pangs of hunger; he is the one who buys a cargo of wheat although one sack may be enough for personal consumption. Profit is the only thing that interests him, and he gets it only by purchasing commodities.

The impulse stimulating the merchant's purchases of commodities is not therefore physical necessity, but the wish to obtain the commodities as cheaply as possible and, with this object, to use as a weapon every trend in the market and every weakness discoverable in the seller. If the seller's position weakens by waiting, the merchant lets him wait. In general he 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 for them. The consumer, under pressure from personal wants, cannot wait, although his money would allow him to do so; neither can the producer, although his personal wants would in many cases allow him to do so. But the possessor of money coming forward as 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

¹¹ Everything decays more or less rapidly, with unimportant exceptions like precious stones, pearls and precious metals. Care bestowed on them can retard, but not prevent, decay. Rust, rot, breakage, damp, drought, heat, frost, worms, flies, ants, moths, beetles, fire, etc. join in the work of destruction. If a merchant closes his store for a year, he must write off 10-20 % of his capital because of 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 2 790 marks per kilogram at the counters of the Reichsbank today. 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 one. At the beginning of the storage period it has not reached the stage of development at which it becomes fit for human consumption.

The juice that flows from the winepress into the casks is must, which only gradually becomes wine. It is the wine-making process that increases its value, not the storage itself. If it were the storage, the increase in value would not stop, which is not the case. The storage itself causes, as always, expense: rent for storage space, casks, bottles, years of care, breakages, etc.

¹² Commercial profit is what is left over for the merchant after he has paid the interest on his capital. The profit of a merchant dealing in merchandise bought exclusively on credit is pure commercial profit, for he must hand over the interest spoken of above (No. 3) to his moneylender. He is thus a sort of bank-messenger for his capitalist.

one man's embarrassment is another man's capital. If producers and consumers were not separated by time and place they 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 a necessity, and also the rule for the greater part of production.

Considering the latter fact, we can leave consumer's money out of reckoning in our observations. All commodities and all money pass through the merchant's hands. The only laws we need consider here are the laws of commercial circulation.¹³

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

If money becomes capital because it can arbitrarily interrupt the exchange of commodities, one may ask why interest does not rise by the full amount of the advantage we derive from the use of money in our monetary economy, measurable by the difference in efficiency between an economy based on the division of labour and one based on self-sufficiency. Similarly one may ask why landowners, when fixing their rents, do not in every case apply the "iron law of wages"; or why the shareholders in the Suez Canal, when fixing the canal dues, do not exclusively take into account the competition from the sea-route around the Cape of Good Hope.

The tribute that money demands for its being used follows laws other than those governing the use of land; it is more like the tribute exacted by robber barons in the Middle Ages. Merchants who had to use a road passing by the baron's town were thoroughly plundered; dues of 30, 40, 50% were the rule. But if the merchant had a choice of another road, the baron became less demanding: he guarded his road, improved its surface, built bridges, protected it from other robbers, and if necessary he even reduced the toll, so that in future the merchant would no longer avoid his road.

It is the same with money. Money also must reckon with competitors if it sets its tribute too high.

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 merchandise.

It is clear that the division of labour could be developed much further than at present. The gold standard is a world standard, so when considering it we must consider the global economic system. But three quarters of the inhabitants of the world still cling to self-sufficiency. Why? Partly because the exchange of commodities by means of money is too heavily burdened with interest. This expense must cause producers to forgo the production of commodities for exchange (wares) in certain branches of their activity, or even altogether, and to get on with the primitive system of production, self-sufficiency. The choice between production of goods for home use and merchandise for the market depends on an arithmetical calculation, so that the interest that burdens the production of merchandise may often enough cause people to cling to self-sufficiency. Many German small farmers, for example, prefer to feed pigs with their potatoes and slaughter them for their own use if the price of meat slightly increases, because of the interest exacted by the agents of exchange. The small farmer will then produce fewer potatoes for the market and more goods for his own consumption. And he will require less money.

¹³ Readers who have difficulty in recognising that merchant's money and consumer's money obey different laws of circulation should reflect upon the mechanism by which savers' money is drawn back into circulation, becoming thus medium of exchange.

This subsistence production must not, even in a country like Germany, be underestimated. Even here money must moderate its demand for interest to avoid forcing modern production back into self-sufficiency. 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 merchandise, that part of present-day production that oscillates about the marginal utility of the division of labour is abandoned, and self-sufficiency either steps in or stays as it is.¹⁴

Money's demand of too large a tribute reduces the production of commodities for exchange in favour of subsistence production, and prices rise.

For the present we simply register this fact.

Barter has the same effect upon the demand for money, when the medium of exchange, money, claims too high a rate of interest. Money indeed owes its existence to the difficulties of barter. It was invented to overcome such 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 in time and place. The more the exchange of products is burdened with interest, the easier it is for barter to challenge the monetary economy. Products bartered reach the consumer interest-free. For which of the parties should pay interest?¹⁵ 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 obstacles of their separation in time and place by arranging to meet on market days at certain places.¹⁶

In this way they demolish the foundation upon which money is built, namely the demand for a medium of exchange embodied in merchandise. Commodities reaching the consumer by barter are lost to money, just as a gypsy 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. We need not know the quantity of commodities that can do without money because of too high a demand for interest. It is sufficient to have demonstrated that barter is a competitor of money, and that its chances of success increase in proportion to the amount of interest demanded. If interest rises, many commodities are diverted from money-sales to barter, and the demand for money decreases. Prices therefore rise, exactly as with an increase in self-sufficiency. This fact also, we are content for now simply to record.

Bills of exchange have the same effect as self-sufficiency and barter, the moment 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 wider use of bills of exchange.

Bills of exchange are not, indeed, as safe and convenient as liquid money; in many cases they cannot replace money at all, as is apparent from the fact that they are

¹⁴ [It is another way of saying that agricultural produce is a form of money, which helps understand the hostility of the banking system towards agriculture and farmers.]

¹⁵ If potatoes are bartered for fish, and each party burdens his product with 10 % interest, the two demands for interest cancel each other out. But this by no means excludes the possibility of interest derived from loans, as distinct from interest derived from barter.

¹⁶ 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 commerce is carried on in this manner among the German colonists of Southern Brazil. These people seldom receive money for their produce.

often exchanged (discounted) in the banks for money, despite the deduction they suffer. This would not happen if the bill of exchange could always replace ready money. Nevertheless bills of exchange, particularly in wholesale commerce and in savings, have often only small disadvantages compared with cash. A slight rise in the rate of interest can in such cases cause people to prefer bills of exchange.

Money-interest affects the use of bills of exchange as an increase in railway fares affects the use of canals. The higher the rate of interest, the greater is the incentive to avoid this tribute to money by the use of bills of exchange. For the same reason everything that artificially increases the natural disadvantages of bills of exchange (compared to 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 5.25 - 5.5 - 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 their competitor, money; the more heavily bills of exchange are burdened by stamp-duty, the higher are the claims of its competitor, 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 by 1%. If bills of exchange are taxed 5%, the deduction will rise from 5% to 10%, bar the intervention of the other competitors of money, barter and subsistence.

For this reason it is odd that the State should try to increase its revenue by a stamp-duty upon bills of exchange while at the same time complaining of the high rate of interest at which it borrows. The State, as debtor, should on the contrary abolish the tax upon bills of exchange in order to reduce the interest upon its loans. What the State loses in stamp-duties it would gain a hundred-fold by the decrease of interest upon its loans. At the same time it would lighten the burden of interest upon the people.

If, now, instead of a tax, we imagine a premium (of any kind) upon bills of exchange, raising such a premium would stimulate the circulation of bills of exchange; lowering the premium would retard it.

But is not the saving of interest afforded to commerce by the circulation of bills of exchange already 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.

But wherever bills of exchange circulate, corresponding quantities of commodities circulate in the opposite direction. These commodities are also lost to the demand for interest. Bills of exchange deprive money of interest. Demand for cash also decreases in the same measure. 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. This, too, for now we simply record.

Money is not, therefore, the absolute ruler 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 be made here 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 subsistence production. Even if the deduction (discount) were 50%, money could not be replaced by bills of exchange in many cases.

And bills of exchange pass only from one trusted hand to another. They are not sufficiently divisible for the needs of the retail trade. 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 exacted interest by postponing the exchange of wares at will.

This objection leaves out of account a fact learned in the fourth part of this book, namely that a general rise in prices drives money to the market. A general rise in the price of commodities means for the possessor of money a loss exactly proportional to the rise in prices, and the only way of avoiding this loss is to offer the money in exchange for commodities. A general rise in 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 in prices everyone endeavours, by purchasing commodities, to avoid the loss threatening his money -by passing this loss on to others.

We can therefore say that to raise the tribute claimed by money above a certain level, automatically unleashes the forces tending to reduce the tribute to its erstwhile level.

The reverse is true when the level of interest falls below this limit. Owing to the reduced cost of commerce, division of labour is introduced where self-sufficiency was hitherto profitable, and money sales replace 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 expense of self-sufficiency) and a simultaneous increase in the offer of wares for ready money (at the expense of the circulation of bills of exchange) depresses prices and hinders the exchange of commodities. The resulting embarrassment of producers again brings in the use of money with an increased demand for interest.

The forces liberated by interest on money (through its effect upon the interest-free competitors of money, and consequently upon prices) have thus an automatic regulatory effect upon interest itself, so that its upper limit 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 must therefore always and necessarily fall back to the point at which it stimulates, or limits, self-sufficiency, barter, and the circulation of bills of exchange.

Today there is also a general opinion that the rise or fall of interest is due to competition among moneylenders.

This opinion is wrong. There is no such thing as competition between moneylenders; competition here is impossible. If the money they offer as loan has been withdrawn from actual circulation, they, in lending it, merely fill the holes that they had dug by withdrawing it. Ten, 100 or 1 000 moneylenders mean ten, 100 or 1000 holes dug by these very moneylenders along the path that money is meant to pursue. The greater the amount of loan-money offered, the larger the holes.¹⁷ 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. In such circumstances we can no longer speak of competition capable of influencing the rate of interest. If it were competition, the fact that changes of residence take place at Martinmas should influence rents. But rents are not so 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. It is the same with moneylenders' competition. Here it is money that changes residence.

¹⁷ In the celebrated crisis that swept over the United States in 1907, Morgan "hastened to the rescue" of the Government with a loan of 300 million dollars. Where did these dollars come from? They were urgently needed. Morgan had previously withdrawn them from circulation, thus bringing his country into trouble. After the slump in stocks had taken place and the differential gains pocketed, the generous rogue, out of pure patriotism, offered them to the Government.

But if the money offered for loan is new money, say from Alaska,¹⁸ this new money will drive up prices. The higher prices will force all borrowers to increase the demand for loans so as to match the price increase. Instead of 10 000, a builder will need 11-12-15 000. The increased supply of loans due to new money will automatically cause a corresponding increase in the demand for loans. Thus the influence of new money upon the rate of interest is soon cancelled. An increase in 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. How, it will be explained later.

Competition between moneylenders capable of affecting the rate of interest does not, therefore, exist; such competition is impossible.

The only competition that can restrict the power of money is competition in the three forms already mentioned: subsistence production, barter and bills of exchange.

An increase in the tribute claimed as interest automatically triggers off an increase in subsistence, in barter and in the circulation of bills of exchange. The result is a general rise in the price of commodities, which makes the possessors of money more accommodating.

The straight line is the shortest distance between two points: translated into economic terms this means the cheapest.

Money is the shortest, and therefore cheapest, road between producer and consumer. (With subsistence 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 merchandise resulting from the division of labour).

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

But that shortest and cheapest road, money, can be closed by its possessor. He never opens it unless paid for the advantage of the straight road over the devious ones. If he demands more, commodities choose the longer road; if he demands less, money is overburdened, that is, commodities that 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 circulation of money is arrested.

Money claims interest each time it is used, somehow like a cab claiming 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 to the producer or as an addition to the price demanded from the consumer. As a rule the merchant can estimate by experience the price 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, which the merchant knows by experience, elapsing 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 transport, shop-rent and his own services, from the difference between factory price and 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 at interest.

¹⁸ [The reference is to the Klondike goldfields, discovered in 1896.]

The cigar-merchant must extract this interest from the above-mentioned difference in price. If that is not possible with the going price, he waits; and while he waits, 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 moneylender regards the outcome with indifference, for in either case he receives his tribute.

Basic interest is therefore simply added to the other costs of commerce, which 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, too, should receive something. But the banker, the savings bank, the moneylender - what do they do? The king stands beside the barrier; he obstructs the stream of commerce across the border and says, "The tithe is mine!" A moneylender stands beside his safe; he obstructs the exchange of commodities requiring its contents, and says, like the king: "Basic interest is mine!" King and moneylender render no service. They exact a tribute simply by obstruction. Basic interest is thus, like import-duties, a tribute, with the difference that the king uses import-duties to pay for public expenses, whereas the capitalist keeps the money-interest for personal ones. Interest is our payment for the activity of the capitalist, which consists in nothing more than placing obstacles in the way of commerce.

Which is the most important of the three competitors of money that set the limits to interest? In commercially developed countries and in ordinary times, it is the bill of exchange; in less developed countries, the other two. Take Germany, a self-sufficient commercial State with its own paper money. Without bills of exchange, money would exact a very high tribute before primitive production and barter could be resorted to with sufficient force to cause a rise in prices sufficient to be liberated from money.¹⁹ One is even justified in assuming that without bills of exchange (including, of course, credit sales, deferred payments and so forth), money would, in such conditions, raise the interest-tribute until it very nearly equalled the advantage derived from the division of labour - as is strikingly proved by unemployment in times of crisis. The unemployed resort to subsistence production and barter only very exceptionally, and to a very small extent. The unemployed worker can mend his trousers, shave his own beard 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 - hunger allowing.

But if bills of exchange are for us the most important regulators of interest, subsistence production and barter are its chief regulators in the undeveloped countries of Asia and Africa, where bills of exchange are little used. That subsistence production and barter must be effective regulators there, we know from the fact that once upon a time, when only a small fraction of the population had adopted the division of labour, as in Rome, or in agricultural England under Queen Elizabeth I, the rate of interest was about the same as today, as will be shown at the end of the book.

The constancy of the rate of basic interest on money is most remarkable, justifying the assumption that the three totally different regulators of interest, adapted to such totally different stages of culture, are interdependent and complementary. For example, a highly developed division of labour, not much capable of further extension, makes barter and primitive production impossible, but produces the degree of culture, the social, legal and commercial organisation, under which the circulation

¹⁹ For a better understanding of this statement I refer again to the chapter at the end of this book "The Components of Gross Interest."

of bills of exchange expands and prospers. The 36 billion marks of bills of exchange that 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, subsistence production and barter are the faithful guardians that prevent money from raising its claim for interest above a certain limit.

Let us summarise this section:

Interest on money is the product of an independent capital, namely money, comparable to the tolls exacted in the Middle Ages by robber barons, and lately by the State, for the use of roads. Interest on money has no influence on, and is not influenced by, the interest on so-called real capital (houses, factories). Competition among moneylenders has no influence upon it either. This interest is limited only by the competition of the other forms of exchange: barter, bills of exchange, and subsistence production.

When money is lent, the ownership of the money changes, but not money itself, just as the tollgate does not change if the toll is collected not by the keeper but by his wife. But the bills of exchange and barter are not the equivalents of a change of personnel; they are an effective competition to money through the provision of other roads for the exchange of commodities.

Through the rise in prices caused by bills of exchange, subsistence production and barter, money is compelled to circulate, thereby putting a stop to the abuse, beyond certain limits, of its power even in relation to commodities that cannot be exchanged by barter or bills of exchange. It is the same as with wage earners. Wages are determined by the fruits of labour of emigrants, even though not all wage earners threaten to emigrate. (See Part 1, Distribution).

Interest is exacted from merchandise, i.e. directly from the circulation of wares and money (as remarked, Marx denied this possibility).

Interest is quite independent of the existence of a proletariat deprived of the means of production; it would be not a 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 handed over their produce to him. It would be levied because the merchant, by withholding his money, can forbid the exchange of goods produced by the workers - without direct loss to himself, and with direct, inevitable loss to them. The reason is that all wares, with a few unimportant exceptions, lose daily in quantity and quality and, in addition, cause considerable expense for storage and care taking.

This basic interest upon money we shall call from now on "usury".²⁰

²⁰ The use of the term "usury" for interest on money, in contrast to interest on "real" capital (houses, factories, and so forth) will serve to emphasise the distinction between the two forms of interest.

Chapter 3.

HOW USURY GETS TRANSFERRED TO MERCHANDISE

If a commodity is to be burdened with usury 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 usury, out of its selling price. The market conditions must allow the circulation of money in accordance with the formula Money - Merchandise (Wares) - Surplus Money.

This is obvious. If not, money would refuse to act as the intermediary of exchange. The producers' consequent embarrassment would cause them to increase the difference between cost and selling price of wares for as long as the selling price, besides the other costs of commerce, could bear the cost of usury.

This whole process is automatic. For our traditional form of money, our medium of exchange and capital at the same time, permits no merchandise to enter commerce without its brand. Wares must, always and necessarily, find the market conditions that permit them to appear as interest-exacting capital - at least to the consumer, who pays the price the producer receives, plus interest. To the producer, on the contrary, wares (his produce) must appear as negative capital, since he receives the price paid by the consumer, minus 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 how could interest be exacted in barter?²¹ 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 merchandise.

It should be noted that the consumer may be led into seeing wares as capital; but if he examines the matter more carefully he soon finds that they 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 the producer's product. If he does this, wares must seem to him negative capital. Wares then appear in their true role of bank-messengers for money-capital. Wares collect usury from the consumer, but not for the producer. They collect it for the possessor of money somewhat like a postman collecting the price of a cash-on-delivery parcel. The weapon with which money arms its messenger is the threat to break the connection between producer and consumer by withdrawing as medium of exchange.

If the intermediary of exchange was deprived of the privilege to interrupt the exchange of wares for the purpose of exacting usury - which is what Free-Money would - money would be obliged to give its services cost-free and goods could be exchanged as in barter, paying no interest.

To facilitate the free exchange of commodities, the State at present charges the owners of bullion nothing for converting their metal into coin. If the State charged a coinage fee of 5% per annum instead of minting bullion free of charge, money would really act free of charge as pure instrument of exchange.

²¹ Marx manages indeed to deduce capital in some mysterious way from barter!

Chapter 4.

THE TRANSFER OF USURY TO PHYSICAL CAPITAL

A commodity bought with money gets loaded with usury and sold again to the consumer against money. After the bargain is struck, money is freed for a new foray.²² This is the true meaning of Marx's formula Money - Wares - Surplus Money.

Usury thus exacted by money from wares is not booty snatched only once. It is a perpetually flowing fountain, and the experience of millennia allows us to estimate it on the average at 4% - 5% of the annual turnover of goods.

The interest that the merchant exacts directly from the wares as they pass through his hands is true and full usury. What the merchant delivers to his creditor is usury minus the cost of collecting it,²³ like the toll money that the toll-collector delivers to the State, which is not the full amount.

If someone buys bricks, lime, wheelbarrows, with money, not in order to sell them again but to build a tenement house, he voluntarily stops the return of the money. He stems 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 the interest that, as experience shows, the money employed in its construction can always exact in commerce. If money in the course of a year can exact 5% interest from merchandise, the house must be able to exact the same tribute from its tenants, the ship from its freight, the factory from wages;²⁴ 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, 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 itself can any time exact from merchandise. 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 built, 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 money."

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

Houses, ships and factories, in short all physical capital, must therefore necessarily yield an interest equal to the tribute that money can impose as usury upon the exchange of merchandise.

Houses, factories and machinery are capital. They do not, like merchandise, collect interest as go-betweens in order to hand it over to the possessors of money.

²² A consumer must therefore always spend more money than he receives as producer. The difference, usury, the producer obtains by producing and selling more than he buys. He delivers the surplus to the money-capitalist as interest, which goes for the lender's personal use. It is the same with the cost of commerce, which are paid by consumers.

²³ We shall see later that the cost of collection is considerable. But the main thing is the devastation caused in economic life by commercial crises.

²⁴ I use this expression unwillingly, for it is ambiguous. It is better to speak of the price that 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.

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 merchandise, prepares the market conditions necessary for collecting interest. The ratio of houses to tenants, of ships to loads of freight, of workmen to factories is so regularly, artificially and inevitably determined by the present form of money, that demand (tenants and workers) always faces an insufficient supply of houses and factories.

The traditional form of State money (intended as medium of exchange) 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 fall below that of usury. This fact is confirmed by the experience of millennia.

So-called "real" capital is not in the slightest "real". Money alone is truly real, basic capital.²⁵ All other types of capital absolutely depend upon the characteristics of money. They are its creatures; money has given them the title of nobility, raising them to capital. Deprive money of the privilege to forbid the workers to build new houses, and the barrier between the workers and physical capital would be torn down. The supply of such capital things would increase till losing the characteristics of capital altogether.²⁶

This statement sounds preposterous. One must be very sure of what he's saying: houses, factories, ships, railways, theatres and power-stations, in short the whole dark and mighty ocean that one can look at, say, from the Kreuzberg in Berlin,²⁷ 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 greater than money-capital, yields interest only because money yields interest? It sounds very improbable.

But the apparent improbability at once sounds reasonable on reflecting that our conventional money is exceedingly old. For the past 3000-4000 years money has, wholly automatically and legally restricted the construction of houses and other physical capital, so as to make demand always exceed supply. It is for this reason that buildings have remained capital.

To grasp further the same improbability, let us recall the economic glacial period (as we have dubbed the Middle Ages) and the thousand upon thousand economic crises caused by money since. The absence of billions upon billions of real capital, caused by forced unemployment throughout this time, explains the improbability.

The cause of the scarcity of houses, ships, factories, etc., i.e. their yielding interest, becomes evident. It 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 additional supply? And those were but five years! Let us not forget that the other causes of economic crises, unconnected with interest (described in the third part of this book: "Money as it is") acted in the same direction, i.e. restricting and preventing exchange.

Clearly, therefore, physical capital produces interest because it can be created only by spending a sum of money, itself acting as capital.

²⁵ [Gesell uses the term *Urkapital*, for which see what has already been said of *Urzins*.]

²⁶ There is no doubt that physical capital consists of true and indispensable things, but not for that they are "real" capital. The interest afforded by such objects is the creature of usury, of money.]

²⁷ [District of Berlin, today home to the largest Turkish community anywhere in Europe.]

This so-called physical capital, like money, lacks the power to extort interest by itself. What happens is that the so-called real capital, like merchandise, finds a market with conditions forcibly imposed by money for its own ends: artificially limiting the production of so-called real capital so as never to allow supply to satisfy demand.

Legally, our traditional form of money, guaranteed and managed by the State, inevitably produces homeless and destitute masses, the proletariat, whose presence is essential for the continuing capitalistic character of houses, ships and factories.

Money is indispensable for the formation of this physical capital, and without interest no money is available. But physical capital cannot exist without a proletariat.²⁸ Consequently the indispensability of money must produce the proletariat necessary both to maintain the interest upon physical capital and to make money circulate.

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

To account for the existence of the proletariat we need not have recourse to desperate hypotheses and allegedly historical explanations. This phenomenon is a regular concomitant of the traditional form of money. Without a proletariat there can be no interest upon physical capital; without interest money does not circulate; without circulation of money there is no exchange of commodities - and poverty is the overall result.

In former times, no doubt, the sword was a powerful factor in producing a proletariat. Throne (legislation) and altar also helped. Even today attempts are still made at legislating rent controls; wheat-duties are devised to deprive people of the weapons they have forged against rent, namely building ships, railways and agricultural machinery (See Part I). A right to exact rent is set up smack against the right to work and the right to eat. But even without sword and legislation, capital would not have lost 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 to build physical capital. Money creates a proletariat with the impetus of a force of nature. Metal money and a proletariat are inseparable.

²⁸ Proletariat: workmen deprived of their own means of production.

Chapter 5.

COMPLETING THE FREE-MONEY THEORY OF INTEREST

We have called money true basic capital because it prepares the way for the so-called real (physical) capital. We have also asserted that physical capital owes its interest-earning capacity solely to the fact that money, through contrived crises, forces unemployment. It prepares, through fire and sword as it were, the market conditions enabling physical capital to exact an interest not inferior to usury. But we must also be able to prove that usury so governs physical capital as to make it necessarily attain its level if for any reason physical capital should temporarily deviate from it.

By asserting that demand and supply determine the interest on physical capital, we recognise that interest is subjected to many influences.

We assert that if from any cause interest on physical capital rises above the basic interest of usury, it must inevitably, from the nature of things, fall back to that level. Conversely, if interest on physical capital falls below the basic interest of usury, money will automatically raise it again to that level. Basic interest (usury) is therefore at once the maximum and minimum return usually to be expected from physical capital. Usury is the point of equilibrium, about which the interest on all forms of physical capital oscillates.

But if this is so, we should also be able to prove that if we were to remove the artificial obstacles that today's money erects before the formation of physical capital, the supply of such capital, through the now untrammelled work of the people, will sooner or later, bar the intervention of any other agent, completely satisfy demand, and precisely in the sense that interest throughout the world, with free-trade and freedom of movement, would fall to zero.

Interest on physical capital is an international phenomenon. It cannot be eliminated by one country alone. If, for instance, houses in Germany yielded no interest, and such interest was 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 that:

1. The power and the means to drown interest in a sea of physical capital, and within a reasonable time, exist.
2. The impulse or will to produce physical capital such as blocks of flats, factories and ships, does not decrease when such things cease to yield interest.

That interest on physical capital can at any time swing upwards or downwards from the basic interest of usury 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 physical capital would be fundamentally upset: every tenant would have four houses to choose from, every farm labourer four ploughs, every gang of workmen four factories. In these circumstances physical capital would no longer yield interest. Competing house-owners would slash rents, and competing employers would reduce profits to such an extent that they probably could not even recover the full costs of upkeep and amortisation.

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

In such circumstances only one form of capital would continue to exist: money. Although all other capital objects would lose the power to exact interest, money would have no need to reduce its claim for interest, even if 99% of the population had died out. The merchandise produced by the now interest-free means of production would still be compelled to pay the former interest for their exchange, as if nothing had happened.

The hypothetical case above throws a vivid light upon the nature of money and its influence on physical capital.

Assuming that the quantity of money in circulation remained unaffected by the plague, the following disproportion between money and commodities would cause a great rise in prices, but the relatively large stock of money would not reduce interest, since, as already proved, there cannot be competition between money-lenders.

Gross interest would even increase with the rise in prices. (See Chapter 7, "The Components of Gross Interest").

In such circumstances it is obvious that no one would give money for building a factory. Money would be given for that purpose only when, partly through an increase in population, partly through fires and other accidents, plus the inevitable passage of time, the supply of physical capital had so decreased that the original ratio of physical capital to population, and with it the level of usury's basic interest, had been reached. Why this must happen we have already explained.

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

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

That it can rise above such basic interest in 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 saying that demand and supply alone determine interest on physical capital, and how much, without the intervention of other factors.

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. Suppose it to be \$5 000. To provide shelter and means of production for the 100 000 immigrant families yearly landing in America, the Americans would have to provide $5 \times 100\,000 = 500$ million dollars annually in new houses, factories, railways, ships, etc.

If all the German workmen were to migrate 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 increase house-rent enormously. Interest upon real capital would rise way above the basic one of usury.

Usually this process remains concealed from immediate observation, since capital goods rise in price with the rise in the yield of interest. A house that can be sold for 10 000 because it brings an interest of 500 will fetch up to 20 000 if the interest doubles to 1 000. Arithmetically the house yields 5% in either case. It is the interest of usury that serves as the basis for calculating the price.

Next we should be able to explain the fact that every rise in the rate of interest upon physical capital above the basic interest of usury inevitably, naturally and automatically causes a steady increase in the production of new houses, factories, etc., and that, under pressure from this supply, interest on such things soon falls back to the point of equilibrium or limit, namely the basic interest of usury. It happens automatically, just as in the opposite case, it would rise to this limit. We must also prove that no economic or psychological obstacles interfere with this process. The will to work, the power available and the natural resources must always and everywhere be enough to provide real capital in such quantities as to reduce interest to the limits of that of usury.

Flürscheim's²⁹ statement that "Interest begets interest" is no absurdity. What he means is that the burden of interest prevents people from producing the amount of physical capital sufficient to eliminate interest, just as the rent tenants pay prevents them from buying the land they rent.

But the statement "Interest begets interest" also implies that a rise of interest must cause an inevitable further rise of it. If, as Flürscheim claims, the law of falling bodies is applicable to interest when interest begins to fall, the law must apply in the opposite direction when interest begins to rise. With his methods of analysis he could not solve this contradiction.

That this is what actually happens we know from the fact that the United States, in a comparatively short time, have passed from a demand of capital to a supply of it in the international capital market; that they have built the great Panama Canal with their own resources; that they have rescued many a princely house in Europe from ruin with their daughters' dowries; and that they are seeking further 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 demand for physical capital, and secondly because devastating economic crises repeatedly interrupted its formation.

Such are the facts. The explanation is wanting.

The interest produced by physical capital stimulates savings, and the higher the interest, the greater is the stimulus to save. It is indeed true that the higher the interest, the greater also its burden, and the more difficult it is for those who have to pay interest to capitalise. But in the present order of things new physical capital formed from the savings of the workers who pay interest is negligible.³⁰

New physical capital is chiefly formed from the surpluses of the capitalists, and these surpluses naturally increase with the increase of the capitalist's income, i.e. with the increase of interest upon capital.

Keep in mind the following fact:

The income of the working class increases if interest falls, whereas the income of the capitalistic class increases if interest rises. Employers' income consists partly of 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 comes from interest, and what proportion from wages for their work.

²⁹ *The Economic Problem*, by Michael Flürscheim, 1910

³⁰ Savings-banks deposits, the capital of the proletariat, in Prussia (100 samples of 35 items each):

Year.	No. of savings books.	Amount saved.	
		Million Marks.	Marks
1913	14,417,642	13,111	909
1914	14,935,190	13,638	913

Workers, therefore, can save more when interest falls, and rentiers when it rises. It would be a fallacy, therefore, to conclude that savings and capital formation, taken as a whole, are independent of the rise or fall of interest.

First, an increase in income affects the spending, and therefore the saving, of a rentier, differently from how it affects the spending, and therefore the saving, of a worker. An increase in the rentier's income, unlike that of the worker's, does not go towards satisfying immediate wants, often for decades. The capitalist can decide to save the whole increment of his income, but the worker can think of saving only after having satisfied other needs.

Furthermore, the rentier's only method of providing for his children is by saving. With the birth of a third child he must increase his capital if he wishes them to keep the lifestyle he has accustomed them to with his example. The worker has no such cares; he need not bequeath anything to his children, for they will support themselves by working.

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 without work that befits their station. And if, as a rule, he must save, we can also assume that he will, as a rule, employ the surplus from an increase of interest on new capital investments.

We can now 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 surpluses available in a country for the erection of new real capital. But an increase of interest also increases the pressure that depresses interest. And the higher the interest, the greater this pressure is.

We cannot of course give examples of this; the thing cannot be proved with figures, for the statistics available under the gold standard are unsuitable.

If Carnegie had given his workers a rise from 20% to 50% he would probably have never made his first billion. The steel-factories he built (from his savings) increased the supply of physical capital, drove up wages and depressed interest. Could the workers have built those factories with their savings? 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 did, with his modest personal needs? (To preserve the existing ratio between the demand and supply of physical capital, the workers would have to produce a much greater mass of it. For their present scanty wages cause an appalling infant mortality, which an increase in wages would have reduced. The resulting great increase in the number of workers would have increased the demand for means of production).

Our first inclination is to answer the above question in the negative -thereby committing a gross error. For what did Carnegie achieve by multiplying physical capital with personal thrift? He repeatedly reduced the interest on physical capital below the basic interest of usury, thereby causing crisis after crisis.

The good man thus destroyed or prevented the formation of as much real capital as he would have brought into existence by a wiser management. Had Carnegie distributed the surplus from his undertakings to the workmen by increasing their wages, only the smaller part of such increase 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 been longer. The workers would consequently have lost less by forced unemployment, thus making up for their excesses. The effect upon interest would have been the same; the supply of physical capital would be the same today as what it was then with his thrift.

The difference between Carnegie's personal savings and the workers' potential savings is regularly and inevitably destroyed by economic crises.

The capitalist's instinct of self-preservation, plus his having to assure the future of his children, forces him to save not just a surplus, but an interest-bearing one. He must provide this surplus even if his income decreases; indeed, his instinct of self-preservation bids him increase the strictness of his saving in direct proportion to the decline of interest. If a capitalist wishes, for example, to compensate the loss of income caused by a fall of interest from 5 to 4% by increasing his capital, he must increase it 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 set limits towards determining 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 physical capital, even though it was precisely the increase in physical capital to have caused the difficulty.

We who assert that in the nature of things physical capital must increase and multiply until it destroys itself or, which is the same, 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 for a summer residence for his family and build, instead, a block of flats in the city. But this new block of flats will 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 flats. For the individual capitalist, however, the opposite is true.

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

The nature of the capitalist, his instinct of self-preservation – the impulse that most conditions the human will - makes it certain that the greater the fall of interest, the greater must be the percentage of the capitalist's income set aside to create new physical capital, which in turn further depresses interest.

Expressing the above in figures we have:

	Billion Marks
Interest paid by the German workers amounts annually, at 5%, to	20
Of this the capitalists devote 50% to new capital enterprises, 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 20bn to	16
The capitalists therefore lose	4
This loss of income, equivalent to a capital loss of 100 billion, 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 20bn to 16 bn) for new capital enterprises. The amount set aside is therefore, instead of 10 bn,	9.6
But the capitalists' loss of income means a corresponding gain of	

income for 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 original 10bn set aside for new capital to 3.6, or 4bn from the workers and 9.6bn from the capitalists.

But we have assumed that the workers will save only part of the remitted burden of interest, perhaps 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

The greater the fall in the rate of interest, the greater is the sum destined for new capital enterprises, which however first depress, and finally eliminate, interest. For the capitalists saving would be a necessity, whereas workers would save because they could now at last satisfy the saving impulse. Thus the nature of new physical capital forces it, as it were, to commit suicide.

The greater the fall in interest, the greater the amount of physical capital created, which in turn depresses interest. It is possible to apply the physical law of gravity to interest - but only, of course, after removing the obstacles that the traditional form of money puts in the way of the creation of so much physical capital.

The objection has been raised here that if physical capital no longer bore interest, no one would build a tenement-house, a factory, a brick-oven, etc. Savings would be spent upon pleasure trips instead of upon flats for others to live in rent-free.

But more is asserted here 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 others: ground rent, maintenance, depreciation, taxes, insurance, cleaning, heating, caretaking, furnishing, and so forth. Interest can account for 70% to 80% of the rent, but often, in the centre of a city, as little as 20% or 30%. Even if interest disappeared completely from house-rent, there would always remain enough expenses to prevent everyone from claiming a palace.

It is the same with the other forms of physical capital. Their users, besides interest, must face other expenses: upkeep, depreciation, insurance, ground rent, taxes, etc. - Such expenses 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 worth of capital wrote off 439 900 475 marks as depreciation; that is, on the average about 5%. Without annual renewals and maintenance, nothing would be left of such capital in 20 years.

Quite apart from this, the objection does not hold good, especially as regards those who have up to the present managed to live on unearned income.

We have seen that such persons would be forced to greater thrift by the decrease of interest on capital. If the interest that has so far protected them were to disappear, they would have to make use of whatever they had left still more carefully, and on interest's complete disappearance, to consume as slowly as possible their remaining investments, which will then no longer be capital. They could do this by spending for their personal requirements only part of the sum annually written off as capital depreciation, and by devoting the remainder to the construction of new houses, ships, etc. Such activities will indeed yield no interest, but will at least give them security against immediate loss. With Free Money they would not only receive no interest, but also suffer an annual loss. By building houses they would avoid the loss.

A shareholder in the Norddeutschen Lloyd, for example, who, under the Free-Money reform will receive no dividends, as already indicated, would 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 would content himself with part of his share, so as to postpone as long as possible the day on which the last sum of his investment is repaid him. New ships will always, therefore, be built, even though, instead of interest, they only produce the sums written off for depreciation. It is true that even so the last ship of the Norddeutschen Lloyd would in time fall apart if others did not take the place of the ex-capitalist living on the amounts written off his capital. The workers, now relieved of the burden of interest, would take the capitalist's place. New savers would replace the part of the depreciation formerly consumed by him - but with the same modality: 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 the best means for investing savings. By investing their savings in houses, ships, factories, which brought no interest but resolved themselves again into sums set aside for depreciation, savers would avoid the expense of storing and care taking for goods purchased with their savings - and that from the day of their first surplus saved to the day when they consumed it. As decades often lie between these two dates (e.g. in the case of a youth saving for old age), the advantages of such investments to the savers are obvious.

Interest now has, no doubt, a special attraction for the saver. But this special attraction is not necessary. The saving impulse remains sufficiently strong even without it. Furthermore, whereas interest may be a great incentive to saving, at the same time it places great obstacles in its way. Because of the burden of interest, saving at present means, for the majority of mankind, severe privation, renunciation, hunger, cold, and snapping at the air. Precisely because of the interest that workers must raise for others, the fruits of labour are so reduced that most workers are unable to save. So if interest is an incentive towards saving, it is still more of an obstacle in its way. Interest limits the possibility of saving to small groups of workers, and the ability to save is limited to the few individuals in these groups with courage enough to face continual privation. If interest fell to zero, the fruits of labour would rise by the whole amount of the burden of interest, and the possibility and ability to save would correspondingly increase. It is certainly easier to save 5 from 200 than from 100. With a wage of 100 a man, partly because of the stimulus of interest, denies his stomach 10 for his own and his children's benefit. With a wage of 200, and without that stimulus, the natural saving impulse would make him set aside maybe not 110 but certainly much more than 10.

Saving is a general natural practice without the incentive of interest. Bees and hamsters save, although their stores bring them no interest and many enemies.

Primitive peoples save too, although interest among them is unknown.³¹ Why should civilised man act otherwise? People save towards building houses, marrying, illness and old age; in Germany they even save for Masses for the repose of their souls and for a burial fund, although burial brings the dead no interest. After all, 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 trouble.³²

³¹ Africans, Red Indians, Hottentots, never get interest from their savings, yet none of them would exchange these savings (provisions) for the savings of our proletarians (savings-bank book).

³² That the prohibition of interest by the medieval popes prevented the growth of an economic system based on money (with the scarcity of the precious metals as a contributing cause) shows that the saving instinct was obeyed even without interest. Savers hoarded the money. [The Bracteates were the exception. Their gold content was reduced every now and then, almost duplicating Gesell's model. They were in use between 1050 and 1300, the period of the great Gothic architecture.

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

If someone saves, i.e. produces more than he consumes, and finds someone else to whom he can lend his surplus on condition that after a certain period it is returned without interest but without loss, the saver would conclude an extraordinarily advantageous bargain by avoiding the expense of the 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 earlier).

Simple restitution, without interest, of the borrowed savings represents, therefore - if we leave money out of reckoning - a considerable amount of work done by the debtor or borrower, namely paying for the upkeep of the borrowed stuff. The saver himself would have had to bear this expense had he found no one to take charge of his savings. It is true that the borrowed goods do not cause the borrower any expense of upkeep, since he consumes them (borrowed seed-wheat for example). 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 could claim payment for this advantage in the shape of a deduction from the amount of the loan (negative interest).

Thus from whichever point the problem of loans without interest is examined, no natural obstacles stand in the way. On the contrary, the greater the fall of interest, the greater the incentive towards increasing the number of houses, factories, ships, canals, railways, theatres, crematoria, tramways, lime-kilns, blast-furnaces, etc.; the work upon such enterprises would reach maximum intensity when they produced no interest at all.

To Boehm-Bawerk it is obvious that a "present good" must be more highly valued than a "future good." He based his new theory of interest upon this assumption.

But why should this assumption be self-evident? Boehm-Bawerk himself gives the somewhat odd reply: Because wine becomes better and dearer year after year in the cellar! Because wine (and among all commodities Boehm-Bawerk discovered no second one with this wonderful property) automatically, it seems, without labour or costs of any kind, including storage, becomes annually dearer and better in the cellar, the remaining commodities: potatoes, flour, powder, lime, hides, wood, iron, silk, wool, sulphur, ladies' garments, also become annually better and dearer. If Boehm-Bawerk's explanation is correct, we have here *the* solution to 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 working at all, live from the proceeds of these commodities that constantly become better and dearer (a difference in quality can always, in economic life, be traced to a difference in quantity). Why 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) Boehm-Bawerk was the foremost authority on interest, with his works translated into many languages!

The anxieties of savers do not in themselves concern us. Our sole purpose is to establish the fundamental theory of interest. But a closer look at these anxieties may perhaps contribute to clarify our theory.

Let us assume, therefore, that after gold is removed from the path of circulation of commodities, someone wishes to save in order to live carefree in old age. The question at once arises: What form will the needed savings take? Piling up his own or other people's produce, or hoarding Free Money, may at once be discounted. The first solution on the line would be loans without interest to employers, artisans, farmers and merchants who wished to expand their businesses; in such cases the longer the term of repayment the better. The saver of course runs the risk of not being repaid. To eliminate this risk, however, he can compel his debtors to pay a special contribution to cover risk, such as is added to the interest on every loan today. But if the saver wishes to be more secure against loss, he will use his savings to build, say, a house for letting. With the sums annually written off for depreciation, which also today are included in house-rent, the tenants will gradually repay the whole cost of the building.

The type of construction will be determined by the amount of depreciation desired. If he is happy with 2%, he will build a stone house. If 10% suits him better, he will put his savings into shipbuilding; and, if he needs his money on short call, he can get 30% by buying a powder-factory. In short, he will have ample choice.

The toil that the children of Israel, 4,000 years ago, put into the building of the Pyramids³³ would be restored today, without loss, if the stones were rolled from their summit. Equally the savings built into an interest-free house would appear again in the rent, undiminished, as sums annually set aside for depreciation. The saver would not, indeed, receive interest, but he would retain the priceless advantage of carrying his surplus without loss, through the period during which he does not require it, to the moment he desires to use it.

A person building a tenement-house with the purpose of letting it interest-free is thus in the same position as one lending money without interest against caution.

In practice, though, to avoid trouble and anxiety, small unrealistic savers would hand over their savings to life-insurance companies. These would build houses, ships, factories, etc. From the sums set aside for depreciation on these tangibles, the insurance companies would then pay each saver a life-annuity; healthy people would receive, say, 5% of the deposit; old people or invalids 10% or 20%. In these circumstances there would 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 on ceasing to work, and at his death it will be consumed completely. In such circumstances, therefore, no one would be forced to provide for 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 Naim no longer needed crutches. Everyone would earn one's own goods and chattels, plus finances, with a surplus, from the aforesaid insurance-companies. Thus the annual depreciation upon houses, ships, etc. paid to old people would be constantly replaced, through new construction, by the savings of the young. The savings of the young would offset the expenditure of the old.

At present a worker pays interest on a capital of about 50 000³⁴ on houses, means of production, national debt, railways, ships, shops, hospitals, crematoria, etc. A worker must raise 2 000 in order to pay interest upon capital and rent upon land, either directly, deducted from wages, or indirectly, included in the price of commodities. Without interest on capital, the fruits of his labour would be doubled. If

³³ [Where Gesell got this notion from I don't know. The Pyramids are nowhere mentioned in the Bible.]

³⁴ Germany's 10 million-odd workers (those who live from the fruits of their labour) pay interest upon a capital of about 500 billion marks (including the land). A single worker must therefore pay interest upon about 50 000 marks.

such a worker, on a wage of 1 000, at present saves 100 annually, it would be a long time before he could live off capital, especially since savings, in the present order of things, cause periodic crises. The crises in turn force him again and again to dig into his savings, or possibly to lose them altogether, should his bank go under in a crisis actually caused by his very savings. But if the worker's income doubled after doing away with interest, he could save annually, in a similar case, 1 100 instead of 100. His savings would not be "automatically" increased by interest, but the difference, at the end of years of saving, between the amount saved without interest, and the amount he could have saved with it, would be so great as to make him rejoice at its disappearance. For the difference would not simply be the ratio between 100 (+ interest) and 1 100; it would be much greater, for he would not have to dig into his savings when out of work.

There remains one more objection to refute, i.e. that it is not possible to equalise demand and supply in the capital market. It is said that more or better machinery can produce at reduced cost. Every employer would then make use of the fall in the rate of interest to enlarge and improve his factory. Hence the fall in interest and still more, its complete absence, would create such a huge demand from entrepreneurs in the capital market that supply could never cover, so that interest could never fall to zero.

Conrad Otto³⁵ says, for example: "Interest can never completely disappear. Suppose that a piece of machinery, say a forklift, replaced five workmen with a total annual income of 4 000. With interest at 5%, the cost of the lift must not exceed 80 000. Now suppose that the rate of interest falls, say, to 0.01 %. The lift could then be profitably installed even if it costs 40 million. If interest sank to zero or near zero, the utilisation of capital would increase to such a degree as to offset any advantage. The most complicated and expensive machines could be installed to save the smallest piece of manual labour. At zero interest, capital investments would be unlimited, infinite. No special proof is needed that such condition could never be fulfilled, today or ever."

To this argument 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 forklift costing 40 million would certainly cost, for upkeep and depreciation alone, 4-5 million. Such lift would thus have to replace not, as Conrad imagined, five, but 4 000 workmen at 800 each, even if not a penny of interest was required. With 5% for upkeep and 5% for depreciation, the lift to replace five workmen at 800 each for wages, must not cost more than 40 000 (not 40 million) in interest-free money. If the cost of construction exceeds this amount, and 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 forestalled by the wages claimed by the workers. The problem here merges with that 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 getting 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 works that depreciate. If he and his works disintegrate at the same rate, he has judged correctly from the individual standpoint. Works outlasting a human life span are not

³⁵ *Jahrbuch für Nationalökonomie und Statistik*, Jena, 1908.

for the mortal individual, but for the people, which also outlast a human life span. The people, so existing, counts upon eternity when blasting rocks, although this work yields no interest and does not depreciate. Even on the vigil of his own death the old State-forester draws up a plan for re-foresting a waste. Such works are for the State. But the State will undertake them only to the extent to which interest-free money is available. Such undertakings are not, therefore, an obstacle to freedom from interest, they are its main backing.

Those raising this objection also forget that a simple expansion of an undertaking (ten lathes instead of five, ten brick-moulders where before there were five etc.) does not take place without a corresponding increase in the number of workmen employed. An increased demand for money for expanding a factory, therefore, always means a simultaneous increase in the demand for workers who, by increasing their claims for wages, cancel the gain expected by the employer. By simply expanding his factory, employers cannot expect any special advantage from interest-free loans. The disappearance of interest will not stimulate them into creating an unlimited demand for loans. The limits to such loans will be set by the wages claimed by the workers, who alone profit from the decrease of interest. And this is natural; for the ratio employers/workmen is fundamentally the same as that between moneylenders/borrowers (their customers) against a pledge.³⁶ Here also the fall in interest is to the advantage of the borrowers.

The employer does not buy work, or working hours, or power of work, none of which he sells. What he buys and sells is the product of labour, and the price he pays is determined not by the cost of upbringing, training and keeping 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 that consumers pay for the product. From this price the employer deducts interest on his factory, cost of raw materials, which include interest, and his own wages. This interest always corresponds to the basic interest of usury; the employer's wage, like all wages, follows the laws of competition; and the employer treats the raw material he intends his workmen to work upon as every shopkeeper treats his merchandise. The employer lends machinery and raw material to the workmen and deducts from what they produce the interest burdening both raw material and machinery. The remainder, so-called wages, is in reality the price of the product as delivered by the workmen.

Factories are, therefore, akin to pawnshops. Between a pawnbroker and Krupp the difference is one of degree (size), not of kind. With wages for piecework the nature of the contract is obvious. But all wages are fundamentally wages for piecework, since they are determined by the piece of work the employer expects to obtain from the individual worker.

Together with the expansion of factories, which increases the demand for workmen, we must also consider those improvements in the means of production that increase commodities but with the same number of workmen. A farmer, for example, that doubles the number of his ploughs must also double the number of his ploughmen. But if he buys a steam-plough he may be able to plough twice as many 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.³⁷ This is the larger, the more his means of

³⁶ 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.

³⁷ Net profit - employer's profit - proceeds of the employees' labour - is what is left over for the management of the business after paying 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

production are superior to his competitors'. Hence the competition among employers to improve the means of production; hence the demand for loans from employers who lack themselves the means necessary for the scrapping of obsolete machinery and for the building of the well-equipped factories that they desire.

It does not follow, however, that the demand for interest-free loans for improving the means of production must at all times be limitless; it does not follow that supply can never overtake the demand caused by the absence of interest. The reason why such conclusion does not follow is that money towards improving the means of production, as opposed to increasing them, is of secondary importance.

Show someone how to bind a broom and he can bind a hundred. But offer him interest-free money on condition that he improve his means of production so as to produce more or better brooms with the same amount of labour, and he will be at a loss for an answer. Improvements in the means of production are due to intelligent effort, which cannot be bought like potatoes at so much per hundredweight.

Improvements in 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 a new invention - but for lacking the necessary talent.

It may happen that in 10 to 100 years the means of production will have so improved that every workman can produce twice, five, 10 times more than today. Employers will hasten to adopt such improvements. But today's employers are forced to use whatever machinery is offered them by today's backward technology.

Let us now assume that a costly machine gets invented, capable of doubling everyone's present production. This would cause an unprecedented demand for loans to purchase it. Everyone would install it and scrap the old machines. Even if interest upon loan-money had disappeared, this enormous new demand would cause its reappearance. In such circumstances (the conversion of all existing machinery into scrap-iron) interest might attain an unprecedented height. But such state of affairs could not last long. Commodities would become 50% cheaper (not cheap in the sense of a fall in 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 extraordinary 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 an excess supply of loan-money, more than able to cover this demand.

Thus from whichever angle we consider the problem of covering the demand for loan-money so thoroughly as to make interest disappear, we find no natural obstacles in its way, either from demand or from supply. Bar the traditional form of money, the road is open to interest-free loans, to houses and to means of production. The removal of interest is the natural result of the natural order of things when undisturbed by artificial interference.

Everything in human nature, as also in the nature of economic life, urges the continual increase of so-called physical capital. Such increase will continue even after the complete disappearance of interest. We have shown that the sole disturber of the peace in this natural order is 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 goods, punishes any delay with losses of all kinds. In defence of their economic welfare, both the individual and 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.

community have always been, and still are, against interest. They would long ago have set it aside had money not stopped them in their tracks.

We have by now studied this new theory of interest from so many angles, that we can conclude with the answer to a question that should logically have been asked at the beginning. We have purposely postponed it until now, because the knowledge and understanding that can only be assumed at the end of our inquiry are now necessary for the complete grasping of the theory.

We said that money as a medium of exchange acts also as capital because it can interrupt the exchange of commodities. From this it follows that if we change its form so as to deprive it of the power to interrupt exchange, money as pure medium of exchange is no longer capital, and therefore can no longer exact usury.

No objection can be raised against this conclusion; it is correct.

But if we further concluded that, since money can no longer exact usury from commodities, it can be borrowed interest-free from the day on which Free-Money is introduced - our conclusion would be wrong.

As medium of exchange in direct relation to commodities, i.e. 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 find the market conditions created by its predecessor, gold, for the purpose of exacting interest upon loans. As long as such conditions continue to exist, i.e. as long as demand and supply permit the exaction of interest in all the branches of the loan-market, interest will have to be paid also upon loans contracted in Free-Money. Free-Money will encounter worldwide poverty, the result of interest. This poverty must first disappear. And it will not disappear from one day to the next. This means work. Until the removal of this poverty, the instruments of production and commodities will continue to yield interest in all the forms of loan-transactions (but not in exchange). Since Free-Money does not make interest the condition for its being lent, it will allow our economic system to put on fat as a result of work uninterrupted by crises. This fat must, and in time will, kill interest. Interest feeds upon the sweat and blood of the people, but cannot stand fat, i.e. the economic prosperity of the people. For interest, that fat is poison.

It is also quite certain that the interest due to the unbalance between demand and supply of real capital will continue to exist for a considerable time after the introduction of the monetary reform. It will disappear only gradually. The effects of the traditional form of money: the scarcity of physical capital exacerbated in thousands of years, cannot disappear by making the State printing presses work 24 hours a day. The dearth of houses, ships and factories cannot be eliminated by gaily-printed slips of paper money, despite belief to the contrary of paper-money buffs of all times. Free-Money will permit the building of houses, factories and ships in unlimited quantities; it will permit the mass of the people to work as much as they please, to sweat and curse the pauperism left behind by gold. But Free-Money will not itself provide a single stone for the missing cities. The lithographic presses upon which it is printed cannot themselves contribute a drop to the ocean of physical capital necessary to drown interest. To free the language from the very word "interest" can happen only after years of dogged and uninterrupted toil. Lasting freedom must always be striven for; freedom from interest in particular must be striven and fought for by working. People will cross the threshold of their first interest-free dwellings and of their first interest-free factories bathed in sweat, and will conquer the interest-free State of the future equally bathed in sweat.

The day when gold gets driven from its throne, and on which Free-Money assumes the function of medium of exchange, will see no change in interest. The interest upon existing physical capital will remain for some time unchanged. Even the

new physical capital, which people can now produce with untrammelled labour, will yield interest. This new physical capital will, however, depress interest in direct proportion to its own increase in quantity. And if beside every city like Berlin, Hamburg, Munich, another, larger, city were to be built, the supply of dwellings would perhaps match the demand, bringing interest upon houses down to zero.

But if physical capital still produces interest and money can still buy commodities that can be assembled into new, interest-bearing, physical capital, it is clear that anyone seeking a loan must pay interest on it equal to that yielded by physical capital. That follows from the laws of competition.

Loans of Free-Money must therefore pay interest for as long as physical capital yields interest. Physical capital will long remain capital because metal money used to allow it to exist in insufficient quantities. Its component parts: money and raw materials will also remain capital for the same time.

Up to the introduction of Free-Money, interest on physical capital depended on usury; after the introduction of Free-Money usury will disappear, and the interest rate on loans will be the same as the interest rate on physical capital. Borrowers of money will no longer pay interest because money can exact a tribute from the wares, but because the demand for loans will exceed their supply for a time.

Usury was not interest on a loan; the exchange of money against wares and the tribute thereby exacted had nothing to do with a loan. Usury was not, therefore, determined by demand and supply. The producer exchanged his produce, become now wares, for money. Usury appeared in this exchange, because the possessor of money could prohibit, or allow, the exchange. Usury corresponded to the difference in efficiency between money and its substitutes as medium of exchange: bills of exchange, barter and subsistence production. No offer of loan-money, however large, could have eliminated this difference, and usury with it.

With interest on physical capital, on the contrary, there is no exchange, but a loan. As the landowner lends his land to a farmer, so the house-owner lends his house to a tenant, the manufacturer lends his factory to the workmen and the banker lends money to his debtor. But the merchant who exacts interest from the wares lends nothing; he exchanges. 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, usury and interest upon physical capital are the effects of totally different causes. We really ought to stop designating two things so fundamentally different by the same word "interest."

Interest on physical capital is determined by demand and supply. It is subjected to the laws of competition. It can be eliminated by a simple change in the ratio of demand to supply. With usury this could never be possible. Interest on physical capital has up to now been protected from such a change, because the condition for the production of physical capital was that it should be able to exact the same interest as that of usury.

Free-Money will sweep away this resistance, but the disparity between demand and supply in loans of every form: tenement houses, factories or machinery, or even money itself, will continue to exist.

The basis for the interest upon these money-loans will, however, no longer be commerce according to the formula Money - Wares - Surplus Money but production. It will consist in the increase of the product that the entrepreneur will realise without increasing its costs with the aid of a loan - and that the lender will claim for himself for as long as the ratio of demand to supply allows it.

Usury used to be exacted during exchange, not during production. It was not a share in the increased quantity of wares produced with the help of a loan, but an

overall share in the wares that depended upon the medium of exchange. Usury would have been exacted even if all workmen had possessed their own, precisely similar, means of production: if all debts had been paid; if everyone had paid for purchases in cash; if everyone had lived in a personally owned house; if the loan-markets had been closed; if loans in every form had been prohibited and if the exaction of interest had been forbidden by law, both civil and ecclesiastical.

The demand for loans, especially in form of means of production, is due to the fact that more or better wares can be produced with these means of production than without them. If the worker creating this demand meets an insufficient supply, he must surrender to the moneylender part of the surplus he hoped to realise with the desired means of production - for no other reason than that the imbalance 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, even after the introduction of Free-Money, also be capital – but not as a commodity, not where bargaining about price takes place. For where Free Money faces commodities, claims for interest would cancel one another. But outside the circulation of wares, where the question is not price, but the conditions for a loan and not for purchasers but for borrowers, the produce of labour can remain capital, and indeed it will remain capital as long as the means of production are.

The opposite is true of our traditional form of money, which exacts its interest not from borrowers but from the circulation of goods. It plunges its proboscis into the very blood-circulation of the people. Free-Money will deprive the medium of exchange of its present leech-like properties. For this reason Free-Money is not intrinsically capital. It cannot in any circumstances extort interest. It shares the fate of the means of production, which can exact interest only for as long as demand lags behind supply. The moment interest on physical capital falls to zero, interest-free loans will have become a fact. With the Free-Money reform usury disappears from the moment Free-Money meets the wares. Free-Money, as a medium of exchange, plays on a level field with 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 usury after the introduction of Free-Money is no reason for the immediate disappearance of interest upon loans. Free-Money will only clear the way for interest-free loans; more it cannot do.

By distinguishing between usury and interest on loans, everything we have so far said about interest is focussed to a point. Usury has up now escaped observation for being concealed behind its offspring, ordinary interest upon loan-money.³⁸ When a merchant borrows money and adds its interest on his other general expenses, to the price of his wares, it was always assumed that this interest was due to the 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. There was no need to be feeble-minded to let this fallacy pass without blinking. Appearances here do indeed deceive. Only the closest observation could discover that the interest paid by the merchant for loan-money was not the beginning, but the end of the whole transaction. The merchant used money to exact usury from the wares, and since the money did not belong to him, he delivered the usury to his

³⁸ [This is the key point of the whole doctrine. No philosopher, ancient, medieval, modern or contemporary ever noticed the fact and therefore made the distinction. The only attempt at distinguishing usury from interest was the 1745 Encyclical *Vix Pervenit* by Pope Benedict XIV, in which the pontiff defines usury as the price of money lent and interest as a fee for the lending service. The encyclical follows Aquinas (II-IIae Q.78), who considers usury as a phenomenon exclusively linked to debt.]

moneylender, acting simply as a broker for him. Had the money been his own, he could have exacted usury just as easily and pocketed it himself. 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 elapsing between the service and its return. But when money is being exchanged for wares, when usury is being exacted, service and return service coincide in time. A loan leaves behind a debtor and a creditor; an exchange-transaction leaves no trace. A person goes into a shop, buys something, pays and leaves. The transaction is 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 takes a loan and pays interest in the form of an increased price. But when a farmer brings a cartload of fattened pigs to market to exchange them for money, there is no poverty, no distress and no burden of debt. A loan-giver gives from superfluity; a loan-taker takes out of want. But in exchange each party has simultaneously superfluity and want; want of what he asks for, superfluity of what he offers.

Usury, therefore, is in no way related to interest upon loans. Usury 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. Usury is a unique phenomenon to be investigated as such; it is a fundamental economic concept. A merchant is willing to pay interest upon a loan of money because he knows that he can recover it from the wares. If usury disappeared; if money lost the power of exacting it, merchants would no longer be able to offer interest for loans to buy wares.

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 interest can be exacted, and how much. If a house can be let for a rent greater than the amount of depreciation, it is obvious that a tenant who rented a house in its component parts (in the form of a loan in wood, lime, iron, etc.) would have to pay interest.

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

Chapter 6.

PREVIOUS ATTEMPTS AT EXPLAINING INTEREST ON CAPITAL

Who now understands the circumstances to which houses, means of production, ships, etc. and money, owe their characteristics as capital, may also wish to read about previous attempts at explaining interest. Whoever wants a thorough grounding, will find it in Boehm-Bawerk's "Capital and Interest on Capital."³⁹ What follows I have taken from that book. The author asks: Whence and why does a capitalist receive interest? He organises the answer 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.

As Boehm-Bawerk does not confine himself to criticising the different theories, but also proposes a theory of his own, he is inevitably influenced by it when examining the theories of others. He then necessarily pays attention to a certain type of evidence, but neglecting others that from another standpoint gain greatly in importance and deserve a more thorough investigation than what he accords them. I find the following quote on p. 47 of his book:

Sonnenfels,⁴⁰ influenced by Forbonnais,⁴¹ sees the origin of interest in the interruption of the circulation of money by moneylenders out of whose hands money can be enticed again only by a tribute called interest. He ascribes various evil effects to interest: it increases the price of commodities; it diminishes the rewards of diligence (the fruits of labour?), which are raked in by the owner of money. He even calls moneylenders a class of non-workers who live by the sweat of the working classes.

For us, an advocate of such theory would appear as man of engaging personality, but Boehm-Bawerk did not consider his argument worth of the slightest attention. He curtly dismissed that author as one endowed with "a contradictory gift of the gab". Obviously. But if these early writings on interest had been studied from the viewpoint of usury, the remarkable assertions they contain would have permitted the discovery and the proof of the independent interest-creating power of our traditional form of money.⁴²

Let us now briefly examine the content of the six aforementioned theories. We shall pay special attention to the aspects with a close bearing on the history of interest on capital as they appear in Boehm Bawerk's work, which is otherwise an excellent one.

A detailed examination of these theories is unnecessary. Knowing what usury is, anyone can spot the point at which the theorist, lured from his course by the siren theory of value, runs aground full-sail on the reef of error.⁴³

³⁹ *Kapital und Kapitalzins*, Innsbruck. Verlag der Wagnerischen Universitäts-Buchhandlung.

⁴⁰ *Handlungswissenschaft*, 2nd edition Vienna, 1758.

⁴¹ I have not been able to trace the quote back to its source.

⁴² [It may be added that "to discover and to prove," as Gesell did, is not enough. A wholecentury has had to go by before beginning to realise how right he was.]

⁴³ [Gesell's original metaphor refers to the Erl King's daughter of Nordic mythology. She lured passers by into a swamp. I have preferred Pye's, first English translator of *The Natural Economic Order*.]

1. **Theories of Fructification**, by a flight of fancy, deduce 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, for it fails to explain why money, expressly declared to be unproductive, can buy a field that produces interest. Among those who adopted this theory we surprisingly find Turgot⁴⁴ and Henry George.⁴⁵ It is not clear at all how such good honest men did end up in such rash company. Theirs may well be opinions held without deep conviction, but simply put forward to provoke discussion and to call the attention of others to the problem of interest.

2. **Productivity Theories** explain 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 neither true nor obvious, as 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 the instruments of production than with his bare hands, nothing whatever would in most cases be left over for the worker. What can a farmer without a field and a plough, or an engine driver without railway? Work and the means of production cannot be separated, and the division of the product between the owner of the means of production and the worker must be due to other circumstances, not to the amount of support rendered to production by the means of production. What circumstances?

We answer: Demand and supply of the means of production fix the ratio at which workers and the owners of the means of production share their product, independently of their efficiency. The means of production make work possible, hence the proletariat's demand for them. But demand alone cannot determine interest; there must be a supply too. In the distribution of the product between capitalists and proletarians everything depends on the ratio of demand to supply. The capitalist can expect interest on his means of production only for as long as demand for them exceeds their supply. And the better and more efficient the means of production placed at the disposal of the workmen by the capitalist, the more what these means produce will help swell their supply, thus depressing 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. The result would be that interest, under pressure from supply, would disappear (supposing that money could not prevent such a development).

The productivity theory cannot explain interest because it treats capital statically (as matter), not dynamically (as a force).⁴⁶ It sees only demand, caused by the usefulness of the means of production, and fails to consider supply. Capital is for it simply matter; it overlooks the forces necessary to convert this matter into capital.

⁴⁴ [Anne Robert Jacques, 1727-1781. Minister of Finance (1774-1775) of Louis XVI. He tried to break the tax immunity of the privileged classes, but they defeated him and plotted his ruin.]

⁴⁵ [1839-1897. There is a certain relation between rent on land and interest, although not one of origin: Since "collateral" for a bank loan is almost always land, land monopoly helps to keep the rates of interests high. Were that monopoly broken, interest, while not disappearing, would fall as Gesell describes in this Part V.]

⁴⁶ See Dr. Christen: *Absolute Währung*, Annalen d. Deutschen Reiches, 1917, p. 742

3. “**Utility Theories** are an offshoot of productivity theories,” says Boehm-Bawerk. But he makes a thorough hash of the simple train of thought on which the productivity theory is based by switching the issue onto one of value - without saying upon which theory of value he bases his proof. If he refers to the value of the product one may think of the ratio at which commodities are exchanged. But what can we make of the expression "value of the means of production"? Such means are only exceptionally exchanged. The point here is how much interest they yield, not how much they cost. If exceptionally an entrepreneur should sell his factory, the price would be determined entirely by the yield of interest, as proved by the daily fluctuations of industrial shares and by the fact that the selling price of a field is the sum yielding an interest equal to the rent. And what theory of value could be applied to a field?

If the factory to be sold was broken up into its component parts, these would become commodities for sale. We would talk about commodities and prices, not about means of production and interest. Commodities are for sale, means of production for personal use or as capital to lend. Is there an existing theory of value simultaneously applying to commodities and means of production, price and interest? An impenetrable fog overhangs this issue.

Our author says (page 131):

It should be obvious that even having proved that capital has power to produce goods or to increase production, we are still not justified in asserting that capital has power to produce more value⁴⁷ than would otherwise have been produced, still less to produce more value than it possesses⁴⁸. 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 has not been proved.

All this talk about so-called value, intrinsic value, production of value, value-producing machines, preserved, stored or petrified value may be meant for those with the same ideas as Boehm-Bawerk. But how can he assume that all his readers hold such opinions? Does "the problem of value" no longer exist? For many it is "obvious" that on condensing the "conception of value", what one really obtains is products of a certain quantity and quality, meant for exchange. Those who understand value in this sense find it natural that the power of capital to produce more goods must include the power of capital to produce more value. If, for example, the general use of the steam-engine doubled the product of labour, everyone would obtain, in exchange for his double produce, double the quantity of goods he obtained formerly. If, now, he calls "value" what he obtains in exchange for his produce, he will obviously obtain double "value" by exchanging his double produce thanks to the steam-engine.

4. Senior's **Abstinence Theory** begins well. It seeks the explanation of interest in the existing imbalance between demand and supply in the means of production. But the abstinence theory stops halfway. Senior regards mankind as a bunch of 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 come the scarcity of the means of production, the imbalance between demand and supply, and finally interest. The few persons who practice abstinence are rewarded for their rare virtue by interest. Even these few abstain 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, they too would live

⁴⁷ Again the machinery of value!

⁴⁸ Again intrinsic value!

from hand to mouth, saving no seed-potatoes but squandering 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 hamsters!), how did mankind continue to exist, and above all how and who ever thought of lending money? 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 instant gratification. How can they ever pay interest or repay the principal? And if our ancestors had always consumed their winter provisions before winter began, how would we enjoy our present 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 prodigality. 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 squander does not belong to them, but to others; for unemployment is the price of usury, by means of which they interrupt monetary circulation at the expense of the workers. Capitalists squander the property of others, namely the power to work of the toiling, thrifty masses. To prevent a fall in the rate of interest that would follow over-production of capital, they allow produce worth billions to be destroyed. That's why there is dearth of capital, that's why 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; if they could be persuaded that to abolish interest they needed only save - chew no tobacco, drink no brandy - presumably they would do so. But what would the result be today? The moment interest upon physical capital fell below that of usury there would be a crisis. An economic crash would rob the workers of the fruits of their abstinence.

But in any case the abstinence theory leads straight on to the following contradiction: Workers, toil and sweat to produce and sell many commodities, but buy as few commodities as possible. Starve, freeze, abstain, buy nothing even of what you produce (but which you have produced for sale) and you will save the largest possible surplus of money towards the formation of new physical capital.

The originators of the abstinence theory would have come upon this perfect contradiction had they followed up their original line of argument. They would have run smack into the shortcomings of our present monetary system. Probably the same line of reasoning taught Proudhon that gold blocks the road of commodities towards producing physical capital, and that the resulting over-production of the first depresses prices and leads to an economic crisis. An over-production of capital, on the contrary, would depress interest and stimulate exchange.

5. **Theories of Work** categorically declare that interest is the product of the capitalist's labour. Rodbertus raises the taking of interest to the rank of an "office;" to Schaeffle coupon cutting appears an economic profession, his only criticism being that such "services" are expensive; and Wagner calls the rentiers "public functionaries for the formation and employment of the national fund for the means of production". And Boehm-Bawerk honours these "experts" by numbering them among the investigators of interest!

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

But does this particular theory deserve the epithet "exploitation?" Does not the abstemious of the abstinence theory also exploit market conditions, when making use of scarce capital in the market so as to exact interest?

According to this theory -chiefly upheld by socialists- the owner of the means of production measures the deduction from the product of labour, curiously 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 that of other commodities." (Capital, I. p.124, 6th Ed.).

But what has the maintenance of labour got to do with history and morality in different places and times? The average quantities of the necessities of life revolve around the preservation of the very power to labour! They may also vary with the difficulty of the task, with the race, with the strengthening or weakening of the digestive organs, but never because of moral and historical causes. If morality is allowed to be a factor in this central point of Marxist doctrine, there is no longer question of "labour" contained in a commodity. With such spongy terminology anything can be proved.

According to this theory the capitalist carefully inquires about the eating habits of the workman's mother, grandmother and great-grandmother, how much 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 he leaves to the workers. The remainder he removes, by stealth, for himself.

This distribution of the product of labour between employer and worker is Marx's comfortable method of evading the whole problem of interest (for in this manner the theory of wages includes the theory of interest and rent –surplus value). It is also the weak point in the theory of exploitation. Its preliminary assumption, 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 accepted standards of the community as to the needs of a workman determine the amount of wages!

In 1907 the newspapers recorded:

In the past five years wages have risen to such an extent on East-German estates that they are hardly distinguishable from West-German ones, and the seasonal migration of labourers (Sachsengängerei) has greatly diminished.

It is remarkable how suddenly the accepted standards of the community change in respect to what a worker needs for a living! The change of prices on the exchanges is, indeed, somewhat even 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 accepted standards of the community about hunger and repletion has so suddenly changed to this extent. The explanation of the contradictions into which the theory of exploitation bumps at every step is the hallmark of an argument advanced 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 by the accepted standards of the community, and for bequeathing it to his children. The rest he throws, without taking the trouble to measure or count it, at the workers.

This version of the theory has, indeed, several advantages over Marx's. It certainly sounds more plausible, for the capitalist would first, obviously, think of himself before inquiring whether the workers could manage with what remains. The introduction of wheat-duties by the German Agrarian Party gave wide publicity to this obvious fact.

The theory that a needy proletariat is at the basis of the origin of interest is very strained. 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 conclusion would have to be established first by a sound theory of wages. Today capital produces the same interest, namely an average of 4-5% whether in the form of a machine of 10 or of 10 000 horsepower.

And even if the large enterprises have always advantages over small enterprises, it would not at all prove that the owners of the small enterprises can 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 cooperative and in this way often succeed in uniting the advantages of a large enterprise⁴⁹ with the thousand minor advantages of small enterprises (co-operative creameries and steam-threshers, village bulls, etc.). Nor is there a valid reason why an advantage of a large enterprise is that its shares must be held by rentiers rather than by the workers themselves.

Briefly, it is not easy to explain the origin of the proletariat. One may invoke the laws of rent or the forcible expropriation by the sword. But this does not explain why a proletariat arises in the colonies. There is no sword there, and Free Land lies before the gates of the cities.

In the German colonies in Brazil (Blumenau, Brusque) many industries, especially textile factories, have been set up. 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 São Paulo.

It is not easy, today, to explain the continued existence, still less the increase, of the proletariat, when movement is free, when the proletarian can migrate to empty countries and there obtain land,⁵⁰ when everyone can easily, by co-operation, enjoy the advantages of a large enterprise, especially as modern liberal legislation tends to protect the proletariat from the raids of the robber barons.

But beside the sword, the advantages of large enterprises, and legislation devised to protect rent; there is another cause at work that can explain the existence of the proletarian masses - a cause hitherto overlooked by the investigators of interest.

Our traditional form of money can claim, unaided, the power to have reduced the masses of the people to proletarians. It needs no allies of any kind. The proletariat inevitably and regularly appears together with 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 universal begging. In former times the sword was an

⁴⁹ [Today's term is "economies of scale".]

⁵⁰ 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.

efficient weapon for separating the people from the means of production. The sword, however, cannot hold the booty it won. But money and its booty cannot be separated. Interest cleaves more tightly to money than blood or rent to the sword.

Briefly, many take part in plundering the workers, and for this purpose make use of the most assorted weapons. But these weapons all rust. Gold alone never rusts. Gold alone can boast that neither the division of inheritance, nor legislation, nor any form of co-operative or communistic order, has the power to deprive it of interest. Interest upon money was, and still is, immune against all legislation and even against the anathemas of the Holy Fathers. Legislation that diverts the rent on land into the coffers of the State is possible and compatible with private ownership of the land. Here and there attempts of this kind are being made.⁵¹ But no law can deprive our traditional money even of a fraction of the interest it exacts.

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

⁵¹ [The attempts collapsed with the Great War. Chiang Kai-Shek succeeded in Taiwan, which owes its prosperity to a law that redistributed land from 18 families to thousands of smallholders.]

Chapter 7.

THE COMPONENTS OF GROSS INTEREST

Usury, Risk-Premium and Rise-Premium⁵²

Whoever seeks to test the correctness of the above theory of interest by consulting statistics, will frequently meet with contradictions. The reason is that besides usury, the rate of interest usually contains components that have nothing to do with interest.

In addition to the risk-premium, the rate of interest often contains a peculiar component dependent upon the variations in the general price level of commodities. I shall call this component "Rise-premium"⁵³ It is the share of the profit from an expected (and occurred) rise in prices falling to the moneylender.

To grasp the nature of this component of gross interest, one need only observe the behaviour of borrowers and moneylenders during an expected general rise in prices. A characteristic feature of a general rise in prices is that borrowed money can be paid back with part of the commodities sold after having been bought with that same money. 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 its probable amount, and above all, to the degree of certainty attached to the expectation of a further rise in prices.

Those who work with borrowed money then apply to the banks for loans to the extreme limit of their credit (which as a rule increases, since rising prices favour debtors); and those who have previously lent money try to get into the business, forgoing their intention only if borrowers, by accepting a higher rate of interest, promise them a share in the expected gain.

All through the general rise in prices (trade-boom, business prosperity) the possessor of ready money and of claims to ready money (Government loans, mortgages, etc.) is threatened with loss, since he receives fewer and fewer 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. With the money realised he then buys industrial shares, commodities, houses, etc., as the prices of these things is commonly expected to rise. After such double transaction the trade-boom can no longer injure the possessor of money; the loss falls on the purchaser of the threatened securities. But as these purchasers also understand the situation, they buy Government securities only at reduced price, increasing the deduction (discount) on them. In this way a kind of equilibrium is established.

But now comes smart Alec who says: "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 the merchandise at a price higher than what I have paid, thus paying my debt and keeping the difference." Clever characters of this kind are plentiful, and they are to be found in plenty at the same time and in the same place, namely in the financier's waiting room. The richest men in the land are to be found there, side by side with small manufacturers and small merchants. They all show an insatiable appetite for money. But the moneyman, seeing the throng, knows that his money isn't enough to satisfy them all. (Were he to 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 keeps it

⁵² This is the moneylender's share in the coming true of an expected rise in prices.

⁵³ I am using the term *Hausseprämie* instead of the archaic *Ristorno*.

up and up until the smart Alocs are uncertain whether the profit from the transaction they have planned can cover the increased amount of interest. Equilibrium is then re-established; the appetite for money disappears; the throng in the waiting room of the moneyman melts away. What the possessor of money loses through a rise in prices ends up in that rate of interest.

Thus the rate of interest must replace what money-capital loses through a rise in commodity prices. If, for instance, the expected rise in prices amounts to 5% annually, given a basic usury of 3 or 4%, the rate of 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 in prices and adds it to his capital, his position is as strong as it was before the rise. $105=100$, 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 (but not landowners) had received, on the average, an abnormally low rate of pure interest. Prices during this period have risen sharply. 1 000 marks 15 years ago purchased quite as much as 1 500 marks do today. If a capitalist makes the above calculation, what becomes of the profit from high dividends and the increase in the price of shares? Where is the so-called increase in value? That's how a capitalist must calculate, for the nominal amount of his money expressed in figures is immaterial. Otherwise a millionaire would only have to travel to Portugal⁵⁴ to become a billionaire.

The greatest sufferers from a rise in prices are the holders of securities bearing a fixed rate of interest. Were they to sell such securities, they would lose through the fall in the selling-price, and were they to keep them, they would receive fewer commodities from the fixed interest. If the great rise in prices had been foreseen fifteen years ago, the price of consols⁵⁵ would have fallen still further, perhaps to 50.

Clearly, therefore, the expectation of a general price rise increases the requests for loans, and the moneylenders are thus in a position to exact a higher rate of interest.

The rise in the interest rate is therefore caused by the universal, or almost universal, belief that prices are about to rise, and it depends ultimately on the borrowers' hope of meeting their liabilities with part of the commodities that owe their existence to money thus borrowed. With a rise in prices the rate of interest contains a foreign component that has nothing to do with interest on capital. We call this component a rise-premium, that is, the moneylender's share in the profit expected from rising prices.

This component of the rate of interest, of course, disappears as soon as the expected general rise of prices has occurred. It is not the actual rise in prices, but the hope of a future such rise that stimulates people to purchase commodities, to invest 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 drops and the rise-premium withdraws from the other components of the rate of interest. Obviously when a general fall of prices is expected, every trace of such a premium vanishes altogether.

The amount of such premium depends of course entirely upon the expected rate of rise for prices. If a sudden large jump in prices is expected, the banks will claim a sudden large jump in the rate of interest.

⁵⁴ [At the time it was a country with a currency unit of small purchasing power.]

⁵⁵ [Short for Consolidated Annuities, or Government securities without maturity date.] All this was written before the war. See also: Gesell, *Die Anpassung des Geldes an die Bedürfnisse des Verkehrs*. Buenos Aires, 1897.

When a general rise in prices was expected in Germany a few years ago, the rate of interest rose to 7%. Shortly afterwards a price fall was expected, and the rate of interest dropped to 3%. The difference can be ascribed with certainty to the rise-premium. In Argentina the rate of interest stood at 15% when the continuous increase of the stock of paper money drove up prices by leaps and bounds. When afterwards the increase of paper money ceased, interest fell to 5%. It was a 10% premium. Henry George was in California during the great gold discoveries. He states that 2% per month was not considered an exorbitant rate of interest there. As there is no limit to a general rise in prices (a pound of candles at one time was worth 100 livres in assignats in Paris),⁵⁶ so there is no limit to the premium. It is easy to imagine circumstances in which a windfall could 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, increasing to infinity the requests for loans made to the moneylenders. Such a gold discovery would cause an unparalleled rise in the rate of interest. The windfall could never, of course, quite equal the surplus expected from the general rise in 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 in prices, the closer the windfall would equal the surplus.⁵⁷

Following 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 low level. Examples are the withdrawal from circulation of paper money issued in excess, or the de-monetisation of silver. In 1898 such a law was passed in Argentina. It reduced the general level of prices from 3 to 1.

If any country today, on the contrary, yielded to the wishes of debtors and drove prices up step by step by increasing the stock of money so as to cause a 10% yearly increase in prices, the certainty of the expected surplus would bring the premium very near to 10%.

The recognition of the rise-premium as a special component of the rate of interest is essential for the explanation of most phenomena connected with interest. How, for instance, can we otherwise explain that the rate of interest and the amount of savings-bank deposits as a rule increase simultaneously, without abandoning the theory that interest is deducted from the fruits of labour?

The division of the rate of interest into usury, risk-premium and rise-premium gives a completely satisfactory explanation of what appears to be an inexplicable anomaly. Only the interest of usury is deducted from the fruits of labour; the rise-premium comes from the expectation of higher prices. The worker, whose wages also follow the rise in prices, is consequently unaffected by the higher rate of interest. He pays higher prices and receives a higher wage; the two neutralise each other. The borrower pays a high rate of interest but receives a higher price for what he sells; it's another neutralisation.

⁵⁶ [The assignats were paper money issued by the Revolutionary Committee from 1789 to 1796. They bore a 5% interest. Their excessive issue, which was in reality a huge influx of counterfeited specimens from England, forced the return to metallic money in 1797. Ten years earlier the British had sunk the Continental dollars in the same fashion. General Howe, Treasurer of the British Navy, printed Continentals by the cartload aboard one of His Majesty's ships in New York Harbour.]

⁵⁷ At the end of the German paper-money swindle (1923), interest was paid at the rate of 100% per diem; the capital doubling daily!

The moneylender gets back his money mangled and mutilated, but is compensated by the higher rate of interest. Here again the two even out. Only an explanation of the increase in savings is wanting, which must be sought in the fact that during a general rise in prices (boom) opportunities for employment are not wanting.

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

Chapter 8.

THE INTEREST OF USURY IS A STABLE MAGNITUDE

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

But as the premium occurs only during a rise in prices, to disappear when such rise comes to an end, we can assume that the rate of interest during periods of falling prices, many of which are historically recorded, consists only of the interest of usury plus a premium for risk. The rate of interest during such periods is therefore a reliable index for tracking down the movements of interest on capital.

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 1400.⁵⁸ During this long period the monetary circulation was confined to gold and silver, as neither paper money nor money of vile metal yet existed. The mines of these metals, especially the Spanish silver mines, were exhausted. Partly owing to prohibitions of interest, however inoperative, the gold handed down from antiquity times circulated badly, and was gradually lost. This general fall in prices is well documented, and 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 data are recorded:

At Rome from the time of Sulla (82 B.C. to 79 B.C.) the rate of interest was fixed at 4% to 6%. (p.163).

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

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

Observation: The temporary 12% rate of interest in wartime is perhaps sufficiently explained by an unusually high premium for risk.⁵⁹ We must also take into account the possibility that despite the general scarcity of money, prices may occasionally have increased owing to local or temporary causes, and that the rate of interest may therefore occasionally have contained a 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.

In the Roman Empire before 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 differences due to place or time; the only difference is due to the nature of the investment, 4% being a low rate, 6% quite normal, and 5% the intermediate rate for very

⁵⁸ In the cities of France, Italy and Spain that lowered the monetary standard or, in other words, practised the so-called debasement of coinage, the fall in prices came to an end sooner.)

⁵⁹ [Curiously, the Reichsmark obtained precisely a rate of 12% during the Second World War.

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 3.5%. (p.180).

The time of Justinian (527-565 A.D.) The conclusions to be drawn are therefore that in 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 actual average. (p. 180).

Billeter's researches come to an end with Justinian. Let us summarise 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? That for 600 years the rate of interest tended to stay at almost exactly the same level as at present, 1 500 years later. The rate of interest of 4-6% was perhaps slightly higher than today, but the difference can be ascribed to the premium for risk, which in classical times and during the Middle Ages was higher than today, when Church, custom and the law have ended up protecting interest.

These figures prove that interest is independent of economic, political and social circumstances. They give the lie to all the various theories of interest, particularly the theory of productivity (the only current theory with a slight semblance of truth). That the same interest should be paid for modern means of production such as steam threshing-machines, self-binders, double-barrelled guns and dynamite, as was paid 2 000 years ago for reaping-hooks, flails, cross-bows or wedges, 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 were at play 2000 years ago, and that they continued, for 600 years, to exert the same influence as today. What circumstances are they? Not one of the current theories of interest gives even a hint of an answer to this question.

Billeter's investigations unfortunately end with 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 monetary circulation, and with it commerce, decreased in consequence of the increasing scarcity of precious metals. From 1400 onwards there begins the deliberate widespread reduction of the precious metal content of currencies, so that it becomes impossible to make out the interest of usury in the going rates. For this period Billeter would have had to add to his investigations the statistics of prices, so as to extract the rise-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, proves how weak commerce, and how infrequent credit were at that date. The pope could 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 using such a threat. The proof of this is that when commerce increased, the opposition of the Church to interest considerably subsided.

With the introduction 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, a monetary economy became possible in many parts of Europe.

With the discovery of America there began the great price-revolution of the sixteenth and seventeenth centuries. Prices rose steadily and the rate of interest was burdened with a heavy rise-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. Queen Elizabeth renewed this law in 1566, 10% remaining the legal rate until 1624.

Around that date the price-revolution had almost come to an end and the general rise in prices somewhat subsided. The rate of interest fell in 1624 to 8%, and shortly after the Stuart restoration (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 had ended. The rate of interest now consisted solely of pure interest on capital plus a premium for risk.

"Before the last war", writes Adam Smith, "the Government borrowed at 3 %, and private persons with good credit borrowed, both in the capital and elsewhere in the kingdom, at 3.5%, 4% and 4.5%."

That is exactly today's condition.

Are further proofs necessary to justify the assertion that pure interest on capital (usury) is a stable magnitude; that it never falls below 3%, or rises above 4-5%, and that not all fluctuations in the rate of interest can be traced back to the interest of usury? When has the rate of interest risen in modern times? Always and only when the price of commodities has also risen. After the Californian gold discoveries the rate of interest rose to such heights that, despite the increased price of wheat, indebted German landowners drew public attention to their plight. The increased price of wheat was being absorbed by an increased demand for wages. And when the Californian mines got exhausted, prices fell together with the rate of interest. Then came the war-indemnity from France, with concomitant 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. Today prices are slowly rising; so is the rate of interest. In short, if one deducts from the rate of interest the premium due to the general rise in prices, what remains, pure interest, a quantity more or less fixed.

But for variations in the price-level, the rate of interest would have remained at 3-4% throughout the past 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 can be read in this book.

Conclusion

In my exposition of *The Natural Economic Order* my aim has been not to furnish detailed solutions to separate economic problems, but to indicate the formulae by which such problems can be solved. No economic problem has ever been brought to my notice that could not be satisfactorily solved by applying the formulae of Free-Land and Free-Money.

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

To these good people I reply: "Your objections are an attempt at finding an escape route, whereas in reality there is none. Nothing I say has any effect on you, because your personal wishes, unconnected with the subject under discussion, block the road to our mutual understanding time and again. Your perverted instinct of self-preservation resists acceptance of my theory, preventing you from finding the answers to your own objections. Consider the young man to whom Jesus said: "'Go, sell what you have and give it to the poor, then 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, at the same time living on interest on capital. But those who have found out that such possibility is a Utopia, an illusion of naive minds; those who recognise that war and interest are inseparable, must choose: either interest and war, or earned income and peace.

Such persons, if really animated by Christian feelings, will accept with enthusiasm the latter alternative; such persons have the right inner preparation to understand *The Natural Economic Order*. For them I have written the book, and it is they who, undeterred by opposition, will carry through the reforms it proposes.