

Part 3

MONEY AS IT IS

INTRODUCTION

Metal money of the present day is in all essentials identical with the money that exchanged the products of antiquity. Gold money unearthed from the ruins of Athens, Rome or Carthage is universally acceptable and circulates freely with the money of modern Europe or America. Apart from possible differences in the fineness of the gold, a kilogram of coins with the stamp of a Roman emperor is equal to a kilogram of coins with the stamp of the German mint. Our money has all the characteristics of the money that Lycurgus banished from Sparta. Money is perhaps the only State-institution that we have adopted unchanged from antiquity.

But our knowledge of the nature of money is by no means proportionate to its great antiquity. Lycurgus recognised that money made of precious metal disrupts the State by dividing the people into rich and poor. We will not here discuss whether he did well in banishing money, in casting out the good with the bad. But even to-day we are as far from understanding the recognised evils of money as was Lycurgus. We can applaud Pythagoras for saying "Honour Lycurgus who banished gold and silver, the root of all evil," or sigh with Goethe "Nach Golde drängt, am Golde hängt doch alles. Ach wir Armen!"—but we can go no further. The question, What is wrong with money? Why is money a curse to mankind? meets with silence. Even our economists are so perplexed by this problem that instead of investigating it they prefer simply to contradict Lycurgus and Pythagoras and to ascribe the alleged shortcomings of money to defective observation. The Spartan Moses is thus classed among tamperers with the monetary standard, and the great mathematician among moral fanatics.

This failure of science is less due to defects of the human understanding than to certain external circumstances unfavourable to the scientific consideration of monetary theory.

The subject itself repels investigators. Lofty idealists can easily find subjects of investigation more attractive than money. Religion, biology, astronomy, for example, are infinitely more edifying than an investigation of the nature of money. Only the prosaic man of figures feels attracted by this step-child of science. It is comprehensible, it does honour to human nature, that the investigators

who have penetrated into the dark continent of monetary science can still be counted on the fingers.

Again, the unfortunate methods hitherto employed, and the connection of the investigation with the now happily moribund doctrine of value, have increased the natural aversion to this branch of science. The pedantic obscurity with which monetary theory has been treated by scientists has caused the public to despise a subject which is nevertheless of vast importance to human development. (The forgotten literature of bimetallism is a praiseworthy exception). Even at the present day the monetary standard seems to the great majority of the public to be simply a certain weight of fine gold, and gold is for most men a substance of small importance. Since the object of monetary theory is held in low estimation, no one buys monetary literature, and the risk of publishing works on monetary theory is too great for most publishers. Much good writing about money has probably remained unpublished—another circumstance that keeps investigators away from monetary problems. Only authors who can afford to publish at their own expense can occupy themselves with the problem of money.

To the latter statement there are exceptions. The works of our university professors are at least bought by students and State libraries, and find publishers. But the exclusion of criticism of the existing order from university teaching prevents university professors from penetrating far into the nature of money. The probe of official science does not go deep, it recoils from the hard underlying layer of controversy. What is true of money is true also of the theories of rent, interest and wages. A university professor who ventured to investigate the controversial basis of these problems would convert his lecture-hall into a field of battle. Controversial matters, politics, theories of wages, rent, interest and money, are out of place in the university, and for this reason economic science must languish in the hands of our professors. A professor has scarcely gone a spade's depth into his subject when the menace: "Thus far but no further!" rings in his ears.

Added to these external difficulties is the fact that the theory of this thorny subject requires knowledge which can only be obtained in practical commerce, and that commerce usually attracts natures incapable of theoretical investigation. Commerce requires men of

action, not theorists and ideologists. Commercial pursuits were also, until quite lately, considered dishonourable; Mercury, the God of Merchants, was also the God of Thieves. Commerce was a profession for those who had failed in the schools. Intelligent sons were sent to the university, the rest to the counting-house.

Such is the explanation of the startling fact that although in every other sphere science passes from triumph to triumph, we have as yet no sound definition or theory of metal money. Metal money has been in existence for 4000 years, has during a hundred generations passed through thousands of millions of hands, yet in the management of money every country in the world is guided, not by science but simply by routine.

The lack of a sound theory of money is the reason why the phenomenon of interest has never been satisfactorily explained. For 4000 years we have paid and received countless thousands of millions in interest, yet science is at the present day incapable of answering the question "Whence and why does the capitalist receive interest?"*

Attempts to solve the problem of interest have not, indeed, been wanting. As an obvious disturber of the peace, interest has received a far larger share of public and scientific attention than money. All economists of note have dealt with this problem, especially the socialists whose whole effort is fundamentally directed against interest.

But in spite of all these attempts the problem of interest remained unsolved.

The failure is not due to the difficulty of the subject, but to the fact that capital-interest (interest on loans as well as interest on real capital) is the child or by-product of our traditional form of money and can therefore be scientifically explained only with the help of a theory of money. Money and interest, to superficial observers inseparable friends, have also a close inner connection, a connection in theory. A theory of interest can only be deduced from a theory of money.

But theorists upon interest have always, for the reasons given above, neglected the study of money. Marx, for example, can never have given the theory of money five minutes attention—witness his

*Boehm - Bawerk, History and Criticism of Theories of Interest.

three large volumes upon interest (capital). Proudhon under-rated money less and came nearest to solving the problem of interest.

In the following investigation, begun by chance and helped by favourable outer circumstances, I now offer science, commerce and politics the long sought-for theory of money and interest.

What I investigated was controversial matter. Am I to blame that what I discovered must stimulate sweeping changes in the social order?

Summer 1911

Silvio Gesell

1. HOW THE NATURE OF MONEY IS REVEALED

If the inscriptions on coins are supposed to furnish information about the nature of money, it must be admitted that the information is scanty. The inscriptions run "10 Marks," "10 Francs" or "10 Roubles," and if we fail to deduce the nature of money from these words, the marginal comment "Mit Gott" or "Liberté, Egalité, Fraternité" will hardly bring us enlightenment.

If we compare the present German coins with the old Prussian thalers it is noticeable that the inscription no longer states the quantity of fine metal contained in the coins. As the indication of weight was often a convenience,* its omission must have been intentional. Why was it omitted? Perhaps because the indication of weight as inscribed on the Prussian thalers, suggested problems that could not be solved by the monetary theories then prevalent—theories that still hold the field to-day. By suppressing the indication of weight on the new coins, the monetary authorities at least avoided the danger of becoming involved in contradictions.

If "XXX Thalers are a pound of fine silver"† then a pound of fine silver is XXX thalers, and the conception "thaler" becomes, by this inscription, simply a unit of weight reserved for silver, just as in England special units of weight are used for certain commodities. (Diamonds, for instance, are weighed by carats. In Neuchâtel a "measure" of apples or potatoes contains 20 litres and a "measure" of grain 16 litres).

But if a pound of fine silver is thirty thalers, if, as the inscription and the theory of the thalers assert, the coin is identical with a certain weight of silver, how can silver be demonetised? How can the thirtieth part of a pound of silver be separated from a thaler? Is it possible from one conception to make two, namely "silver" and "thaler"? Before the year 1872 XXX were one pound of fine silver, but after that date no longer so. If the latter statement is possible (and it is a fact), the first statement can never have been true, and the inscription on the coins represented to us as one conception what had always been two conceptions—the thaler, and

* The coin became a legally certified weight with which anyone could check a shopkeeper's weights. The number of coins in a sum of money could be determined by weighing, and conversely the weight of a given number of coins in a sum of money could be determined by counting.

† "XXX ein Pfund Fein" the inscription on the old Prussian thaler.

the material of which the thaler was made. Only the weight of the thaler was equal to the thirtieth part of a pound of fine silver, one pound of silver was necessary to make thirty thalers, just as one pound of iron is necessary to make a horseshoe. A thaler was no more a certain quantity of silver than a house is a pile of bricks, or a pair of shoes is a yard of leather. The thaler was a product manufactured by the German mint and quite distinct from silver. And, in spite of its inscription, it was that as much before as after the demonetisation of silver.

The inscription made the thaler and its material one and the same conception; the demonetisation of silver proved the existence of two conceptions in the thaler. The withdrawal of the right of free coinage of silver made the thaler transparent, so that through the silver we saw its inner nature. We had believed that a thaler was merely silver, but now we were forced to recognise that it had also been money. We had denied the thaler a soul until, at its death, a soul left its body before our eyes. Up to the withdrawal of the right of free coinage the subjects of Prussia had seen only silver; now for the first time was revealed to them, in the conjunction of silver and a law of the State, the existence of a peculiar manufactured product, namely money.

Before the closure of the mints to silver, the explanation of money given by theorists, both monometallists and bimetalists, passed without contradiction; but the demonetisation of silver showed that although coins are struck from metal bars, metal bars are not for that reason coins.

"Coins are bars of metal the weight and fineness of which are attested by the stamp." Chevalier, *La Monnaie*, p. 39.

"Our German mark is simply the name for 1/1395 of a pound of gold." Otto Arendt.

No one saw that the free coinage of silver, which in practice, of course, converted coins into bars of metal and bars of metal into coins, was a law, a law made by the State and dependent upon the will of legislators. No one saw that the thaler was a manufactured article, a product of legislation, the silver being but the arbitrarily chosen raw material of the thaler. The law made the thaler; the law unmade it; and what is here stated of the thaler applies, of

course, also to its successor, the German mark. The right of free coinage of gold, which to-day in practice identifies coins with gold, is the work of our legislators. The means which called this right into existence may withdraw it. The right may be challenged at any time if the opinion prevails that much which was taken for granted at the adoption of the gold standard cannot stand the test of criticism.

But if this happens, if the mints are closed to gold—and the recognition of the notes of the Reichsbank as legal tender is a first step in this direction—what is then the relation of gold to our money? Merely that, like copper, silver, nickel and paper, it is used as a material in the manufacture of money; that is to say, the relation that obtains between stone and house, leather and boots, iron and plough. All trace of identity between money and the material of money would disappear, and the distinction between gold and the mark would be as apparent as the distinction between silver and the thaler, or between hats and straw.*

We must therefore make a sharp distinction between money and its raw material, between the German mark and gold. Money and its material can never be considered one, for between them lies the law which to-day unites, but to-morrow may separate them.

This distinction between money and its raw material has always existed. It existed in a concealed form during the free coinage of

* The theory of the gold standard is at present in such confusion that it would be difficult to formulate it in words. During the discussions which preceded the adoption of the gold standard in Germany, the bullion theory in its crudest form still held the field. "The value of money is the value it gives itself," said Bamberger; "and gold forces itself forward as money by virtue of its properties as metal."

How can we reconcile with this assertion the fact that a few years later there appeared in Germany "A Society for the Protection of the German Gold Standard"? Did gold no longer force itself forward as money by virtue of its properties as metal? And how did they come to speak of a "German" gold standard? If, as the theory proclaims, the German mark is simply a certain weight of gold, it is no more German than French, Russian or Japanese. Or does the mine or melting-pot produce German gold, and how is this gold distinguished chemically from other gold? The title of this society, like the leaflets it publishes, contains almost as many contradictions as words.

As an example of the state of monetary theory in Germany as lately as ten years ago, it may be mentioned that the appeal for membership of this society was signed by persons absolutely without professional experience in monetary matters. Mommsen and Virchow gave their names as indifferently as they would have given them for the foundation of a society of goat-keepers. To them the monetary standard was a trifle, a minor controversy to be decided offhand.

silver, and it exists in a concealed form with the gold standard. But the distinction was revealed to everyone by the withdrawal, the legal arbitrary withdrawal, of the right of free coinage of silver. The distinction is equally apparent at the present day to those who have learnt from the history of silver that the privileges of money are not inherent in any metal, but can be transferred by law from one material to another.

But what do our legislators now think when the currency question arises, when, for example, they take up a German mark and ask themselves what it is? Are they conscious that the German mark has never been legally defined, that none of the current monetary theories is compatible with the German monetary standard; that the promotion of the German banknote to legal tender deprives the orthodox theory of the gold standard of its last support; that the inscription upon our banknotes has become nonsense?

"The Reichsbank promises to pay bearer at sight 100 Marks German Standard"—so runs the inscription, and monetary theory declared that the banknotes can circulate only because of this promise to pay. But the inscription has been implicitly cancelled by the declaration that the notes themselves are legal tender. Yet the notes continue to circulate. How is this possible? The German peasant, for example, consented formerly to sell his cow for 1000 silver marks which, if melted, would yield only 400 marks worth of silver, and he is now willing to give his best horse in exchange for a banknote which, both from a material and a theoretical point of view, he must regard as a scrap of paper!

The inscription on the notes should be brought into harmony with facts. Upon the notes as upon the gold and silver coins should be written simply 10—20—100 marks. The rest of the inscription, especially the word "pay," should be cancelled. This word is used in promises to pay (promissory notes, bills of exchange and so forth); and banknotes are not promises to pay. With promises to pay, especially those of the State, the holder receives interest; but with banknotes the opposite is true, the drawer, that is, the State, receives interest.*

*With the present note-issue of 10 billion marks, the State draws 500 million marks interest annually.

The drawer or issuer of banknotes, the State, is really the creditor, and the holder of the banknote is the debtor. "The Reichsbank promises to pay the holder . . ." should be changed to "This is 100 Marks." Banknotes, in spite of their inscriptions, can never be promises to pay. Credit paper without interest is, under present conditions, inconceivable. But where, except in the inscriptions on banknotes, do we find credit paper which costs the holder (creditor) interest and brings in interest to the issuer (debtor), and at the same time stands at par with real interest-bearing paper? The German Imperial Loans, which bring the holders 3% interest annually, stand to-day (1911) at 84½; the German banknote, which costs the holder annually 4, 5, 6, 8½% interest, stands at par.* The law and present-day monetary theory treat both kinds of paper alike, regarding each of them as promises to pay, promises to pay made by the same debtor!

Legislation and pseudo-scientific theory so full of contradiction must be swept away.

The cellulose of the banknotes, like copper, nickel, silver or gold, is raw material for the manufacture of money. All these different forms of money have an equal share in the privileges of money and are interchangeable. They are all subject to the same effective control of the State. Nobody buys paper-money with metal money of the same State; one is simply changed for the other. The promise of payment on banknotes should therefore be cancelled and the new inscription should run: "This is ten, one hundred, one thousand marks German standard."

A banknote circulates at par with metal money not because of, but in spite of, its inscription.†

What forces, we now ask, make the issuer of a banknote an interest-receiving creditor, and the holder an interest-paying debtor? Undoubtedly the miracle is due to the fact that the note has the privilege of being money. We must therefore examine more closely the nature of this privilege.

* The Reichsbank discounts commercial paper indifferently with its notes or with gold. It receives the same interest for both. Yet it counts the gold as part of its capital and the notes as part of its debts!

† When paper falls below par, the metal money, in accordance with Gresham's law, flows out of the country. The paper-money then circulates alone.

2. THE INDISPENSABILITY OF MONEY AND THE INDIFFERENCE OF THE PUBLIC TO THE MONEY-MATERIAL

We owe it to the division of labour that we produce more than we consume. Liberated thus from the compulsion of immediate needs, we can devote time, provisions and work to the perfection and multiplication of our means of production. Without the division of labour we could never have accumulated our present wealth of means of production, and without these means of production our labour could not have attained the hundredth part of its present fertility. The greater part of the population therefore owes its existence directly to the division of labour. Sixty millions of the sixty-five millions in Germany exist solely through the division of labour.

The products of divided labour are not goods for immediate consumption by the producer, but wares, things useful to the producer only as means of exchange. A cobbler, a carpenter, a general, a teacher or a day-labourer cannot consume the immediate product of his own labour. Even a farmer can do so only to a very limited degree. They must all sell what they produce. The cobbler and carpenter sell their products to their customers; the teacher and general sell their services to the State; the day-labourer sells his services to his employer.

For most products the compulsion to sell is absolute; for industrial products this is a rule without exceptions. For this reason work is at once interrupted if a disturbance occurs in the sale of the products. Will a tailor continue to make clothes for which he cannot find customers?

But sales, mutual exchanges of products, are effected through the medium of money. Without the intervention of money no wares can reach the consumer.

It is indeed not altogether impossible to dispose of the products of the division of labour by barter, but barter is so cumbersome and requires so many complicated preparatory arrangements, that producers generally cease work rather than have recourse to it.

Proudhon's banks for the products of labour were an attempt to re-introduce barter. Modern department-stores would serve the same purpose as these banks, for to establish barter I need only find

someone who will buy what I produce and pay with what I need in return. A department-store which provides everything must of course buy everything. The only necessary preliminary condition of barter would be here fulfilled, and within the walls of a department-store price-tickets might easily replace money, on condition that all customers of the store were its purveyors and vice-versa.*

Wares must therefore be sold for money; that is, there exists a compulsory demand for money equal in amount to the stock of wares. The use of money is therefore as indispensable to all as the division of labour is advantageous to all. The more advantageous the division of labour, the more indispensable is money. With the exception of the small farmers who consume almost all they produce, the whole population is unconditionally under an economic

* Much confusion has been caused in economic literature by the old fallacy that since price-tickets can be substituted for money within the walls of a department-store, money is therefore equivalent to these tickets.

Money is an independent commodity and its price must be determined afresh, by the sale itself, every time it changes hands. When selling his products, the receiver of money never knows what, in his turn, he will receive for the money. That is something only to be determined by another sale, generally at another time, in another place and with other persons. When price-tickets are used instead of money, the amount and quality of the return service must be exactly determined beforehand. This is true barter, and the price-ticket has the function of a unit for calculation, not of a medium of exchange. To the cabinet-maker, for example, who offers his chairs for sale in the department-store, it is a matter of indifference whether the hat he intends to buy is marked 5 or 10 on the price-ticket, for he will of course calculate the price of his chairs in accordance with these figures. He reduces all the prices in the store to terms of chairs.

In a socialistic State, with all prices fixed by the Government, price-tickets could replace money. Committees of appeal and written complaints would take the place of bargaining between individuals. The individual would receive for his product a price-ticket and a book for complaints. With an economic system based on money, bargaining about the price takes the place of the committees and the book of complaints. Differences of opinion are settled on the spot by the parties concerned, without the intervention of the law. Either the transaction does not take place, or the price is legally valid beyond the possibility of appeal.

Herein lies the distinction between price-tickets and money.

The frequent confusion of price-tickets and money in economic literature is, no doubt, mainly due to the fact that both money and price-tickets can be made of any material, and that in neither case has the material any influence upon prices, unless the material of which money is made influences the quantity of money in circulation. Of late years many economists have been caught in this pitfall—Bendixen, Liefmann and many pupils of Knapp. Indeed the only investigators to escape it were those who perceived the true nature of money (as revealed, for example, by the demonetisation of silver described in the previous chapter).

compulsion to sell its produce for money. Money is the essential condition of the division of labour as soon as the scope of the latter exceeds the possibilities of barter.

But what is the nature of this compulsion? Must all who wish to participate in the division of labour sell their produce for gold (silver etc.), or must they sell it for money? Money was formerly made of silver, so all wares had to be sold for thalers. Money was then divorced from silver, yet the division of labour remained, the exchange of products proceeded. It was not, therefore, silver on which the division of labour depended. The demand for a medium of exchange caused by the wares was not a demand for the material of the medium of exchange. The money need not necessarily be made of silver. This is now proved, once and for all, by experience.

But must the medium of exchange be made of gold? Does a peasant who has grown cabbages and wishes to sell them to pay a dentist, need gold? Is it not, on the contrary, a matter of complete indifference to him, for the short time during which, as a rule, he retains the money, of what substance the money consists? Has he, as a rule, even time to look at the money? And can one not use this circumstance to make money out of paper? Would not the necessity of offering the products of the division of labour, namely the wares, in exchange for money still exist, if we substituted cellulose for gold in the manufacture of money? Would such a transition cause the abandonment of the division of labour, would the population prefer to starve rather than recognise cellulose-money as the instrument of exchange?

The theory of the gold standard asserts that money, to serve as the medium of exchange, must have an "intrinsic value," since money can exchange only as much "value" as it contains, somewhat as weights can be raised only by weights. But as cellulose-money has no intrinsic value, it cannot exchange the wares, which have value. Nought cannot be compared with one. Cellulose-money has no relation to the wares because it lacks "value" and is therefore an impossibility.

The advocates of the gold standard still hold to these arguments but in the meantime paper-money is quietly taking possession of the world. It is true that the fact is still denied, the theorists now speak-

ing of "transferred" forces. Paper-money, they say, is in use in every country, but it passes current only because it is rooted in gold. If there were no metal money in existence, paper-money would go to pieces like a sparrow's nest in a falling tower. The holder of paper-money is promised gold, and this promise gives paper life. The "value" of the gold is transferred to the paper by the fact or promise of conversion into gold. Paper-money is like a bill of lading which can indeed be sold, but loses its value if the goods it represents disappear.

If the gold or the promise of redemption is removed, all paper-money is reduced to waste-paper. Hence what supports paper-money is merely a "transferred value."

This is about all that is said against the possibility of paper-money, and the argument seems so conclusive that almost everyone who trusts his own power of judgment denies, without further consideration, the possibility of paper-money.

(The practical question whether paper-money has advantages or disadvantages in comparison with metal money will be considered later. We shall first answer the question whether cellulose can serve as raw material for money, whether paper can be transformed into money which, without depending on any particular commodity, especially gold or silver, can circulate and perform the functions of a medium of exchange.)

Money, it is stated, can only redeem or exchange a value equal to its intrinsic value. But what is this so-called value which bars the road to our understanding of paper-money—which declares paper-money to be a hallucination? For paper-money does exist and circulate in many countries, and in some countries it circulates unconnected with metal money. Where it exists, moreover, it demonstrates its existence in the form of the millions that it brings to the monopolists of its manufacture. If paper-money, judged by the theory of value, is a hallucination, these millions, judged by the same theory, should also be regarded as a hallucination. The millions which the German Government gains by the issue of paper-money, the 7% dividend of the Reichsbank, are, according to the theory of value, a hallucination. Or should the roles be reversed? Is it the theory of value which is a hallucination?

3. SO-CALLED "VALUE"

"German gold money has full value, that is, its value as money is fully covered by its value as a substance. Fine silver has only half the value of the coined thaler, and it is the same with our silver money; it is undervalued, that is, its value as a substance is less than its value as money."

"Healthy States have always aimed at money with an intrinsic value and a constancy of value which no one could doubt."

Helfferich, *The Currency Question*, p. 11 and 46.

"Gold and silver have always had a universally recognised value. These metals were collected as a means of providing purchasing power and served therefore as a store of value. Coins soon became more than instruments of exchange; it became customary to measure the values of all products by the value of money. Money became a measure of value. We estimate all values by money. We become aware of all changes of value as changes in the relation to the value of money. The value of money seems to be the measuring-rod by which everything else is measured."

Otto Arendt, *Leading Principles of the Currency Question*.

In these controversial works by two upholders of the metallic standard, one of the gold standard and the other of bimetallism, the same fundamental importance is attached to "value." There is no discussion of the question "What is value?" or of Gottl's critical inquiry "Does the term 'value' denote an object, a force or a material?" The two opponents agree in accepting without question the existence of a reality called value; in this fundamental matter they are completely at one. Both use the word "value" in its various connections without constraint, as if they had never heard of a "problem of value," an "investigation of value" or a "doctrine of value." Both consider the expressions "substance containing value" (Wertstoff), "value as a substance" (Stoffwert), "intrinsic value," "constancy of value," "measure of value" "preserver of value" (Wertbewahrer), "conserver of value" (Wertkonserve), "concrete value" (Wertpetrefakt), "store of value" (Wertspeicher), "medium for transfer of value" (Werttransportmittel), as unambiguous.* Both authors tacitly assume that their readers will understand these expressions as accurately as would appear to be necessary for the comprehension of their books.

* "We must admit that gold is of great importance as a measure of value but of less importance as a store of value (Wertspeicher)." I. A. F. Engel in the *Hamburger Fremdenblatt*, February 1916.

Now what does science say of this expression "value?"

Those who wish to know should read Gottl's work: "The Idea of 'Value,' a Veiled Dogma of Political Economy." Out of deference to his colleagues the professor does not openly express what his book so clearly proves, that "value" is a hallucination, a mere product of the imagination.

Marx, whose economic system is founded upon a theory of value, uses almost the same words: "Value is a phantom"—which does not, however, prevent him from attempting to conjure up this phantom in three bulky volumes. Abstract from the worked-up substances* all material properties, says Marx, and only one property remains, namely value.

Anyone who has let these words, which occur at the very beginning of "Capital," pass without finding anything suspicious in them, may safely read on. He cannot be further perverted. But he who raises the above question: "What is a property separated from its substance?—he who endeavours to grasp this fundamental statement in Marx's "Capital" and to clothe it in material terms, will either be perplexed, or pronounce it to be nonsense and its point of departure an illusion.

How can the human brain, which is substance, grasp, record, classify and develop such a complete abstraction? What relations and transitions could we depend on in forming this idea? To comprehend something means to hold fast somewhere to its substance (comprehend—prehendere), to have found already present in our mind objects (notions) of comparison with which the new idea may come into relation. But an abstraction divorced from every kind of substance and energy eludes the grasp of the understanding as the cup eluded the grasp of Tantalus.

Marx's abstraction cannot be demonstrated in any crucible. It disconnects itself from everything that is material just as completely as from our understanding. But, strangely enough, this complete abstraction has one "property" and this property is its origin, its origin in human work.† It is indeed a peculiar property calculated

* "Products of labour" in Marx's words, but the expression is misleading. What remains after this abstraction is not a property but simply the history of the object—the knowledge that a human being has worked upon it.

† "Sieht man vom Gebrauchswert der Warenkörper ab, so bleibt ihnen nur noch eine Eigenschaft, die von Arbeitsprodukten." Marx, *Kapital*, Vol. 1, p. 4.

to convert language into jargon! By this theory German money would have different properties according to whether its material was treasure buried by the Huns, or the gains of an honest gold miner, or the bloodstained millions wrung from France. The origin of a product is part of its history, not one of its properties; otherwise the assertion (not infrequently heard) that rareness is one of the properties of gold, would also be correct. Yet this assertion is sheer nonsense.

But if things are as here explained, if Marx mistook the origin and history of products for their properties, it is not surprising that in the sequel he saw strange visions and began to fear the "phantom" he had raised.

I have quoted Marx, but the other investigators of value are no whit better. None of them has succeeded in separating out the "material of value," or in connecting the "property of value" with any substance and so bringing it before our eyes. "Value" soars above substance, intangible, unapproachable, like Erlkönig in Schubert's song.

These investigators are unanimously of Knies' opinion that "the theory of value is of fundamental importance in economic science." But a theory so important in economic science should be still more important in economic practice. How, then, can it be explained that, in the economic life of the community or of the individual, the theory of value is unknown? If this theory were really of such fundamental importance, one would expect to find on the first page of every German ledger, after the words "Mit Gott," the theory of value recognised by the firm and intended to guide its business policy.

Should it not further be assumed that every business failure is due to a defective foundation, that is, to an incomplete or erroneous theory of value?

If the theory of value is of "fundamental importance" in economic science is it not an astonishing fact that this so-called value is unknown in business life? In every other sphere of human activity science and life go hand in hand; in commerce alone nothing is known of the principal theory of the science with which it is connected. In commerce we find only prices, prices determined by demand and supply. A business man speaking of the value of a

thing means the price that its owner would probably obtain under the given circumstances of time and place. Value is therefore an estimate which upon completion of a transaction is converted into a measured quantity of exchange products, that is, a price. Price can be measured to a nicety, value can only be estimated, that is the sole difference. A theory of price must therefore apply equally to price and to value. A separate theory of value is superfluous.

The expressions employed without definition by the two writers upon monetary standard whom we quoted at the beginning of the chapter have, in the current use of language, somewhat the following meaning: Gold has a "property," its so-called value. This "property," like the weight of gold, is inherent in its substance: "value as a substance" (Stoffwert). This "property" is, like the weight and chemical affinities of gold, inseparable from gold: "intrinsic value," unchangeable, indestructible: "constancy of value." Just as gold cannot be conceived without weight, neither can it be conceived without value; weight and value are simply marks of substance. One kilogram of gold is one kilogram of value: the value of the substance equals the substance containing the value. The presence of value can be demonstrated on the weighing-machine: "fully-valued." Whether there are any other processes for detecting value has not yet been established. Litmus paper seems to be insensitive to value; the magnetic needle is not deflected by it; it withstands the highest known temperatures. Indeed our whole knowledge of value is still somewhat meagre, we only know that it exists. This is unfortunate, considering the "fundamental importance" of value in science and in life. New possibilities are, however, opened up by Dr. Helfferich's discovery that with some "substances containing value" (Wertstoffe) the value is not always proportionate to the substance. The substance containing the value is greater or smaller than the value of the substance. He has discovered that the value of silver money is twice the value of the silver used in its manufacture. Silver money thus contains value in double concentration, and we have therefore an extract of value. This important discovery gives a quite new insight into the nature of value. It shows that value can be extracted, concentrated and, as it were, separated from its substance. We may therefore hope that science will at some future date be able to produce chemically

pure value. But here again we have a contradiction. In a round-about way we have reached the theory of a paper-money standard. But this theory is based solely on price and leaves the theory of value severely alone.

Value is, then, a fantasy*, and this explains the pronouncement of Zuckerkandl: "In the theory of value almost everything is still in the stage of controversy, beginning with the terminology employed"†. And of Boehm-Bawerk: "In spite of numberless efforts, the theory of value was and is one of the darkest, most confused and controversial parts of our science."

Fantasies are cheap. Examined by themselves they may form a closed system and so appear acceptable to our understanding. Like miracles they are above nature; they grow and thrive in the brains of men. Translated into reality, however, they at once come into collision with facts. Fantasies have no place in the world of reality; they vanish into thin air. And nothing is more real than economic life, whether of the community or of the individual. Matter and energy—anything unconnected with these can be nothing more than a cheap product of the imagination. Such is value. A science sprung from the illusion of value can only engender illusion and is doomed to sterility. Elsewhere science fructifies practice, elsewhere science is the pole-star of practice; but practical economic life is even to-day left to its own devices. Science is here inarticulate, since "beginning with the terminology employed, almost everything is still in the stage of controversy." The science based upon doctrines of value possesses as yet no theory of interest, no theory of wages, no theory of economic rent, no theory of crises and no theory of money, although attempts to construct them have not been lacking. It is incapable of giving the scientific explanation of the simplest daily occurrences, it can foresee no economic event, nor can it predict the economic effect of any legal measure (such as for

* In trade the word value means an estimate of the price that can be obtained for a product. The value of a product is its probable price, allowing for the state of the market. Stocktaking is dependent on "value" in this sense. Whether the estimate was correct appears later in the selling price.

† Since the matter is of "fundamental importance," it would have been well if Zuckerkandl had informed us what the word "almost" is meant to exclude. Is the only non-controversial matter in the theory of value the alphabet used to write it down?

instance, the possibility of shifting the burden of the wheat-duty or land-tax).

Neither merchant, nor speculator, nor banker, nor employer, nor journalist, nor deputy, nor statesman, can avail himself of this science as weapon or shield; no single German commercial undertaking, not even the Reichsbank, is guided by theoretical considerations. In parliament the science that has taken value as its foundation is passed by unnoticed, not even one of its theories can boast of having influenced legislation. The characteristic of this science is its complete sterility.

Only among those whom fate has excluded from commercial life so that they know of commerce, speculation, profit, merely by hearsay—only amongst wage-earners has the theory of value found disciples. The wage-earners allow themselves to be guided in practical affairs, particularly in their political activities and their wage-policy, by a theory of value. This phantom haunts the brains of our socialists. In the rayless depths of the coal-mine, in the roar and dust of the factory, in the smoke and vapour of the furnaces, the naïve belief that something called value really exists and is of practical importance has gained a hold on men's minds.

If this sterility were the only drawback of the matter, we might put up with it. Thousands of our best intellects have wasted their time in futile theological speculation, so if their number is swollen by a few dozen men who cannot extricate themselves from speculation upon the idea of value we may lament the waste, but the loss, in a nation of many millions, hardly amounts to much. The belief in value costs us, however, more than the profitable co-operation of these men. For though the doctrine of value is completely sterile, something is still hoped from it by many who but for this hope would themselves devote their labours to more fruitful endeavours in this sphere. The doctrine is thus pernicious by its mere existence.

There are in Germany many business men of judgment and intelligence, men alert for theoretical knowledge in every branch of human activity. But these men anxiously avoid theoretical explanations of questions connected with their calling (for such are economic questions in relation to the business man). Business men are the first to feel the effects of mistaken legislation; they have to pay for its consequences, or at least temporarily advance the money

to meet the costs; they are buffers between legislation and the economic life of the community, and always in danger of being crushed in some crisis; yet they anxiously shrink from taking part in discussion of the theoretical problems of their pursuit. For what reasons? For two: first, these men, educated in the approved German mental discipline, cannot shake off their belief in authority; they think that science is well cared-for in the hands of our professors*. Secondly, with their clear and sober understanding they cannot comprehend the theory of value expounded by the professors, or even gasp the subject-matter of this theory, and they are ashamed to confess in public this intellectual incapacity.

These sceptical observers, among them many Jewish stockbrokers with the keen intellects of their race, are not to be put off with empty phrases of almost manifest absurdity. Only the fear of making themselves ridiculous prevents them from declaring publicly that the subject-matter of the theory of value is invisible to them, like the king's shirt to the child in the fairy-tale.

Incalculable mischief has been done to both the practice and the science of economics by this flimsy product of illusion. A science sprung from a phantom of the brain has caused the whole nation to mistrust its own power of understanding and prevented the investigation of the laws of the people's well-being from becoming the people's science.

* Whether this opinion is well-founded may be judged from the following quotation (Bund der Landwirte, 7-8-1915): "Ruhland, from the start, entertained the idea of furnishing the scientific theories necessary for putting agriculture, industry and commerce permanently upon a sound practical basis. He therefore rejected from the beginning the interpretation of the task of economic science laid down by Roscher and Schmoller: 'Economic science is concerned with what exists or has existed, but not with what should exist' (Roscher). 'Science is not concerned with influencing directly the settlement of the questions of the day. That is the task of the statesman' (Schmoller)."

Schmoller and Roscher had quite rightly recognised that we have as yet no true economic science but only the economics of a class-State and that the study of the anatomy of this State is no task for a university. But unfortunately they refused to draw the final conclusion from this recognition; that the study of the economics of a class-State is no business for a university either. What a mischievous germ of corruption such a science is for the universities is expressed by Professor Brentano (*Der Unternehmer*, p. 6): "In the teaching of economics a truth is recognised only as long as it coincides with the interests of a powerful party, and then only as long as this party remains powerful; if another party becomes more powerful, the most erroneous doctrines are rehabilitated if they appear to serve its interests."

A currency administration guided by a theory—any theory—of value is doomed to sterility and inactivity. For what can be administered in the "intrinsic value" of gold? The illusion of value precludes progress in matters of monetary administration. No other explanation is needed of why the monetary system of to-day is the monetary system of 4000 years ago. It is the same, at least in theory; in practice we have gone over to a paper-standard, noiselessly and stealthily, it is true, since the fact must be concealed. For if our professors hear about it, their cries of alarm might cause immense damage—paper-money, money without "intrinsic value," being, in their opinion, fundamentally impossible and therefore certain to collapse.

4. WHY MONEY CAN BE MADE OF PAPER.

The Fact

Paper-money, such is the contention, is impossible, since money can exchange only its own "intrinsic value," its "value as a substance," and paper-money has no "value as a substance."

In striking contradiction to this contention stands the plain fact that the enormous present-day exchange of products is effected throughout the world almost exclusively with paper-money or with banknotes only partly covered by gold. One can travel around the world in any degree of latitude and spend or receive nothing but paper-money. Germany, England and Turkey are, as far as I know, the only civilised countries today with a preponderatingly metallic circulation; elsewhere gold coins are met with only exceptionally.*

In Norway, Sweden, Denmark, Austria, Holland, Belgium, Switzerland, Russia, Italy, France, Spain, Greece, the United States, Canada, Mexico, Brazil, Argentina, Paraguay, Chile, Australia, New Zealand, British India, Japan, the Dutch Indies, that is, over almost the whole world, commerce is conducted with paper-money or banknotes and so-called subsidiary or token coins. Those who want gold must travel to the capital and ask for it at the counters of the Bank of Issue. Even then they often receive the gold only in bars and upon payment of a premium. In ordinary business transactions nobody demands payment in gold in any of these countries;

* Since this was written in 1907, the last gold coins have disappeared from circulation.

indeed, in many of them, such as Argentina, Uruguay, Mexico and India, there are no gold coins in the national monetary units.

If we buy in Germany, with gold coins, drafts on any of these countries, the drafts are always paid in paper-money or, if we raise no objection, with a bag of silver coins, that is, in coins which, to use Helfferich's terminology, would lose half the "substance of their value" (Wertstoff) if struck with a hammer.

These banknotes do indeed promise the holder, according to their inscription, a certain quantity of gold, hence the general opinion that they are not paper-money. But this circumstance is not a sufficient explanation of the fact that for one rouble, rupee or dollar in gold, there exist three or more roubles, rupees or dollars in paper-money. Two-thirds of the banknotes in circulation are not covered by gold, two-thirds of the banknotes must therefore owe their existence and properties to causes other than the promise of convertibility. Somewhere or other, in commerce, on the stock-exchange or elsewhere, forces must exist which prevent the holders of banknotes from taking advantage of the promise of convertibility. Otherwise the fact would be inexplicable that for 10 — 20 — 100 years the creditors of the Bank of Issue (the holders of the notes) make no use of their rights. Forces must also exist which for generations keep the coins out of the melting-pot.

I shall soon trace these forces to their origin. For the moment I only wish to establish their existence, to prepare the reader for the assertion that in all these countries, in spite of the inscriptions on the banknotes, the currency is paper, not metal money.

If the State prints on a piece of paper:

"This is 100 grammes of gold,"

all the world believes the assertion, and such a scrap of paper may circulate for years at par with massive gold. Sometimes it may even bear a premium in relation to gold.*

But if the same State, on a similar piece of paper, promised a milch cow, all the holders of such papers would arrive next day with a halter for the cow.

Now if a piece of paper can for generations, for an interminable

* In Sweden in 1916, 105 kronen in gold were paid for 100 kronen in paper-money. The substitute products of the war were dear and bitter. Only the substitute for gold, paper-money, failed to make us sigh for peace.

series of people in the most varied economic situations, represent completely a certain quantity of gold, whereas the same piece of paper could not represent for twenty-four hours a cow or any other article of use, this proves that, for all the essential properties coming into consideration, paper and gold coin are for all men interchangeable, that is, indifferent. Gold discs or paper in the form of money perform for all men the same services. Further, if the promise of conversion were the covering of the banknotes which keeps them in circulation, if banknotes should be regarded simply as promises to pay, if the issuer were debtor and the holder creditor as with bills of exchange, then the Banks of Issue would have to pay their creditors, that is, the noteholders, interest. Interest is paid by the debtor upon every other kind of promise to pay, without exception. But with banknotes the relation is inverted. Here the debtor, the bank, receives interest, and the creditor, the holder, pays interest. Banks of Issue can consider their debts (banknotes, right of issue) as their most valuable capital. To produce this miracle, to reverse so completely the relation between debtor and creditor, extraordinary forces must be at work in banknotes removing them from the category of promises to pay.

Furthermore, if banknotes are to be considered as promises to pay by the State, the fact remains inexplicable that these promises to pay, only one-third covered, without a sinking-fund and bringing the holder no interest, are usually at a premium in comparison with the ordinary loans of the State which bear interest and are covered by the power of the State to levy taxes. A German 100-mark note, for example, upon which interest is paid by the holder, is equal to 117 marks of the German Imperial Loan which brings in 3% interest to the holder.

Relying on these facts, therefore, we deny that it is the promise of conversion that gives life to banknotes and ordinary paper-money. We assert that forces must exist elsewhere in commerce which play the part at present erroneously assigned to the metal reserve (so-called covering), or to the promise of conversion. These forces, hidden for the moment, which turn a promise to pay (bank-note) into capital, and force the creditor to pay interest to the debtor, are, we maintain, strong enough by themselves to assure the functioning of money in the market. Relying on these facts we assert

that money can be made out of paper which, without any kind of promise of conversion, without resting on any particular commodity (gold, for example), bears only the following inscription:

“One Dollar” (or “Mark,” “Shilling,” “Franc,” etc.)

or “This Piece of Paper is in itself one Dollar.”

or “This Piece of Paper is in commerce, in State-Treasuries and in Courts of Justice legal tender for 100 Dollars.”

or, to express my meaning, if not more clearly, at least more drastically:

“He who presents this Piece of Paper for redemption at the Bank of Issue will receive

100 Lashes (negative promise of payment).

In the markets and shops of the country, however, the holder will receive in goods as much as demand and supply allow him; that is, as much as, by bargaining, he can make his own.”

I think that I have here expressed myself with sufficient clearness and that there can be no further doubt about what I mean by the expression paper-money.

Let us now investigate the forces which make it possible that men will scramble for papers with any of the above inscriptions, that men will work in the sweat of their brow to earn such papers, that men will give their produce, goods with “intrinsic value,” in exchange for such papers, that men will accept bills of exchange and mortgage deeds payable in such scraps of paper and hoard them as so-called “stores of value,” that men will “eat their bread in sorrow and weep their nights away” brooding upon how they can obtain these scraps of paper to meet an expiring draft—the forces which expose to bankruptcy, sequestration and loss of honour, men who fail to meet their liability to deliver, at a given time and place, papers with any of the above inscriptions—the forces, finally, which allow men to live grandly, year in, year out, without work or loss of property, because they have “placed” these papers somewhere as capital.

What is the hidden source from which such a scrap of paper—paper-money, the money of John Law and other paper-money swindlers, the abhorrence of orthodox economists and little minds—draws its force?

Explanation of the Fact

If a person needs and wishes to obtain something, and if the desired object happens to be in the possession of another and cannot otherwise be obtained, he will usually be forced to offer some of his possessions to induce the possessor of the desired object to surrender it. That is, he will bring the object into his possession by giving something in return. This he must do even if the object he desires is useless to the other. It suffices for the possessor of the object to know that someone needs it or, still more, is compelled to obtain it, for him to refuse to give it for nothing; indeed, a man will often keep or gain possession of an object solely because he knows that behind him comes another person who can employ the object usefully. And the more urgent is the latter's need of the object, the higher will the owner screw up his demands.

What we have here said seems at the present day so natural and so obvious that many persons will consider its expression superfluous; indeed, so far as I know, this is the first time the statement occurs in a piece of economic writing. Yet this is the fundamental law of present-day economic life, of commerce, of the economic relations between the individuals composing a State and between these individuals and the State.

This “epoch-making discovery” is not more stupid and obvious than Newton's discovery of the law of gravitation, and it has the same fundamental importance for economic science as Newton's law for physics.

In gaining possession of an object which is useless to us, but which we assume or know will be sought after by others, we can have only one purpose in mind, namely to embarrass others and then to exploit their embarrassment. Our purpose is usury, for to bring someone into embarrassment in order to exploit his embarrassment, is to practice usury.

The fact that the exploitation is mutual may possibly extenuate the offence, but it is nevertheless true that exploitation of our neighbour's need,* mutual plundering conducted with all the wiles

* One must not always picture shivering beggars in this connection. Rockefeller is in “embarrassment” when fuel-substitutes interfere with the sales of petroleum. Krupp is in embarrassment when the expansion of his factories requires the purchase of a peasant's field.

of salesmanship, is the foundation of our economic life. Upon this foundation is built the whole fabric of exchange; it is the fundamental economic law which automatically regulates the relations in exchange, that is, the prices of all commodities. Remove this foundation and our economic life would collapse. The only remaining method of exchanging commodities would be the Christian, socialistic, communistic, fraternal method of mutual giving.

Are examples necessary in explanation?

Why does the post-office charge two cents for a letter and but one cent for a printed packet, although the service rendered is the same? Simply because the letter-writer is likely to have urgent reasons for sending the letter, whereas the dispatch of the printed packet would often be omitted if postage were higher. The letter-writer is under compulsion, the sender of printed-matter is not, and solely for this reason the letter-writer must pay double the postage.

Or why are chemists' shops in Germany with a stock of 10,000 marks sold for half a million? Because the privileges granted to the chemist by the State allow him to charge higher prices for medicines than would be possible with unrestricted trading. (This explanation holds good even if we admit that, in return for the privileges, the State requires scientific training).

Or why does the price of wheat often rise in Germany in spite of plentiful harvests? Because the import-duty excludes competition and the German farmer knows that his countrymen must buy his product.

It is indeed said that prices are raised or lowered by "the state of the market." We try to ignore the personal motive, the action, and to find a scapegoat to bear the odium of usury, by saying that prices are determined by demand and supply; but how could demand and supply and "the state of the market" exist without the living agents who make the separate transactions? It is these living agents who cause the fluctuations of price, and the condition of the market is their tool. And who are these agents but ourselves—the whole population? Everyone who brings something to market is animated by the same spirit, namely, to obtain the highest

price that the state of the market allows him to obtain. And everyone seeks to exculpate himself by speaking of something impersonal, the state of the market, whereas in reality everyone is exculpated by the fact that the exploitation is mutual.

Anyone, it is true, who asserts with Karl Marx that commodities exchange themselves (in proportion, be it noted, to their "intrinsic value") is spared the necessity of practising usury; he need have no scruples in pressing his debtors or in letting his workmen go hungry. For the usury is caused, not by him but by his property. It is not he who exchanges; his shoe-polish exchanges itself for silk, wheat or leather.* The product makes the deal and makes it by reason of its "intrinsic value."

But those of us who are unable to grasp this ghostly property of commodities called value, and who therefore regard the exchange of commodities as an action, and the commodities and state of the market as accessories of this action, will be able to discover no other motive for such action than the desire common to all owners of commodities, to give as little as possible and to receive as much as possible. In every exchange, from wage-negotiations to dealings in stocks, we observe that both parties seek information about the state of the market. Sellers try to find out whether buyers urgently require their commodities, and they are especially anxious to conceal the fact that they are compelled to sell immediately. In short, we soon convince ourselves that the principles of usury are the principles of commerce in general, that the difference between commerce and usury is a difference in degree, not a difference in kind. The merchant, the workman, the stock-broker have the same aim, namely to exploit the state of the market, that is, the public at large. Perhaps the sole difference between usury and commerce is that the professional usurer directs his exploitation more against specific persons.

Therefore I repeat: the effort to call out the largest possible return service for the smallest possible service is the force that directs and controls the exchange of commodities.

It is necessary to state this with absolute clarity, since nothing but the recognition of this fact can enable us fully to understand the possibility of paper-money.

* Marx, Capital, Vol. 1, p. 3.

Let us now assume that Jones has somehow obtained possession of a piece of paper-money with which he can satisfy none of his physical or spiritual needs, and that Robinson, to whom, for some reason, it is useful, asks Jones to let him have it. The knowledge we have just gained makes it clear that Jones will not hand over the piece of paper for nothing.

But the mere fact that it cannot be had for nothing would in itself transform the paper into paper-money, since all that we expect of paper-money, for the moment, is that it should cost more than the paper of which it is made. It must not be possible to obtain paper-money gratis. Money fulfils its function because there is always someone looking for it and forced to give something in exchange.*

To account for the possibility that paper may become paper-money, it only remains to be proved that Robinson may actually find himself compelled to obtain the piece of paper-money in the possession of Jones. The proof is not difficult.

The products of the division of labour,† wares, are from the outset destined for exchange, that is to say, they have for their producers the same characteristic that money has for all of us—they are useful only as objects of exchange. It is only the prospect of exchanging his products, his wares, for other wares that causes the producer to abandon the primitive form of production and to adopt the division of labour.

* Orthodox and socialistic economic theory deny the possibility of this return service, and must continue to do so, for the return service would stamp the surrender of the paper as an exchange, and an exchange would, to use the terminology of these theories, presuppose "intrinsic" or "exchange" value. But we have assumed that the piece of paper was in itself without "intrinsic" or "exchange" value. (It is immaterial, for the moment, whether we can connect these terms with reality). The orthodox and socialistic doctrines of value assert that a commodity can exchange only for the amount of value it contains (exchange value) and if the pieces of paper-money in the hypothesis have no exchange value, the exchange, the price given, is an impossibility. For such an exchange there is, according to the doctrine of value, no "measure of value" to "measure" the return service. Paper-money and commodities are incommensurable quantities.

† By division of labour we mean here work which results in objects of exchange, that is, wares, in contrast to primitive economic production which aims at the immediate satisfaction of needs. The industrial division of labour, the multiplication of the processes by which single products are manufactured, is technical division of labour and should not be confused with the economic division of labour.

But if wares are to be exchanged for wares, a medium of exchange, what we call money, is a necessity. The only alternative to a medium of exchange is barter, and barter, we already know, becomes impracticable after the division of labour has developed to a certain degree. It is easy to see that barter is possible only under quite primitive economic conditions.

Money, a medium of exchange, is the essential condition of a highly developed division of labour, of the production of wares. For the division of labour a medium of exchange is indispensable.

But the nature of a medium of exchange is such that the free production of the medium chosen must by some means be excluded. If everyone were free to manufacture money according to his own system, the variety of the money produced would disqualify it for the purpose it has to fulfil. Everyone would declare his own particular product to be money, and we should be back again to barter.

The necessity for unity in the money system appears from the fact that not even a double standard was considered workable. Or suppose that agreement had been reached to adopt gold as the standard, but that the manufacture of the coins had been left free. Coins of every shape, weight and degree of fineness would then be in circulation together — an impossible situation. (Such "agreement" is in itself a State action, for everything upon which we can reach agreement is the material out of which the State is built).

By whatever method the unrestricted manufacture of money is excluded; whether the result has been obtained by legal enactment or by difficulties in the production of the money-material (gold, cowry-shells, etc.), whether the regulation of money has been conscious or unconscious, whether the people willed it in solemn assembly or simply yielded to the thrust of advancing economic forces—in any case we have here an action of the people, and what is such a unanimous action of the people other than a law, an action of the State? Thus the medium of exchange has always the character of a State institution and this is equally true of coined metal, cowry-shell or banknote. The moment a people has come — no matter how — to recognise a certain object as money, this object bears the stamp of a State institution.

The choice is, therefore, either State money or no money. Freedom of enterprise in the manufacture of money is an impossibility. This is too obvious to require further explanation.*

It is true that at present the production of the money-material is unrestricted, and that the right of free coinage in practice converts the money-material into money. But this is not an argument against the above theory of money; for, in spite of the right of free coinage, the money-material is not in itself money, as is strikingly shown by the history of the Prussian thalers.

As the right of free coinage of gold is granted by law, it is not a property of gold, and it can at any moment be withdrawn by law (closure of the mints to silver).

But in any case the production of the money-material is at present only nominally unrestricted. The natural difficulty of gold production makes this freedom illusory.

Nor is this theory of money incompatible with the fact that in many undeveloped countries (in the United States, for instance, during the colonial period) powder, salt, tea, hides, etc., were used as media of exchange. Here we have barter, not money. The salt, tea, powder, etc. received in exchange for the pioneer's produce were used in his household. These wares did not circulate, they never returned to their starting-point, the port at which they were unloaded: they were bought because of their material properties, and consumed. They had to be continually replaced by new wares. But it is characteristic of money that it is bought, not because of its material, but because of its function as a medium of exchange; it is not consumed, but merely used as a medium of exchange. Money describes a circle around which it continually moves; it returns repeatedly to its starting point. If a package of Chinese tea is to be considered as money, it must have returned to China after circulating for years through the American colonies, just as a silver dollar of the United States may, in the course of trade, reach China, circulate for years there and, again by way of trade, return to Colorado to be paid out as wages to a miner and to descend once more into the mine from which it came. Furthermore, the price of the package

* Where natural products serve as money, unrestricted production is eliminated by the choice of a money-material (cowry, gold) which at that time and in that place cannot be produced in unlimited quantities or cannot be produced at all.

of tea continually increased in proportion to the distance separating it from the port of entry, all charges for transport, interest and middleman's profit being added to its price, whereas the silver dollar could travel ten times around the world and be given back to the miner for the price for which he originally supplied it. In most countries coins 100 years old, or more, are in circulation. Such a coin may have changed hands 100,000 times, yet no one in this long chain of holders has ever thought of consuming, that is, melting it on account of its content of gold or silver. For 100 years such a coin has been used as a medium of exchange; for 100,000 holders it has been not gold but money; not one of the holders has had any use for the money-material.

This, then, is the criterion of money, that the holder should be indifferent to the money-material. Solely for this reason, solely because of this complete indifference, can poisonous, verdigris-coated copper coins, worn silver coins, handsome gold coins and gaily printed slips of paper circulate side by side at parity.

The cowry-shells used as a medium of exchange in the interior of Africa have a somewhat greater resemblance to money. The cowry-shells are not consumed, the purchasers are much more indifferent to them than are the purchasers of tea and powder. They circulate and so do not need to be continuously replaced. Occasionally they may even reach their point of departure, the coast. Here and there they may, indeed, be diverted from their function as money and used as ornaments by the women, but their economic importance is independent of this use. Cowry-shells—if not expelled by some other medium of exchange—would certainly continue to be used as money, even if they went out of fashion as ornaments. They would then be a true medium of exchange like our copper, nickel and silver coins, or our banknotes, which can be used only as media of exchange; they would be true money. And they could, like our money, be called social or State money, the word "State" being applied in a restricted sense to such undeveloped countries. The State monopoly of the manufacture of money would be here preserved by the impossibility of producing in Central Africa a kind of shell found on the coast, thousands of miles away. (The shells can be obtained, like gold in Europe, only by way of trade, by exchange.)

But if a medium of exchange is the necessary condition for the division of labour, and if such a medium of exchange is conceivable only as State money, as money produced or controlled by the State, by means of special currency laws, what choice has the producer who brings his wares to market and finds no other money than pieces of paper—the State having decided to produce no other form of money than paper-money?

If the producer rejects this money (say because it is not in harmony with the orthodox or socialistic theory of value), he must also give up hope of exchanging his produce and return home with his unsold potatoes, newspapers, brooms or whatnot. He must give up his trade and the division of labour, for he can buy nothing if he sells nothing, that is, if he refuses to accept the money circulated by the State. The producer's strike would come to an end in 24 hours; for 24 hours only could he persist in his theory of value and his arguments about the fraudulency of paper-money. For hunger, thirst and cold would then have done their work and forced him to offer his wares in exchange for paper-money inscribed by the State, let us say, with the following inscription:

“Anyone presenting this at the Bank of Issue will receive
100 Lashes,

But in the markets he will receive as much merchandise as demand and supply permit him to obtain.”

Hunger, thirst and cold (to which we may add the tax-gatherer) force all those who cannot return to primitive production, all those who desire to preserve for their work the advantages of the division of labour (and that, in a modern State, means almost everyone), to offer their products for the paper issued as money by the State. That is, all these persons are forced to create, with their wares, a demand for paper-money, and because of this demand the possessors of such paper will not surrender it for nothing. They will ask as much for it as the market conditions allow them to obtain.

Paper has therefore been transformed into paper-money:

1. Because the division of labour has great advantages.
2. Because the division of labour creates wares, that is, commodities useful to their producers only as objects of exchange.

3. Because, at a certain stage in the development of the division of labour, the exchange of wares becomes impossible without a medium of exchange.
4. Because a medium of exchange, from its very nature, is only possible as State money, or at least social money.
5. Because the State, according to our hypothesis, has provided no other money than paper-money.
6. Because all possessors of wares are faced with the alternative either of accepting the paper-money provided by the State or else of abandoning the division of labour. And finally:
7. Because the holders of this paper-money do not surrender it for nothing when they see that the producers are in difficulties and must offer their wares for this paper.

The proof that money can be made of cellulose is now complete, and I could at once proceed to the next question, “How much produce will, or should, the piece of paper-money obtain for its holder?” But the importance of the subject induces me to take account of the prejudices opposed to the idea of paper-money and to expose the fallaciousness of the more prominent among them. By this course I hope to gain the confidence of those judicious or cautious readers who are ready to admit that the proof given above is logically deduced, but who fear that the premises may be incomplete and the proof invalidated by some fact not yet considered.*

Like others who have wrestled with the problem of paper-money, I could have cut a long story short by saying that the State could demand the payment of taxes, fines, etc. in paper-money.

If the State, for example, sold postage-stamps, tickets on the State railway, timber from the State forests, salt from the State mines only for paper-money manufactured by it, if import-duties, tithes, education-rates, could be paid only in such paper, everyone would of course consider this paper something highly valuable and would refuse to part with it for nothing. The State would thus

* I again take the precaution of mentioning that up till now I have discussed only the possibility of making money out of paper. The question whether such money can have any advantages over metal money remains quite untouched and will be treated later.

promise the holders State services instead of gold, that is, many services instead of one service. It would then be these services that give life to paper-money.

But this explanation, as will appear later, would soon confront us, like all other paper-money reformers and paper-money manufacturers, with insoluble problems. He who is unaware of the real foundation of paper-money, as given in the seven points above, can trace back no single economic phenomenon to its final cause.

Among the most conspicuous "proofs" of the impossibility of paper-money is the assertion—we may call it the *chef-d'oeuvre* of the bullionists—that wares can be exchanged only for wares, since no one would give a useful object for a useless one, a scrap of paper.

This argument seems so conclusive that, as far as I know, all paper-money theorists have prudently avoided dealing with it, probably because they were unable to see through the fallacy involved. With its aid the advocates of a metal standard have always succeeded in proving *a priori* the impossibility of paper-money and in repelling scientific inquiry from this field.

"Wares can be exchanged only for wares." That is undoubtedly true, but what is a ware? A ware is the product of the division of labour, and to their producers the products of the division of labour are useful only as media of exchange. They are of no immediate use, as we have already shown. What could a farmer who had grown 100 tons of potatoes, or a cotton spinner employing a million spindles, do with their products but sell them, that is, use them as objects of exchange?

After this definition of terms the assertion that wares can be exchanged only for wares requires a very different interpretation. All it implies is, first (by the use of the term "ware") that the possessor or producer of the thing to be exchanged should have no use for it. Secondly it implies that the thing for which the ware is exchanged should also be useless to its possessor—and is not this true of the piece of paper-money? Is not this slip of paper, apart from its property as money, an absolutely useless object?

The assertion that "wares can be exchanged only for wares" becomes therefore a proof that paper-money is possible, not a proof that it is impossible. It is evidence against, not for, the orthodox theory of metallic money.

If we turn now to the reason given for the assertion: "For no one would give a useful object for a useless one" we at once discover a fallacy. The assertion itself refers to wares, and wares are always useless to their possessors: but the explanation refers not to wares, but to useful objects, to goods for use.

Applied to our example, the above argument runs as follows: "Potatoes can be exchanged for thread, since potatoes are useful to the farmer and thread to the cotton spinner by virtue of their intrinsic value." This is obviously untrue. What possible immediate use, we repeat, can the cotton spinner find for the enormous quantity of thread?

But if the explanation given is untrue, that does not impair the truth of the assertion itself that "wares can be exchanged only for wares." In order to make paper-money conform to this contention, we must prove that it is just as much a ware as the wares which it helps to exchange. We wish to leave no room for misunderstanding; we claim for the piece of paper, for the gaily printed leaflet with the absurd inscription:

"100 Lashes

will be paid at sight by the National Currency Office to the bearer of this paper, but in the markets he will receive for it as much produce as by bargaining he can make his own," all the properties of a ware, a ware obviously of enormous importance. We admit for paper-money no borrowed, stolen or transferred properties. Above all we must not recognise the piece of paper-money as a ware simply because the State promises its holder some service unconnected with its function as money. On the contrary, we wish to persuade the reader to endorse the apparent paradox:

"Paper-money is purely a ware, and it is the only object which, even as a ware, is of use to us."

To be regarded as a ware, an object must possess the following two characteristics:

1. It must be in demand, that is, someone must want the object, or be forced to obtain it, and for this reason be prepared to give another ware in exchange for it.

2. To create this demand the object must of course be of use to the buyer, otherwise it is not sought for and purchased.

Fleas, weeds and stench are for this reason not wares, nor are objects without an owner. But if an object is useful (useful to the buyer, not to the seller), and if it cannot be obtained gratis, all the conditions are fulfilled that make it a ware.

That paper-money satisfies the first condition we proved when we demonstrated that money, State money, is an absolute necessity for the division of labour, and that all possessors of wares, are, by the nature of their possessions, compelled to offer their wares for paper-money, that is, to create a demand for paper-money, if the State provides no other form of money. If Germany demonetised gold as it demonetised silver, and substituted paper for gold, the owners and producers of wares would be compelled to accept this paper-money. One and all would have to create with their produce a demand for the paper-money. Nay more, the demand for this paper-money would be exactly as large as the supply of wares awaiting sale, which in turn would depend upon the production of wares.

Paper-money therefore plainly fulfils the first condition. Petroleum, wheat, cotton, iron have also, most certainly, the characteristics of wares; they are among the most important staple articles on the market. Yet the demand for these articles is not so unconditional as the demand for paper-money. Everyone to-day who carries on a trade and produces wares, that is, everyone who has given up primitive production and takes part in the division of labour, creates with his products a demand for a medium of exchange. All wares without exception are the embodied demand for money—for paper-money if the State provides no other form of money. But not all owners of wares buy iron, petroleum, wheat with the money obtained for their products. For iron, petroleum and wheat there are many substitutes, whereas for money the only substitutes are primitive production and barter, and these substitutes would only come into consideration if 90% of the present population, all those, namely, who owe their existence to the division of labour, had starved to death.

The demand for paper-money is called into existence therefore, by the fact that the products of the division of labour are wares. The division of labour, which gives birth to wares, is the

inexhaustible source of the demand for money, whereas the demand for other wares is far less urgent.

The origin of the demand for an object can of course be explained only by the fact that the object demanded, in our case paper-money, performs some service for the buyer (not for the present possessor) or, in other words, is of use to him.

But this oblong piece of gaily-printed paper raised to the dignity of money, the medium of exchange recognised by the State and consequently the only medium of exchange—is it not a useful thing? Is this scrap of paper of no use which permits the workman, the doctor, the dancing-master, the king, the clergyman to convert products or services, utterly useless to them personally, into goods for consumption?

Plainly we must here keep in mind, not, as usually happens, the material aspect of the paper-money, the scrap of paper itself, but the whole—the paper, that is to say, plus its public status as medium of exchange, or money. We must think of money as a manufactured product, as a manufactured product, moreover, which is protected by law and monopolised by the State.

It is indeed true that if we deprive paper-money of its distinctive characteristic as the only legally recognised and practically universal medium of exchange, what remains is but waste paper. But is not the same true of almost any other object when considered simply as a material, apart from its use? Scrape together the colours of an oil-painting, strike with a hammer a token coin, an inkpot, a soup-tureen, and what remains but rubbish? If we regarded a house as a pile of bricks, a king's crown as metal, a book as paper, if we saw in everything merely its raw material, the great majority of objects would have few advantages over waste-paper.

A piano is not used as firewood, a locomotive as cast-iron, or paper-money for papering walls. So why, in the case of paper-money, do we speak only of the material, the cellulose? Why do we not speak of the medium of exchange? All other objects are considered in connection with their intended use; and paper-money thus treated, that is, regarded as the medium of exchange, is not a mere scrap of paper, but a highly important, indeed indispensable, manufactured product, the most important and useful of commodities.

That the cost of producing this article is practically nil, subtracts nothing from its importance. We do not seek in other products the sweat and blood of the producer. The building sites of Berlin, with a total value of thousands of millions, have not cost a penny to produce.

To understand paper-money, therefore, we must pay no attention to the paper of which it is made; we must accustom ourselves to think of it as an indispensable manufactured article, one, in addition, protected by the State. We shall then have no difficulty in recognising paper-money as something with all the characteristics of a ware. We shall then find it a proof, not a refutation, of the proposition that wares can be paid for only with wares.

Those who take the trouble to search the literature of monetary theory will find money constantly treated, not as a manufactured product with an exactly determined purpose (medium of exchange), but as a raw material for industrial purposes (jewellery), its function as money being regarded as merely subsidiary and transitory. Yet in many countries coins struck 100 or 200 years ago are in circulation (such coins circulated until quite recently in Germany), whereas wares a year old are, as a rule, more or less unsaleable, and are written down at a merchant's stocktaking.

If money were but a raw material for industrial purposes it would be purchased only as other wares are purchased, namely on condition that it could be passed on with the addition of interest and profit. But if the dollar already mentioned which, mined in Colorado, had circulated 10 or 20 years in China before being used to pay wages in the original mine, had on its travels been again and again loaded with interest, transport-charges and profit, what would it have cost the miner who finally received it? Yet this loading would have been necessary if the dollar had always been bought for the silver it contained, if no one had found that it performed another service—namely the exchange of his products for consumable goods.

Money is indeed the most characteristic of wares, for money, especially paper-money, is used only as a ware, a commodity for exchange. It is not, like other wares, bought to be consumed in the factory or kitchen, that is, away from the market. Money is and remains a ware, its usefulness lies entirely in its services as a ware

of exchange. All other wares are bought for consumption (except by merchants, for whom both wares and money always remain wares). A person produces wares for sale, but buys them for consumption; he sells wares, he buys consumable goods. Money alone remains a ware, for it performs the service of exchange. Money, and above all paper-money, is thus

the only useful ware.

The protagonists of a metallic standard commonly think of metal money merely as raw material for the goldsmith. A mark, says the bimetallist Arendt, is the 1392nd part of a pound of gold, and the advocates of the gold standard had naturally no reason to attack an opinion which deprived their opponent of all weapons for defence of his cause.*

The champions of paper-money, who should have begun by demolishing this fallacy, one and all evade the issue. Obviously they have not recognised with sufficient clearness that money itself, without regard to its material, is a useful, indeed an indispensable object: and so, in devising the inscription on paper-money, they all felt themselves constrained to promise the holder something independent of the function of money, gold, interest, wheat, work, land and so forth. The exchange of wares, made possible by money alone, evidently does not seem to them a service sufficient to ensure a ready market for paper-money.

The only exception known to me is the inscription on the paper-money issued in 1869 by the Province of Buenos-Aires. Here, for the first time, the paper itself is declared money, and the holder is not promised conversion. The inscription runs:

La Provincia de Buenos-Aires
reconoce este Billeto por
un peso
moneda corriente, 10 Enera de 1869.

Translation: The province of Buenos-Aires recognises this piece of paper as a peso (dollar) of national money.

I have never been able to discover whether this inscription was the result of insight, or of embarrassment, like the wording of the present Argentine paper-money, which promises to pay the bearer

* Chevalier, *La Monnaie*, Paris, 1866, p.36. "I must hold to this fundamental opinion that coins are simply bars of metal, the weight and fineness of which are guaranteed by the State."

at sight so many pesos—in paper-money! “La Nacion pagará al portador y á la vista y por medio del Banco de la Nacion 100 Pesos moneda nacional.” Clearly nonsense, since a peso mon. nac. is nothing else than the same paper peso. The bank promises to hand back the piece of paper handed in for conversion.

The following proposal has been made repeatedly and even in quite recent times: The State prints enough paper-money to buy up the whole land of the nation and thus at once solves the greatest of all social problems, the problem of how to return rents to the people. The land is then security for the paper-money, but in accordance with the aim of the proposal, is not given in exchange for the notes. The holder of the paper-money has to be satisfied with the security of the land, just as the holder of a banknote is supposed to be satisfied with the security of the gold in the cellars of the bank (which is certainly not the case, for the holder of the banknotes satisfies himself with the services performed by them as the medium of exchange. If it were otherwise, he would, like the goldsmith in need of raw material, go and fetch away the gold at once). From the standpoint of monetary technique this is a crazy proposal. Here again it is overlooked that to mediate the exchange of wares is a sufficient service for paper-money, and that if this service is guaranteed (for which it is only necessary that no other form of money should be issued), every other kind of service is superfluous.

The difficulty of grasping the notion of money lies in the fact that the service we expect from it is so completely independent of the money-material. The material is necessary only in order that money may be visible and palpable, so that we can assure ourselves of its existence and transfer it; by no means because we expect something of its material part as such. Otherwise it would be impossible for a coin to remain 1, 10 or 100 years in circulation, or for a banknote to remain 24 hours outstanding. The quantity of money alone is of importance, for upon it, partly, depends the magnitude of the supply of money and the amount of commodities that we can buy for it. Money considered as a material has no properties, or at least no active, working properties, no properties that would be missed even if entirely absent. Why, the Germans chose gold instead of silver for

their money simply because they had to yield sixteen times more commodities for one kilogram of gold than for one kilogram of silver! They got sixteen times less money-material—that is why they preferred gold to silver!

Of every kind of goods for use, without exception, the buyer says “the more the better,” but of the money-material, on the contrary, “the less the better.” Money only needs to be countable: the rest is mere ballast.

We buy honey because it tastes sweet, beer because it intoxicates, lead because it is heavy, a foot-rule because it measures a certain length, a quart measure because it has a certain cubic capacity. But with money we do not ask for taste, weight, cubic capacity, or any material characteristic, or anything for the direct satisfaction of our personal wants. We buy money as a ware in order to pass it on again as a ware.

A proof of the general indifference to the physical characteristics of money is the fact that not one person in a thousand is able to state how much fine gold he is legally entitled to demand for a dollar, a mark, a franc, or a five-pound note. The incredulous can easily test the truth of this statement.

For this reason we ask of money only that it should possess the fewest possible physical properties; for this reason mankind has gradually and unconsciously adopted as money-material a natural substance, gold, which of all substances has been most niggardly endowed with properties. How poor in properties is gold in comparison with any other product say a hammer, a book or a canary-bird! Not for its colour, weight, bulk, ring, smell, taste or chemical affinities has gold been chosen as money. Gold neither rusts nor rots, neither grows nor decays, neither scratches, nor burns, nor cuts. Gold is without life, it is the archetype of death.

In the substance of money we seek negative, not positive, properties. The minimum of material properties is what all men demand of the material part of money. Everyone feels for the substance of money what the merchant feels for his wares, namely icy indifference. If the shadow of gold suffices, the shadow of gold is preferred, witness the existence and popularity of banknotes. The more negative the properties of a substance, the more positive its

advantages as a money-material. That is the whole secret of a paper-money standard.

It is said that a universal predilection for precious metals led to their adoption as money. I believe, on the contrary, that the universal indifference of producers to gold and silver was the reason why mankind could agree to recognise these metals as money. It is easier to agree upon something indifferent, upon something neutral, than upon something possessing positive properties that vary in effect for each man according to his temperament. Of all natural products gold has the fewest properties, the fewest uses in industry and agriculture. To no substance are we so indifferent as to gold, hence the facility with which it could be adopted as money.

Gold has an industrial use in the manufacture of jewellery. But those who use money as a medium of exchange, producers, workmen, farmers, artisans, merchants, the State, the courts of justice, as a rule need no articles of jewellery. Young girls may covet gold (often only because it is money); but young girls who are not producers need no medium of exchange, they create no mercantile demand for money. The desires of young girls can hardly be allowed to determine the material chosen for money. Money, by far the most important means of economic intercourse, the essential condition of the division of labour, must have some basis other than the desires of the economically weakest members of the community— young girls with a taste for self-adornment.

The material part of money has for economic life about the same importance that the leather of a football has for the players. The players do not concern themselves with the material of the ball, or with its ownership. Whether it is battered or dirty, new or old, matters little; so long as it can be seen, kicked or handled the game can proceed. It is the same with money. Our aim in life is an unceasing, restless struggle to possess it, not because we need the ball itself, the money-material, but because we know that others will strive to regain possession of it, and to do so must make sacrifices. In football the sacrifices are hard knocks, in economic life they are wares, that is the only difference. Lovers of epigram may find pleasure in the following: Money is the football of economic life.

5. THE SAFETY AND COVERING OF PAPER-MONEY

The tender new idea which sprang into being in the last chapter, germinating amongst the clods of prejudice, must now be protected from the cold wind of doubt until it grows into a vigorous thorn-protected shrub. The idea of paper-money must give the common man a feeling of security instead of making his flesh creep. The German peasant who still often prefers to keep his savings in silver rather than in gold, must come to prefer paper-money to silver because his hard head can no longer reject the truth that, when all is well considered, the paper offers him more security than gold or silver.

It is a question, therefore, of showing not only that paper-money is possible, but also that it is "covered" and secure. I wish to prove that whereas metallic money can, without breach of law, be destroyed by the State that coined it, paper-money can only fall with the State itself.

Otto Arendt's statement "our German mark is but the name for the 1392nd part of a pound of gold" cannot be refuted by the authority of the German currency laws. No law protects the holder of specie or bullion from such a legal interpretation of the conception of money. Indeed, the inscription on the former German coins, "XXX One Pound Fine," and the present inscription on banknotes and treasury notes, "The Bank (or the State as the case may be) promises to pay the holder . . . etc." show that the composers of the inscriptions shared Arendt's views on the nature of metal money. We can therefore easily imagine the following situation: The State, for some reason, deprives gold of its monopoly as money, just as, in the past, it deprived silver of its monopoly as money. But instead of exchanging the coins for new money, it defaces the inscription on them by a stroke of the hammer and returns the metal to its possessor with the words, "You have now, on your own admission, all that you are legally entitled to, a bar of gold of a certain weight. But this gold is henceforward not money. The State has adopted another form of money and no longer recognises gold as money, nor will it exchange the new money for gold. Gold coins were, in your words and according to your explanation of the nature of money, protected by their content in gold. You are

now in possession of this metal content; do what you like with it, the State has no further interest in the matter. You brought gold bars to the State which coined them without expense to you, but at considerable expense to itself. The State now returns to everyone what it received, a gold bar. You can demand nothing more, for you have supplied nothing more."

There is no law to protect us from such a monetary policy. On the contrary it is in complete harmony with current theory, with public opinion and with the inscriptions on the coins.

Yet this policy would be pure swindling, it would be confiscation directed against the holders of ready money, mortgages, bills of exchange, government securities, promissory notes, annuities, bonds, who would thereby lose a large part of their property. For mortgages, municipal or government loans, promissory notes, annuities and bills of exchange are simply promises to deliver so many grains of gold*, and if gold were suddenly deprived of its principal use, as money-material, gold would obviously become cheap. The coins flattened by the hammer, now simply bars of metal, would pour into the goldsmith's shops, and such an increase of supply would, of course, lower the price of gold.

When silver was demonetised, its ratio of exchange to gold fell from 16 to 30 or 35. One ton of gold had for centuries bought 16 tons of silver, but after the demonetisation it bought 30 tons or more, and if the demonetisation of silver had been undertaken simultaneously by all countries, the slump in the price of silver would have been much greater.† After the adoption of nickel as money, the price of nickel, until then trivial, rose hundreds per cent.

The supposition here discussed, the withdrawal of the right of free coinage of gold, almost, indeed, became a reality in the year 1856. Creditors of that date found that the general rise of prices caused by the Californian gold discoveries injured them in favour

* It is clear that no one can be compelled to pay debts in coined gold if the State ceases coining gold, and private coining is prohibited. No one can be compelled to deliver something which is the object of a monopoly.

† It is probable that if one of the great commercial nations demonetised gold, the other nations would immediately follow its example. They would seek to protect themselves from the stream of gold from the first nation, and to avoid losses such as the Latin Union suffered by hesitating too long with the sale of its silver.

of their debtors, so they pressed for the withdrawal of the right of free coinage of gold. Holland did, in fact, adopt this policy. Had not the exhaustion of the Californian gold mines been as sudden as their expansion, beyond all doubt the fate of the gold standard would have been sealed.*

But if gold lost its privileges as money, if everyone who had abandoned primitive economic conditions and gone over to the division of labour, everyone, in short, who produced or possessed wares, ceased to create with these wares a demand for gold, what would be its present importance? What would be the importance of gold if it were no longer money? Gold would have as little economic importance as silver since the demonetisation of silver. It would be raw material for an insignificant industry, an industry which is the least important branch of the thousand-branched tree of commerce. Who ever speaks now of silver? Who would now think of buying silver bars to hoard as a medium of saving? Does anyone care whether the price of silver rises to 200 or falls to 50? Does anyone gain or lose, does anyone become insolvent, because the price of silver, the ratio of exchange between silver and other products, has changed? The change hits at most a few dealers in precious metals; the ordinary business man is as indifferent to the price of silver as a marble statue to toothache. Formerly it was otherwise, a rise of a few per cent in the ratio of exchange between silver and other products sufficed to stop the wheels of industry, to bring about an economic crisis, to spread death and destruction, to cause suspension of payment, unemployment, starvation and social unrest.

For the price of silver, the ratio of exchange between silver and other products, determined how much money men received for their products and whether their products could be sold at all. Formerly to ask the price of a product meant to ask, at the same time, the price of silver. Anyone asking: How much does this or that cost? was simply informing himself about the price of silver.†

* I again draw attention to the fact that this is a new edition of a book which appeared in 1911, that is, before the war. The war has furnished many new proofs of this theory of money, but I have no wish to gain anything from the war, not even material for proving a theory.

† In French and Spanish "silver" means "money." (l'argent, plata.).

This is now no longer true since the State, by a stroke of the pen, divorced silver from money. Let no one imagine that a great popular movement was necessary to deprive silver of the privileges it had for thousands of years enjoyed as money. The "great monetary reform" was introduced in Germany by a few phrase-mongers, and without risk or trouble defended by them against another half-dozen phrase-mongers. Read, if you have patience, these wordy duels throughout which monetary reform is treated as it would have been treated by the Huns. Empty phrases, undigested theories, cheap assertions, special pleading—such was the great conflict of those days over monetary reform; and in every succeeding one, up to the present time, the arguments have been quite as superficial. Nothing has ever been heard of a medium of exchange, of the needs of the wares awaiting exchange, of the division of labour. It really seemed as if the German mark were nothing more than the 1392nd part of a pound of gold.

Assertions in favour of the gold standard were taken for granted; nothing was tested; there was no trace of scientific inquiry into the subject. Even to-day, after many bitter experiences, we have no legal definition of the word "money" to which recourse could be had in cases of doubt in the application of monetary laws.

It is also a fact that at the present moment cultured men and women, to say nothing of peasants and labourers, have childish ideas about the nature of money; that "many persons, even economists of repute, have no thought-out theory of money." (Knut Wicksell, *Interest and Prices*).*

In these circumstances we are justified in asking: Where are the security and covering of German money, of the German mark? They certainly do not lie in the metal. That is apparent from the fact that silver, which was more closely united to German money than gold, was in a day, without fuss or trouble, legally separated from it.

* The post-war experiences of inflation, deflation and stabilisation have convinced most people that the monetary standard is the very foundation of national life. Nevertheless the new constitution of the German Republic makes no mention of the monetary standard. After the German Government had caused the greatest inflation the world has ever known, our legislators, with German thoroughness (*deutsche Gründlichkeit*), determined in lengthy debates the colour of the nation's flag—and completely forgot to determine the standard of the nation's money.

Nor is the security of money guaranteed by the law, for a legal definition of the German mark is wanting—so completely wanting, that the question: What, according to law, is a German mark? invariably receives the same intelligent answer: "A mark is 100 pfennigs"—no matter to whom one may apply.

The only real security would be the monetary education of a sufficient number of men who, in the event of legislation affecting monetary standard, would form a bodyguard, so to speak, to protect the mark from bunglers and swindlers. But at present this security does not exist, for the indifference of the general public, of science, of the press, of business men, to monetary theory is so great that it would be difficult to collect among the millions of the German population a dozen persons for a serious discussion of the subject.

Where, then, is the security of the German mark? Who or what protects it from bunglers and manipulators? The leaflets of the Society for Protecting the German Gold Standard? Are not these defenders also bunglers? If the leaflets are examined attentively it is apparent that the writers have no idea of what function money has to fulfil. The fact is never mentioned that money should secure, accelerate and cheapen the exchange of products; that the market, not the metal content, nor the weight, is the criterion of the excellence of money. Money is here viewed from the lowest possible standpoint, the standpoint of the goldsmith or banker. Yet at present the victory rests with this Society!

That the metal content provides no security or "covering" for the German mark we have proved from the history of silver. The conclusion to be drawn from silver is so obvious that it should suffice alone to brand as a falsehood the assertion that a mark is the 1392nd part of a pound of gold, and that it is sufficiently secured by its metal content.

In addition it is well established that through the play of forces known as Gresham's law,* gold can be driven out of a country

* Gresham's law: When in any country the stock of money exceeds the needs of the exchange of products, the result is a rise of prices. This rise of prices impedes export and facilitates import. The balance of foreign trade consequently shows a deficit of export in relation to import which is most easily met by the export of gold.

Thus during the years 1872-1874, when Germany was flooded with the

by the issue of paper or silver money whenever the party in power so determines. The State need only coin more silver, or the Bank of Issue print more notes, and before long gold coins will begin to cross the frontier. But if the law determines whether gold is driven out by some other form of money, where is the security and covering of gold money? Silver and gold were in circulation in France when John Law began to experiment with paper-money. The security of this French money was so perfect that in a short time it disappeared, leaving paper-money only in circulation. The experiment was repeated with the assignats during the French Revolution, with the same result. Later still, when the war indemnity was being delivered to Germany, the market was again cleared of gold by paper-money. Three times this experiment has been repeated in France, and always with the same result. Three times the security supposed to be given by metal has proved illusory. In Scotland, England, Austria, Russia, Spain, Italy, the United States, South America, metallic money has countless times, as often as the ruling power (autocrats or people's representatives) desired, been expelled by paper. The metal has never been able to protect the money of these countries from bunglers and swindlers, just as the silver content of the thalers failed to protect German money.

French war indemnity, German imports exceeded exports by 3646 million marks, or almost the whole amount of the indemnity. Yet before the war German exports had exceeded imports.

This export of gold which means a decrease in the stock of money in the country, reduces prices and therefore automatically re-establishes equilibrium between export and import. But if the State takes no heed of the warning given by the export of gold and continues to increase the stock of money by the issue of paper-money, gold continues to leave the country until importers begin to meet with difficulties in obtaining gold (or foreign bills of exchange) to pay for their imports. These difficulties are at once translated into a premium, or *agio*, upon gold, and this premium then acts as regulator of foreign trade by putting difficulties in the way of import and facilitating export. But at the same time the premium renders the circulation of gold within the country difficult, since government offices and courts of justice accept only paper-money, and the varying premium is soon considered a vexatious concomitant of gold by the public which becomes unwilling to accept this form of money. Gold cannot circulate, it becomes superfluous and collects in the banks where it lies fallow until sent abroad by its possessors to seek interest. It thus happens that if within a country gold and paper are in conflict, paper always wins. Paper-money, or base currency, drives its rival, gold, over the frontier, and this "law" is called Gresham's law in honour of the Elizabethan statesman who discovered, or rediscovered, it.

The belief that the mark is protected from bunglers and swindlers by its gold content, shows complete ignorance of monetary history.

But quite apart from Gresham's law — whom did the metal content of money protect? Obviously only the chance holders of the coins, the holders of the four or five billions of coined money circulating in Germany. But what importance has this comparatively quite insignificant quantity of gold in comparison with the 500 billions of State debts, mortgages, bills of exchange, leases and other rent agreements? Are these 500 billions also covered by the metal content of the five billions of gold? The only security for these 500 billions is the law; the law, not the metal content of the coins, determines the meaning of the German mark in mortgages, government securities, etc. Forty years ago all German mortgages, securities and bills of exchange were payable in silver, yet the law forced debtors to pay their debts in gold.

From this standpoint also, the security given to the German mark by its metal content proves illusory.

The coined money of a country is a drop in the ocean of uncoined money* (that is, all agreements to pay money). Consequently the security given by the metal content of the coined money is a negligible quantity. And at any time the play of forces known as Gresham's law can remove even this infinitesimal security.

In the above-named countries when gold and silver money was expelled by paper-money and copper coins, when in many cases this paper-money became as worthless as the paper upon which it was printed, all agreements between debtor and creditor—government securities, mortgages, bills of exchange—sank simultaneously to the level of the paper-money!

And so, once again, I put the question: where was then the security of metal money?

Money requires the State; without a State money is not possible; indeed the foundation of the State may be said to date from the introduction of money. Money is the most natural and the most powerful cement of nations. The Roman Empire was held together more by the Roman currency than by the Roman legions. When the

* With a circulation of five billion marks in gold in Germany, the circulation of bills of exchange was 40 billions, the amount of mortgages 143 billions, etc.

gold and silver mines became exhausted, and coins could no longer be struck, the Roman Empire fell asunder.

The fact that money is indispensable, and that State control of money is also indispensable, gives the State unlimited power over money. Exposed to this unlimited power the metal covering of money is as chaff before the wind.

Money is as little protected by the money-material from abuse of State power as the constitution of the State is protected from arbitrary usurpation of power by the parchment upon which it is written.

Only the State itself, the will of those in power (autocrats or representatives) can protect money from bunglers, swindlers and speculators — on condition that those in power are capable of purposeful use of their power. Up to the present they have never, unfortunately, possessed this capability.

What has here been said of metal money applies, of course, also to paper-money. The material of paper-money offers no security either to the holders of the money itself or to the holders of promises to pay money (bills of exchange, government securities, titles to pensions, leases and other rent agreements, insurance policies, mortgages, bonds).

Paper-money is in this respect somewhat more insecure than metal-money; but, to compensate for this, it is more completely protected by the State.

We have seen that the State, without infringement of the law, and in complete harmony with current monetary theories, can convert coins by a stroke of the hammer into the raw material of which they were made, that the State can deprive gold coins of the privileges of money; that the loss of the privileges of money would depress the price of gold; that the State is bound by no law to compensate the holders for this loss and that, if it decides to compensate them, it acts not in accordance with the law but merely in accordance with fair play. And fair play is an elastic term, much depends upon the class of society by which it is invoked.*

The legal position of paper-money is much stronger. The State

* The German landowners asked the State to increase the cost of the nation's food by erecting tariff-barriers, and their request was granted. The German working class asked the State to reduce the cost of food by abolishing the tariff-barriers—and met with a stern refusal.

cannot deprive paper-money of the privileges of money without compensating the holders. By issuing paper-money the State has received something for which it is in the holder's debt. This something must be given back; from whatever standpoint the matter is considered, this cannot be denied. The best proof of the duty of compensation is its obviousness.

The State deprived thalers of their privileges as money and compensated the holders by exchanging thalers for new money* There was no legal right of compensation, but sufficient grounds were discovered for this action apart from the law. The State had, for example, by levying taxes, compelled its citizens to purchase thalers. To pay his taxes, a peasant had first to purchase thalers by selling his cow. Because the State demanded silver, the peasant had to buy silver, even if he had no personal need for it. The State therefore undertook the duty of assuring the sale of these thalers—from which may be deduced the duty of compensation.

Such a plea for the duty of compensation deserves a hearing, but whether it would always obtain one is another matter. It is useless pleading to deaf ears, and "none are so deaf as those who will not hear." To plead for a right is, indeed, to acknowledge a weakness.

If the German landowners had known, when the gold-standard was being adopted in Germany, that the demonetisation of silver would cause a slump in its price sufficient to have freed them from 50% of their mortgage-debts contracted in silver thalers, their attitude to the question of compensation might have been very different. Their later conduct when they learnt, too late, how the matter really stood, justifies the belief that they would have adopted the monetary theory whereby a thaler was declared to be the thirtieth part of a pound of fine silver, and that they would then have insisted on paying their debts, contracted in terms of silver, in uncoined silver at the ratio of 1/30th of a pound of silver for every thaler. This would have been an equally profitable and a more honourable line of conduct than the one actually adopted, namely the raising of their rents through protective duties.

* That the holders of the thalers could suffer any loss through the withdrawal of the privileges of money from silver was, and remains in contradiction with the theory of metal money.

With paper-money there are no such uncertainties. There are no laws and no interpretations of law, no arguments to support the State's duty of compensation; the duty being obvious. For this reason the security of paper-money is greater than that of metal money. Paper-money is secured by all the interests and ideals which weld a people into a State. The paper-money of a State can only go down with the State itself.

Besides the imaginary security of money in relation to the absolute power of the State, a "covering" or economic security is claimed for money. Granted that the State makes the best possible use of its powers, granted that there is no abuse of power, there is still no guarantee, say the advocates of a metal standard, that the holder of money will be recouped for the outlay he has made in obtaining it. Metal money contains in itself the material for meeting this outlay, it has "intrinsic value" (for the moment it does not matter what meaning is attached to this term), whereas paper-money has no content and must seek its covering elsewhere, apart from its material.

This objection is void and shows confusion of thought, as we have already learnt in the chapter "So-called Value" and in the above discussion of the security of money. The mere fact that all the holders of the demonetised silver coins, without exception, made use of the right of exchange, shows clearly that metal money is not a full "covering" for the holder for his outlay in obtaining it. If it had been a full covering, the holders would simply have kept the silver.

To what has already been said in reply to the above objection, all that may be reasonably, though perhaps superfluously, added is this:

A ware is covered as long as someone is prepared to give the usual quantity of other wares or money in exchange for it, in other words, as long as the demand for it does not fail. But no ware is covering for itself. The division of labour and the word "ware" imply that the product of the producer's labour is useless to him. What, we repeat, can tailors, shoemakers or chemists do with their produce, or farmers with the gold of the coins, if no one offers to purchase it from them?

By the covering of money is meant utility such as the possessor

of goods for use (provisions, tools, etc.) derives from their use. It is sought to provide the possessor of money with the same kind of utility through the material of money. Money is to be simultaneously a ware and a material for the satisfaction of personal needs. Money is to be a hybrid, an impossibility.* The moment the money-material became useful to all its possessors, money would cease to exist. The utility of the money-material would force the coins into the melting pot. But money is indispensable; therefore it must not be consumed.

As long as the division of labour exists, as long as we produce wares, products useless to us personally—so long shall we need a medium of exchange, that is, money. The demand for money is therefore permanent and continuous; it is based upon the division of labour, the foundation of our existence. Why should anyone have the power of using up and destroying money? Would not the possibility of consuming the medium of exchange endanger the exchange of wares and the continuation of the division of labour?

A covering of money such as the above objection implies, does not, and cannot exist.

It is not the money-material, but the function of money as the medium of exchange, that covers money and ensures the economic demand for it. In the last analysis money is covered by the inexhaustible treasures brought within reach of humanity by the division of labour.

Except the division of labour, there is no covering for money. The division of labour produces a never-ending stream of wares and a never-ending demand for a medium of exchange, for money, regardless of what material the money is made. Whether the money is made of gold, silver or paper has no influence upon the supply of wares, that is, upon the covering of money; for whatever the form of money, the products of the division of labour must be offered in exchange for it. Whether a farmer receives gold or paper for his potatoes has no influence upon the quantity of potatoes he brings to market, for in either case he brings all he can spare. Whether the Reichsbank has 10 or 100 tons of gold in its cellars has no influence upon the supply of wares, upon the demand for the medium of exchange. And since this demand for it is the real

* "Usually when a German wants anything he also wants the opposite."
Bismarck

covering of money (as of wares in general), therefore the covering of money is independent of the money-material.

Wares, demand for money, and covering of money are three different expressions for the same thing. Where is the covering of a railway share? Does it consist of rails and embankments? Everyone knows that the covering of a railway share is the mass of goods daily offered for transport. The division of labour is the covering of the railway share.

The same is true of shares in the privileges of money, that is to say, of the possession of money itself. If freight and passengers fail, the railway share is rubbish; if the division of labour and the stream of wares ceases, money is the most useless of objects; paper-money then becomes waste-paper, and metal money raw material for the least important of industries.

To recapitulate what has been said in this section:

1. The money-material is no security against misuse of State power in monetary matters.
2. Even if we disregard the working of Gresham's law, the money-material can only to a small extent cover coined money (silver covered but 40% of the thalers). The thousand-fold greater volume of contracts payable in money (mortgages, government securities) remains quite uncovered.
3. If a certain form of money is deprived of its privileges as money, the duty of compensation by the State is obvious only in the case of paper-money. With metal money this duty must be defended against the opposition of large sections of the community whose interests are at stake. For this reason the security of paper-money is greater than that of metal money.
4. The money-material cannot influence the demand for money and cannot, therefore, serve as covering for money. The money-material can neither cause, nor influence, nor control the demand for money.
5. Money is, independently of its material, at all times covered solely by the division of labour.
6. The security of money can be attained only by a sound conception of currency policy shared by the people and their rulers.

6. WHAT SHOULD THE PRICE OF MONEY BE?

We have now shown, with all the detail demanded by the importance of the subject that money can be made of paper, or, in other words, that a higher price can be obtained for paper-money than for the same amount of paper without the privileges of money.

Next comes the question: How much higher should the price of paper-money be than the price of the paper of which it is made? What should be the ratio of exchange between money and wares?

This is a question of importance, a question of burning interest to the producer. Producers are indifferent to the substance of money, which is for them merely unnecessary ballast; but their attention is always aroused by the question: How much money do you ask for your cow? or: What do you offer for my tools? For upon the answer depends the success or failure of the whole process of production.

If there is a change in the ratio of exchange between wares and money, everyone in selling his wares receives more or less in money, and when selling his money receives correspondingly less or more in wares. From this point of view, therefore, a change in the price of money would be pretty much a matter of indifference.

But everyone does not immediately buy wares with the money he has received; and for such persons it is certainly not a matter of indifference whether prices have changed during the interval between selling and buying. Still less are the prices a matter of indifference to debtors and creditors. To them the question: How much of my produce must I sell to meet the interest upon my debt and to provide for repayment? (or: How much produce shall I receive for the money coming in as interest and repayment for my loan?) is of vital importance. We shall also see that the question of prices, considered simply from the technical standpoint of commerce, determines the continuation or non-continuation of the exchange of wares, that is, of the division of labour, the foundation of economic life.

To illustrate the importance of prices, we shall at present consider only the relations between creditor and debtor.

The assets of a debtor (mortgager, issuer of bonds, acceptor of bills, tenant, holder of life-insurance policies, taxpayer) usually consist of wares, machinery, land, cattle, whereas his liabilities

always consist of a definite sum of money. And the debtor can obtain money to meet his liabilities only by selling for money part of his assets, usually his produce.

If the ratio of exchange of wares to money changes, the ratio of the debtor's assets to his liabilities evidently changes in the same proportion. Suppose, for example, that the price of wheat is \$62 a ton (the price in Germany after the introduction of the import-duty on wheat) and that a farmer needs one quarter of his harvest to provide for taxes, insurance and interest, including redemption charges on mortgages (or for rent, in the case of a tenant-farmer). If, now, the duty on wheat is removed, the farmer may have to sacrifice one-third of his harvest to make the same payments. This increase may mean the disappearance of the debtor's profits, and his ruin.

The position is reversed if prices rise, and it is also, of course, reversed if looked at from the standpoint of the creditor, who gains exactly what his debtor loses, and loses exactly what his debtor gains, through a change in the level of prices.

Credit has expanded enormously in modern times. German debtors owe German creditors something like three or four hundred billion marks.* The interest and amortization for this sum can be raised only by the sale of the products of labour. A small change of prices is sufficient to throw a burden of many billions of marks upon one of these two great classes, to the benefit of the other.

An average fall of prices of 1%, the commonest of events with our much-praised gold standard, throws a greater burden upon the German debtor than the five billions of the war-indemnity of 1871 threw upon the French nation.

Or suppose a tax-payer pays \$100 annually in direct and indirect taxes to meet his share of the interest and sinking-funds on local and government loans. The ratio of exchange between money and the product of his labour determines whether he must devote ten, twenty or fifty days to earning the money.

Should our monetary policy aim at raising prices in order to exploit the creditor for the benefit of the debtor, or should we lower prices in order to enrich the stock-holding class? Are we

* Throughout this book, in accordance with American notation, a billion means 1,000 millions. The German word is "milliard."

to leave the determination of the question to creditors or to debtors; are we to allow the monetary standard to be determined by egoistic motives of individuals? The answer is that private interests must never be considered in the management of money. Money must be managed in the interests of economic life as a whole, not in the interests of individuals.

Independently of time and place money should always obtain the price it obtains to-day. What the holder of money has paid for it in commodities he should be able to demand in commodities to-morrow, or ten years hence. In this way the debtor pays back what he has received, and the creditor receives what he has given, no more, no less.

That is self-evident and requires no proof.

7. HOW THE PRICE OF MONEY CAN BE MEASURED WITH PRECISION *

If the price of money is to remain constant, proof must be given that it actually has remained constant. If this proof is not forthcoming, either debtors or creditors will be dissatisfied and demand the lowering or raising of the price of money. The only way of silencing the complaints of creditors and debtors is to prove in black and white that the price of money has remained unchanged.

The conflict between the advocates of the gold standard and the bimetallists turned upon the question whether the price of money had changed. The question was debated on both sides under the influence of an illusion, that of so-called "value" ("intrinsic value," "store of value" etc.), and therefore could not be settled. The finest scientific proofs of the bimetallists were again and again reduced to absurdity by this fiction. If the bimetallists, by the help of laboriously compiled statistics, showed that prices had fallen 10, 20 or 50% since the introduction of the gold standard, the champions of the gold standard replied that this objection was meaningless, since the question was not the price of money but its "value"—as indeed the bimetallists admitted. The general fall in the price of commodities was ascribed to the decrease of costs of production and transport, caused by technical progress. Only a

* By "price of money" is meant the amount of commodities that must be given in exchange for a certain amount of money.

few convinced opponents of the theory of value could succeed in proving that the introduction of the gold standard was a blunder through which debtors (among them the State) were plundered to the profit of their creditors. The bimetallists would have won, and won with ease, if they had confined the issue to the price of money, but they disarmed themselves by their docile acceptance of the illusion of "value."

The price of money can be expressed only in commodities. If barter is excluded, the price of commodities can be expressed only in one way, namely by a sum of money, but the price of money can be expressed in as many ways as there are kinds and qualities of commodities, terms for the delivery of commodities, markets for commodities. If we read every current market report, price-list and catalogue in a country, we know what, at that moment, its money is worth.

But if we need to find out whether the price of money has changed, it is not sufficient simply to compare the prices of commodities to-day with their prices of yesterday. For it is probable that a large number has increased, and that another large number has decreased in price.

At the same time a change in the price of steam-coal, wheat and iron is, of course vastly more important than a change in the price of needles, canaries or buttons.

An example will show what we mean:—

	1906	1907
A person paid for 1 tobacco-pipe ...	\$1.00	\$1.10+
1 tin of boot-polish ...	0.50	0.60+
1 doz. steel pens ...	0.50	0.80+
1 hat ...	3.00	2.50—
1 pair of boots ...	4.00	3.00—
1 pair of trousers ...	11.00	10.00—
	<hr/>	<hr/>
	\$20.00	\$18.00—

Thus although one half of these six articles increased in price and the other half diminished, yet the "average price" fell \$2 or 10%. Judging by the above commodities the buyer will observe an increase in the price of money of approximately 11%. The buyer receives 11% more commodities for his money than formerly.

To establish equilibrium with the time of the first measurement it is not necessary that the former exchange-relation of the commodities to one another should be re-established. It is sufficient if the price of money is lowered. All commodities must simply rise 11% in price. Money has no influence upon the exchange-relation of the commodities among themselves. If, simultaneously, boot-polish rises in price, and a pair of trousers falls in price, that is the result of changed conditions in the production and sale of these commodities. Only when, "on the average," more or less commodities of the same quality are received for the same amount of money, can we say that the ratio of exchange of commodities and money has altered. And so, to re-establish the former equilibrium, an increase of 11% (11.1%) must be made upon each of the above six articles, no matter what their former prices were. We should then have:—

1 tobacco-pipe ...	\$1.10	} +11.1% =	\$1.22
1 tin of boot-polish ...	0.60		0.67
1 doz. steel pens ...	0.80		0.89
1 hat ...	2.50		2.78
1 pair of boots ...	3.00		3.33
1 pair of trousers ...	10.00		11.11
	<hr/>		<hr/>
	\$18.00		\$20.00

The total is now \$20, as before.

This uniform proportionate increase can only come from a cause acting uniformly upon all commodities, not from changes in the various costs of production, and money alone * can act uniformly upon the prices of all commodities. To re-establish equilibrium we need only bring more money into circulation until prices have risen 11%.

To measure variations in the price of money we must therefore determine the average price of commodities and compare it with the average price of some former time.

Thousands of millions are here at stake, since the price of money

* General changes of price affect the relation between debtor and creditor, between the earning class and the stockholding class. This affects the demand for, and consequently the price of, the (very different) commodities bought by these two classes. This reaction is not treated here, as it is immaterial to the understanding of this part of the subject.

determines the prosperity or ruin of creditors and debtors. Careful work is therefore necessary; the method employed must be proof against interested outside manipulation and give an exact scientific result; otherwise there will be no end to the complaints of debtors and creditors.

Unfortunately this exact, unimpeachable result is not attained by the methods hitherto proposed. Dismayed by the difficulty of determining officially the prices of millions of commodities of different qualities, at different places, and of classifying them according to their relative importance, statisticians have proposed to choose a limited number of commodities from among the staple articles bought and sold at the exchanges, and to estimate the relative importance of these commodities by the amount of capital sunk in their production and marketing.

In this manner the "Index numbers" of Jevons, Sauerbeck, Soetbeer and others have been compiled.

To facilitate the understanding of a matter of vital importance to economic life, I shall here print such a table—with the prefatory remark that all the figures in it are drawn from imagination and are used simply as illustrations.

Table for the Calculation of the Average Price of Staple Commodities

	1860			1880			1900		
	a Price	b Quant.	c Total	a Price	b Quant.	c Total	a Price	b Quant.	c Total
1. Wool	1.00	100	100	0.80	90	72	0.70	40	28
2. Sugar	1.00	20	20	0.90	90	81	0.80	110	88
1. Flax	1.00	70	70	1.10	40	44	1.20	10	12
2. Cotton	1.00	20	20	0.90	40	36	0.80	60	48
1. Wood	1.00	150	150	1.20	100	120	1.30	80	104
2. Iron	1.00	50	50	0.80	100	80	0.70	130	91
1. Wheat	1.00	400	400	0.80	300	240	0.75	260	195
2. Meat	1.00	150	150	1.20	200	240	1.40	260	364
1. Indigo	1.00	30	30	0.80	5	4	0.75	1	(1)
2. Petroleum	1.00	10	10	1.10	35	38	1.20	49	58
		1000	1000		1000	955		1000	989

Explanation: According to this table the average price of these ten commodities changed from 1000 in the year 1860 to 955 in the year 1880 and 989 in the year 1900.

The quantities in the three columns (b) must of course always be brought to the same total amount (here 1000) if the result is to hold good. The figure chosen is unimportant, it is only necessary that the ratios of the separate quantities among themselves in each column (b) should be correct. If for instance, we reduced the sum of these quantities in our table to 500 or 100, the final result would be the same; the relation of the numbers 1000—955—989 would remain unchanged.

Each price in the first column (a) is for the quantity of the commodity obtainable in the year 1860 for one dollar, for example, $7\frac{1}{2}$ ounces of wool, 51 ounces of sugar, 6 ounces of flax, etc. For this reason all the prices appear as one dollar in the first column. The prices in the second and third columns (a), for 1880 and 1900, are for the same amounts, the amounts of the commodities which were obtainable for one dollar in 1860; that is, again $7\frac{1}{2}$ ounces of wool, 51 ounces of sugar, etc.

To illustrate the chief difficulties to be overcome with this method of determining the general level of prices, I have chosen the commodities in such a way that a commodity of decreasing importance in the economic life of the country is followed by a commodity of increasing importance. Wool and sugar are an example. German sheep-breeding has steadily declined during the last decades and wool has by no means the same importance in German economic life as it had 40 years ago. At that time the price of wool reacted upon the price of an enormous flock of sheep and upon the rent of a large tract of country which was used for sheep-grazing. To-day German agriculture is hardly concerned in the price of wool. If the price of wool fell from 100 to 50, scarcely one German farmer in a hundred would be aware of the fact; wool-merchants, weavers and cloth-merchants alone would suffer.

Only by "weighting" the price of wool with its quantity can we reduce the price in the above table to its real importance. For this quantity, therefore, we have chosen the numbers 100—90—40.

Of sugar the reverse is true. The German beet-sugar industry has expanded greatly since 1860, not alone absolutely, but also in comparison with other industries. Many sheep-pastures have been converted into beet-fields; large numbers of German farmers and considerable amounts of capital in land, factories and stores are

affected by the price of sugar. Sugar is therefore given a place of increasing importance in our table.

It is the same with the other pairs of commodities, flax and cotton, wood and iron, wheat and meat, indigo and petroleum.

If we can make sure:—

1. that the data are complete,
2. that the separate prices are correctly ascertained,
3. that the estimates of the comparative importance of the separate commodities are correct,

the result, doubtlessly, will be unobjectionable.

But this is a large assumption. There are millions of separate commodities, and each commodity has numerous differences of quality, as one can observe by turning over the pages of the catalogues of the separate factories. Take, for example, a catalogue of photographic articles, of drugs or hardware. A thousand different articles strike the eye. And how are the prices to be officially ascertained? Factories have for their different customers blue, red, green and white quotation-lists with different rates of discount. Is the official price-collector to be given a white or a green discount quotation?

But if there were no other, simpler, method of reaching a sufficient degree of accuracy, we might be content with an approximate result, a determination, not of the average price of all commodities but of 100, 200 or 500 of the most important staple articles.

If the work of collecting the prices were left to the Chambers of Commerce, and the average were taken of the prices collected by them, no great objection could be made from the standpoint of impartiality towards debtors and creditors.

Absolute precision could not be obtained since:—

1. The prices of commodities cannot be exactly ascertained by third persons, especially if these persons are government officials.
2. The estimation of the relative importance of the different commodities is exceedingly intricate.

But is this any reason why we should make no attempt to measure the price of money? The tailor measuring cloth does not use the standard metre of Paris; his customers are satisfied with the use of the wooden yard-stick. The rough result obtained by

the above method of ascertaining the price of money would be preferable to the wordy assertions of the President of the Reichsbank. What do we know to-day of the price of money in Germany? Nothing but what our own observation tells us, or what interested persons, without proofs or facts, choose to assert.

Compared with this blind ignorance an approximate measurement of the movements of the price of money would be practically and theoretically an immense advantage. Such a measurement would perhaps bring surprises and embarrass the worshippers of the gold standard, but is this any reason for renouncing it? Does the judge when framing his questions for the jury take into consideration the embarrassment of the thief? Is not a tallow-candle better than inky darkness, the doubt that science suggests preferable to blind superstition?

For 40 years we have been put off with the assertion that the German monetary standard is an excellent standard, and for 40 years we have waited in vain for the proof.

Statistics of prices collected by the above method would give us a basis for examining the correctness of this assertion. The reason why such statistics have not been compiled up to the present is fear of the unwelcome light they would throw upon our present currency administration. Routine hates science.

It is curious to observe how the same persons who are blind to the acrobatics of the gold standard suddenly become meticulous pedants and raise the claims of accuracy beyond all practical requirements when considering a paper-money standard and the possibility of its measurement. The complaint that within short periods of time, prices, under the gold standard, rise or fall 10—20—30% is met with the counter-complaint that the proposed method of measurement is not absolutely reliable, that it is not free from errors, though possibly the existence of these errors cannot be proved.*

But even such malevolent pedantry can be silenced, provided

* To prove the errors complained of in this method of measurement critics would have to provide a method of measurement of their own. But this they refuse to do, as the method would be applied to the gold standard, which could not stand the test. They prefer therefore to speak of "unprovable" errors and to arouse the suspicion in lay minds that anything which is "unprovable" is, for that reason, particularly dangerous.

that we are prepared to take a certain amount of trouble. For what is the problem at bottom? It is merely to discover whether the interests of creditors and debtors have been affected by changes of prices; whether and to what extent the budget of the business classes has been influenced by a rise or fall of prices; whether wage-earners, officials, stock-holders and pensioners can buy more or less commodities with their money income.

To ascertain this beyond the possibility of error it would only be necessary to pass the following law: That all producers (farmers, manufacturers) be required to furnish the amount of the commodities produced by them, and the prices obtained, to authorities designated for this purpose, perhaps the Chambers of Commerce. The separate figures would be collected by these authorities and the result communicated to the central bureau of statistics. The communication would be somewhat as follows:—

5,000 tons wheat, per ton	...	...	\$140	\$700,000
1,000 tons potatoes, per ton	...	...	30	30,000
5,000 gallons milk, per gallon	...	...	0.60	3,000
600 cubic yards boards, per cubic yard	...	...	9	5,400
5 million bricks, per thousand	...	...	8	40,000
200 sheep	...	...	20	4,000
500 doz. straw hats, per doz.	...	...	10	5,000

Annual production of the District X. \$787,400

At the central bureau of statistics the amounts returned by all the districts would be added together. The total would give the point of comparison for the determination, from time to time, of later variations. For these new measurements new prices, ascertained by the local collecting agencies, would be incorporated in a calculation similar to the one sketched above. The new total would give the average change of prices for the whole production of the country. The prices would therefore have to be collected as often as measurements were desired, but the amounts produced would only be taken annually. For foreign commodities statistics of imports would be used.

Since the volume of production varies as much as prices, the new statistics of production would not be immediately available for the new measurement. To obtain comparable quantities the new

amounts of production must be used first with the old prices, and then with the new prices. The comparison of these two figures gives the index numbers of the movement of the price of money.

Merchants' stocks are left out of this calculation. They are included in production, and we may assume that changes revealed by statistics of the prices of production would apply in the same proportion to the wares held by merchants. It would therefore be a useless complication to include the merchants' stocks in the statistics of prices. The same is true of wages, which are already included in the price of wares. It may also be assumed that if factory prices in general are constant, the cost of living must also be constant; that workmen, officials, stockholders and pensioners will be able to buy the same quantity of goods for their money. (The workmen's house-rent, which consists chiefly of interest, cannot be taken into consideration in this connection).

Means of production (land, houses, machinery, etc.) must not be included in these statistics. The means of production are no longer wares for exchange, but goods useful to their owners through the employment to which they put them. And the price of things which are not for sale is a matter of indifference.

That part of the instruments of production which is consumed by "wear and tear," and written off, is transformed into wares and reappears regularly in the market. It is thus sufficiently represented in the prices of wares.

The State, by this plan, neither ascertains the prices nor estimates the importance of the separate commodities. The whole work is carried out by the people themselves. The price of money is thus ascertained impartially, outside the sphere of politics. The nation is directly responsible for its monetary standard.

The duty of supplying the figures to be placed at the disposal of the State would hardly be a noticeable burden upon the business world, and the records required would be extremely useful to the producer, showing him to what extent his balance was affected by the management of the monetary standard. He would learn how much depended upon his activity and how much upon the activity of the Bank of Issue.

The most important objection to this method is that individuals interested in the rise or fall of prices (debtors or creditors) would

falsify their reports; that farmers with debts, for example, would endeavour to prove that prices had fallen, in order to cause the State to raise prices by the issue of money—a rise of prices being equivalent to a general relief of debtors. But this danger is not great, since everyone would know how infinitely little his declaration would affect the total result. If an indebted farmer wrongly declared a loss of 1000 marks on a turn-over of 10,000 marks, this would be a negligible quantity in comparison with fifty billion marks, the turn-over of Germany as a whole. False declarations could be made punishable, and individuals would ask themselves whether the risk was not out of all proportion to the expected gain.

Each declaration would also be checked by the others. If the majority of farmers reported a rise of prices, an exception would be noticeable, and the falsifier would have to be prepared to face an inquiry.

Obviously this procedure takes no account of the illusion of “value.”

Wares are paid for with wares, and money can be measured only by wares, by the material characteristics of wares. There is no other measure of money. I have given wares for money and I shall receive wares for it. Not work, not sweat. Someone in exchange for my money gives me an article. How he came into possession of it, how long he worked upon it, is his concern, not mine. I am interested solely in the product. Labour must be sharply distinguished from the product of labour, and wages must therefore be rejected as a measure of the price of money. Wages do indeed depend upon the product of labour and not, as Marx asserts, upon the factory clock. But wages are not identical with the product of labour, inasmuch as a deduction must be made from the latter in the shape of rent and interest. But wages, plus rent, plus interest, are equivalent to the product of labour which, in the form of wares, is, as we have seen, the measure* of the price of money.

* I use the word “measure” reluctantly. A measure is always a part or multiple of the object to be measured; the length of a bale of cloth is measured by the length of the yardstick. But what part of a horse can be found in the dollars for which it is sold? For 100 years economists have called money “a measure of value” and none of them has as yet felt the necessity of finding a substitute for this manifestly erroneous expression.

That money and commodities are exchanged does not prove that they

8. WHAT DETERMINES THE PRICE OF PAPER-MONEY?

The theory that the ratio in which commodities are exchanged is determined by the amount of work necessary for their production cannot be applied to paper-money. Paper-money has indeed a price but it has no “value,” since it has cost no work. Paper-money has no “intrinsic” or “extrinsic” value, no “value as a substance”; it cannot serve as a “store of value,” a “conservator of value” or a “means of transport of value”; it is never “undervalued” or “fully-valued.” The price of paper-money cannot “oscillate about its value as centre of gravity.” (Terminology of the theory of value †).

Paper-money must therefore go its own way; it is completely subject to the forces which determine price, and serves but one master.

The forces that determine price are summed up by the words demand and supply. To answer the question at the head of the chapter we must therefore understand clearly what these words mean.

If we ask to-day: What is demand for money? Who creates a demand for money? Where do we find a demand for money? We receive contradictory answers. Probably the answer most frequently given would be: “In the banks, where employers and merchants discount bills. If the demand for money increases, the rate of interest

have something in common; on the contrary, it is because money and commodities have little or nothing in common, it is because they are incommensurable, that they are exchanged to the advantage of both parties. But how can we “measure” two things that lack a common property?

This criticism also applies to the expression “purchasing power of money” which causes the same illusions and must be rejected. For price is the result of bargaining and is influenced by thousands of factors.

A real measure, again, the standard platinum metre at Paris, is kept in a special compartment constructed deep in the earth in order to remove it from the influence of variations of temperature. Apply such a measure to the action (bargaining) on which price is based and you will at once recognise the illusory character of the expressions “value,” “purchasing power,” “measure of value,” as applied to money.

And perhaps, if you are a bad mathematician but a good philosopher, you will then discover the term that economists can henceforward without reluctance employ.

† We might here ask why price must “oscillate” about “value,” why the forces that are strong enough to separate price from value are not also strong enough to make the separation lasting.

risers, so the rate of interest can be used as a measure of the demand for money. States that, unable to balance their budgets, float loans create a demand for money; so do beggars."

But this is not a demand compatible with the conception of a medium of exchange; and money is above all things a medium of exchange. We must learn to regard money simply as a medium of exchange. That the above answers are nonsense becomes apparent if we substitute for the word "money" the expression "medium of exchange."

The merchant who asks the bank for money exchanges nothing; he gives nothing but his promise to repay the money; he borrows, he does not exchange. He gives money for money; there is no question of commerce and prices, but one of interest. Nor does the State create with its loans a demand for the medium of exchange; it offers nothing in exchange either. A sum of money in the present is changed for a sum of money in the future.

This is not demand for the medium of exchange; it is not a demand for money compatible with the purpose of money. To demand money as a medium of exchange, something different from money must be offered for it.

Where, then, is the demand for money?

Evidently wherever there is need of a medium of exchange; wherever the division of labour throws upon the market wares which, for their exchange, require a medium of exchange, that is, money.

And who demands money? Evidently the farmer bringing his produce to market, the merchant selling his wares across the counter, the workman offering his services and asking money for the product of his labour. Where the supply of wares is largest, the demand for the medium of exchange is largest; where the supply of wares increases, the demand for money, for the medium of exchange, increases. If there are no wares to be exchanged, the demand for money disappears. Primitive production and barter mean absence of demand for money.

We must therefore distinguish sharply between the merchant offering a farmer calico in his shop and the same merchant an hour later visiting the bank to discount a bill. With his calico in his shop the merchant creates demand for the medium of exchange; with the

bill of exchange at his bank he creates no demand for money, since a bill of exchange is not a ware. We speak here of rate of interest. This is simply desire for money, not demand.

Demand for money has nothing in common with desire for money. The beggar, the farmer in the grasp of the usurer, the State, the employer, or merchant discounting a bill desire money; but demand for money is only created by those who have wares for sale. Desire for money is complicated, demand for money is simple. Desire for money comes from a person, demand for money comes from a thing, from a commodity awaiting sale. The beggar desires alms; the merchant desires to enlarge his business; the speculator desires to keep loan-money out of reach of his competitors, so as to monopolise the market; the farmer has fallen into the trap laid by the usurer. All of them have an intense desire for money and none of them is able to create a demand for money, since demand depends, not upon the cares of men, but upon the stock of wares awaiting exchange. In this sense it would be false to say that desire for a thing and the supply of it determine price. There is the greatest possible difference between the desire for money, measured by the rate of interest, and the demand for money, measured by prices. The two things have nothing in common.

Persons who hear the word "demand for money" and do not at once think of wares, or the words "a great demand for money" and do not at once think of a pile of wares, a market, a goods train, an overladen ship or perhaps of "over-production" and unemployment, have not grasped the meaning of the expressions: "Demand for the medium of exchange," "Demand for money." They have failed to understand that the division of labour produces wares for the exchange of which money is as necessary as railway wagons for the sale of coal.

If we hear someone speaking of an increasing demand for money because the rate of interest has risen, we may be sure that this person is unable to give clear expression to his ideas. And if we find a professional economist confusing demand and desire, it is our duty to remark that scientific questions should not be handled in loose language.

We thus separate the demand for money from human desires, from the state of the market, from business projects, dealings,

speculations and so forth; we rescue it from the enveloping fog of "value" and enthrone it upon the mountain of wares which the division of labour throws upon the market—visible to all, palpable, measurable.

We distinguish this demand for money from desire for money. Upon another mountain, not of wares but of bills of exchange, deeds of mortgage, bonds, government securities, insurance-policies and so forth we place the inscription: "Desire for money." Upon the first mountain we write "Prices" and upon the second "Rates of interest." Anyone who, in the course of the following inquiry, thinks of desire for money when I write demand for money had better lay aside this book. It was not written for him.

Demand and supply determine price, the ratio in which money and wares are exchanged. What demand for money is, we now know. It is material; it is the stream of wares continuously flowing from the division of labour.

But what is the supply of money? We must give this conception a form and content; we must remove it also from its enveloping fog.

The farmer who harvests potatoes, the tailor who sews a coat, must offer the product of his labour for money—but what does he do with the money? What have the 100,000 farmers and artisans done with the thaler which for 100 years has passed from hand to hand? Each of them offered the thaler for wares which, once in their possession, became goods for use and disappeared from the market. But the thaler returned again and again to the market; it remained on the market for one year, 10 years, 100 years; and perhaps, supposing it to be re-coined, for 1000, 2000, 3000 years. To all through whose hands it passed the thaler was useful only as a ware; of all those 100,000 persons there was not one who could use it otherwise. The uselessness of the thaler for consumption compelled everyone to get rid of it again, to sell it, that is, to offer it in exchange for commodities.

Those who had much money were forced to offer much money in exchange, those who had little money were forced to offer the little they had. The offer of money was, and is, quite correctly called the demand for commodities. Where the stock of commodities is large, the demand for money is large. Similarly it can

be said that where the quantity of money is large there is necessarily more demand for commodities than where the quantity of money is small. (The limitations of this statement will soon appear).

Is there any demand for commodities other than that which the supply of money represents?

Here again, as with money, we must distinguish between the desire for, the need of, commodities, and the demand for commodities. The "needy" need or desire commodities, but only those persons demand commodities who offer money for them. The need or desire for wares is expressed by requests or begging letters, the demand for wares by the ring of hard cash upon the counter. Merchants shun desire for their wares, but demand for their wares attracts them like a magnet. In short, the demand for wares consists of the offer of money; those who have money must create a demand (We shall see later when they must do so.)

Demand for commodities, usually known simply as demand, is therefore always represented by money. A mountain of money means a great demand for commodities, though not indeed always, as is proved clearly by the 180 millions in the war-chest at Spandau. During 40 years this mountain of money has not bought a pfennig's worth of commodities. Such exceptions will be treated later. The discovery of a new gold mine means an increasing demand for commodities, and if a country with a paper-money standard sets in motion additional printing-presses for paper-money, everyone knows that demand, and consequently prices, will increase. If everyone were given the right to cut banknotes, treasury notes and coins in two, and to use each half as a whole, demand, and prices would be doubled.

But can we now go further; can we do with the supply of money what we did with the supply of wares, can we say: "To measure the stock of money is to measure the demand for wares?" In other words, is the supply of money to such a degree identical with the stock of money that it is completely independent of the wishes of the possessor of money? Or is the offer of money, partly at least, subject to the whims of the market, to the greed of speculators? In short, is the supply of money something material, namely money itself, or does it include an action?

The answer to this question is obviously of extreme importance for the solution of our problem.

The division of labour causes a never-ending stream of wares called "supply." The stock of money causes the offer of money called "demand." The stock of money is a definite quantity. If, therefore, the offer of money were continuous, price, the ratio of exchange between money and wares, would be independent of human action. Money would be the embodiment, sharply defined, of demand, just as the wares are the calculable, measurable embodiment of supply. We should then only need to ascertain the ratio of the stock of money to the stock of wares in order to know whether prices were about to rise or fall. This would actually be true of Free-Money as described in the next section of this book. Free-Money embodies demand, it eliminates from demand the wishes of the possessor of money in respect to the time, place and amount of demand. Free-Money dictates to its possessor orders for commodities and makes these orders an imperative necessity. With Free-Money the amount of demand can be measured directly by the amount of Free-Money issued by the State, just as the supply of potatoes or of a morning newspaper can be measured by the size of the harvest or of the edition printed.

But this is not true of the present form of money, as we shall see later, and we cannot therefore at once answer the question at the head of this chapter. We must undertake further investigation before we can say what determines the price of the present form of paper-money.

9. INFLUENCES TO WHICH DEMAND AND SUPPLY ARE SUBJECT

Wares are produced for the market and are useful to their producers only as objects of exchange. For this reason supply is equal to the stock of wares; it is something material, or at least an involuntary action carried out by means of wares. Without wares the action which lies in supply cannot be carried out, and with wares it must be carried out. To offer wares for exchange is the only thing which can be usefully done with them. In general therefore, the action which lies in supply is so closely identified with the substance

necessary for the action that substance and action are bound into one.

Supply, that is, demand for money, is therefore identical with the stock of wares.

The stock of wares, again, depends upon:

1. The stream of wares flowing into the market, due to the division of labour.
2. The stream of consumers' goods leaving the market after completion of exchange.

If the stream of commodities into and out of the market never varied, supply, that is demand for money, would be constant. But this, we know, is far from the truth. The stream of wares into the market is continually increasing because of the continual increase of population. One hundred workers throw more wares upon the market than ninety. The stream of wares into the market also increases because of the steady expansion of the division of labour. If a farmer organises his farm for cattle-breeding, instead of wasting his energy in producing articles for his own consumption, he must make more frequent journeys to market. Formerly he bought and sold little, now he sells his whole produce; he has therefore increased the supply of wares, that is, the demand for money, by almost the whole amount of his production.

In the country and in small towns many artisans used to follow their trades intermittently; they had subsidiary occupations such as farming or gardening; they made their own tools, clothes, furniture, they taught their children. No artisan can now spare time for such occupations. His trade occupies him completely and pays him better. The whole product of his labour takes the form of wares and comes to market, where it creates demand for money. In this way demand for the medium of exchange has been greatly increased during the last decades.

Still more is the offer of wares, the demand for money, increased by improvements in the means of production. If a weaver with a hand-loom wove 10 ells of cloth he marketed only 10 ells of cloth; his demand for money was only 10 ells of cloth. With modern machinery the same weaver weaves 500 ells. He therefore sends 50 times more wares to market; his demand for money has increased

fifty-fold.* It is the same with all other arts and crafts. To copy the books produced annually by a single modern printing press, the whole population of the Chinese Empire would have to spend its time from morning till night, year in, year out, in copying. The same is true of colour printing.

Thirty men in Argentina with steam-ploughs and threshing machines produce as much wheat as 3,000 German smallholders with the same effort. These Argentine farmers consequently produce one hundred times the supply of wares and cause one hundred times the demand for the medium of exchange.

The amount of supply should not, however, be measured solely by the amount produced, but also by its quality. A ton of first-class wheat represents a greater demand for money than a ton of wheat of the second quality.

Modern products are constantly advancing in quality. Breeding stock and seeds are being steadily improved; the finish given by machinery is becoming finer and finer; purer and more useful chemicals reach the market. With electric chisels and the splendid models furnished by our exploited proletariat, sculptors produce miracles, and the demand for money increases by the full advance of the art of the present beyond the art of the past.

The stream of products into the market is also increased by the discovery of uses for formerly useless products. The German blast furnaces supply over a million trucks of basic slag for use as a fertiliser. Slag, at one time a troublesome waste product, now creates a demand for many hundred million marks of the medium of exchange. (This does not, however, mean that the circulation need be increased by so many millions). The same is true of potash salts and of many other substances. Less money, less of the medium of exchange would be required in Germany if the usefulness of basic slag and potash salts had not been discovered.

* Value theorists, who have succeeded in enveloping economic phenomena in an impenetrable fog, will here object that the improved means of production have reduced the "value" of 500 ells to the value of the former 10 ells, with the result that 500 ells now only cause the same demand as 10 ells formerly. In reply we may ask why improvements in the means of production should halt before money. We should be justified in replying as follows: "The improved processes of production have reduced the 'value' of 500 ells of paper-money to the 'value' of 10 ells. With the fall in the value of wares, the 'value' of money has also fallen, and has thereby remained on the same level as that of the wares."

But the demand for money is also influenced by factors independent of production. The division of property makes many things wares which were formerly goods for use. Land, for instance, can now be bought and sold; formerly it was the property of the community and inalienable. Year after year large sums of money are required for the transfer of real estate. The demand for money had increased since the land of the country has been degraded to the level of a ware. Interest upon mortgages and rent require much currency. Less currency would suffice if farmers had not to put by part of the money received for their produce to pay the rent and interest due at Martinmas; less money would be required if the land had remained common property.

The same is true of house-rent. Formerly most men lived in their own huts or houses, and rent was something exceptional. At present the houses in which men dwell are seldom their property, and part of the weekly or monthly wage must be set apart to pay the rent on quarter-day. Many millions are thus locked up for days, weeks or months.*

The provision of water, light, power, etc., by the community, converts a number of important things into wares which were formerly produced for direct consumption. This also increases the demand for money.

Again, nothing can become a ware unless it can be brought to the purchaser. How many things are to-day lying useless because, for want of railways, roads, canals, they cannot be transported! Mountains of ore and timber, herds of cattle are brought into the market by a new railway line, a tunnel, a bridge, a voyage of discovery, and the demand for money is increased by the whole amount of these products.

In general, therefore, the supply of wares, the demand for money, is constantly increasing. But sometimes the demand for money decreases, for example through a general reduction of the hours of

* Whether rent on land and houses or other regular payments are made every quarter, every month, or every week also affects the demand for money. If a workman puts by the part of his wages destined for rent in the first weeks of the quarter, the money lies fallow for three months. If, as in England, he pays his rent weekly, the money at once comes into circulation again, through his landlord. This is one of the reasons why England manages with a much smaller quantity of currency than any other country.

work. War, failure of the crops, and epidemics can cause important reductions in demand for the medium of exchange, as does the whole present wage-policy of the workers.

These examples suffice to illustrate some of the many factors which determine the flow of wares into the market. But the offer of wares depends also, as we have already stated, upon the stream of wares out of the market. Until a commodity has reached the consumer it is offered for sale and creates demand for money. Every commodity carried away from the market means a reduction in the demand for money.

Thus the supply of wares, the demand for money, depends also upon how quickly wares find purchasers and cease to be wares. A comparison with the means of transport will again serve to make this clear. Suppose a certain quantity of bricks, say a thousand tons, must be brought daily from the brick fields to the city. The road is bad, bridges are wanting, and the bricks have to be unloaded to pass a morass. The carts therefore proceed slowly, their load is small, and many carters must be engaged to cope with the work. Suppose now that the road is improved, the morass filled in, and bridges built. The carters can now take larger loads and can make two journeys instead of one. Only half the carters are required; the thousand tons of bricks now represent only half the former demand for carters. Or a narrow-gauge railway is built, and the thousand tons of bricks represent but a hundredth part, or less, of the former demand for carters. This is how we must think of the demand for the medium of exchange caused by the stock of wares.

To bring the wares from producer to consumer by way of exchange, a series of commercial organisations is necessary. Upon the existence and efficiency of these organisations depends the speed with which wares leave the market.

Suppose a bag of Brazilian coffee had to be exchanged by way of barter for prints from Aix-la-Chapelle. It would have to be exchanged countless times; it would drift about the market endlessly as a ware. To-day, with the help of money, a bag of Brazilian coffee often reaches the German consumer after three or four changes of possession.

The technique of commerce has reached a comparatively high

degree of perfection*, and each improvement accelerates the conversion of wares into goods for use. We need mention only the improvements in modern banking and in the laws relating to bills and cheques; co-operative societies and department stores; the postal, telegraphic and consular services; advertising and printing; commercial schools for the training of young business men; uniform weights and measures; telephones, typewriters and copying presses.

A modern commercial undertaking can do 10, 20, 100 times the amount of business that was formerly possible; the "salesmanship"† of a modern merchant is, from the merely technical standpoint, 100 times greater than that of his grandfather.

The division of labour continuously throws masses of wares into the market, and merchants, with the help of commercial organisation, continuously direct these masses of wares out of the market, into the hands of the consumers.

If merchants had not this commercial organisation at their disposal, the stores, shops and markets to receive the slowly flowing stream of wares would have to be many times larger. A mountain stream broadens as it enters the plain, as the fall decreases; and it would be the same with wares. Without modern commercial organisation the stock of wares would be larger, the demand for money incomparably greater. Even at the present day we often experience the breakdown of some form of commercial organisation, for instance the organisation of credit, and we can then observe how the flow of wares from the market is retarded, how the stock of wares increases until it threatens to flood the market (so-called over-production). Under the pressure of this growing demand for the medium of exchange prices then weaken and there is a crisis.

Suppose that a road is incapable of dealing with the traffic because of its many turnings and bad surface. The road is straightened and its surface adapted to rapid traffic when, in spite of the increased volume of traffic, it will appear half deserted. If, now, the old conditions are suddenly restored, the traffic will perhaps be completely blocked by the congestion of vehicles. It is the

* Only the power of money to exchange wares is steadily decreasing—as we shall prove later.

† Salesmanship: Capability of bringing wares from the place of production to the consumer.

same with commercial organisation which straightens and mends the roads for the rapid exchange of wares. If part of the organisation breaks down, the stock of wares immediately becomes greater, that is to say, the demand for the medium of exchange increases.

As credit transactions have in this way a powerful influence upon the demand for money, we must consider them somewhat more closely.

We said that wares represent a demand for the medium of exchange exactly corresponding to their amount and quality. So, if there were any method of exchanging wares without employing money, the demand for money would be reduced by the amount of the wares so exchanged. This is self-evident when examined with the aid of our conception of the demand for money. Here again we may use a railway-line as an illustration. The demand for rolling stock is exactly equal to the amount of goods awaiting transport. But if a canal is built along the railway, the demand for rolling stock decreases by the amount of the goods transported by canal.

Credit transactions substituted for money in the exchange of goods have the same effect as such a canal. If A. in Königsberg sends B. in Aix-la-Chapelle a consignment of butter, and B. pays the bill with a consignment of wine, the transaction is completed without a pfennig of money. If B. had no credit with A. or A. had no credit with B. the butter would have been handed over only for money, and the wine could only have been exchanged in the same way. The demand which the wine and butter would have created for money is here eliminated by credit.

The demand for money is therefore reduced by the exact amount of the wares exchanged by way of credit. If the sum of credit transactions increases, the demand for money decreases; if credit decreases, the demand for money increases proportionately. The influence of the credit transactions upon the demand for money is unchanged if the price of the butter and wine is calculated in money and this money is represented by cheques, bills of exchange, or other credit instruments. Credit is always an evasion of the demand for money. Credit instruments, although drawn in money, render money superfluous for the transactions they negotiate. But they are only credit instruments, they rise and fall with credit. They are substitutes for money only as long as credit is flourishing.

We may again use as illustration the railway from which the traffic was diverted by a canal. If the water in the canal freezes over in winter, or evaporates in the summer drought, the goods which would have been transported by canal return to the railway. If the ice melted, the demand for rolling-stock would again decrease. An unreliable canal, sometimes silted up and sometimes frozen over, would disturb rather than relieve the traffic on the railway. Credit transactions have a similar effect upon the demand for money.

Let us now recapitulate what has been said of the demand for money in this section.

Demand for money is represented by the wares which the division of labour continuously throws upon the market. Demand for money therefore increases, and also decreases, with the quantity of wares produced by the division of labour. Demand for money is not merely proportional to the stock of wares, it is the stock of wares. There is no demand for money except the stock of wares. And when we speak here of wares we include all their material properties. When we use the word "wares" we have casks of beer, hams, ships laden with tobacco, before our eyes. We mean a palpable, not an abstract ham, a ham which we have visualised so clearly that we could swear it was the product of Westphalia. When we speak of demand for money, when we speak of wares, we do not mean crystallised or mummified labour, or a quintessence of labour, or a social substance, or sweat and blood and working hours. We do not think of a ham from which have been abstracted all material properties, the lean, the fat and the bone. Demand for money, demand for a medium of exchange, emanates from the visible, palpable things that we purchase in the market by the pound or yard, to feed and clothe ourselves. And in the demand for money is included not only the quantity, but also the quality of the wares.

Demand for money depends upon the stream of wares produced by the division of labour and the division of property. The size of this stream depends again upon the number, industry, skill and wisdom of the workers, and upon the quality of their instruments of production. An English weaver throws five times as much calico upon the market as an Indian weaver. He creates, therefore, five times the demand for money.

Demand for money depends upon the speed with which commerce brings the wares to the consumer, and this speed increases with every improvement in the technique of commerce. If the salesmanship of a young man trained in a school of commerce is greater than that of an ordinary retailer, the demand for money has decreased with the foundation of the school of commerce. (If the salesmanship of the student is not greater, these schools have no right to existence).

Demand for money is in inverse ratio to the speed with which the products of the division of labour and property lose the quality of a ware.

Demand for money also depends upon the growth or limitation of credit, that is, upon the constantly varying quantity of wares withdrawn from the market, and from the demand for money, by the constant expansion and contraction of credit.

The daily demand for money therefore equals the quantity of wares daily brought to market, less the wares exchanged by way of credit (or barter).

In short: The supply of wares, supply simply, supply as we mean it in the statement, "demand and supply determine prices"—this supply is the demand for money. The demand for money is comprised in the supply of wares and vice-versa. And supply is equal to the stock of wares.

10. THE SUPPLY OF MONEY

(The Demand for Wares or, simply, Demand)

The characteristic of the products of the division of labour and property is that they must be sold. Wares are produced to sell, and no product is more characteristically a ware than money. This we have already shown.

All other wares sooner or later leave the market as goods for consumption, but money is bought only to be sold again.

Wares can be sold only for money, and in the same way money can be sold only for wares. Just as wares represent the embodied demand for money, so money represents the demand for wares. An increase in the stock of money means an increase in the demand for wares. He who has no money can create no demand for wares.

The money in the cellars of a bank could at any moment be poured upon the market and would create a powerful demand for wares, whereas a thousand starving unemployed casting longing glances at the riches of the market can create no demand for them.

The demand for wares depends therefore chiefly upon the stock of money. The demand for wares will not always coincide with the stock of money (we shall very soon come to this crucial point), but money is a ware and therefore sooner or later compels its possessor to offer it in exchange.

A person can offer less money than he possesses, but he cannot offer more than he possesses. Our stock of money is the upper limit of our offer of money. Again, since money is a ware, more money will be offered in exchange, on the average, over a period of years, where the stock of money is larger than where it is smaller.

The 180 millions stored for 40 years in the German war chest at Spandau prove, no doubt, that money and the supply of money are not, like potatoes and the supply of potatoes, almost identical. Nevertheless the function of money is, to be offered, under certain circumstances, in exchange.

As a vehicle becomes useful to its owner only through a change of place, so money becomes useful only when it changes possession, when it serves as a medium of exchange and circulates. Inherent in money is the characteristic which sets it in circulation. To a certain degree the present form of money is under a material compulsion to circulate. (With Free-Money this compulsion becomes absolute).

We said that the stock of wares is in inverse proportion to the speed with which commerce dispatches wares from the market to the consumer. But since money is used and not consumed, since it preserves its characteristic of being a ware, since it is bought only to be sold (the use of gold in the arts can here be disregarded) an acceleration, by improved commercial organisation, of the rate at which money changes possession has the opposite effect to an acceleration of the sale of wares. The more rapidly money passes from hand to hand, the sooner it appears at its point of departure, the market, to begin its circuit again. With each change of possession

of money, a ware is brought a stage further in its progress towards the cellar of the consumer. Just as the number of ton-miles completed by a railway wagon in a given time is proportionate to the rapidity at which the wheels rotate, so the quantity of wares that a piece of money clears from its path is proportionate to the rapidity with which it completes its circuit. A brand-new, obviously genuine thaler perhaps changes possession only ten times in the week, since some persons into whose possession it comes will think twice before parting with it. With a worn thaler this obstacle to circulation is smaller, and with a doubtful one it is non-existent. So to complete the same circuit a new thaler may require a month, a worn thaler a fortnight, and a doubtful thaler a week. Four new thalers, two worn thalers or one doubtful thaler perform the same amount of work. The power of money to effect exchanges, its technical quality from the mercantile standpoint, is in inverse proportion to its technical quality from the banking standpoint. From the mercantile standpoint a doubtful thaler may be four times as efficient as one fresh from the mint. This little detail should be carefully noted.

Supply is a stream which rises in the division of labour and flows into the houses of the consumers. Demand is not a stream but an object which moves in a circle and when rotating quickly resembles a solid ring. Supply is always composed of fresh wares which make one journey and disappear for ever. Demand is composed of a mass of coins which have completed the same journey a thousand times and are destined to complete it as many times again.

This comparison is used to show that demand is subject to laws other than those of supply. The mere fact that a ware on its journey to the consumer becomes larger, heavier, that is, dearer, whereas the price of money may remain the same after it has changed hands a thousand times, shows clearly that we cannot always compare money with wares. (But nothing in this sentence should be taken to mean that at present money performs the exchange of wares free of cost).

None of the conditions determining the amount of the supply of wares, noted in the last chapter, apply in fact to demand (supply of money). Indeed one condition, the improvement of commercial

technique, has an effect upon money opposite to that upon wares. Improved commercial technique accelerates the progress of wares to the consumer, and this reduces the stock and supply of wares. A technical improvement in money, on the contrary, a reduction of its period of circulation, causes the same coin to reappear sooner at its starting point to begin its work again. Every improvement in money therefore increases the supply of money. For this reason, after the introduction of Free-Money about one-third of the stock of money will probably suffice to create the same amount of demand.

The amount of the supply of wares is in the first place determined by the conditions of production—the fruitfulness of nature, the skill of the workers and the efficiency of their tools. For demand all this is immaterial. Gold is not produced but found; and the stock of gold which affects the present generation has been inherited from its forbears. Similarly the stock of paper-money has been arbitrarily “issued.” The wares produced a year ago have almost ceased to influence supply, but the gold which Solomon brought from Ophir doubtless forms part of the currency of to-day and influences demand. Supply is each year created afresh; demand is an inheritance which includes the treasures of Solomon, the Spanish plunder from Mexico and Peru and, in recent times, the abundant gold discoveries from Klondyke and the Transvaal. The magnitude of demand is determined by men whose bones are long since dust. A thousand million human beings are engaged in feeding supply; demand, on the other hand, is kept up by a handful of adventurers in the gold-mines of Alaska and South Africa.

But demand is also affected by the velocity of the monetary circulation, and many may find it difficult to set any limit to this velocity. They will therefore be inclined to think that demand is something quite indeterminate. Yet demand, in conjunction with supply, has the supremely important function of determining price.

It is a fact that we can hardly imagine a velocity of circulation which could not be increased by some improvement in commercial organisation.

Suppose, for instance, that we have worked out carefully the

highest imaginable limit for the velocity of paper-money. Someone then proposes to impregnate the notes with some nauseous chemical such as sulphuretted hydrogen. Everyone would try to get rid of such money still more quickly, so the limit set to the velocity was obviously too low.

But in practice it is immaterial to the demand of to-day whether the velocity of circulation of money can be increased to-morrow. "To-day" is what matters in the market; "to-morrow" is important only if it can be clearly foreseen. We cannot imagine a limit to the speed of a railway train which could not be exceeded by some technical improvement; but for the present the limit is prescribed by the existing locomotives, bridges, curves and embankments. It is a matter of course for all of us that we cannot travel at any speed we please. After a little consideration we should be able to familiarise ourselves with the thought that the existing commercial organisation prescribes a maximum velocity for money which, for the present, cannot be exceeded.

But this does not mean that commercial organisation cannot be improved. As a matter of fact it is being improved almost daily. The reform of the German currency, for example, which replaced the former medley of coins by a unified coinage passing from hand to hand without examination, certainly made a faster circulation possible.*

Exchanges, clearing-houses, cheques and bills of exchange increase the velocity of circulation of money.†

Above all, the change in the form of saving has influenced the velocity of circulation. Savings were formerly hidden in a mattress, a buried jar, etc.; in modern times they are brought into circulation again through the medium of the savings banks. In this manner large sums go to increase demand.

* Arguments could be found for the opposite conclusion. The greater security against a fall in the rate of exchange and the greater security from false coinage must make the coins more attractive to savers than the worn groschen, thalers and gulden. But to save the actual currency means to interrupt the circulation of money. We have here without doubt, to some extent, a restraining influence.

† Merchants formerly, like cattle-dealers to-day, carried, when travelling, ready money for their purchases. The ocean bed on the sea route to India is said to be covered with a layer of silver lost through shipwreck.

The circulation of money is even accelerated by modern department stores, since a purchaser can spend in such a store in one day a sum which would have required two days to spend in separate shops scattered through the town. In short, the possibility of a continual acceleration of the velocity of circulation of money cannot be denied, but this possibility does not obscure in any way the picture of demand which we have drawn in the preceding pages.

Demand, then, is determined by the amount of the stock of money and the velocity of circulation of money. Demand increases in exact proportion to the increase of the stock of money and of the velocity of its circulation.

That is what we must first know of demand, to form a general picture of the determination of price through demand and supply. It must be admitted that what we have learnt is as yet very little. But at least a content has been given to these words. We can weigh and handle demand and supply; they are no longer abstractions. When we speak of supply we no longer think of business transactions, speculation and so forth. We see passing before us a goods train loaded with timber, straw, lime, vegetables, wool, minerals. With our eyes and other senses we have become aware of the nature of supply.

And if we speak of demand we do not see beggars, deficits, interest on loans. We see money, paper-money or metallic money, which we can handle and count. We know that money is brought into motion in a circuit by a force inherent in it, and that this motion can be accelerated by improvements in commercial organisation. We observe that each time money completes its circuit it seizes a certain quantity of wares and throws them from the market into the consumers' houses. We can follow with our own eyes how demand depends in part upon the rate at which money, after each ejection, returns to the market to seize another ware. We speak no longer as parrots, but with the consciousness that we are uttering the fundamental truth of economic science when we say: Prices are determined by demand and supply.

A numerical representation of the elements of price discussed so far would be somewhat as follows:

Supply	Tons	Demand	Tons
When commercial organisation is working smoothly, the division of labour and property throws on the market daily a quantity of wares equal to - - -	1000	The metal or paper-money of the State creates, with its present velocity of circulation and yesterday's prices, a demand which also equals - - -	1000
This supply increases:		Demand increases:	
1. Because production increases through a 10% increase of population	100	1. Because the stock of money increases through the discovery of new gold mines or the issue of paper-money 10% - -	100
2. Because division of labour replaces primitive production, expanding 5% - -	50	2. Because the velocity of circulation of money increases through improvements in commercial organisation, 20% - - -	200
3. Because the means of production improve 20% - - -	200	3. Because the savings banks bring the money of small savers more rapidly into circulation. 10% - - -	100
4. Because workmen, becoming more efficient, produce wares of superior quality. 30%	300		
	1650		1400
On the other hand supply decreases:		But this demand is not constant, it does not appear regularly in the market, as we shall see in the following chapters.	
1. Because better commercial organisation and the elimination of middlemen cause wares to flow more rapidly from the market to the places of consumption - - -	100		
2. Because simplification of the law relating to bills of exchange and other circumstances cause wares to be exchanged by way of credit instead of for money - - -	400		
	1250		

Explanation: A ton can of course be a ton of any kind of ware, for example peat. We then calculate the quantity of potatoes, milk, cranberries, buckwheat, etc. that can be exchanged, at present prices, for a ton of peat. 100 lbs. of potatoes, first quality, or 20

gallons of unskimmed milk, or two bushels of buckwheat are then equal to one ton of supply.

In the case of demand we calculate from the actual stock of money and its actual velocity of circulation how much money can to-day be offered for wares, and how many tons of wares can be bought at present prices by this amount. The answer is 1000 tons. Since demand and supply determine the prices upon which these 1000 tons are based, demand expressed in tons by means of the money offered, must necessarily correspond to supply expressed in tons. If this is not the case, as for instance in the above example, where a supply of 1250 tons is confronted with a demand of 1400 tons, the discrepancy is sooner or later removed by a change of prices. In our example equilibrium would be established by a rise of prices of 12 per cent.

11. THE LAWS OF CIRCULATION OF THE PRESENT FORM OF MONEY

If we recognise demand and supply as the sovereign regulators of prices, if we are convinced that the subject-matter of the theory of value is an illusion, and further, that production oscillates about price as centre of gravity and not vice-versa, it is clear that price and the factors influencing price will absorb our interest, and that certain facts which until now seemed trivial will assume an immense new importance.

One of these apparently trivial facts, which has, up to the present, been totally overlooked, is that the nature of our traditional money allows demand (the offer of money) to be delayed from one day, one week, one month, one year to another, whereas supply (the offer of wares) cannot be postponed a day without causing its possessor losses of every kind. The French war-indemnity of 180 million marks of gold stored in the fortress of Spandau has not entered the market once in 40 years, yet any expense caused the German government by this so-called war-chest has come from without, not from within the Julius tower. The amount and quality of the gold has remained the same. Not a pfennig has been lost through loss of material. The soldier on guard protects the gold, not from moth and rust, but from thieves. He knows that as long as

the locks remain intact no harm can come to the treasure piled within.

In contrast to this, a real war-chest, the so-called "wheat of the Swiss Confederation" stored at Berne, suffers annually a loss of 10% of its material, apart from the cost of guarding and storage. (Without counting interest, which the owners of the Spandau treasure also lose).

The wares which compose supply decay, lose weight and quality, decrease continually in price in comparison with fresh wares.

Rust, damp, decay, heat, cold, breakage, mice, moths, flies, spiders, dust, wind, lightning, hail and earthquakes, epidemics, accidents, floods and thieves wage war continuously and successfully upon the quantity and quality of wares. Few wares fail to exhibit the results of this warfare a few days or months after their production. And it is precisely the most essential wares, food and clothing, that are least able to withstand these enemies.

Like all things earthly, wares are in constant state of flux. Rust is converted into pure iron by fire, and iron is converted back into rust by the slow fire of the atmosphere. Costly furs fly out of the window in the form of a thousand moths. Dry-rot converts the woodwork of a house into dust. Even glass, which might seem better able than other products to withstand the assault of time, sooner or later undergoes something of the same transformation—it breaks.

Each product is threatened by a particular enemy—iron by rust, furs by moths, glass by breakage, live-stock by disease; and with these particular enemies are allied common enemies, water, fire, thieves and the oxygen of the air, which slowly but surely burns everything away.

Who could pay the premium for insurance against all these risks? How much does the shopkeeper pay for the place of storage, only, of his wares?

Wares, again, not alone deteriorate, they also become antiquated. Who would to-day buy a muzzle-loader or a spinning-wheel? Who would even pay the cost of the raw material of such wares? Production is constantly bringing newer and better models into the market; the Zeppelin had no sooner proved its dirigibility than it was outflown by the aeroplane.

The only way in which an owner of wares can protect himself against such losses is to sell them. He is compelled by the nature of his property to offer it for sale. If he resists this compulsion he is punished, and the punishment is carried out by his property, by the wares in his possession.

It must also be remembered that new wares are continually flowing into the market. A cow must be milked daily, a man without possessions is daily compelled by hunger to work. The offer of wares must therefore become larger and more urgent if sale is delayed. As a rule the most favourable time for the sale of a product is the moment it leaves the factory. The longer sale is delayed, the less favourable the market conditions.

Newsboys shout and run because their wares are unsaleable a few hours after production. The milkman's cart is provided with bells because he must make his sales to the hour and minute. The vegetable woman is the earliest riser of God's creatures; she awakens the sleeping cocks. The butcher cannot afford to oversleep himself or to close his shop during the Whitsun holidays, for in twenty-four hours his wares would be on the verge of putrefaction. Bakers can sell their wares at the regular price only as long as the loaves are warm. They are throughout their lives as hurried as the good Zürchers who once a year appear with their millet broth in Strasbourg. The farmer who has ploughed out his potatoes and fears an early frost hurriedly collects them and as hurriedly brings them to market to take advantage of the fine weather and to save, as far as possible, the laborious loading and unloading of his cheap and heavy product.

Or take wage-earners, the ten thousand battalions of workmen. Are they not as hurried as the newsboy, the vegetable-seller, the farmer? If they do not work, part of their assets, their capability to work, is lost with every beat of the pendulum.

Thus the nature of wares, their transitoriness, arouses the majority of us every morning from sleep, spurs us to haste and forces us to appear at a given hour in the market. The possessor of wares is commanded by them, under threat of punishment, to seek the market, and the punishment is carried out by the wares themselves. The offer of a ware for sale depends, therefore, not upon the will of its possessor, but upon the ware itself. Wares

seldom leave their possessors free-will, and then only within narrow limits. A farmer, for instance, can, after threshing his wheat, store it in his barn to await a better opportunity of sale. The nature of wheat allows its possessor more time for reflexion than the nature of salad, eggs, milk, meat or labour. But the time for reflexion is not unlimited; for the wheat loses weight and quality, is eaten by mice and mites, and must be protected from fire and other dangers. If the farmer brings his wheat to a granary, storage, even if interest is neglected, costs him in six months a considerable part of the wheat. In any case the wheat must be sold before the next harvest, and the harvest, owing to import from the southern hemisphere, now occurs once every six months.

Mlle. Zélie, of the Théâtre Lyrique, Paris (1860), receives for a concert on the island of Makea in the Pacific, as entrance money for the 860 tickets sold: 3 pigs, 23 turkeys, 44 chickens, 500 coconuts, 1200 pineapples, 120 measures of bananas, 120 gourds, 1500 oranges. She estimates the receipts, at Paris market prices, at 4000 francs and asks; "How can I convert all this into money? I hear that a speculator from the neighbouring island of Manyca is prepared to make an offer in hard coin. Meanwhile, to keep my pigs alive, I give them the gourds, and I feed the chickens and turkeys with bananas and oranges, so that, to preserve the animal part of my capital, the vegetable part must be sacrificed." *

It can therefore be said without fear of contradiction that supply is subject to a mighty compelling force inherent in the objects of which it is composed, and that this force increases from day to day and breaks down the barriers separating supply from the market. Supply cannot be postponed. Quite independently of the will of the possessors of wares, a supply of them must daily appear in the market. Whether the sun shines or the rain falls, whether political rumours alarm the exchanges, supply is always equal to the stock of wares. Supply remains equal to the stock of wares even if the price of wares is unsatisfactory. Whether the price brings the producer gain or loss, the wares must be offered for sale—usually at once.

We may therefore regard the supply of wares, that is, the demand for money, as identical with the wares themselves. Supply is independent of deals on the market. Supply is a thing, a material, not a business transaction. Supply always equals the stock of wares.

* Wirth, *Das Geld*, p. 7.

Demand, on the contrary, as we have already shown, is not subject to this compulsion. It is composed of gold, a precious metal which, as the expression implies, occupies an exceptional position among the products of the earth. Gold may be regarded almost as foreign matter intruded upon the earth and successfully withstanding all the destructive forces of nature.

Gold neither rusts nor decays, neither breaks nor dies. Neither frost, heat, sun, rain nor fire can harm it. The holder of money made of gold need fear no loss arising from the material of his possession. Nor does its quality change. Gold which has lain buried for a thousand years remains unconsumed.

Again the production of gold is trivial in comparison with the masses of gold accumulated since the earliest times. The production of gold in three, six, twelve months hardly equals the thousandth part of the stock of gold.

Nor is gold money affected by changes of fashion. The only change of fashion in money in 4000 years was the change from bimetallism to a simple gold standard.

Gold has only one possible danger to fear—the invention of an efficient form of paper-money. But even here the holder of gold is safe enough, for such paper-money would have to be introduced by the will of the whole people—a slow-moving force which gives him time to save himself.

The possessor of gold is protected from loss of his material by the unique characteristics of this foreign body. Time passes gold unnoticed by, for gold is charmed against his ravages.

The possessor of gold is not forced to sell by the nature of his property. It is true that while he is waiting he loses interest. But does he not also, perhaps, gain interest simply because he can wait? The owner of wares also loses interest if he delays his sale. But he must be prepared as well for the loss of part of his product and for the expense of storage and care-taking, whereas the possessor of money suffers only the loss of a profit.

The possessor of money can therefore postpone his demand for wares; he can use his will. He must indeed sooner or later offer his gold for sale, for in itself it is useless to him. But he is free to choose the time at which he does so.

Supply can always be measured by the stock of wares in existence; it is exactly equivalent to those wares. Wares command and brook no contradiction; the will of the possessor of wares is so powerless that it may be disregarded. With demand, on the other hand, the will of the possessor of money comes into play; for gold is a patient servant. The possessor of money holds demand like a hound on the leash and lets it slip at the quarry of his choice. Wares are the quarry of demand. Or, to imitate Karl Marx's pictorial language: Demand enters the market proudly confident of an easy victory; supply appears dejected like a beggar who expects more kicks than ha'pence. On the one hand compulsion, on the other hand freedom; and the two together, compulsion and freedom, determine price.

Why this difference? Because in one case there is indestructible gold to sell, in the other perishable commodities. Because one can wait and the other cannot. Because one possesses the medium of exchange, and, thanks to the physical characteristics of this medium, can, without personal loss, postpone exchange, whereas the other suffers personal loss from the postponement—a loss proportional to its duration. Because this relation makes the possessor of wares dependent upon the possessor of money; because, to quote Proudhon, money is not the key that opens the gates of the market but the bolt that bars them.

Suppose now that demand makes use of the freedom it enjoys and withdraws from the market. Supply must then, because of the compulsion to which it is subject, seek out demand, hasten to meet it and entice it back to the market by the offer of some special advantage.

Demand, instant demand, is a necessity to supply, and demand knows of this necessity. Consequently demand can usually ask for, and obtain some special advantage from its privilege of being able to withdraw from the market. Is there any reason why the possessor of money should not ask for this reward? Have we not shown that our whole economic system, the determination of prices through demand and supply, is founded upon exploitation of our neighbour's embarrassment?

A and B, separated by space and time, wish to exchange their wares, flour and pig-iron, and for this purpose need the money in

C's possession. C can at once effect the exchange with his money, or he can delay, hinder or forbid the exchange; for his money gives him the freedom of choosing the time at which it shall take place. Is it not obvious that C will demand payment for this power, and that A and B must grant it in the form of a tribute on their flour and pig-iron. If they refuse this tribute to money, money withdraws from the market. A and B must then retire without completing the sale and undertake the heavy cost of returning home with their unsold products. They will then suffer equally as producers and consumers; as producers because their wares deteriorate, and as consumers because they must do without the goods to obtain which they brought their products to market. If instead of gold, C owned any other product, tea, powder, salt, cattle or Free-Money, the characteristics of these media of exchange would deprive him of the power of postponing his demand; he would no longer be able to levy a tribute on other products.

Usually, therefore, that is, commercially, the present form of money acts as intermediary for the exchange of wares only on condition that it receives a tribute. If the market is a road for the exchange of wares, money is a toll-gate built across the road and opened only upon payment of the toll. The toll, profit, tribute, interest or whatever we choose to call it, is the condition upon which wares are exchanged. No tribute, no exchange.

I wish here to avoid all possibility of misunderstanding. I am not now speaking of commercial profit, of the payment which the merchant can and does demand for his work. What I speak of here is the profit which the possessor of money can demand from producers, because he can paralyse the exchange of wares by withholding his money. This profit has nothing in common with the merchant's profit; it is a separate effect produced by money itself, a tribute which money is able to exact because, unlike all other wares, it is free from the material compulsion of being offered for sale. For supply: the material compulsion inherent in wares; for demand: freedom, will, independence of time—the result must be a tribute. Wares must pay money a tribute because money is free; there is no other possibility. Without this tribute money will not be offered in exchange, and without money to effect exchanges no wares will reach their destination. If, for any reason, money

cannot exact its accustomed tribute, there is a crisis; wares lie where they are, and rot.

But if tribute is the obvious condition for the appearance of demand, it is still more obvious that it will not appear in the market if loss awaits it there. Supply is forced into the market regardless of gain or loss. Demand, if conditions are unfavourable, retires into its fortress (its fortress being its indestructibility), and quietly waits there until conditions are again suitable for a sally.

Demand, therefore, the regular offer of money for wares exists, only when the condition of the market ensures:—

1. Sufficient security against loss.
2. A tribute for money.

The tribute can be levied only on the sale of wares, and requires the fulfilment of one essential condition: During the interval between buying and selling a product, its price must not fall. The selling price must exceed the price of purchase, for the tribute is contained in the difference between them. In times of trade expansion, when the average price of wares is rising, the merchant's profit rises also. The difference between the two prices is then sufficient to cover the merchant's profit and the tribute paid to money. When prices are falling, the collection of the tribute becomes doubtful or impossible. The doubt alone is sufficient to keep the merchant from purchasing wares. No merchant, speculator or employer will discount a bill at the bank and undertake the obligation of paying interest if he suspects that the product he thinks of buying may fall in price. A fall of price may mean that he does not get back even the amount of his outlay.

If we now consider the two conditions upon which money offers its services as medium of exchange, we see that commerce is mathematically impossible with falling prices. But it should be noted that the only person who speaks of this mathematical impossibility is the possessor of money. For the possessor of wares, extreme, demonstrable losses are no obstacle to supply; for him there is no question of mathematical impossibility. Whether profit is or is not probable, wares are in all circumstances ready for exchange. But money goes on strike if its usual tribute is not assured, and that happens when, for any reason, the ratio of demand to supply is disturbed and prices fall.

But stop! What is it that we have just affirmed? That demand withdraws, that the circulation of money becomes mathematically impossible when prices fall! But prices fall just because the supply of money is insufficient. Does the supply of money, when it is insufficient to prevent a fall of prices, withdraw, that is, become still smaller?

It is indeed so; there is no misprint or mistake in what we have just written. Money actually withdraws from the market, the circulation of money is mathematically impossible, when the supply of money becomes insufficient and a fall of prices begins or is expected.

When, after the introduction of the gold standard, the production of money was reduced by the whole amount of the production of silver, and prices fell, the circulation of money became impossible and money piled up in the banks. The rate of interest steadily sank. The bimetallists then opened their campaign against the gold standard and argued that the chronic trade depression of that time was due to an insufficient stock of money. In reply, the defenders of the gold standard, Bamberger and others, pointed to the enormous bank-reserves, to the low rate of interest, and asserted that these phenomena were a conclusive proof that the stock of money was not too small, but too large. The fall of prices, they explained, was due to a general fall in the cost of production (including that of gold?) with an overproduction of wares.

The bimetallists, above all Laveleye, brilliantly disposed of this argument by proving that the commercial circulation of money is impossible if money is not offered in a quantity sufficient to prevent a fall of prices. The large bank deposits, the low rate of interest, were a striking proof that the supply of money was insufficient.

But our monetary philosophers, wandering in the fog of "value," have never understood this. Even to-day they do not see their way clearly, although monetary history has meanwhile furnished many proofs of the correctness of this part of the bimetallistic theory. For since chance has decreed great discoveries of gold and the prices of commodities have moved strongly upwards all along the line, the great bank reserves have disappeared and the rate of interest is higher than ever. It is therefore a fact that money collects in the banks, that the rate of interest falls, because there is a lack

of money; and it is also a fact that the banks are emptied, that the rate of interest rises, because the supply of money is too great.

And prices fall precisely because the supply of money is insufficient.

An actual fall of prices is not necessary to cause the flight of money from the market. If there is a general opinion that prices will fall (no matter whether the opinion is true or false), demand hesitates, less money is offered, and for this reason what was expected or feared becomes an actual fact.

Is not this sentence a revelation? Does it not give us a clearer explanation of the nature of commercial crises than is contained in any of the many-volumed explanations of the matter? From this sentence we learn why a Black Friday, a crisis scattering death and destruction, often comes like a bolt from the blue.

Demand withdraws, conceals itself, because it is insufficient to effect the exchange of wares at the present price-level! Supply exceeds demand, therefore demand must disappear entirely. A merchant writes an order for cotton. He hears that the production of cotton has increased and consigns the order to his waste-paper basket! Is that not comic?

But production continues to throw new masses of wares upon the market, so the stock of wares increases if sales are interrupted—just as the water-level of a river rises when the sluices are closed.

Supply therefore becomes larger and more urgent because demand hesitates, and demand hesitates simply because supply is too large in proportion to demand.

Here again there is no mistake, no misprint. The phenomenon of a commercial crisis, so ridiculous to the onlooker, must have a ridiculous cause. Demand becomes smaller because it is already too small, and supply becomes larger because it is already too large.

But the comedy develops into a tragedy. Demand and supply determine price; that is, the ratio in which money and wares are exchanged. The more wares are offered for exchange, the greater is the demand for money. Wares reaching the consumer by way of credit or barter are lost to the demand for money. Prices, therefore, rise when credit sales increase, since the quantity of wares offered in exchange for money decreases by the amount of these

credit sales, and since demand and supply — the ratio in which money and wares are exchanged—determine price.

Conversely, prices must fall when credit sales decrease, since wares reaching the buyer through these side channels again create a demand for money.

The offer of wares for money therefore increases in proportion to the decrease of credit sales.

Credit sales decrease when prices fall, when selling prices fall below cost prices, when a merchant usually loses upon his stock of wares, when on stocktaking day he can buy for 900 those articles in his warehouse which cost him 1000, and must therefore write them down to 900 in his inventory. The solvency of the merchant increases or decreases with the prices of his wares, so credit sales also increase or decrease with the increase or decrease of prices.

Everyone knows this fact and everyone regards it as something quite natural. Yet the fact is strange enough.

If prices rise, that is, if demand exceeds supply, credit comes into play, deprives money of part of the wares to be exchanged and drives prices still higher. If prices fall, credit retires, wares must be exchanged for cash, and prices are still further depressed.

Need we search further for the explanation of commercial crises? *

Because we have improved our means of production, because we have been industrious and inventive, because we have enjoyed good weather and abundant harvests, because our wives have been fruitful, because we have extended the division of labour, the mother of all culture, the supply of wares (the demand for money), has increased; and because we have not balanced this greater demand for money with a greater supply of money, the prices of wares have fallen.

But because prices have fallen, demand withdraws, money is hoarded. And because demand is withdrawn and sales hindered,

* The amount of the circulation of bills of exchange in Germany in 1907 was given in the Reichstag as 35 billion marks. This sum should possibly be reduced to 9 billion marks if it represents the total bills stamped during the year, as these would be three months bills. But even in this case we can imagine how greatly the steadiness of demand and prices is imperilled by such an amount of credit—credit which depends on men's moods and the turn of the market.

the wares pile up like ice blocks in rivers when the flow of ice is obstructed. Supply breaks down the obstruction and floods the market, and the wares must be got rid of at any price. But because prices are falling all along the line, no merchant can buy wares for fear that what he is tempted to buy so cheap to-day could be bought still cheaper to-morrow by his rival with whom, in this case, he could no longer compete. Wares are unsaleable because they are too cheap and threaten to become still cheaper. This is the crisis.

The crisis breaks out, merchants' assets dwindle and their liabilities (in proportion to their assets) increase. Anyone who has signed a contract to deliver money * finds the engagement difficult to keep because of the falling prices of commodities (his assets); suspensions of payment begin, and the exchange of wares becomes a game of chance. For these reasons credit sales are restricted and the demand for money is increased by the whole mass of wares hitherto exchanged by way of credit—at a time when money is scarce and therefore disappears.

Just as the draught created by a fire makes it blaze, so obstacles to the circulation of our present form of money stimulate the demand for money. The equilibrating forces, of which so much is written, never come into play. The evil is intensified, not mitigated; there is no sign of any compensatory tendency.

Many still seek this compensation in an increased velocity of circulation of money when the demand for money increases. They imagine that the wish to buy cheap † must bring increasing quantities of "money from the reserves" into the market. The contrary is the truth. A rise of prices, not a fall, stimulates the merchant to purchase; a fall of prices can only injure him. The fear that what is offered cheap † to-day will be offered still cheaper to-morrow closes all purses. Purses remain open only as long as a rise of prices is expected. Again, where are these supposed "reserves" to be found? Are they to be found in the banks? The

* Bills of exchange, promissory notes, bonds, rents and leases, insurance policies, and so forth.

† From the merchant's point of view no ware is in itself cheap; a ware is cheap only in comparison with its selling price. When prices are falling, all wares are dear. Wares become cheap when a general rise of prices raises the price at which the merchant sells above the price at which he buys.

banks withdraw their money from circulation when, because of the general fall of prices, it cannot circulate with safety. The millions thus withdrawn from the market at the time when they are most needed cannot be regarded as reserves. If the harvest fails and the sheriff seizes a farmer's cow, the result is not an addition to the stock of cows. The banks are always overflowing when prices are falling, that is, when the supply of money is insufficient; when prices are rising they are empty. If the contrary were true, we could speak of reserves. If there are actually reserves in existence they should, in the interest of the exchange of wares, be used up as quickly as possible, since their existence would be a further cause of price fluctuations. Reserves, that is, collections of money, can be formed only by withdrawing money from circulation, from the market, from the exchange of wares. But if such reserves are formed only when money is already scarce in the market, they are not reserves but poison.

This, therefore, is the law of demand, that it disappears when it becomes insufficient.

But what happens when demand is too large in proportion to supply, when the prices of commodities rise? This state of the market must also be examined; for it is theoretically possible (p. 222), and has actually occurred, as is shown by the history of the market during the last decades. No one denies that since about 1895 prices, in spite of greatly increased production, have risen sharply.

How does the possessor of money act when prices rise? He expects or knows that what he has bought to-day can be sold to-morrow at a higher price. He knows that rising prices make everything, from the merchant's viewpoint, cheap (see footnote p. 234) and that by turning over his money he can gain increasing profits. He buys therefore as much as he can, that is, as much as his money and credit allow. And merchants obtain credit as long as prices are rising and the selling price exceeds the cost price of merchandise. The optimistic feeling among merchants caused by rising profits also makes them more inclined to purchase; they do not turn a piece of money over ten times before deciding to spend it. Money circulates more rapidly when prices are rising; during a

trade-boom the circulation of money attains the maximum velocity which the existing commercial organisation allows.

But demand is the product of the quantity and velocity of circulation of money; and demand and supply determine prices.

Because, therefore, prices rise, the demand for wares increases through the accelerated velocity of money, and at the same time the quantity of wares offered for ready money decreases, because of the increase of credit sales. Prices therefore rise because they have risen. Demand is stimulated and enlarged because it is too large. Merchants buy wares far beyond their immediate needs; they seek to secure stocks for future sale—because supply is too small in comparison with demand. When supply increased and became too large in proportion to demand, the merchant reduced his orders to the minimum, to what he could at once dispose of. He could not allow any time to elapse between buying and selling, for during this time the selling price would have fallen below the price he had paid for the ware. But if wares are scarce he is eager to buy; all the purchases he can make seem nothing to him, he is anxious by every means to increase his stocks. The debts, based on bills of exchange, that he contracts in doing so, sink daily in significance in comparison with his assets, which are daily increased by the rise of prices. These debts cause him no anxiety—as long as prices are rising.

Is not this a fantastic phenomenon, worthy of the other fantastic phenomena of a trade boom?

The demand for wares must always increase far above its usual volume as often and as long as supply is insufficient.

Yes, our gold standard, offspring of the theory of value, stands the test. That our investigation has clearly proved. It causes an increasing demand when demand is already too large, and restricts demand to the personal bodily wants of the few holders of money the moment demand becomes too small! A starving man is deprived of nourishment because he is starving, and a glutton is filled to bursting because he is a glutton.

We know in what the true utility of money consists (Chap. 4). But the true utility of money has unfortunately been hitherto overlooked, with the result that no one was able to imagine demand

for a kind of money made of worthless paper. Something must stimulate people to purchase money, and if this something were not its utility as the medium of exchange it would have to be the utility of the material.

Now gold is in fact a material of industrial utility, and its utility would be much greater if it were cheaper. The high price of gold alone prevents its being often used instead of iron, lead or copper.

But gold is not too dear to be used at least for ornaments, where expense need not be considered. Gold is in fact the special raw material of the jeweller's trade. Bracelets, chains, watch-cases and such ornaments are made of gold, as are chalices for the Catholic form of worship. The fittings of motor cars, church clocks, lightning conductors, picture frames, etc. are plated with gold, and dentists and photographers use considerable quantities. All this gold is withheld from the currency. Coins are usually the goldsmith's cheapest raw material.

The use of gold for industrial purposes increases with the love of splendour, with the growth of prosperity and wealth; and wealth increases through production, through work. During years of prosperity goldsmiths work overtime; during periods of economic depression people in difficulties bring them back gold ornaments for the melting pot.

That is, when more wares are produced, when the demand for money, the medium of exchange, increases, large numbers of gold coins are thrown into the goldsmiths' melting pots.

But halt! Surely this statement is mere nonsense! The more work performed, the more wares produced, the greater is the increase of wealth. And the greater the increase of wealth, the more money (the medium for the exchange of wares) is melted down for jewellery. We cannot have heard aright!

But such indeed was the statement. There is here no misunderstanding and the words are uttered with the gravity of a judge passing a death sentence. For in these words there is cause enough to condemn the gold standard. Let those who have the temerity to deny this truth produce their arguments!

We repeat: the more wares produced, the greater is the growth of prosperity, the accumulation of wealth, and the love of splendour. The population having attained prosperity through the

production of wares, empties the jewellers' shops, and the jewellers throw part of the money they receive into the melting pot to replace with money-material (gold) the watches, chains, etc. which they have sold.

Many wares have been produced. A process has been invented for making good steel of indifferent ore. This steel has given us good tools which increase ten-fold the product of our labour. In addition, the waste products of the process prove to be an excellent fertiliser which trebles the produce of our fields. Our workmen have learned in technical schools to use their hands intelligently. In short, the supply of wares has increased. And because the supply of wares has increased, we destroy the demand for wares by melting down the medium of exchange, the bearer of demand!

What would be said of a railway company which decided that the best way to celebrate a good harvest, or a time of industrial prosperity when factories were working overtime, was to burn its rolling-stock?

If my potatoes are a success this year, I shall buy my wife a gold necklace, says the landowner.

If my cow has two calves this year, I shall buy my sweetheart a wedding ring, says the young farmer.

If I can finish twice as many pairs of trousers with my sewing machine, I shall buy a gold watch, says the tailor.

If I can produce ten times as much nitrogen with my new process, I shall regild the chapel of Our Lady of Succour, says the chemist.

If the production of my steel works again increases this year, I shall buy a service of gold plate, says the capitalist.

In short, the purchase of the wedding ring, necklace, and so-forth, is always caused by increased production of wares, increased supply, and the gold for these necklaces and wedding rings is always deducted from demand, from the coinage. (Uncoined gold, also is by law money).

The money melted by the jeweller is lost from the demand for wares, and lost, unfortunately, at a time when the supply of wares is increasing (see below). But demand and supply determine price. Prices therefore fall. And this fall of prices interrupts the exchange and production of wares. The result is unemployment and pauperism.

The gold standard, the usefulness of the money-material for industrial purposes, is thus the saw that saws away the branch upon which prosperity grows. Money is the condition of the division of labour, the division of labour leads to prosperity, and prosperity destroys money.

Prosperity always, therefore, ends by committing parricide.

The gold standard and beggary are inseparable. Frederick the Great was ashamed of ruling over a nation of beggars and thereby proved that he had an over-delicate sense of honour. He had no special cause for shame, for wherever the previous metals have become the standard of money, kings have always ruled over nations of beggars. If men continue to love display and to spend part of their increase of income in buying the products of the goldsmith's art; and if gold continues to be the raw material for the medium of exchange—the prosperity of mankind as a whole is impossible.

But a farmer does not always use a good harvest to buy his wife a gold necklace, nor do all chemists implore a blessing upon their inventions by vowing to regild a statue of the Blessed Virgin.

If the harvest turns out well, I shall buy a reaping machine, says the farmer.

If I become a successful breeder I shall drain the swamp, says the landowner.

If my invention fulfils my expectations I shall build a factory, says the chemist.

If my mill pays a good dividend and the strike is settled, I shall build a tenement house, says the capitalist.

That is, the greater the production of wares, the greater is the increase of the means of producing wares. (So-called real capital).

But from these investments, from real capital, interest is expected and the rate of interest falls if the proportion of real capital to population increases. If there are many houses and few tenants, house-rent is low. If there are many factories and few workmen, the dividends of factories are low.

If, therefore, real capital is multiplied and the interest upon it in

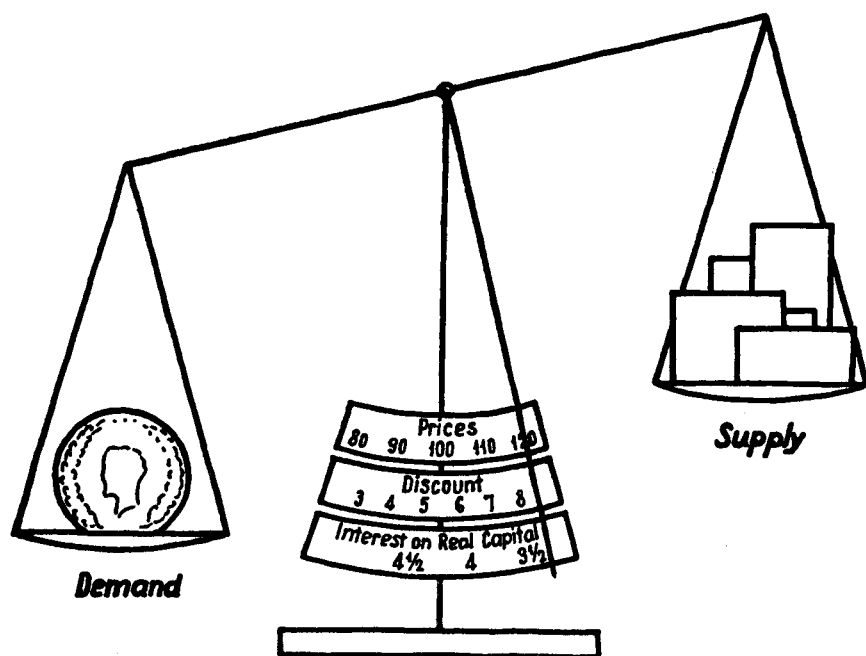


Figure 2. Trade Boom

Demand: Gold-discovery or over-issue of paper-money increases credit and the velocity of circulation of money. Demand increases, prices rise.

Supply: The rising prices cause maximum activity of economic life (full employment, overtime, night shifts), but in spite of greatly increased supply, prices are still forced upwards.

The rate of discount rises, but abundant investment depresses the rate of interest on real capital.

consequence falls below the traditional rate, no money will be given for new undertakings.*

Halt a moment! Once more, can I trust my ears? If the interest on factories, houses, ships, falls, no more houses are built, since no one will give money for new real capital? Is this true? How then can cheap houses ever be built?

These were indeed my words, this is the truth, and will anyone dare to deny it? If the interest on houses and other real capital falls, the money employed in such enterprises withdraws. What is

* The reader is referred to the theory of interest developed at the end of this volume.

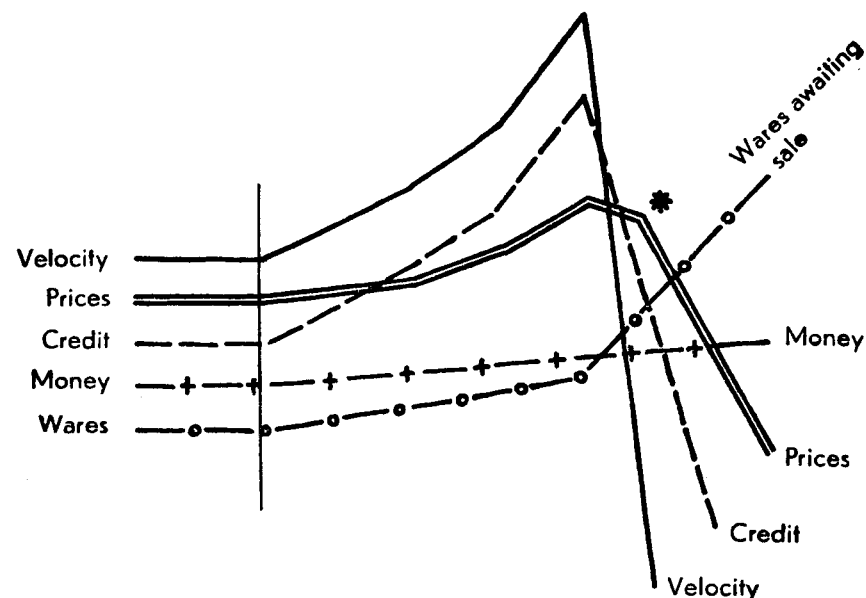


Figure 3. Trade Boom and Crisis

Explanation: The components of Demand are Quantity of Money (M), Velocity of Circulation (V), and Credit (C). Supply consists of the wares awaiting sale. The rise of prices caused by increase in the quantity of money stimulates production of wares. If the production of wares increases out of proportion to the increase of money, prices begin to fall. The result is that V and C withdraw from Demand and that the fall of prices becomes at * a slump of prices, especially as the fall of prices causes sales to stagnate, so that the quantity of wares awaiting sale increases rapidly. Prices remain stable only if M, V, C, and W run parallel, or if the deviations compensate one another.

then to become of the wares hitherto consumed in renewing and extending real capital? *

When men are industrious and inventive, when harvests are favoured by sun and rain, when many products are available to multiply houses and factories—this is the time that money (which should facilitate exchange), chooses to withdraw and wait.

And because money withdraws, because demand is lacking, prices fall, and a crisis occurs.

* At the German Congress for Housing Reform, the banker Reusch, Wiesbaden, estimated the amount of money required for house-building in Germany at 1500–2000 million marks annually.

A crisis must therefore always break out when, on account of increased production of real capital, the rate of interest on factories and houses sinks.

In the theory of interest at the end of this book, proof will be given that interest on money is independent of interest on real capital (but not vice versa). The objection that interest on money decreases simultaneously with the decrease of interest on real capital, that there is consequently no lack of money for new real capital, even if the rate of interest on real capital falls, does not, therefore, hold good.

This reason, even taken alone, is sufficient to account for the fact that economic life proceeds from crisis to crisis. Under the rule of metal money men must periodically eke out existence as homeless beggars. Gold, our hereditary king, is the true "roi des gueux", the king of beggars.

12. ECONOMIC CRISES AND THE CONDITIONS NECESSARY TO PREVENT THEM

Economic crises, that is, stagnation of the market, unemployment and the accompanying phenomena, are conceivable only with falling prices.

Prices can fall for three reasons:

1. Because the conditions under which gold is produced do not allow the supply of money (demand) to be adapted to the supply of wares.

2. Because when the production of wares, and therefore of real capital, is increasing, the rate of interest upon the latter falls.* No more money is then offered for the formation of new real capital, and the markets of wares destined for this use (an important part of production, especially when population is increasing) stagnate.

3. Because with increased production and prosperity money is melted by the goldsmiths in direct proportion to the increase in the supply of wares.*

* The Chinese are said to make silver figures which are much valued as the patron gods of the household. But silver is the general medium of exchange among the Chinese. The following course of events is therefore probable: For some reason silver flows into China in greater abundance than usual and stimulates trade and industry (trade-boom). Merchants prosper,

Any one of these three causes of falling prices is sufficient alone to produce a crisis; and it is characteristic of them that when one cause (say the first, owing to sufficient discoveries of gold) fails to function, the others leap into the breach. One or other of these three causes of crisis regularly and inevitably occasions the periodic breakdown of economic life.

Only if gold continues to be discovered in such unusual quantities that, in spite of increased consumption of gold for industrial purposes, there is a large and steady rise of prices (at least 5% annually), can economic life develop without crises. Even the resistance to the circulation of money caused by the fall of interest on real capital would give way to such a general rise of prices; the rise of prices would compel the circulation of money. But such a general rise of prices would in itself constitute a breakdown of the monetary standard.

The explanation of the causes of commercial crises indicates the condition which must be fulfilled to prevent their occurrence. The condition is that prices must never, under any circumstances, fall.

The next question is how this condition can be fulfilled. It can be fulfilled by:

1. Separation of money from gold and the production of money in accordance with the needs of the market.

2. A form of paper-money so contrived that it will be offered in all possible circumstances in exchange for wares, even if interest on capital (interest on money as well as interest on real capital) falls or disappears.

A form of money fulfilling these conditions will be described in Part IV of this book (Free-Money).

and out of gratitude increase the size and weight of their silver household gods. The silver they obtain in exchange for their products—the cause of the trade activity—is melted and disappears for ever in the household shrine. If, however, conditions are reversed and from lack of silver prices fall and business is bad (crisis), the Chinese merchant comes to the conclusion that his household god is powerless because it is too small. So he scrapes together the little silver he has, to increase its size. Even if there were no other causes, this cause alone would be sufficient to explain the striking arrest, extending backwards over a thousand years, of the development of China.

Has a European any right to laugh at the Chinese? If trade is good he buys a gold watch-chain for ostentation, and if trade is bad he buys a still larger one to persuade others to give him credit. Both, for different motives, saw off the branch upon which they are sitting.

13. REFORM OF THE NOTE-ISSUE

Demand and supply determine prices: and economic life needs a fixed level of prices to prosper and to enable the splendid possibilities of progress inherent in money to unfold themselves. If during three thousand years or more, civilisation had not been again and again forced by economic crises down the slope it had so laboriously climbed, if the widespread pauperism left behind by each crisis had not made a pauper philosophy part of our flesh and blood, capitalism* would long ago have been a thing of the past. The German workers would have ceased to tolerate the treatment they receive from their employers and from the State if the demand for their wares appeared as regularly on the market as supply. And our German landowners would not have exposed their sores to excite public sympathy, and begged for wheat-duties from emaciated workmen's wives, if they themselves had not been ruined by the fall of prices caused by the gold standard.

The pangs of hunger and pressure of debt are pernicious educational influences.

Mankind would have scaled heights as yet unknown in science, art and religion if the promising culture called into life by gold (even though bloodstained and plundered) at Rome, had not been petrified and annihilated in the economic glacial period, fifteen hundred years in length, which was created by lack of money.

Solomon wrought miracles because the money-material he received from Ophir made possible the regular exchange of wares and the division of labour. But everything he wrought was lost with the passing of the supplies of gold.

The growth of culture has always been blasted by a fall of prices. For culture means the division of labour, and the division of labour means supply. But supply cannot result in exchange if prices are sinking from want of demand, from want of money.

Money and civilisation rise and fall together. For this reason the mercantilists, who regarded gold as synonymous with wealth and culture, and planned a constant increase of the stock of gold by

* Capitalism—An economic condition in which the demand for loan-money and real capital exceeds the supply and therefore gives rise to interest.

means of import-duties, were not so very far wrong. A sound principle was foolishly applied. It is a fact that science, trade and art flourish when the stock of money is increasing. But the mercantilists confused money with gold; they thought that gold performed the miracle by means of its "intrinsic value." They overlooked money; they had eyes for nothing but gold. Money and gold meant the same thing to them. They did not know that money, not gold, carries out the exchange of wares, and that wealth is created by the division of labour which money, not gold, makes possible. They ascribed the progress resulting from the division of labour to the characteristics of gold, instead of to the characteristics of money.

Many of those who have learnt to separate money from gold, who have renounced the heresy of "intrinsic value" and convinced themselves of the importance of stable prices will now be inclined to argue as follows: Why not simply manufacture paper-money and bring it into circulation as soon as supply has overtaken demand or, in other words, when prices begin to fall? And conversely: Why not withdraw paper-money from circulation and burn it when demand begins to exceed supply, that is, when prices begin to rise? This is merely a question of quantity: a lithographic press and a fireplace put it in your power to adapt demand (money) so exactly to supply (the wares) that prices remain constant.

So says among others Michael Flürscheim*, a zealous propagandist of this idea, who counts me among the first who have formulated and popularised it. This honour I must, however, decline, since at the outset† and ever since I have denied that paper-money as we know it (without direct, material compulsion to circulate) could ever be as closely adapted to supply as a regular exchange of wares, national and international, requires.

I deny this possibility and intend to prove in black and white that if the State controls the amount of money issued, but neglects to control its circulation, all the anomalies we have revealed in the functioning of the present form of money will continue to exist.

As long as money, regarded as a ware, is superior to wares in general, as long as savers prefer money to wares (their own products), as long as speculators can with impunity misuse money

* Michael Flürscheim, *The Economic and Social Problem*.

† Silvio Gesell, *Nervus Rerum*, p. 36-37, Buenos-Aires, 1891.

for manipulating the market, money will not mediate the exchange of wares without exacting a special tribute over and above the legitimate profit of commerce. But money should be "the key to open the gates of the market, not the bolt to close them"; it should be a road and not a toll-gate; it should assist and cheapen exchange, not impede and burden it. And it is clear that money cannot be simultaneously the medium of exchange and the medium of saving—simultaneously spur and brake.

In addition to State control of the quantity of money in circulation (only possible by means of a paper-money standard) I therefore propose a complete separation of the medium of exchange from the medium of saving. All the commodities of the world are at the disposal of those who wish to save, so why should they make their savings in the form of money? Money was not made to be saved!

Supply is under a direct compulsion inherent in the nature of wares, and for this reason I propose a similar compulsion for demand. In the process of settling the price, supply would then no longer be at a disadvantage in comparison with demand.*

Because of this compulsion, supply is a simple measurable object not dependent upon the will of the possessor of wares. Demand must therefore also be separated from the will of the possessor of money, demand must become an object capable at all times of measurement. If we know the amount of wares produced at any time we know the amount of supply. Similarly if we know the quantity of money in circulation at any time we should be able to foretell the quantity of demand.

This reform can be attained by the introduction of a medium of exchange subject to a material, inherent compulsion to circulate, and it can be attained only in this way. (See Part IV, Free-Money).

The material compulsion liberates money from all the hindrances to circulation caused by greed of gain, speculation and panic, and sets the whole mass of money issued by the State in constant, uninterrupted circulation which creates a constant, uninterrupted demand.

Regularised demand eliminates the stagnation of sales and the

* Those who are not yet free from the "value" superstition will not understand the justice of this claim.

congestion of wares. The immediate result of a regular demand is a regular supply influenced only by the production of wares, just as the flow of a river becomes regular when the fall is evenly distributed.

If money were under compulsion to circulate, minute changes in the quantity of money would suffice to make demand fit like a glove the natural variations of production.

Without this forced circulation of money we are at once back again to the present confusion. Demand eludes the power of the State, and the only fixed factor in the present chaos, the fact that money exacts a tribute for its services, causes money to be withdrawn from the market by private individuals as soon as it is scarce, and to be again brought into circulation as soon as it is offered in superfluity.

To test the correctness of what has just been said, I shall examine more closely Flürscheim's proposal.* This is all the more necessary since Argentina†, Brazil, India and other countries have succeeded in keeping their currencies at par with the gold standard by regulating the issue of money other than gold. This has called attention to paper-money and awakened the belief that this medium of exchange is capable of further perfection. But advocates of a paper-money standard can do their cause no greater injury than to attempt the introduction of reforms which do not exclude the possibility of failure, for each failure strengthens the position of those who defend a metallic monetary system and postpones for decades the discussion of a paper currency.

The simple reform of the note-issue, here described as inadequate, proposes to empower the State to issue or withdraw paper-money in quantities to be determined by the general level of prices. The State is to estimate the demand for money solely by the average price of the wares. The quantity of money in circulation is to be increased when prices fall, and to be decreased when prices rise. Money is not to be redeemable in gold or any other particular product; for redemption the holder of money is directed to the

* See also Arthur Fonda, *Honest Money*: Professor Frank Parsons, *Rational Money*.

† Silvio Gesell, *La Cuestion monetaria argentina*, Buenos-Aires, 1898; *La pletora monetaria*, Buenos Aires, 1907.

market. But in every other respect this paper-money is to be indistinguishable from ordinary paper-money; it may be used or misused for saving, or as a reserve for speculation. Demand is left in possession of all the privileges it possesses over supply. Demand is to remain what it is to-day, an action willed by the holder of money, and therefore the plaything of money-magnates.

Nevertheless the reform professes to eliminate the recurring periods of over-production and unemployment, to make economic crises impossible and to suppress interest on capital.

The fate of this reform would be determined by the behaviour of persons in a position to save. We must here recall our words about saving. A person who saves produces more wares than he purchases, and his surplus, bought by employers with money from the savings banks, is worked up into new real capital. But no one parts with money-savings unless promised interest, and the employer can pay no interest if what he constructs does not bring in at least as much interest as is demanded for the use of savings. And if work upon the building of houses, factories, ships, etc. continues for a time, the interest on such things of course falls. The employer cannot then pay the interest demanded for the use of savings. The money remains in the savings-banks, and as this is the money with which the surplus wares of the savers are bought, the sale of these wares is interrupted and prices fall. This means a crisis.

But here the reformers of the note-issue intervene and say, Why did the crisis break out? Because prices fell—and prices fell because money was scarce. Because of the lowered rate of interest on real capital, part of the stock of money was withdrawn from circulation. Good! We leave the savers or the savings-banks in possession of the money, and let them hoard it; we shall replace it with new money. The State prints money and advances it to the employers, if the money of capitalists and money-savers is held back. If the rate of interest on real capital falls, the State also reduces the rate of interest on the money it issues. If employers can extract only 3, 2, 1% from their houses, factories, ships, the State supplies them with money at 3, 2, 1%, or, if necessary, at 0%.

The proposal is simple and sounds reasonable. But it only sounds reasonable to the layman. The trained ear can detect a discord.

For money exists to facilitate exchange, and here capitalists,

speculators and money-savers are permitted to use money for purposes foreign to the exchange of wares. Money was made to help the producer of wares to exchange his products for the products of other producers. Money is a medium of exchange and nothing more. Money makes exchange possible, and exchange is complete only when two producers have exchanged their products. When a producer has sold his product for money, exchange is not yet complete; someone is in the market waiting for him. The purpose of money demands that the sale of a product for money shall immediately be followed by the purchase of a product with money, to complete the exchange. Anyone hesitating with his purchase leaves exchange incomplete and interrupts a sale for another producer. This is a misuse of money. Without purchase there can be no sale; therefore, if money is to fulfil its purpose, purchase must follow step for step on the heels of sale.

We are told that the man who has sold his products for money and does not set free his money by further purchases of products is ready to lend his money if offered interest. But this condition cannot in justice be permitted. The man must lend his money unconditionally, or be compelled to purchase wares, or to re-purchase his own products. No private individual can be allowed to make conditions of any kind about the circulation of money. Those who have money have the right of immediately purchasing wares, and no other right. A right to interest is incompatible with the conception of money, for this right would resemble a tax upon the exchange of wares for the benefit of private individuals and sanctioned by the power of the State. The right to interest is the right to interrupt the exchange of wares by holding back money, to embarrass the owners of wares waiting for this money, and to exploit their embarrassment for the purpose of extorting interest. The conditions upon which money can be lent are the private affair of the savers, with which the State has no concern. The State, to which money is purely a medium of exchange, says to the saver: You have sold more wares than you have bought and you are consequently in possession of a surplus of money. This surplus must in all circumstances be brought back to the market and exchanged for wares. Money is not a feather-bed, it is a moment's halting place by the road-side. If you have no personal need of wares you

can buy bills of exchange, promissory notes, mortgage-deeds and so forth from persons who are in need of wares and have no money. The conditions upon which you can buy bills of exchange are your affair; only on one point the State insists upon absolute obedience; that your money shall immediately be brought back to the market. If you fail to put your money in circulation voluntarily, the State, by punishment, will compel you to do so, since your delay is detrimental to the common interest.

The State builds roads for the transport of wares and provides a currency for the exchange of wares. The State insists that no one shall interrupt the traffic of a busy street by slow-moving ox-carts, and should also insist that no one shall interrupt or delay exchange by holding back money. Such inconsiderateness invites punishment.

Reformers of the note-issue with youthful enthusiasm pass over these fairly obvious conditions of an efficient monetary system, yet hope to realise their aim. It is a vain hope!

Savers produce more commodities than they consume, and they do not again set free the money they receive for their surplus unless they are promised interest. The proposal now before us is that the crisis which is the direct result of the savers' conduct should be resolved by the State supplying money to the employers at a lower rate of interest, this money to be new money straight from the printing-press.

The surplus production of the savers is in this case not bought with their money, but with new money. For the moment this is unimportant; with the help of the new money the building of houses, factories and ships proceeds without interruption. It is true that employers receive less and less interest from these enterprises, since building is now uninterrupted, and the supply of ships, tenements, etc. is constantly increasing. But parallel with the decrease of the interest they receive is the fall in the rate of interest they have to pay the Bank of Issue. As employers they are therefore indifferent to the amount of interest they receive on the ships or houses, as it must all be handed over to their creditors. Work proceeds without interruption, and there is therefore no interruption in saving. Many still find it advantageous to lend their savings at the lower rate of interest; but others, especially the small savers who, in

any case, obtain but a trivial amount of interest, will return to the old custom of keeping their savings at home and renouncing interest—even if the fall in the rate of interest is only from 5% to 4% or 3%. The small sums thus hoarded would, added together, amount to many hundred million dollars. The State replaces this amount by the issue of new money. Crisis is thus averted and work proceeds upon houses, ships, factories, the interest upon which would steadily, and probably quickly, fall. But the fresh fall in the rate of interest will still further check the flow of savings into the savings-banks. Soon even the larger class of savers will begin to find it scarcely profitable to bring money to the savings-banks; they will certainly hesitate about bringing money wanted at short notice to a savings-bank some distance away. Some persons will also consider their money safer in their own possession than under the control of strangers. All the forces preventing the re-entry of saved money into circulation, which were counterbalanced by the high rate of interest, will now be set free, and a stream of money, paper-money, will flow from the National Currency Office or Bank of Issue into millions of savings-boxes. The lithographic press of the National Currency Office will ceaselessly replace what is here withdrawn from the market. A mighty stream of paper-money, of demand due from day to day, will be lost to sight.

The more the rate of interest falls, the more the stream swells. Finally, before the market is saturated with real capital, when interest has fallen to about 1%, no one will bring his savings to the savings-banks; everyone will prefer to keep the money under his own supervision. At this stage the savings of the whole nation, huge sums amounting annually to many billions of dollars, will flow into the savings-boxes. These sums will be increased by the absence of economic crises and by the fall in the rate of interest which will make saving easier. The savings of last year will not be consumed by this year's unemployment. If interest falls to 1%, the income of the workers will be doubled, and if income is doubled savings can be increased ten-fold. It is the last addition to the income which is saved, and this addition will be equivalent to the whole amount of the income hitherto.

All this money is to be annually replaced by the State! A whole nation is to convert its savings into money, into what should be

demand falling due from day to day, into scraps of paper which have some use only because a fraction of them is required for the exchange of wares. A strange state of affairs!

Billions of dollars are lent on mortgage. But if mortgages bring in no interest they will be foreclosed and the money hoarded. The State must replace these billions by new issues. Bills of exchange to a total of over 30 billions of marks circulate regularly in Germany and at the same time serve as a medium of exchange. But if interest disappears, no one will any longer discount a bill. Bills of exchange therefore become useless for trade purposes, and the State will have to issue an equivalent amount of money. Many hundreds of billions will be necessary. With a hundred lithographic presses printing \$1000 notes day and night the State will hardly keep pace with the requirements of currency. Hundreds of billions of demand, due in the market from day to day, lying buried in the hoards!

But what if, for any reason, this demand came to life and appeared in the market? Where would then be the corresponding supply of products? If supply is lacking, prices rise, and rising prices cause differential profits. This prospect of gain entices money into the market! The rise of prices, the prospect of differential profits, bursts open the savings-boxes and the billions of demand pour like an avalanche upon the market. "Sauve qui peut!" is the cry, and in the shipwreck the only lifeboats are the wares. Those who can buy wares are safe, so everybody buys wares. Demand rises to thousands of billions, and as supply is of course lacking, prices shoot up. The rise of prices annihilates savings. The peasant again uses paper-money as he used the French assignats—to paper his cowshed.

Flürscheim indeed denies such a possibility. He asserts that the thought of a rise of prices could never occur to the savers, that is, to the holders of the billions of demand, since it is known that the State would immediately counteract the slightest tendency to rising prices by withdrawing the surplus money.

But here we meet the second contradiction in this reform. The first contradiction was the toleration by the State of the use, or rather misuse, of money as a medium of saving, with the result that it was forced to manufacture more money than was necessary for the true purpose of money, namely the exchange of wares.

The second contradiction lies in the fact that the State, when issuing money to employers, was itself not using the money as a medium of exchange. The money was not given for wares but for bills of exchange, mortgages and other securities. But money is a medium of exchange, and as such should be issued only against wares, that is, given out in accordance with its purpose. If the State had issued money only for wares (and if these wares had not in the meantime fallen into dust and decay), it would have no reason to fear the avalanche of demand caused by the return to circulation of the hoarded savings. As it is, the State holds only mortgages, promissory notes and bills of exchange which bear no interest, and with such instruments no ready money can be recalled.

The State misunderstood the function of money when it advanced the employers the money refused them by the savers. The State misused its power; and money wreaks a sharp and sudden vengeance for every misuse to which the State subjects it. Here appears the third contradiction inseparable from this reform. Different qualities are demanded of money according to whether it is used for the purpose of saving or for the purpose of exchange. As consumer the saver pays \$100 for a certain quantity of wares, but as saver he does not pay this price. He prefers his \$100. Thus \$100 considered as a medium of saving are more than the wares that can be bought for \$100. Savings can never be brought back to circulation by wares.

The State has here treated money for exchange and money for saving as equivalents; it has replaced the money withdrawn from the market in the form of savings, by purchasing bills of exchange, mortgages, and so forth. When the time comes for the State to exchange these things for savings, the impossibility of doing so becomes apparent.

This becomes still clearer if we think of two different kinds of money, say gold and tea, in circulation together. To those who use money as a medium of exchange it would be a matter of indifference which kind of money they received, as they would immediately pay it out again. But to those who wish to save money, it is by no means a matter of indifference whether they receive gold or tea, since gold is durable and tea spoils. A person who wishes to save will not give \$10 of gold for \$10 of tea; indeed, if he reckons with long periods of time, he will not deem gold and tea equivalent at any ratio of

exchange. For him gold and tea are simply quantities that cannot be compared.

Further, the State must act promptly. The slightest rise of prices would immediately bring speculators for a rise of prices upon the scene, and once they had pocketed their first gains from the differences in price-levels there would be no holding back the flood of paper-money. Any action by the State would then come too late. Let us picture the situation of the State. Ten billions are necessary for the regular exchange of wares, 100 billions have been issued and the difference hoarded as savings. If a fraction of the surplus 90 billions reaches the market, prices rise, and the moment prices rise, the rest of the 90 billions are flung upon the market. The sequence of events would be as follows: The merchants who believe prices are about to rise buy more than they immediately require. They obtain the money for these purchases by offering interest to the savers of money. These savings, coming into circulation, now make the rise of prices a reality. This stimulates new borrowing and new speculative purchases. So the process would proceed, step by step, until all the money from the savings-boxes had been drawn into circulation by the upward movement of prices.

The slightest want of confidence in the power of the State to prevent a rise of prices would instantly bring the billions of savings into the market, into the shops, just as the slightest doubt as to the solvency of a bank of deposit immediately brings all the depositors to the counters of the bank. They would race to market, at double-quick speed, in motor-cars, in aeroplanes. That is the inevitable result of a monetary reform that leaves untouched the misuse of the medium of exchange as a medium of saving.

As long as paper-money remains what it was meant to be, a medium of exchange, everything works smoothly. Paper-money used for any other purpose is not worth the paper upon which it is printed. It becomes a scrap of paper fit at best for lighting a pipe.

The anomaly of the physical junction of the medium of exchange and the medium of saving is still more obvious if we suppose that, as in Joseph's time, a series of fruitful years is followed by a series of bad ones. During the fruitful years the people would of course be able to save, that is, to pile up a mountain of paper-money. If during the following years of scarcity the people wish to utilise this

mass of paper it becomes apparent that there is no supply to balance the piled-up demand.

The reform which we are here examining can be effective only as long as the interest which the employer receives, and can therefore afford to pay the savings-banks or capitalists, is sufficient to induce the majority of savers to put their money into circulation again. But does not Flürscheim claim that interest, if it once begins to fall, and if economic crises can be averted, must soon fall to zero?

A reform of this kind would be short-lived and would bring the possibility of the greatest fraud ever practised upon mankind. After such an attempt at reform the people, as in the past, would believe that their salvation lay in the gold standard and would clamour for its re-introduction.*

To me it seems preferable to make the work of reform thorough at the outset, and to add to the reform of the note-issue, just described, a change in the form of money which would dissolve the material connection between medium of exchange and medium of saving, a change which would cause the disappearance of all private stores of money, which would break the lids of all savings-boxes and force the locks of all money-chests—a change which, in war and peace, in good years and in bad, would keep exactly as much money in circulation as the market, without fluctuations in the general level of prices, could absorb.

With Free-Money the traditional connection between the medium of saving and the medium of exchange is, in conformity with the results of our inquiry, irrevocably broken. Money becomes a pure medium of exchange, independent of the will of its possessor. Money becomes materialised demand.

14. CRITERION OF THE QUALITY OF MONEY

The partisans of the gold standard ascribe the great absolute and relative economic development of the last decades to the gold standard. These millions of factory-chimneys belching forth smoke

* Throughout the foregoing analysis it is assumed that the reform is adopted universally. If only one country, or a few countries, adopted the reform, the fall in the rate of interest would be checked by the export of savings which would be sent abroad to gain the higher rate of interest. In this case the reform would not result in a catastrophe, but neither would it eliminate interest.

are the modern equivalents of sacrificial altars, and they express the nation's thankfulness for the gold standard !

There is certainly nothing surprising in the assertion that the monetary standard can cause, or make possible, an economic revival. For money makes the exchange of wares possible, and without exchange of wares there can be no work, no profit, no traffic, no marriage. When the exchange of wares is interrupted, factories shut down.

The assertion, we repeat, contains nothing at first sight surprising. On the contrary, manufacturers, shipbuilders and other employers, when asked whether they could produce more wares with their present machinery and staffs, are unanimously of opinion that production is limited only by the sale of their wares. And money makes sales possible—or makes them impossible.

That this eulogy of the gold standard should contain a tacit assumption that its predecessor, the bimetallic standard, hindered economic development also causes no surprise. For money, if it can bring progress, can also, evidently, hinder progress. More important results can be ascribed to money than economic prosperity or the reverse during a few decades.*

After the adoption of the gold standard by Germany, German landowners complained of the fall of prices and of their difficulties in finding money to meet the interest on their mortgages. The German import-duties were devised for their protection, and without this protection many farms would have come under the hammer. But with prices falling, who would have bought these farms? Large estates would have been formed, just as under the Roman Empire, and the downfall of Rome has been ascribed to its latifundia.

The assertion of the advocates of the gold standard contains, therefore, nothing remarkable, but it requires proof. For German economic development could have had other causes; the school, the many technical inventions which made work fruitful, German wives who provide a numerous and healthy stock of workers, and so forth. There is, in short, no lack of competitors eager to snatch the laurels from the gold standard.

Proofs, then, are needed. We must find some criterion for the quality of money. We must determine whether the gold standard has

*Gesell: "Gold and Peace ?" (spoken at Berne, 1916). (See page 117).

so facilitated exchange that the expansion of economic life can be ascribed to this cause alone.

If the gold standard has facilitated the exchange of products, the result must be increased safety, speed or cheapness of exchange, and this increased safety, speed or cheapness of exchange must cause a corresponding decrease in the number of those engaged in commerce. This is too obvious to require further explanation. If we improve the roads that serve for the transport of merchandise, the efficiency of carters increases, and if the amount of merchandise to be carted remains the same, the number of carters must diminish. Since the introduction of steam, sea traffic has increased a hundred-fold, yet the number of sailors has diminished.

The same result should occur in commerce if the gold standard is to the cowry-shell standard as steam power is to wind, or as dynamite compared with a wedge.

But with the gold standard an exactly contrary development can be observed.

"The middleman's activity (that is, commerce) used to claim about 3 or 5% of the workers; it now claims 13 or 15, sometimes even 31%. This activity (the cost of commerce) forms an increasing proportion of price," says Schmoller (Commerce in the XIXth Century, Die Woche).

Commerce, instead of growing less difficult, grows daily more difficult. With gold as the medium of exchange not fewer but more persons are required to exchange the wares, and these persons have a better general education and a better commercial training. This can be proved from the German statistics of occupations.

	1882	1895	1907
Population of Germany	- 45,719,000	52,001,000	62,013,000
Total number of workers	- 7,340,789	10,269,269	14,348,016
Persons engaged in commerce	838,392	1,332,993	2,063,634

From these figures we see that the increase in the number of persons engaged in commerce has far outstripped the increase in the total number of German workers (industry, commerce, agriculture). The total number of workers has increased from 7,340,789 to 14,348,016, or 95%, whereas the number of those engaged in commerce has increased from 838,392 to 2,063,634 that is 146%.

These figures are a clear proof that since gold has been adopted as the medium of exchange, commerce has become more difficult.

It may be objected that during the last decades many producers have gone over from primitive methods of production to the division of labour, especially in the country, where less and less is produced for personal consumption and more and more for the market. This of course increases the number of merchants required. Few spinning wheels, for instance, are now in use, and the village artisans paid directly in kind (barter) have had to give way to factories.

Again a worker, thanks to improved methods of production, now produces more wares, judged by quantity or quality, than formerly. Thus a much greater mass of wares is brought to market, and this also increases the number of persons engaged in commerce. If one merchant is required to sell the calico produced by 10 weavers, then, other things being equal, two merchants are required if the 10 weavers, with improved looms, produce twice as much calico.

This objection is valid, but on the other hand it should be remembered that commercial work also has been greatly facilitated by organisation and invention. We have the decimal coinage, introduced with the German gold standard (though it is independent of the gold standard, as the English currency system proves), the metric system of weights and measures, commercial staffs trained in better schools, co-ordinated laws of commerce, consulates, extraordinary postal facilities, (cheap letter postage, parcel-post, postcards, money orders, collection of cash through the post, etc.). Add to these telegraph and telephone, stenography, typewriters, multigraphs, cash registers, cheques and current accounts, more efficient methods of advertising, consumers' co-operative societies; in short, the countless improvements introduced into the technique of commerce during the last thirty years. Finally, the better technical training of the business man must have increased his power of selling merchandise. If technical training has not done so, it is superfluous, and the merchant is a fool who pays a higher salary to a trained assistant. For he pays the higher salary because he believes that the trained assistant does more work, that is, sells more merchandise than his untrained colleague.

If the increase in production is compensated by the increased efficiency of commercial organisation, then the increase in the

proportion of those engaged in commerce retains its full force as evidence against the alleged advantages of the gold standard.

But the above figures give only the number of persons engaged in commerce, and we are more interested in the gross profit of commerce. This, to judge by appearances, has certainly increased. It cannot be deduced directly from the number of those engaged in commerce, since the average income of persons engaged in commerce is higher than that of any other workers.

To judge the effect of a monetary reform upon commerce, it would be necessary to calculate statistically the gross profit of commerce, that is, the difference between the factory price and the retail price of each product. Retail price, less factory price, equals the gross profit of commerce. It would be possible to calculate in this way the cost of commerce to a country and the efficiency of its monetary system. There is reason to believe that such statistics would prove the well-known assertion that commerce at present consumes one-third or more of the total production! Of 1000 tons of production 333 tons fall to the traders.

15. WHY THE CRUDE QUANTITY THEORY FAILS WHEN APPLIED TO MONEY

Demand and supply determine the price of wares, and supply depends upon the existing stock of wares. If the stock increases, supply increases; if the stock decreases, supply decreases. Stock and supply are identical; instead of saying "demand and supply" we could say "demand and the stock of wares" determine price. Indeed the statement in this form brings the suppositions of the quantity theory into higher relief.

The quantity theory, which, with unimportant limitations, holds good of all wares, has been applied to money. It has been stated that the price of money is determined by the stock of money. But experience has shown that the supply of money is not so dependent upon the stock of money as this statement of the quantity theory assumes. The stock of money often remains unaltered, but the supply of money is subject to great variations. The war-chest at Spandau has not been offered as supply once in forty years, whereas other money annually changes hands 10 or 50 times. The places where money is kept (banks, safes, chests or stockings) are some-

times empty, sometimes overflowing, and accordingly the supply of money is great to-day and small to-morrow. A rumour is often sufficient to direct a torrent of money and demand from the market to the places where money is preserved. A telegram, perhaps forged, often makes hands in the act of closing the purse-strings scatter money broadcast upon the market.

The conditions of the market have the greatest possible effect upon the supply of money, and if we said above of wares that demand and supply determine their price, we could say with equal truth of money that "demand for money and the mood of its holders" determine its price. The stock of money is certainly important for the supply of money, since the stock fixes the upper limit to the supply of money. More money cannot be offered than the stock allows. But whereas with wares the upper limit to supply (that is, the stock) is also the lower limit, so that supply and stock are always equivalent, with money no lower limit can be discovered, unless we regard it as zero.

When confidence exists, there is money in the market; when confidence is wanting, money withdraws—such is the teaching of experience.

But, if as experience teaches, the supply of money does not exactly and at all times correspond to the stock of money, then the price of money is independent of the stock, and the crude quantity theory cannot be applied to money.

But if the crude quantity theory is not applicable to money, neither is the cost-of-production theory. The cost of production can determine price only by its influence upon the quantity produced, that is, the stock; and the stock of money does not, as we have seen, always correspond to the supply of money.*

Of products in general it is true that when the cost of production falls, production increases. With increasing production the stock and supply increase, and with increasing supply the price falls.

* "The increase of the stock of money alone cannot increase prices; the new money must also cause demand by being used for purchasing in the market. That is the first limitation to be made to this theory," Dr. George Wiebe, *History of the Price Revolution in the 16th and 17th Centuries*, p. 318.

"Money which is not offered in exchange for products has as little influence upon prices as if it were destroyed." Hume.

But with the precious metals it is by no means certain that when the stock increases supply immediately increases; still less, that supply always corresponds to the stock. Proof: the stores of silver at Washington; the war-chest at Spandau; the frequently discovered hoards of coins.

Both theories, the crude quantity theory and the cost-of-production theory, fail when applied to money, and the reason why they fail must be sought in the characteristics of the money-material. The contents of the war-chest at Spandau would long ago have fallen into dust but for certain characteristics of gold, and the silver policy of the United States would have been inconceivable but for certain similar characteristics of silver.

If gold decayed like other products, the supply of money would always correspond exactly to the stock of money. Confidence or want of confidence would have no effect upon the supply of money. In war and peace, in prosperity and adversity, money would always be offered for exchange, even when the offer meant certain loss, just as potatoes are offered for exchange quite apart from the question of profit to their owner. In short, demand and supply would determine the price of money as now they determine the price of all other products.

The price of a product like the gold at Spandau, or the silver at Washington, which, without suffering the least depreciation, can be stored for decades in damp subterranean strongrooms, the price of a product the supply of which depends not upon intrinsic necessity but upon human judgment, is as free and incalculable as the wind. The price of such a product knows no economic laws; the quantity theory and the cost-of-production theory pass it by. Its supply is determined simply by profit.

Such money, as Lassalle rightly remarked, is from the outset capital; it is offered in exchange as long as it can obtain interest, and no longer. No interest, no money!

We have now completed our investigation of money as it is, of the metal or paper-money of the present, and can turn our attention to money as it should be, to the money of the future which we have named Free-Money, that is to say, money free to circulate, money free from the anomaly of interest.