§ 47. The Means of Payment by Credit

The effect of credit in increasing money: commercial paper, unsecured notes, transfers by check—Cash reserve, secondary reserves, commercial coverage—Economizing the use of money through credit: balancing the account.

Taking certain things for granted, men have become accustomed to accept money demands arising out of credit transactions as payment in lieu of money. This occurs on a large scale in highly developed commercial intercourse. Thus in addition to the fundamental significance of credit which it has attained in distinguishing ownership and wealth it has acquired a further and scarcely less important one. It has increased to an extraordinary extent the media of circulation of the social economy and in this connection has signally elaborated the methods and institutions of payment.

There are three forms of substitutes where the evidences of credit transactions pass for money: commercial paper or the bill of exchange, bank-notes and checks. The last two as credit instruments are not covered by cash to the face value. It is unnecessary for our present purpose to elaborate the details of their various established forms. It will be sufficient to describe the type so far as to explain the service which they constantly render in the financial adjustments of the community.

Commercial paper, as contrasted with other demand drafts that share with the latter the rigors of legal proceedings and the right to issue executions, is distinguished in offering an additional security in the personality of the debtors. The business man making an advance has, as a general rule, a sufficient insight into their earning capacity to estimate correctly their right to credit. The short period for which the commercial bill is generally drawn gives a fair presumption that the responsibility of the drawee is not likely to become less up to the day of maturity. But these are not the only advantages to be considered. Commercial paper is more than a bill of exchange drawn against a merchant; it grows out of a business transaction. Thus in addition to its legal guarantee it carries an internal commercial guarantee.

If, for example, a bill representing merchandise is drawn on a business man who buys a quantity of goods on credit, the time which the bill is to run is fixed so as to enable the purchaser to sell the wares and collect the proceeds. The proceeds furnish the fund out of which the bill may be paid—the commercial protection. The high value which attaches to this internal coverage which a commercial change receives by the mercantile transaction described, is shown by the fact

that a good demand may be discounted as it stands on the books. This may happen even though no bill has been drawn against it so as to bring it under the rules of bills of exchange. This discounting of open-book accounts has increased greatly of late. To be sure, only a draft accompanied by all papers may be used as a means of payment. In the business circles in which a bill of exchange is issued it is regarded as so certain that a good commercial bill will be honored when due, and the due-date is so near that the money demand which it represents is looked on itself as money. As the phase runs the bill "is money," and in these circles it is used by way of payment when actual cash payment is not desirable or convenient.

The larger the number of hands through which the bill has passed, the better its currency becomes. The increased number of endorsements increases the security which it offers as it widens the commercial circle in which the bill is recognized. Nevertheless, this circle is very small when it is compared with the whole of the national economy. As the period for which it is drawn is short, the time during which it may remain in circulation is exceedingly limited. The bill, when taken up, ceases to function and new dealings in merchandise are required to create new bills of exchange which may again be put in circulation.

More important still is another condition to the use of bills of exchange. The draft or acceptance which is to function as payment, does not, in fact, serve as payment in full. Should payment not be made when the paper is due, the final holder may fall back on his predecessors. Each man thus resorted to may again have recourse to those before him. Not until the bill has been actually honored and paid, does the payment, which was supposed to have been made at its original delivery, become final. Until then, the payment is considered conditional. A bill of exchange is thus only a provisional means of payment, not a conclusive and final one such as is afforded by money itself.

"Unprotected" banknotes are notes for which no metallic equivalent of their face-value is held under government authority: i. e., such notes as the bank of issue, which we shall typify by the central bank for the entire national economy, places in circulation without always holding metallic or cash reserves in readiness for their full redemption.

Notes which are issued only within the amount of the metallic reserve have no theoretical interest for us in this connection. For large payments they are more convenient than metallic money which is coined in smaller units. They may be more conveniently and in-

expensively safeguarded, counted and shipped. They are therefore a practical substitute for coined money which they represent. But this substitute substance, if one may so call it, does not in any way increase the total amount of money in the country. It circulates in lieu of the coins. The latter may at any time again take its place, for the notes must be redeemed in lawful money at sight on the demand of any holder.

On the other hand notes issued without cover of metallic coin are a peculiar means of payment by credit. They are added to the actual stock of metallic money and increase this "cash" effectually. This supplementary money, as it might be called, is of the utmost importance to the financial condition of a country. We shall have to discuss this money now at some length but we must warn our readers that externally this supplementary money cannot be distinguished from the substitute substance discussed in the last paragraph.

It is the essential basis of the legal status of the two types of issue that they are indistinguishably connected. Each confers on the holder the right to demand redemption. Of no individual note can it be confidently said "this is substitute money" or "this is supplementary money." In practice every note passes at its face value. However, as it may be safely assumed that all the notes issued will never be simultaneously presented for redemption, it is deemed sufficient to keep on hand a fund only in such proportion to the total circulation as experience has shown to be necessary. Over and above this fund, the bank of issue holds a secondary reserve to supplement its cash, i. e., the so-called "bankable reserve." This fund consists of those demands from its approved credit transactions, from loans arising in the business of the bank of issue or, more simply, "the Bank." This type of reserve consists of well-rated commercial drafts at short sight which the bank has discounted. The ingenious combination of these two reserves enables every bank to make good the promise of redemption given to the holders of the notes. In the first place it may use its cash reserve to redeem the notes presented. Then at the shortest notice, by cashing its demand represented by negotiable paper and kindred investments, it may obtain funds to redeem the rest of the notes also in so far as the notes themselves are not presented in repayment of the loans. Thus all notes issued by a well-managed bank, the supplementary as well as the substitute circulating media, can be used to obtain their face value in money and are accepted in all transactions as money.

In the case of money the mass habit of acceptance has become historical. This is quickly transferred to the notes of a central bank

even without any legal enactments which enforce their acceptance or establish compulsory rates of exchange. It is unlikely that anyone would refuse to receive such notes in payment for in so doing he would be regarded as indulging in unbusinesslike chicanery. If the bank fails to observe the rules of protecting its notes, there will in the long run be a reaction which impairs confidence in the bank's notes even with the general public. But so long as the bank conducts its business with due regularity, the public and the entire business community receive and pay out the notes without so much as a thought of the cash reserve or the secondary reserve; or frequently without even having heard of these.

When the mass habit of acceptance once attaches to a note, it ceases from a practical point of view to be a mere demand for the payment of money. It becomes money, and practically, therefore, the country's total fund of effective money is augmented by the amount of the supplementary money.

This statement requires a restrictive explanation. This increase of the country's capital is not permanent. Notes which are paid out in discounting loans are subject to a law which has been called after its discoverer "Fullerton's law." When the credit granted by the bank expires the bank either receives back its note, or, if repayment is made in cash, an amount of cash which covers the note remaining in circulation. The notes which the bank issues in discounting commercial paper are no longer lived than the draft or acceptance itself. If they continue to circulate they are at any rate no longer uncovered notes. They come into existence when the draft is discounted; they die when the draft is honored. The payment of a draft gives to the bank a fund to cover the bank's note. During periods of slackening business activity when few drafts are offered for discount the supplementary fund decreases and vice versa.

The notes take the place of the draft which is deposited by the bank's cashier. Fundamentally, therefore, they are nothing more nor less than transformations of the draft which fit it to perform the functions of money. Drafts or acceptances are in amounts of uneven denomination; the notes of the bank are in round and convenient sums. Commercial paper is timed; notes are payable to the bearer on demand. The former appreciates in value, the nearer the time for its presentation and payment; the latter, as is the case with money, are not affected by the lapse of time. The former circulates only in its own narrowly restricted sphere; the notes of a central bank whose solvency is universally recognized are adapted to circulate throughout the entire national economy. Finally commercial paper is a means of

only provisional payment. Notes are a means of final and conclusive payment just as is money. Should the commercial paper in place of which the notes were given, not be honored, the bank will fall back exclusively on the drawers and indorsers. The bank notes are in no wise affected and no one who has made payments by their instrumentality accepts any secondary liability. Why should he? The note is not, like the draft or acceptance, an individual promise to pay;[1] it is as representative as the money of the realm. It is national currency[2] as it should be in order to qualify as ultimate service for money through the mass-habit of use.

In most of its characteristics the "uncovered" bank check is the opposite of the unprotected note. Before explaining the check in detail we shall have to discuss a term which is not now in general use in precisely this form. The Austrian postal savings bank in its organization typifies the centralized clearing house arrangement. By the English method the parties draw in the first place on their bankers and these subsequently balance demands and counter demands in the clearing house. This method is substantially the same as the former, but its explanation is more difficult and does not give as clear a view of the relations which it is our object to disclose theoretically.

The centralized clearing bank accepts deposits of money. The creditors of account dispose of those funds by transfer checks. Payments are effected by debiting the account of the payer and crediting that of the payee. The arrangement amounts to the old exchange or giro trade on the greatly enlarged scale of a bank which operates over the entire national economy. As little theoretical interest attaches to that part of the deposit which is covered by cash on hand as does to notes covered by cash reserves. There are certain practical advantages in paying by check, but the country's media of exchange are not enlarged by drafts against cash on hand. But at this point the clearing bank avails itself of the experience of the bank of issue. Knowing that it is unnecessary to hold in readiness the entire coverage, it uses a certain portion of the funds entrusted to it for suitable investments which produce interest and enable it to allow a moderate interest to the depositors. This is an additional inducement towards increasing deposits. To the entire extent of these investments, the depositors renounce claims against a cash reserve and accept the secondary reserve in its place.

Therefore just as we distinguish between the covered and uncovered notes we shall have to distinguish between the credits which are protected by metallic reserve and those which are covered only by the bank's investments. This distinction is without significance so far as transfers are concerned. Just as the notes of a well-managed bank of issue are accepted in daily exchange, whether they are covered by metallic money or approved security, and just as they form a homogeneous mass enjoying equal rights and used with equal effect without regard to the manner of security; so the credits of a well-managed clearing bank are looked upon as a homogeneous mass to be disposed of by transfer with identical effect without regard to the manner in which they are secured. But since the funds deposited are returned to economic circulation to the entire extent of the unsecured credits, it follows that to this extent the funds do double service and the media of exchange of the country are increased just as they are by "unsecured notes."

[1] ein Einzelpapier.
[2] ein Massenpapier.

In many respects the clearing bank facilitates payments more effectively than the bank of issue. It is an improvement on earlier methods that the transfer takes place in the bank's accounts rather than by counting out and shipping funds. It is a further improvement that the balances, by the transfer of which payments are effected, at the same time yield a moderate rate of interest to creditors. In this way the method of clearing resumes a characteristic of the bill of exchange which was altogether lost in the case of the note, the representative of the bill of exchange. On the other hand, people must agree that their balances cannot be withdrawn at will, but their withdrawals are subject to certain short notice. This, too, is an improvement. While in the case of a bank note, the holder has a right to insist that it is payable on demand, payment by check has advanced beyond this stage. Depositors in the bank pay by money demands which cannot be withdrawn immediately but only after a trifling delay. Once the bank's patrons feel confident that payments are immediately effected by a transfer on the accounts, it is a matter of little importance that the withdrawal of funds is restricted by short notices. In this respect also the check revives a quality of the bill of exchange which is used by way of payment but subject to a certain number of days of grace. However, owing to the superior guarantee which the check receives in the combination of cash reserve and approved security, it surpasses the bill of exchange in effecting definitive or conclusive payment.

The amount of the unsecured balances, to the extent of which money does double work, fluctuates as elastically with the monetary requirements of trade as does the amount of unsecured notes. In periods with large financial requirements, the bank will increase its loans.

As the requirements drop off, there takes place a return flow of bank funds which is quite analogous to that described by the law of the return of bank notes.

The clearing method has developed much more rapidly than that of the use of notes. It has profited by the experiences of the latter and from the start has been in a much higher degree a matter of forethought and conscious purposeful organization. The charter and by-laws of the clearing bank regulate the legal effects of every event in all its details; the parties submit voluntarily to the established regulations and state legislation has little need of interference. Much depends on the extent to which the public makes use of the institution of banking. It is one thing when only large business houses lend their support. It is quite another when smaller concerns and, outside of the business world, the public, properly speaking, participate. The checking system is not well adapted to the needs of workers, small traders, petty officials and the like. These classes have the disposal of only small sums; they receive their incomes at short intervals and consume them as soon as they come in; they reserve no funds. However the system is well suited to the middle classes in easy circumstances. Not only in England but in many other countries it has found ready adherents among these classes.

The use of payment by check is fairly wide-spread as compared with the sphere of the use of notes as it was rigidly regarded by the older schools. Originally the note was intended only for the larger commercial transactions. It was not even thought desirable that the notes should find their way into the tills of petty traders and they were therefore issued only in higher denominations. Transfers by check, on the contrary, are made among the customers of the bank down to the smallest amounts, and are just as careful in effecting domestic payments as business transfers. Where the checking system has once taken root, its sphere of usefulness is wide enough to give rise to a mass habit. The strength of this habit is such as to place the individual under the spell of a universal practice. In the last instance it is this which creates for the check the quality by virtue of which it operates with the public at large as definite payment. It is the possibility of accomplishing this feat on so large a scale which gives the checking system the firm position in the public estimation which it now enjoys. The methods of the clearing bank by which guarantee of payment is established are after all a secondary consideration. It is true that under present conditions the guarantees cannot be dispensed with; the entire checking system would be shaken to its foundation if the security of the reserves were to be found

insufficient. Confidence in the bank would be lost and balances would be withdrawn in large proportions. The checking system would be at an end. But while the credit of the bank is maintained, all these considerations have little weight; the public is guided first of all by the fact that these transfers have universal currency.

What in England and continental Europe is known as the Lombard business, in the course of which loans are granted on securities listed on the stock exchange, is looked upon, like the business of discount, as lending on approved security. When prudently managed, it actually offers a real secondary reserve, as the sums loaned may be withdrawn on the shortest possible notice. But it lacks that guarantee which arises from the connection with a business transaction, notes are placed in circulation without the support of new natural values to balance the face value of the obligation. For good reason therefore the Lombard business is confined to a narrower field. If it is transacted on too large a scale it must inevitably interfere with the smooth working of the institution of money.

Over and above the important result of adding materially to the ready money in any country, the institution of credit affects the methods of payment in still another way by minimizing the specific acts of payment. However, under present conditions this proves to be of far less importance. Between merchants with a regular and lasting business connection which leads to obligations of payment on either side, actual payment may be simplified by mutual credits and debits and a periodic settlement. Such adjustments minimize not only the acts of payment but also the means on both sides. Means of payment need only be held in readiness for the balances which are not otherwise cancelled. On the whole if we disregard settlements on the Exchange, the method of balancing accounts has not gone much beyond the limits of commercial business intercourse. Clearing house settlements on the English system which reach enormous dimensions are not considered in this connection; they merely supplement the checking system and are wholly unnecessary with a centralized organization. We have already discussed their effect in our exposition of the checking system.

Finally the institution of credit also admits of arrangements by which the trans-shipments of paper or metallic money can be done away with. Costs of transportation are thus saved and other considerable advantages secured without essentially influencing the structure of the economic community comprised of those who pay and are paid. It is therefore not necessary for us to discuss this feature at the present time. In the theory of the world economy, we shall have to discuss a function of credit of greater importance.

Precisely as money itself has been evolved, so the method of payment by credit has been developed largely by the tendency to experiment which is constantly manifested in the practical affairs of life. The task of theory is in the first place directed to a summary explanation of the significance of those things which have been worked out in detail by human ingenuity and skill. Theory has contributed to the practical shaping of results mainly by criticism which it is able to offer because of the breadth of its knowledge. In this spirit it dictates the necessary safeguards whenever the aggressive impulses of practical life tend to pass the limits of prudence. Theory is a conservative rather

than a progressive element. With scarcely an exception theoretical criticism has been too cautious; so far developments have gone beyond the limits indicated by the rigid discipline of the schools. There can be no doubt that in the future also the practical quest will point out and attain methods which are still proscribed though they are destined to lead to the creation of media of payment bolder and more extensive than any we now dare fancy.

§ 48. The National Economic Community of Payment

Payment—Price-payments and payments by assignment—Original and derived income—The equation of supply and demand—Natural and monetary forms—Personal balances of wares and of payments.

The economic concept of payment is presupposed in the phrase, means of payment by credit. In attempting to define this concept, so important to an understanding of the institution of money, we shall assume an undeveloped economic condition where there are no credit media and the only means of payment is ready cash. At first we shall also assume for the sake of simplicity that we are dealing with a static economy which obtains the same social income year in and year out through a frictionless, undisturbed process of production and acquisition and which distributes this income to its members by similarly frictionless sales. We shall first examine the effects on the institution of money resulting from change, friction and disturbances in production, acquisition and the market. We shall then pass to changes in the value of money.

Payments in money may be made irrespective of exchange as well as a result of an exchange. Those made under the latter condition may be classified as payments made for natural values and those for money or capital. In our analysis we must begin with payments made for natural values. It is through these that all other payments receive their significance. If money were not able to buy natural values, it would be absurd to lend money and collect taxes.

The exchange of natural values for money is a necessary consequence of the division of labor in the economic process which has brought in its train the money economy. While the domestic production of the old natural economy resulted in a natural yield from which the household was immediately supplied, production in a monetized economy gives a natural yield to every individual of which he may be able to use little or none in his household. These products and the other natural values turned out in the process of acquisition must first be sold in the market to yield a money income. This, finally, must be changed into the natural income which leads to the satisfaction of needs in the household.

Acquisition is considered complete as soon as a money income has been obtained from the sale of the finished natural values. Turning the money income into natural income offers no further acquisitional difficulties; the essential problem here is to observe correctly the margin of use of the household. It thus happens that this purchase, although it also requires a certain market experience, is looked upon as a problem of the household where the ultimate preparation of the commodities for consumption is presumed to take place.

In disposing of his products for money, the producer effects a transition from the narrow field of his particular process—a limitation imposed by the division of labor—to the entire wealth of values in the market. He surrenders the natural form of a specially conditioned product for which the market possesses only a limited capacity of acceptance. In return he receives money, the general medium of exchange, which enjoys a mass-habit of acceptance and by which he is left to a greater or less degree master of the market. He may now come forward in the market with his demand. It is this shift from a restricted to a general command of the market that is significant in the concept of payment. In this sense payment is a monetary performance in exchange.

The process of production in the money economy leads to continuous sales not merely of consumption goods that are ready for use and are being transferred to the household, but also of material and personal productive means that are used in production and must be replaced. In the case of these sales also a concrete natural service is surrendered in exchange for the universal medium of exchange, money. Payment is made in money.

Once the position of money as a means of payment is established in the market of natural values, the development of the money economy leads to other types of payment in order fully to profit by the power money confers in the natural market. Loans and credits in the money and investment markets are examples. The payment of money gives to the borrower, according to the amount of the loan, a general market control. By the payment of interest and the repayment of the principal sum, he returns this control to the creditor. Credit transactions are made in the general means of payment, money. Therefore anyone may become a creditor who receives payments of money through any method of acquisition. Anyone who has to make money payments may become a debtor. Similarly anyone may fulfil his credit obligations who has received payments of money from some source.

The payments of public taxes are also made in money. In a natural

economy circumstances require the payment of natural taxes. The state therefore is confined in its expenditures to the primitive natural values offered by the domestic production of its subjects. A tax paid in money gives to the state a control of the entire domestic and foreign market in proportion to the amount of the tax. On the other hand the performance of the tax bears less oppressively on both burghers and peasants as soon as their acquisitional activity is adjusted to yield money incomes. The same is true of the payment of fines and damages in money: it is most effective for the collecting party and least burdensome in the age of the money economy for the person paying.

Those payments which are made without involving any return from the beneficiary: liberal gifts of every description, donations, alms and foundations are most effectively made in money. There may be special reasons that make a natural performance desirable; it is possible that the particular natural form which is ultimately desired may be represented in the fund from which the donation is made. But if the gift is executed in the universal medium of payment, it allows the beneficiary the most unrestrained selection of natural values. The same remarks apply to properties to be placed in social enterprises. Finally in the insurance business the payment of premiums and the recovery of damages call for a transfer of money; indeed wherever the money economy prevails, such transfers cannot be differently conceived.

Payments are classified into two great groups: price payments and payments by assignment.

Price payments are the monetary consideration for natural values in the market. Strictly speaking, the term includes the payment of interest by a debtor, as interest is also a price; but we shall not consider it as a price payment, for it does not embrace the particular characteristic of price payment which involves the sale of natural values. Price payments are the auxiliary movements by which in the economic process of sale the principal movement of natural values is maintained. The title, which qualifies men to receive payments of price, is the fact that they have surrendered natural values which have been introduced to the economic process of the nation for exchange.

We shall call payments by assignment all those which are made under any title outside the market of natural values. In part they are payments in consequence of contracts: loans and other credit arrangements, contracts of partnership or other association, insurance agreements and those of gift. These contracts again are made either

for a consideration or gratis. Some of these payments are founded on legal obligations as in the payment of fines, damages or taxes. The primary purpose of a payment by assignment is to transfer the control over the market of natural values, which the possession of money confers, from the existing owner to another. In the further course of transactions the purpose is so extended as to transfer also the power to make payments by assignment, be they with or without consideration, by contract or imposed by law. The creditor transfers his power of payment to the debtor; the latter returns it to the creditor. The taxpayer transfers his power to the community, the donor to his beneficiary, the member of an association to the society and the insured to the insurer. In some cases there is a return from insurer to insured. It is not an easy matter to find one collective name to describe all these payments originating in so many different titles. The name, payment by assignment, may be the most suitable that could be agreed upon. We think then of the party paying as the assignor who surrenders a certain general market control, considered as money, to an assignee. An especially important group of such payments are those discharging a debt which the party bound by contract or law makes in performance of his obligation. We shall later see that the state bases its control of money-matters mainly on the sovereignty which as legislator and judge of last resort, it exercises concerning the regulation of the payment of debts.

The income, acquired by participation in the process of production and acquisition, is spoken of as original income. In our science the term is used in several other meanings, but it is this meaning in which it is probably most aptly accepted. The original income is made up of the price-payments which men receive for the surrender of natural values, formed by their economic activity; we mean by the transformation of a natural form into the money-form. Original income is acquired by the farmer, the mine-owner, the manufacturer and every other industrial producer, the merchant, the freighter, the landlord, the physician, the lawyer, the priest, the military officer and the official of the state. Such income is acquired not only by the independent, individual entrepreneur. Every other person, performing some part in the process of acquisition and production, also receives it: the partner in any business-enterprise, the stockholder, and fully as much the wage-laborer or the owner of realty, leasing his real-estate.

In contrast with the original income we find the derived income, earned directly in money-form. Derived income is received by the creditor, the banker, the mendicant who lives on alms or the charity

of the public, the beneficiary of an annuity. The income also of the state and of other commonwealths received in taxes and dues of all kinds is derived income. It is paid out of the money-income of the citizens whose income is correspondingly decreased without the compensating exchange of any natural value, although the community attends to the task of procuring out of this income the natural values, employed in the administration of government.

So long as the assumption of an undisturbed static economy is maintained, the principal movement of natural values must always balance with the auxiliary movement of price-payments. More accurately, the sum of natural values offered by the participants in the processes of production and acquisition must be equal to the sum of the money values at the disposal of buyers. Put most briefly: there invariably exists an equilibrium of supply and demand. In a static economy, functioning without progress or retrogression, there must more especially be an equilibrium between money income and natural income, i. e., between the money income and those natural values which are being consumed in the households. This proposition we shall now have to prove.

Let us first assume that all income is original income. In this case we may feel assured that, whoever has brought a natural value into the mechanism of production and acquisition and received a price-payment in return, may, in a static economy, count on finding a natural counter-value of corresponding magnitude offered in the market. The purchaser received the natural value by paying a price. But in order to obtain the money with which to pay, he must himself have placed a similar natural value in the economy. In the process of exchange, there are a series of successively linked pairs. In order to obtain the monetary commodity, each successor in this chain—those both near and remote from the pair under consideration here—had to bring forward a natural value. Somewhere, this chain of exchanges finally breaks as certain persons have not yet brought their wares into the economy. They wait for the successor on whose demand they will bring forward their goods. In a static economy, the farmer, selling grain, will find somewhere in the market, the industrial products which he is seeking, offered by producers, who are in quest of his demand, in order to obtain by sale the means of payment which they themselves are in need of, in order to push their own demands. When, finally, the last excessive supply and the last uncared-for demand have met and effected an exchange, the ring is closed in the series constituting trade. In the static economy, the demand—as far as the supply is concerned—does not come unexpectedly; supply

and demand, by long continued relations in the market, have adjusted themselves to each other. The demand is expected in advance, and it thus exercises an effect equivalent to an order. The natural values, of which the demand is in quest, have been prepared by the supply in quantity and quality as desired, enabling the parties to effect the exchanges of the market in easy routine and without friction.

In a static economy, the equation of supply and demand is by no means interfered with by the influence of assignment payments or of derived income. By such payments only the individuals are changed, who make up the demand; persons with derived income take the places of those with original income. A producer may waive the right to receive from the market for his own consumption the natural values to the receipt of which he has become entitled by the products turned in. He may prefer to loan the price realized to a debtor. In this case, the debtor will exercise the demand, and his demand will operate as an order, as soon as the market has become accustomed to it. The reverse is true when the debtor proceeds to the payment of interest and repayment of principal. He can do this only through natural values which he prepares or which, in more complicated cases, a new creditor, some other provider of funds or his predecessor in the production process has turned in for him. Whenever the state collects monetary taxes, which are paid from original or derived income, the citizens, in paying, make over to the tax-collecting government their expectations or opportunities of obtaining market-supplies. In the more complicated cases, the transfers of market-certificates, accomplished by assignment payments, are very numerous. Thus, for example, the mechanic in debt may pay to the creditor-bank, the bank to the depositor, the depositor to the state, the state to its creditors, and from these the series may be similarly continued. But numerous as the shifts may be, the equation of supply and demand will always have to continue to exist in the market of natural values, where the economy is a static one; neither the quantity of natural values supplied, nor the amount of the sums of money giving title to demands, undergo any change whatever.

We can summarize the result of our investigation in the phrase that the closed enonomy is, for the entire people, a community of payments. By a universal habit of thought, we picture economic organization as a community of production and acquisition; but we shall have to think of it as well as a community of payments, a community settling the mutual claims which arise in the process of sale. With the aid of the universal means of payment, money, the necessary service is performed in a surprisingly simple manner and without the need of a

superior management. As long as every individual, in making price- and assignment-payments, looks strictly to his own interest, the orderly settlement of affairs is assured. Every individual is a member of the community of acquisition who is ready to turn in a natural value, and who thus disposes of the natural form; he also is a part of the payment-community who disposes of the money-form. Sales are made as members of the two communities come together in exchange, two by two. In the exchange they change rôles, the supplying predecessor acquires in place of the natural form, the money-form; the demanding successor in place of the money-form, the natural form. This interchange of natural form and money-form in connection with the equation of supply and demand is sufficient to discharge in due routine the service of the community of payments. No one can achieve the control of the money-form, who has not himself or through another turned in a corresponding quantity of natural values; no one can aspire to the control of the natural form, who has not surrendered a corresponding quantity of values in the money-form. It is his personal loss, when one of the contracting parties errs and surrenders a greater value in the one form than he receives in the other. The equation of values in the total, however, is not affected by this error, for what he overpaid becomes the gain of the other party to the contract. Anyone who does not wish to employ the authority, conferred by the possession of the money-form, personally to withdraw natural values, will probably perform one or the other act of assignment-payment; he will lend out money, give it away or fulfil his public or private obligations to pay, and thus surrender his position in the community of payment to one or the other assignee.

The free-trade school has—as far as international commerce is concerned—maintained that, in the long run, wares can only be paid for in wares. As we shall see later on, the position does not hold good for the foreign trade of an individual country; it does hold good in a closed economy or in the whole of the commerce of the world. But we shall have to change somewhat the mode of formulation; rather than of wares, we shall have to speak of natural values, generally; and we shall have to substitute a more appropriate phrase for the term "paid," for in every instance payment can only be made in money. The true meaning of the statement is that the money-values, available for the demand of natural values, are ultimately derived from the sale of natural values which the supply has carried into the economic process. Thus formulated, the proposition coincides with the equation of supply and demand.

The equation of supply and demand does not hold good for a single section of a closed economy any more than it does for the commerce of a single nation with foreign countries. The sum of the products which the farmers of a closed state sell, does not necessarily coincide with the sum of products and other natural values, which they acquire for production and for domestic use. It will, even with entirely undisturbed economic processes, coincide with the latter only on the assumption that the original income of the farmers has not been reduced by the payment either of interest on indebtedness, of taxes or any other assignment-payments. An agricultural enterprise, heavily indebted and burdened by taxation, will withdraw from the economy a much smaller quantity of products, than it has itself raised and carried into the social fund. On the other hand, the group of capitalistic investors, who live entirely from derived income, will be able in its domestic economy to supply itself abundantly with means of enjoyment of every description, without itself producing natural values of any kind. These men find their natural needs supplied by the values brought to the market by their debtors to cover their payments of indebtedness. It may be the capitalists do not take out the very natural values brought into the general market by their personal debtors. None the less at some place in this market corresponding values must be found prepared.

What we have now explained as to individual sections of the national economy, applies equally to every individual economy. The natural values, coming and going in an individual economy, need not by any means be equally balanced. The personal balance of natural values or, as the case may be, the personal balance of wares, may be a credit or a debit balance. It will be a credit balance when more natural values, or wares, are sent out; a debit balance, when more come in. When thus interpreted, the personal balance of wares of the farmer, largely in debt, will be a credit balance; the personal balance of wares of the capitalist, a debit balance. These are ways of speaking which do not correspond to the personal relations; and still we adopt them, because since the days of the Mercantilists, they have been habitually used in our science for national and universal economic relations. We shall have to discuss them further in our theory of the economy of the world.

As we speak of a personal balance of wares, we may speak of a personal balance of payments. This is the balance of moneys received and paid out in the individual economy or of the payments which, during the economic period, should come in and go out. In a properly conducted individual economy, the personal balance of payments can never permanently be either a credit or a debit balance. Those who receive larger payments than they are willing to expend in the conduct of acquisition or in the domestic economy, will pay out money for some kind of investment; they will purchase securities of some kind, bonds, stocks or real estate; they will make a liquid deposit in banks; or they will turn part of the funds over to other individuals by liberal acts. The banks, on their part, will not permit funds to lie idle, which have been deposited with them; they will again place them in circulation by means of their loan-and credit-transactions. The hoarding of large sums of unused money, forming a treasure or thesaurus, as was the former practice, will find no advocates under modern conditions. No one will for any length of time so shape his personal balance of payments, as to carry a credit balance in the sense of taking in more money than, in one way or the other, he pays out. On the other hand, however, no properly conducted economy will so fashion its behavior as to produce a debit balance by becoming bound to expenditures greater than anticipated receipts. To cover expenses which unexpectedly disturb the equilibrium, and which cannot be met from regular receipts, extraordinary measures will have to be resorted to, by availing oneself of credit, proceeding to sales or omitting other

intended expenditures. Rather than speak of credit and debit balances, we should speak of the favorable or unfavorable formation of the balance of payments. The favorable formation is one where payments come in after a manner which always supplies sufficient funds to meet expenses; the unfavorable are those where difficulties arise because payments become due before the funds required to meet them have been realized. Even in an household of small income, the balance of payments may be favorable, where affairs are well managed and certain reserve-funds kept in readiness; while in an economy of large income it may be unfavorable temporarily or even habitually, where things are ill managed and large obligations are assumed, which go beyond the available cash-resources.

It is difficult to grasp correctly the relation of money-form and natural form. The practical point of view for obvious reasons sees first of all the money-form; it looks not upon the whole, but upon things as presented by the private interest of the individual whose access to the wealth of the market is secured by the money-form. The scientific mode of thought, on the other hand, insists logically upon the importance of the natural form. Here, all individual aspects have to be united into a total representation, exhibiting the natural values as the nucleus of national wealth. However this may be, science has not, after all, won its insights without itself becoming ensnared in errors of exaggeration; and it has on occasion announced its axiom as though the natural form were the key to all verity, and the money-form were of no import whatever. Socialistic criticism went to even greater lengths. It thought to have found in the money-form and in the necessity of transforming the natural form—the community-form as Marx called it—into the money-form, which in an eternal circulation is retransformed into the natural form, the source of all exploitation. The correct view is probably the view which holds that, as long as there is an economy of exchange, the social institution of the money-form cannot be dispensed with; its service in the process of sale may assuredly still be elaborated by more perfected arrangements, but in no way may be replaced.

§ 49. The Developed Form of Money

The money-form and credit—Natural, monetary and credit economies—Definitions of money.

The economic community that arises through exchange did not stop with the original form of monetary payment. The introduction of credit and more especially the adoption of media of payment by credit has greatly extended the scope of the money form.

In the first place credit operates by deferring payment in ready money and substituting book accounts. When sales are made on credit, the vendor surrenders his position in the acquisitive community to the purchaser. The latter gains possession of the wares; the former cannot reënter the market until he has been paid. If we eliminate the possibility that the vendor may protect himself by taking a mortgage or bond, the transaction is wholly at his risk. If the

purchaser fails to make the promised payment, the seller loses his position in the economic community. So long as the account remains open the transaction is incomplete; there is as yet no money income because the vendor is in possession not of money but of a demand for money. For the latter no habit of general acceptance has been established. Such credits are therefore always confined to a narrow circle in which the personal and business relations of the parties are such that the creditor can scarcely decline to accept the risk of the transaction.

In those cases where debits and credits are balanced on the books the use of money is dispensed with and as a means of payment money is economized. It is still used as an instrument of computation. The prices and interest are computed in money and the balance in terms of money is carried forward to a new account.

The development of demands for money, which may be used in wider spheres as means of payment by credit, is more important than open book accounts. As typical forms we have become acquainted with commercial paper, drafts, bank notes and checks. Neither of the last two is secured by a full cash reserve. These have all been amply described and we need only summarize their relation to the form of money. A draft is a provisional means of payment used in restricted business circles mainly to effect price-payments. It has grown out of the needs of commerce that receives its numerical value from the size of the commercial transaction covering it. It is an accessory means of payment which supplements money. It does not, however, actually become money but always remains a demand for money.

The "unprotected" note is a transformation of the draft. It is made to serve more perfectly as money; it is a means of definitive payment, supported by the general habit of acceptance. Suitable for larger payments in all fields of the national economy, it is issued or withdrawn in amounts equivalent to the commercial transaction which it covers. But even the note is only an accessory means of payment; it augments money but never completely displaces it. To be sure, in the mass habit of acceptance the note has individuality; one might say that it has a "call" to independence. It has a double basis: on the one hand it is a demand for money which presupposes money; on the other hand, through the general habit of acceptance, it has become fundamentally independent of money and stands "on its own." In a closed economy, which needed to give no attention to payments in foreign trade, it is not only possible but probable that the note would have achieved this independence in practice.

On the whole the same statement is true of checks. In all civilized countries the sphere in which checks serve as money has become so large that we may properly speak of a mass habit of using checks which might be strong enough to establish the check independently of metallic money. We are not concerned here with possible developments; our object is merely to describe actual conditions. At present the note and check are only accessory media of payment. They supplement metallic money to the extent of the needs of commerce: i. e., according to the commercial values which secure them.

With these limitations notes and checks do service as money in their own fields with precisely the effect of money. The recipient of a note or check becomes a member of a limited but still extensive community of payment. To an amount equalling his receipts he commands the money form and is able to make payments with full effect. The transaction closes with the receipt of the note or check; a monetary income is received by the man who is paid and who gains a position in the acquisitive community that formerly was the payer's.

The process is most clearly seen in the manner in which payments are effected on the central clearing bank. The bank unites its depositors into a community of payment. It enters on its books the values of which its patrons dispose in monetary terms. Payment is made by transferring a claim to the payee according to the amount of the credit. But does not the simple act of payment in ready money accomplish the same thing? A coin is a material token of value whose temporary possessor is enabled to pay. The note is a transitional form between the original—one may almost say the primitive or naturalistic—coined form and the refined money-form of the bank-book. It resembles the coined in that it must be physically transferred; but the trained eye of the modern observer sees these notes as precursors of the bank-book. They are merely the loose leaves of an unbound bank-book; their use prepares the way for the coming development.

The credit economy is frequently explained as being in the same manner a development of the money economy as the latter is of the natural economy. This is a mistake. The transition from the natural to the monetary economy is by far the greater. There is a fundamental difference between the active agents in the two, and hence in the effects of economic activity. In the natural economy the individual household must rely upon itself and its forces. The process of production is carried on within the limits fixed by the scanty natural resources of a household. There are no intermediaries between production and consumption. In the money economy all workers separate production and other acquisitive activities from consumption by two

intervening acts: a transfer of the natural form to the money form and of this back into the former. This external opposition has the greatest material consequences. Through these two transfers the way is opened to the development, first, or the division of labor which releases an enormous social productive force, and second, of the community of payments which distributes the socially prepared values. Not until the rise of a monetary economy did the great, far-reaching national economy originate.

The establishment of the credit system did not introduce a fundamentally new set of conditions; it is not even desirable to speak of a special credit economy. What men refer to as the credit economy is merely an extension of the money-economy; it might be called the credit-and-money-economy. By means of loans and credits in their various forms individuals other than those owning property are given control of the property. In particular the group of entrepreneurs is renewed. By means of payment by credit the form of money is expanded; developing natural values offer a commercial security and themselves furnish the means of payment which facilitate their sale. Thus the avenues of production are enlarged. These are great results but they rest on a monetary economy within which they function.

According to these explanations any general means of payment, in exchange or outside of it, is money. A means of payment gains universality historically as soon as a mass habit of use has attached to it. Specie is independent money, money at its best, that on its own account may find universal employment. Bank notes and checks are accessory to this true money. A commercial draft has no general acceptability; it forms the transition to demands of various kinds for money which are accepted as payment by special agreement in each particular case.

The term, general means of exchange, that appears in many definitions is too narrow. It does not include payments by assignment and fails to emphasize sufficiently the effect of price-payments. The much used designation, circulating medium, does not properly limit the concept, for a commercial draft also becomes a circulating medium as soon as it is frequently endorsed.

Formerly the explanation was frequently inserted in the definition of money that is "the means of preserving values for the future." Even today this statement, which is a last remnant of the mercantilistic theory of money, is made. But the wealth of the future would be ill conserved if there were not also enduring natural values and sources of value. The durability of money is assuredly an important consideration, for future economic organizations will need means of payment; but it is hardly necessary to add that in all future periods the natural forms of wealth will be developed by the side of the monetary ones. Finally, it should be mentioned that for anticipated and also for unexpected future payments a cash reserve should be established that is proportioned to one's means. The continuing organization of credit accumulates the reserves of individual economies in the banks and thus effects a considerable saving in the monetary material.

In many definitions, money, having been declared a medium of exchange, is also set up as a standard of price. This addendum is superfluous. Money could never be a practical instrument of paying prices, if it were not qualified to measure them.

With far more propriety money has been described as a measure of value. But the idea which it is desired to convey, may be more suitably expressed in another way. What the phrase is intended to indicate is that money is used to symbolize values in other transactions than those of exchange. This happens when a later exchange is foreseen, as for example when an official appraisal precedes a sale at public auction. The same thing happens where no sale at all is expected to follow, as for example where the exchange-value of the yield is determined. At the end of this section we expect to take up again the applications and significance of computation in money; provisionally let us say that money is indeed the general instrument of appraisal in the processes of private economy.

Money is affected more radically by paper money than by the means of payment by credit. Paper money does not supplement but ousts specie. Externally it is of the same form as the bank note, but essentially it is in no way kindred to the bank note or other forms of credit media. Its origin is not in credit but in the edict of the state, establishing a nominal value. When we come to discuss the nominal value of money, we shall also go into details as to paper money.

§ 50. The Economic [Objective] Exchange Value of Money, or The Value of Money

The Concept—The law of its formation, its historical conditioning and continuity.

Theory is not likely to unravel the problem of the value of money in a satisfactory manner until it has grasped the concept of the money form and of the expanded form of money. The older theory was bound to fail when approaching this problem, if for no other reason than that it never succeeded in defining these concepts and hence could never determine the "quantity" of money which determines its value. In the older theory this quantity was the material stock of money. Actually it should be represented by the entire sum of the income of the economy which is available under the expanded form of money. A wealthy man who disburses his large income by checks drawn on his bank is unlikely to appraise the value of money by the standard which would be set merely by the sum of cash which he happens to carry at any particular time. As regards the personal exchange value of money, this is so apparent that any further discussion may scarcely be expected. But the conditions governing the value of money in the national economy are different and a more careful analysis is required in order to shed light upon the concept of this value and the

law which governs it under the amplified form of money. In practical life it is the social economic exchange value of money which men have in mind when they say that money is worth more in one place than another or that it is worth more now than it formerly was. In this connection also, the prevailing scientific interpretation follows the procedure of daily experience. It accepts the value of money as it is objectively determined and refers to it as the objective exchange value. The same statements which we have ascertained to be true in connection with the objective determination of natural values hold good also in respect to money. The value of money is not an objective value; it is the general cross-section of the subjective or personal valuations of money; it is the value as to which all persons are agreed. We define this value as the significance which all parties concerned attach to money in the economic process under the general price level.

More is predicated in the value of money than the mere fact of a general level of prices. Not only is it stated that the goods which are being sold in the market are held at particular prices; it is implied that because of the general price level, money has a certain significance for everybody in the economic process. This significance of the value of money is more clearly experienced when economic changes affect its purchasing power than under conditions of perfect stability. The statement that money has risen or fallen in value does not merely inform us that the general price level has gone up or down, and that things are cheaper or dearer; it gives us to understand that simultaneously with the general change of prices, money has taken on a different value for everybody. In this statement it is predicated that the relation of the unit of money to that of utility has changed; that in order to cover the same marginal use, more or less money has to be expended. When more units of money have to be surrendered to secure the same degree of utility, the value of money has declined, and vice versa. When a general rise of prices has the effect that the provisioning of all households has to be curtailed, or when falling prices enable it to be expanded, the exchange value of all commodities has risen or fallen, while that of money need not be affected at all.

Accordingly we may define the value of money more accurately as the significance attaching to a unit of money because of its relation to a unit of utility. All factors which contribute to the determination of the general price level influence the value of money. But there are other circumstances which determine the ratio in which units of money are equated to the price level of a unit of utility. These should also be considered. In the final analysis, the general price level is always determined by the sums of the values which make up the supply

and demand in the market of natural values. On the side of the supply, these consist in all the natural values offered for sale. On the part of the demand we find the sums of money which are available for price payments. It is a matter of indifference in what particular monetary form these amounts exist. Sums which are available in bank notes or checks as well as in commercial paper are all to be counted. No less are those amounts which are credited and carried to an open account. These all influence the formation of price. Of all the prices paid in the market, those payments made for consumption goods are decisive for the exchange value of money; it is from these that the prices of productive means are derived. In a static economy, with neither progress nor retrogression, the money income is all used for the purchase of the consumption values necessary for the households. Thus we arrive at the brief expression that in a static economy, the general level of prices is determined by the newly produced natural consumption values on the one side and the monetary income on the other.

Payments by assignment do not influence the exchange value of money. They have no other effect than that they bring about a change in the individuals who are entitled to dispose of the money. The national income is neither immediately increased nor diminished by them. Indirectly, however, more remote effects may arise and may result in appreciable modifications of the national income because of the influence of these payments upon the distribution of the social income. The number of units of money to be used to express a unit of utility cannot be predetermined. They may be many or few. As a matter of fact, the value of money has been quite diverse both at various times and in different localities. It is invariably a matter that is historically determined. At any given time every economy finds the value of money determined by prior development. During a new period the development proceeds continuously from this condition with historical precision. No matter what factors operate on the side of natural values or of money to influence the general price level, they always operate from the basis of a preëxisting level of prices. The existing price structure is never changed simultaneously in all its parts. New facts affect only individual prices. Momentous influences on the price level accumulate little by little with the ceaseless occurrence of new events which affect ever new sections of the market. In a particular case the parties to a transaction compute a new price from the one with which they are familiar. "If such and such things cost so and so much, then I shall have to ask this or that price for my wares"; or, "I can only pay such and such a price": thus any formation of prices is popularly worked out. When the conditions of the market are more disturbed, the new prices will depart more rapidly and in larger numbers from the old ones; but no matter how great the disturbances of the price level, even at times when they lead to a violent upheaval of the value of money, the leap to the new value always proceeds from the basis of the old value, historical continuity is maintained.

The theory of the value of money must start from the service of money, just as that of the value of wares starts from their serviceability. The prevailing doctrine has failed to do so; it fell into the error of drawing the exchange-value of money too closely to the pattern of that of wares. It has sought to construct the closest possible parallel between the two. Just as the exchange-value of goods was founded in their money-price, so the exchange-value of money was to be found in the "goods-price" of money. By this phrase they meant the quantity of goods which are to be obtained for money or rather for a unit of money. Properly speaking, however, money has no price. We pay prices in money. It is only in the primitive exchange of the natural economy that each of the two commodities transferred is the price of the other. Furthermore it was held that for both goods and money supply and demand are determining. This is also mistaken; as far as money is concerned neither the concept of stock nor of need applies to it in the same sense in which it applies to wares. The theorists were therefore compelled to resort to all manner of modifications of the two concepts, changes which were more or less forced. It was recognized that the credit substitutes also influence the "stock of money." Obviously the extent to which specie and credit substitutes are used is also important, and the idea took root of appealing to a third factor of the supply as well, the rapidity of the circulation of the monetary symbols. But specie, credit media and rapidity of circulation are only the elements for the auxiliary movement of money; the prevailing theory never succeeded in assembling the elements in the one concept of money income.

In connection with interest on capital we shall have to discuss the particular sense in which the money market speaks of the value of money.

§ 51. The Monetary Material and the Bullion Value of Money

Coins, standard of coinage, price of coinage—The material unity of international monetary systems—Bullionist theory, money made of valueless materials.

Among all civilized peoples and for a long period a mass habit of use has attached to the precious metals. These metals do not satisfy all the requirements of a perfect money. As we shall show later money is subject to a variability of value because the quantity of money in circulation depends on the fluctuating productivity of the mines. This detracts from its usefulness as money. Aside from this

consideration coined money is excessively bulky for large payments. Credit instruments are particularly convenient media of payment in these cases; they perform the service with scarcely any difficulty and almost without expense. On the other hand the precious metals do possess in high degree the quality of divisibility which is important in minting. They have greater durability than most other monetary materials. Moreover they have purity, lustre and a high bullion value due to their scarcity: all qualities that were particularly important in the beginning of the monetary economy and that are not to be overlooked today. Ultimately the historical force which was invoked by the use of precious metals among the most advanced peoples determined the dominance of these metals over all other monetary materials. Unity of the monetary systems is essential to an unchallenged functioning. Thus the backward economies were forced to adopt the material used for money by the nations controlling world commerce unless they wished to be isolated from the money economy of the world. The ousting of silver and the transition to the gold standard, which most advanced nations have accomplished with the last decades, is to be traced back to this cause. However, it is not part of our task to describe these events which are not adapted to purely theoretical exposition but demand extensive materials that may only be collected by empirical methods of investigation.

In the following analysis we shall take advantage of the right to adopt the method of theoretical simplification. We shall assume a condition in which the money of a country consists exclusively of gold and requires no supplementary coins or small change. As before, we shall disregard all international relations and assume a closed social economy entirely dependent upon its own resources.

While a certain amount of the gold which is held in reserve to secure the payment of notes may be uncoined, the gold destined for circulation is coined. Only for large transactions is gold in bars used. Our next problem is to explain the significance of the coined form of money.

The standard of coinage determines the number of units of money: i. e., pieces of money, to be coined from a unit weight of bullion. Thus 1395 Marks are made from one German pound [1] of fine gold in ten and twenty mark pieces, or 139.5 ten mark pieces or 69.75 twenty mark pieces. Applying the standard of coinage of the Austrian crown to the German pound (the law expresses it in the kilogram of fine gold), 164 ten crown pieces or 82 twenty crown pieces are obtained. Accordingly the bullion content prescribed by the coinage law is 1/69.75 of a German pound for a twenty mark piece and 1/82 for a twenty crown piece. The technical process of coining is so accurately controlled that this content can actually be adhered to except for altogether insignificant variations. Since the coinage law provides that every coin must be accepted at full value, whose departure from the standard does not exceed certain narrowly defined limits of error, the twenty mark piece and the twenty crown piece are to be held equivalent to 1/69.75 and 1/82 German pound of fine gold respectively. To this extent, then, the well known definition of Goldschmidt for a standard coin applies to the gold coin: i. e., "a bar or ingot of precious metal legitimized or approved by the state as regards purity and fineness." The stamp of the unit on a twenty mark or twenty crown piece, not too greatly worn, is evidence that it contains the quantity of gold prescribed by law.

[1] Trans. note: *Zollpfund*. The customs union adopted a unit equalling a half kilogram.

From this point of view the form of the coin is a mere matter of authorization whereas the true worth of the coin, the bullion value, is determined by the metal content. The latter would also seem to give its essential nature to the coin. However, all of this fails to enlighten us fully as to the significance of the coin as the standard money. Certain controlling provisions of the coinage law have not yet been considered.

The state reserves the exclusive right of coinage. No one other than the state may impress upon the material the mark which makes it money. No other evidence of the money content than the impress of the state is permitted. To what other authority could a function so important to the regular course of affairs be entrusted without incurring the risk of grave abuses? It is true that in earlier days even the government did not always prove deserving of the confidence to which they pretended. Only too frequently they shamefully abused the right of coinage by debasing currency and later by issuing worthless paper money in order to increase revenues. However, for a considerable time now in all modern countries the function of coinage has been recognized as an important duty which every government has faithfully discharged. Wherever this stage of development has been reached the restriction of the right of coinage to governmental authority has been upheld in the recognized interest of the public.

Similarly all people have a common interest in the legal enforcement of the validity of the currency created by the state. Once the state creates money that shall serve as legal tender, in which all payments shall be made except those for which a contract stipulates payment in a different kind of money, the monetary system has reached a stage

of the greatest possible simplicity. The state then protects all individuals against the chicane of those who would refuse to receive the universal means of payment in settlement of their demands. The power of the state to give currency to its coins gives the legal basis for the mass habit of acceptance which always forms about every well administered domestic currency. Whenever foreign coins or bars of gold are to be used in particular cases, special agreements to this effect are required; the universal means of payment is to be found exclusively in the form of the familiar domestic coin which it becomes almost impossible to dissociate from the idea of money.

Every people who recognize a specialized monetary system come to regard the precious metal itself merely as merchandize. They look upon it as nothing more than the material of which money is made, and respect it as money only when it is coined. The public at large and even the great majority of business men have become so thoroughly accustomed to the coined form of money and repose such confidence in the official coinage, that they take little thought of the material content of the coins. This is true more especially as few who use them know accurately the precise quantity of gold each coin should contain. However if the currency should again be debased as in former times, it would soon come to pass again that the fineness of the material would be tested and the weight verified on the jeweler's balance. With the present historical background, the magic of the coin form nowhere goes to the length of making the material of the money a matter of indifference.

That the coin has never attained this position despite the governmental privilege is explained by a section that is incorporated in every system of coinage regulations. This section supplements the restriction by virtue of which the right of coinage inheres in the state alone. Every private individual has the right to have coined for his account gold which he delivers to the government mints. For the monetary material which he surrenders, he receives the amount of money determined by the standard of coinage. In most countries a brassage charge is made for this service; but there are coinage laws which meet the public need to the extent of coining gold free of all charges.

It might be held that this transaction between the state and a private individual consists in an exchange of wares for money. In fact it is customary to speak of the "coin-price" received by the individual from the state, but in truth there is no exchange, and there is no price in this transaction. The two parties do not meet as supply and demand and no trace may be found of the determinations of value

which accompany an exchange. All that happens is that the mechanical process of minting, which as a rule the state performs for itself, according to the monetary standard, is now performed at the request of a private individual. A bar of gold is turned in, weighing one German pound and is divided into 69.75 or 82 pieces which the state fashions into the form prescribed by the coinage regulations and designates as 20 Marks or 20 Crowns. These names are simply statements of the amount of the fine metal content. They do not express an exchange value, and, as we shall see later on, do not in the proper sense establish a nominal value. The concept of the value coins, which we all automatically associate with their names, arises exclusively from their value in exchange which is formed socially in the market. Even where the name of the coin is a direct derivative of its weight, as, for example, the Pound which occurs in so many languages, the exchange-value concept is immediately associated with the weight name. The former so impresses everybody that it inevitably transforms the weight name into a value name. This term of value remains current even after the coin has long since relinquished the mere semblance of its original weight.

The governmental prerogative of minting is largely compensated for by free coinage for private account, and by the effect which the exercise of this right has on the value of the coin. If this right did not exist and the state were negligent in the process of coining for its own account, so that it supplied less than the number of coins required for trade, then the value of money would necessarily rise, perhaps to a marked degree above the value of the bullion. The reverse condition, that with over-abundant coinage, the value of money would fall below the value of the bullion content, can never become a practical fact. It will be seen at once that as soon as the depreciation of the money became noticeable, people would withdraw money from circulation and melt it up in order to take advantage of the higher value of the metal. By the right of free coinage the determination of the quantity of money is left to private individuals. Dealers in precious metals and speculators will recognize opportunities to realize a profit from differences which may arise between the price of the coin and the price of the metal. The expenses which arise in these manipulations irrespective of brassage, such as transportation, loss of interest and the like, are small. The coin price will probably always be the most important component of the market price. Though the fluctuations of supply and demand exert their influence in the money market and the metal market, the market price of gold is never able to depart widely from its coin price. On the other hand, the dis-

parity which may arise between the two prices when the right of free coinage is abolished may be seen in the fall of the price of silver since the cessation of its free coinage.

The result of our investigation of the significance of the coin form, may be summarized in the conclusion that in principle money and the monetary material are to be distinguished, but that in practice the values of money and bullion coincide wholly, or almost wholly.

The right of free coinage has important effects in the international money economy. International monetary systems are kept apart by the jealously guarded independence of the state coinage laws and by the historically transmitted diversities of the standards of coinage. On the other hand they are united by the homogeneity of the monetary material in all countries which are on a gold standard. The value of money by virtue of the right of free coinage is held in agreement with the value of gold in the world market save for trifling fluctuations and departures. Thus a condition is brought about internationally by the material identity of gold which after all closely approaches complete monetary unity in the essential effect of constancy of values.

The more accurate and detailed exposition of these relations properly belongs in the theory of world economy. In the closed social economy, another problem demands our consideration. If the relationship between bullion and money is such as we have represented it to be, the question must be raised in what manner the value which is transferred to money from its material is related to the exchange value which it derives from its service of the payment of prices.

The relationship of bullion and money being such as we have shown, it would seem that money derives its value from the value of the monetary material. But we have deduced the exchange value of money from another source, namely from its service in the payment of prices. Does this not involve a contradiction?

There is in fact no contradiction; the two ideas may be shown to be entirely consistent. The resultant force of two streams from different sources establishes the value of money. It is a compound of the value in use which the bullion acquires from its manifold industrial employments—its use for purposes of ornament, for utensils and technical services of every description—and of the exchange value which it derives from functioning as a means of paying prices. Each of these two streams, the use service of the material and the service in payment of the money, flows independently. It is the same condition that one encounters so often of a commodity receiving a direct use-value from its consumptive employment in the household and acquisitive- or yield-value from its assignment to production. For instance when a landowner himself consumes a part of his crops and sells another, his valuation will be determined by both uses. The decisive marginal utility is ascertained by balancing the services against each other. The same conditions hold in the case of money; its value is the resultant of the joint force of the effect produced by the service of the coin as a medium of exchange and by the industrial uses of the gold.

This joint resultant is noticeable in the value of gold as well as in the value of money. The value of gold is increased because of the fact that it satisfies

not only industrial but also monetary demands. The value of money stays in close accord with the value of gold which is thus ascertained. Under present conditions the monetary use is the more important of the joint forces, since far more gold is coined than is used industrially.

We may go still farther and insist that each of the two uses is sufficiently independent so that it would continue even though the other should disappear. The practical use of gold would not cease, should the minting of gold be discontinued. No more would its use as money end, if the state were to prohibit its industrial use and were to seize all gold for coinage. In both cases an enormous disturbance of values would follow, as occurs whenever the conditions of demand are fundamentally displaced. The disturbance would be greater if its use as money were to cease, because this employs the larger quantity of the metal; but in either case after some time a regular series of values would be re-established on the new basis.

The prevailing bullionist theory follows a different reasoning. According to this theory the bullion value of money is equivalent to the use-value of the monetary material. When the exchange-value of money coincides with the bullion value, it shows simply the use-value of the bullion. The current bullionist theory could not conceive of money made of valueless material; it holds that money could surely never measure the value of commodities if in its own material it did not possess value.

However, this constantly repeated argument is not conclusive. It is true that worthless money could never be a standard of value in commodities; it would therefore be useless as a standard of value. But it does not follow that money is worthless merely because it is made of worthless material. The material of paper money is as nearly worthless as can be imagined. Paper money is useless in foreign countries and does not serve as money in international transactions. Yet, despite the worthlessness of its material, the history of almost every country shows that it is fitted to perform the function of money in the markets of natural values and therefore to measure the value of commodities. As soon as a circulating medium has gained general acceptability, it also acquires exchange-value whether the material of which it is made has exchange-value or not. Paper money for which the mass habit of acceptance has been historically formed is given and received not merely as a symbol of value, as a mere order to deliver natural values, but exactly like metallic money itself it becomes a vehicle of individual value. As soon as the general public is assured of the universal acceptability of paper money, each of the individual economies participating in the general traffic attaches its personal exchange-value to the money by the same rules that determine the exchange-value of metallic money; on the basis of the generally adopted appraisal of its exchange-value, paper money will acquire a social economic exchange-value exactly as does metallic money.

It may possibly also be objected that every exchange-value presupposes use-value and that therefore money must also have use-value if it is to have exchange-value. This argument also is inconclusive. A means of transportation does not need to have any other use than the carriage of goods in order to possess exchange-value. No more does money, the means of transportation in the traffic of value as it might be called, have to convey use by virtue of its material composition in order to have exchange-value. It is sufficient, if the money facilitates the circulation of other things which have use-value.

As we have shown in an earlier connection, the prevailing doctrine denies its

own principles if it develops a theory of its own of the exchange-value of money. If money-value were always riveted to the use-value of the monetary material, what influence could the facts of the demand for money, rapidity of circulation and quantity of credit substitutes still exert?

The kernel of truth in the bullionist theory is this: the use-value of the precious metals was significant during the period of the adoption of money. Had silver and gold not been esteemed as materials for ornament, for use in utensils and the like, these metals would never have been selected to serve as media of exchange in trade. Metallic money had to plead its cause to traffic by its material value, in order that the mass-habit of use could attach to it. By virtue of its material value it inaugurated its service as money. But once the mass habit was formed, the historical aid which was indispensable to its introduction could drop out without endangering its further use as money and its fitness for use as an exchange value. Once this money-value is acquired, in historical continuity it becomes the basis on which the money-value of the future will further assert itself and will continue its course.

§ 52. The Nominal Value of Money

The nominal value of small change and silver-coin—The nominal value of the banknote and the check—The nominal value in changes of standard—Debasements of coin—Paper money—Knapp's "state theory of money," and nominalism.

The monetary unit, the declared standard money, is insufficient to fulfil the requirements of trade. Over and above the means of payment by credit, it is everywhere supplemented by other sorts of coins. We find as such the commercial coins, small change and the current silver money. We shall not have to discuss here the commercial coin, which is intended for foreign trade. Small change and current silver are used exclusively in internal dealings; they are constituents of the monetary system of the country.

The small change, made of base metal or of silver, is intended for small payments which cannot be made in the larger coin. Small change is composed of fractional coins. As such it must be in determinate proportions to the unit of the standard money. The regularity of payments throughout the country would be seriously impaired, should this token money be subject to fluctuations of value in terms of the standard coin. For the purpose of regulating this value, the state issues a denominational value-order, declaring how many fractional coins are to be computed to the standard coin; the order directs that the fractional coins have to be accepted in smaller payments, up to a certain amount, in this proportion.

To enforce the denominational value-order, it is necessary to issue small change below value, i. e., with a bullion content or value, lower than the denominational value specified in the coinage law. If small change were brought out at full value, there would be danger of the

coins becoming excessive in value with the smallest rise of the market-price of their metal. This, then, might tempt the public to withdraw them from circulation and melt them down. The issue below value has the further advantage that the coins are of more convenient form, while the state realizes a profit, which can be conveniently used in covering the considerable expense of coining.

The right of free coinage cannot be granted in the case of small change. The decision to coin these must be left exclusively to the state, otherwise the denominational value could not be maintained. If private persons might give orders to coin, the value of the coins would always be reduced to costs, i. e., metal value plus expenses of coining.

Silver currency is an intermediate form between small change and standard-money. As the best known illustrations, the thaler in Germany and the silver gulden in Austria may serve. We have here an historical result of the peculiar circumstances under which the countries on a silver standard and double standard accomplished during the last decades the transition to the gold-standard. This transition was accomplished by a severe drop in the price of silver, which made the rejection of the old stores of silver standard-coins the source of such amazing losses, that it was decided to retain such remaining bullion as could not be immediately transformed into small change. This was done by the express retention of the traditional, compulsory acceptance law of historical origin. By a different method, the United States of America have obtained their silver currency; but it is not part of our task, and cannot serve our purpose, to enter into details of this sort. All that we can wish to accomplish, is to determine the concept of this silver currency. Now, as heretofore, payment of even the largest sums of money may be lawfully offered in this money as well as in the standard. The seller or the creditor is bound to accept this payment. As a matter of fact, to be sure, it is never used for really large payments, but only for such as rise only slightly above the level of those in which small change is used. For the rest, these coins are legally, too, placed on a level with small change; their coinage for private account is barred—and the state goes even further, renouncing for itself as well all further coinage. The coinage-law accords to them the nominal value of a fractional coin. Although issued in its day as of full value, this current silver has become depreciated by the drop in the price of the metal. Its nominal value has been taken over from the old relation existing between gold and silver before the silver crisis, and stands high above the money-value.

The nominal value of small change and of silver currency is to be defined as the value established by the state for the fractional coin in terms of the money-unit. But the command of the state does not by itself accomplish the end. Should the state issue more fractional coin than the traffic can absorb, the state's edict would never be able to uphold the denominational value. The ultimate source for increased denominational value of the fractional coins is to be found in the socially established exchange-value of the standard-money to which they are allied by the universal practice, regulated by government. In their increased denominational value, they participate in the value-producing effect of monetary service, which has created the exchange-value of the standard-money. This is the same effect which maintains the exchange-value of the gold money high above the level at which the gold price could maintain itself, were gold to derive its value solely from its industrial uses. It is also the same effect as that to which paper-money, similarly prepared from worthless material, owes its value in the last instance.

The nominal value of bank-notes and checks signifies something very different from that of the fractional coin. Banknotes and checks are not worth less than face value; their nominal value is placed at par, the amount at which they are to be taken up. Every well administered bank of issue or clearing-bank maintains the nominal value, without being directed to do so by some supporting governmental command. There are many countries where banknotes, unaided by obligations which have been legally imposed, remain in circulation at full face value; certainly in the case of checks a compulsory rate of exchange has never been considered.

The monetary standard has no nominal value. It does not even admit of such a concept; for there is no higher money to which it might be subordinated, like a fractional coin, by a law to that effect. Nor is that notion of a nominal value, which is peculiar to the payment by credit instruments, presently to be redeemed, to be applied to the metallic standard. The currency legislation, which establishes compulsory acceptance of the standard money, does not set its nominal value. Even such an edict would fail to operate in the case of price-payments, where parties are always at liberty to agree upon the sort of money in which the price is to be paid and, in case they decide to pay the price in standard money, are free to agree upon the price. The state has no power to control the exchange-value of money; the only way to bind it to a constant norm would be by market-legislation. The state would have to make the hopeless attempt to fetter by law

the prices of all things or the general price-level. In the case of assignment-payments the parties also are at liberty to determine the species of money, as well as the amount to be paid. This is not true in the payments of debts which do not call for especial kinds of money. The creditor is bound to accept payment in standard money. But even here the compulsory acceptance of the gold standard coins does not in point of fact carry a command regarding value; the law declares nothing further than that the Mark or Crown pieces, issued by the state, are the coins in which the debt of Marks or the debt of Crowns may be legally discharged. A broader intention thus to enhance the value of either Mark or Crown is wholly foreign to the law.

In countries with a double standard it is necessary in the interest of unity and the stability of the monetary system to bring the standard gold and silver coins into a firm relation of nominal value to each other. It would never do to permit their relative value to depend on the fluctuations of the market prices of gold and silver. As to the value of the standard money as a whole, nothing is determined by this edict of nominal value either.

Just as regard to the certainty of transactions demands that the monetary system should possess homogeneity in itself, so it renders imperative the preservation of unbroken unity in the transition from standard to standard. With every change of the standard, whether it be in the metal employed or the standard adopted, it is indispensable that the value be regulated by laws, which the unit of the new standard money is to possess in comparison with the old. There must, especially, be provisions as to the manner in which obligations, demanding the old standard, are to be fulfilled in the new standard. The relation of the two standards to each other should be so regulated, that neither the party making nor the party receiving payment is detrimentally affected. The law fixing the nominal value in the case of change of standard, should never have the effect of increasing the value of coins, as it does in case of fractional currency. With a mere change of the coinage standard, the relation is to be computed accurately according to the ratio of the weights of the old and the new coin; in case of change of the standard metal—and similarly in case of change from paper money to metallic standard—the proportion will be taken to aid the computation, which exists between the old standard and the foreign standards employing the newly selected standard metal. The test of the correct computation of the relation is that the market prices in the new money remain in exactly the same relation as the old market-prices.

Debasement of coinage in former times introduced changes in monetary standards with the intention of obtaining a pecuniary gain for the state. A coin of less weight was issued under the same name as the old coin, subject to a law fixing the nominal value so as to place it on a par with the old and heavier coin. The power of the state is equal to the task of enforcing a law of nominal value for those payments which the state itself makes to dependent officials and military men; it is equal to the task of enforcing it in the case of the payment of debts to its own creditors, as well as in case of the payment of debts in private intercourse; the judge, called upon to decide the question in litigations, is bound by the state coinage law. But as against the market, the state proves powerless; price-payments are beyond the jurisdiction of the state, they are exclusively controlled by the agreements of the parties of interest.

When a sovereign state finds itself without the means of defraying expenses and issues irredeemable paper-money, it adopts the outward form of banknotes; but the nominal value attached to its symbols of money is not secured by cash reserves or approved evidences of indebtedness as in the case of banknotes. The nominal value of paper-money is the value which the state decrees for its notes in terms of the standard metallic money; it designates the number of units of metallic money for which the state's note is to be accepted in payment. What has just been said in regard to the debasement of coins applies to the effect of this law fixing nominal value. The state can enforce it in payments to its employees, and it can also enforce it in payments of debts. But it can never maintain an order of this sort in the market of natural values.

Let us confine ourselves to the exchange-traffic of a closed economy. We disregard all speculative influences to which the rate of exchange of paper-money in the international markets is subject. This is influenced by the probability of ultimate redemption, a condition which we do not feel called upon to discuss at present. It is quite clear that in such an economy the formation of the exchange-value of paper money in the market is controlled by exactly the same law as the exchange-value of money generally, and that the effect of an excessive issue of paper-money must be essentially the same as that of an excessively augmented production of the precious metals. When the state increases its emissions of paper money in rapid succession to enormous sums—as happens in times of great financial stress—the depreciation of paper-money must result even more rapidly and in a higher degree than has ever occurred through the depreciation of metallic money. The effect on the national economy will, therefore, be much more ruinous. At short intervals of time the exchange-value of money will be lowered again and again, just as the individual economies have barely adjusted their plans of acquisition and expenditure to its limits. Those who have just been confidently named among the wealthy, will perhaps be wealthy no longer; those who to-day were able to meet their obligations, will perhaps not be able to meet them to-morrow. Numerous and momentous displacements in acquisitions and possessions will take place. They necessarily lead to disastrous disturbances of the entire national economic process.

The evil results of experiments which have so far been made with paper-money, issued as a sovereign state's signal of distress, prove absolutely nothing against paper-money in itself. In its own nature, paper-money is by no means of uncertain or fluctuating value; it becomes so only by the circumstances under which it is ordinarily issued. If once the state should issue it, no longer in its own immediate and selfish interest, but solely in order to substitute a well regulated monetary symbol for the costly, inconvenient hard money, which depends so much on the results of the production of the precious metals, the effect will be an entirely different one. If the owners of the notes but feel assured that in seeking to purchase commodities they will not be exposed to loss from the face-value of their paper, the old prices will still be asked in every sale. The reappraisal of all market-values to fit a new standard, on the part of all buyers and sellers without exception, is an exceedingly complicated and laborious process which the market is not overready to undertake. Experience has shown in many places that the mass-habit of acceptance for emergency money of the state is easily enough formed—in this direction the power of the state proves exceedingly effective—and that at first, so long as the state's emergency money is issued only in moderate amounts, no higher domestic prices will be contracted for in paper than those in metal had been up to that time. Nor would the market be revolutionized even later by a well regulated body of paper-money. The notes would take over the exchange-value of the coin, in the place of which they would appear. They would retain this value without being exposed to the disturbances which, to-day, have their origin in the production of the precious metals.

That state-controlled paper-money has not already successfully occupied its position in the economic and financial world, may be explained from the fact that money must serve its purpose as a means of payment not only in domestic but also in foreign commerce. So far in the commerce of the world, only gold has historically acquired this mass-habit of acceptance. It is this fact which secures to gold, for the present, the controlling position also as domestic money. Gold money, as a free, social institution, has prevailed beyond the boundaries and the oppositions of states. These have so far made a common regulation of paper-money impossible, and will possibly prevent it for a long time, if not forever. All the states which have been forced to issue emergency money and whose citizens become accustomed to the use of paper-money, would surely have preferred, when they proceeded to the stabilization of the disordered monetary system, to regulate paper-money as such, rather than assume the enormous burdens incidental to the resumption of the metallic standard. But the losses, threatening the national economy from the isolation of its monetary system, are the greater of the two evils. The costly, inconvenient coin, affected by the fluctuations of the production of precious metals, is the less objectionable evil because it best secures an international constancy of values; it is thus preferable to the best regulated paper-money, confined to a single state.

Knapp's "State Theory of Money" starts from the fact that the original "pensatorical" payment by weighing the metal has been abolished in every country, and that men pay everywhere by surrendering imprinted pieces, invested by the authority of government with authoritatively definite validity in units of value. He calls this "chartal" payment, by the side of which prevails "giral" payment or transfer of a credit on some central office. Money involves "chartal" payment. In order that legal regulation should be able to confer on money a definite validity in units of value, the idea of value-units (Mark, Franc, Rubel, Pound Sterling) must have been formed during the period of pensatorical payment; the legal regulations must have set out from this concept. At the present stage of development, the Mark can no longer be defined as the $\frac{1}{1395}$ part of a

pound of fine gold. It has to be defined in the sense of the German coinage legislation, as the third part of the earlier unit of value, the German Thaler. The manner in which the state settles the value of money is by determining the basis on which units may be used in the payment of debts, especially in payments made to the state itself.

Knapp's nominalistic theory, contrasted with the bullionist theory, is an important advance. He finds that fundamentally the historical value-unit of a developed money has become independent of the metallic basis; and he succeeds in setting up a broader concept of money, surpassing that of bullion or cash.

For monetary policy, too, this theory is of importance. Knapp declares the state bound to regulate the system of payments; bound, especially, to steady the rate of exchange of the state's domestic currency, in its intercourse with important adjoining countries. He decides, that, for this purpose, the state has means at its disposal which, according to the strictly bullionist theory, must be barred.

The advance of Knapp's nominalistic theory is, however, counter-balanced by the narrowness to which it restricts the problem of the theory of money. Knapp is satisfied when he has discovered that the historical value-units of money have been formed; he makes no attempt whatever to explain how they could have been formed. As far as he is concerned, at any rate, the fact that money possesses value deserves no further consideration; all he knows is, that there are prices and levels of prices. But how—it must be asked—can the concept of a value-unit be understood by anyone who cannot explain how money becomes valuable? And what do we learn by a price-level, symbolized by money, if we are unable to evaluate the sums of money which are paid out as prices? As little as Knapp is able to explain how money has historically attained the standard of its value-unit, is he able to explain how the value-units, which have arisen historically, continue to change; neither can he explain in any way whatever the meaning of the changes which have occurred. To this extent, his theory, with its self-imposed limitations of enquiry, is indeed anything but an advance on the old bullionist theory, which stated the problem of the value of money with its fluctuations of value. Despite inadequate theoretical foundations of the latter theory, it nevertheless made important contributions to the solution of his problem. A satisfactory theory of money will have to unite both points of view; it will have to recognize the way in which the value of money is historically conditioned, detach it from its metallic basis, and disclose the final law of its social formation and change.

The theoretical shortcoming of Knapp's theory shows itself also in the practical application, made by himself to monetary policy. He overestimates the power of the state's determination of the nominal value, originating in the legal system of the state. The state can never succeed in finally settling, as regards other countries, the rate of exchange of its money; the state cannot maintain the nominal value of an excessive issue of paper-money. At this day there exists no full-fledged security for the money-system of any country, other than its being made to rest on the gold-basis, which alone has hitherto historically won the mass-habit of acceptance throughout the world. The power which the state exercises over money by virtue of the determination of the nominal value proves, as regards the effect in world-economy, too feeble. By its value in the commerce of the world, money shows itself to be not an institution of the state but of society, which the state must be held to regulate on the basis society affords.

§ 53. The Law of Change In the Value of Gold

The change of the general price level—The depreciation of money—Money-value and credit-crises—"Appreciation of money" and "general overproduction."

The changes in the value of money which we shall now have to discuss are exclusively those of its exchange-value. Changes in the use-value of the monetary material and in the rate of interest, "the price of the use of money," "as it is generally called, only indirectly influence the value of money. The direct effect of the value of the material is so insignificant that we need not further discuss it; that of the rate of interest we shall consider in its appropriate connection. We need not speak at all of nominal value. Under normal conditions the state is not called upon to label the standard money with a nominal value which is intended to fix its value and to affect the exchange value of money.

Every change in the value of money presupposes a change in the general price level, but not every general shift in prices points to a change in the value of money. A progressive rise of the general price level—a similar distinction would have to be made for the process of a progressive reduction of prices—may be accompanied by such a marked reduction in the supply of goods that the public has to curtail its consumption of the daily necessities as well as its total consumption. But a progressive rise of the general price level may also occur while the margin of supply for the mass of the people remain unchanged; more than this, the margin may possibly be extended at this time.

There is an essential difference between these two conditions of rising prices. In the final analysis the first affects the natural values. The second affects only money. The first arouses a deeper and more general anxiety; the second affects only individual groups of people and excites a theoretical rather than a personal interest. The rising prices which are at present to be observed in all directions, may possibly be a resultant of the two causes.

Scientific explanations are agreed as to the practical aspect of the two conditions. They are at variance as to the terminology to be used in presenting the problem. A large number, probably the majority of economists speak in both cases of a change in the value of money, distinguishing the change of money-value itself from that of the supply of commodities. However, as we shall immediately see, the distinction does not wholly coincide with the opposition of the two conditions. Before defining our attitude in the matter, we shall

enter upon a more accurate investigation of the actual course of events.

The most frequently discussed and the most obvious case of change in the value of money is the shrinkage of value or depreciation of money, as it occurs in consequence of an increase of the available amount of standard money. Excessive production of the precious metals or excessive issue of paper money will both alike lead to depreciation. The equation of supply and demand is disturbed by the increase in the quantity of money. The demand, which originates with the money form, increases, but the supply of natural values remains the same. Neither the gold miner who has struck an exceedingly rich deposit or the state which issues paper money in huge quantities are under any compulsion to introduce beforehand into the economic organism natural values in equal amounts which would prepare the ground for their demand. They appear as purchases in a market which they have never entered as sellers. Therefore they do not meet ready sellers without disturbing the market. Their demand may possibly contribute to an enlargement in production and to an increase in the supply. However this possibility is another matter which we shall presently consider in another connection. For the present let us simplify our investigation by assuming that production is incapable of development or is capable of only slow growth. Under such conditions the newly added demand can only be satisfied as it secures a part of the supply by out-bidding the earlier demand. The prices of those articles to which the new purchasing power is directed will rise. In further sequence the prices of all those goods will rise which are demanded by the sellers who have been thus enriched. If the quantity of new money which is thrown into the market is sufficiently large, the entire general level of prices must ultimately rise. Within the restricted area of a mining district which is scantily supplied with commodities the increase of the demand in times of abundant yields will be strongly felt and will rapidly exert marked effects in increasing prices. In the broad world markets during short periods of time, the effects are less perceptible, for the significance of the annual increment of gold, however great, is small when contrasted with the enormous monetary income of the entire world. However, when the metallic supplies remain large during a longer period of time, their effects will be felt by virtue of a summation of the annual increments even in the world market.

The multiplication of commercial paper of banknotes and checks does not act to depreciate the money market, for all these means of payment by credit are the outgrowth of the monetary requirements of

increased commercial intercourse; their appearance does not affect the equation of supply and demand. The well managed bank does not force its credits upon commerce. It extends its discounts only so far as the business would offer acceptable commercial drafts. The amount of the new means of payment which it issues on discounting a draft is limited by the quantities of products which have been freshly introduced into trade. Credit media come and go with the movement of commodities in business; they sublimate the natural values and are their companion values in monetary form. They afford one of those surprising examples of free, individualistic, yet social institutions which are more perfectly adjusted to the general interest than would be possible through the most thoroughly considered, purposeful contrivances of the state. The voluntary organization of credit has achieved what no regulation of state-contrived monetary systems has heretofore been able to attain: a standard which receives its quantitative norm from the service of money itself. Banks and the large business houses whose commercial paper the banks discount are the guardians of this standard. The volume of minted gold money which is valid in all modern states is determined by the manifestation of the spirit of enterprise in mining operations. Nowhere has this been subjected to the monetary system; it is not even being attempted. Great as the disturbances in the economy of the world may be as a result of the decreasing value of gold, entrepreneurs will continue to mine gold as long as in so doing they realize personal profit. In contradistinction, credit-money fulfills the spirit of the institution of money as enlightened statesmanship would determine it. The latter would provide for impounding the gold obtained from the mines in order to hand it over to trade and to reappropriate it as the needs of commerce may demand.

It must be admitted that the voluntary reorganization of credit is not always equal to the magnitude of its task. It has often happened that the possibilities of credit have been abused. Although men have learned much in the school of experience, such abuse is likely to recur frequently. The great profits derived from rapid and extensive improvements in production tempt new enterprises which too rapidly exceed the limits fixed by commercial opportunity. Credit is then extended to the products of over-production which lack the fundamental inner qualifications by which credit is merited. The ease with which means of payment are magically procreated by an incautious administration of the credit system seduces the spirit of enterprise, especially when accompanied by declining rates of interest and carries enterprise farther and farther into the labyrinth of over-

production. Once credit is thus misapplied, the equation of demand and supply is interfered with. The frantic demand of entrepreneurs, operating with unsecured means of credit, enhances the price of productive means. These increased cost-prices raise the price of products as well. Then, when overproduction ends in crises of liquidation, the balance of supply and demand is disturbed in the opposite direction; there remains a supply of goods for which there are no buyers and the edifice of high prices collapses. The fabulous rise of prices is succeeded by a precipitate drop, with economic after-effects which may be devastating and of long duration, until finally the equilibrium of supply and demand is re-established.

The process of depreciation through an increase of metallic currency or paper money runs a different course from start to finish. Its progress is without ebb. It moves slowly, sometimes exceedingly so, without the strain of violent disturbances; but its effect on the monetary system is more lasting and more deeply rooted. There is no section of the nation's economy which does not suffer change, for money is the instrument which binds together all individual economies. The abuse of credit and overproduction after all affect only certain groups directly, and even mediately are not likely to make themselves felt in all directions. By the depreciation of money all prices are affected. The prices are permanently increased; the value of money is permanently changed. Because its value becomes unstable, money functions with constant friction. The plan of all private and public economies is adjusted to the presupposition of the constancy of the value of money; money is given and received by those who assume that in the future it will have the same purchasing power as it has here and now. When this assumption proves incorrect many expectations remain unfulfilled, numerous economies are disorganized and more than one is ruined. The groups who suffer most severely under such conditions are those drawing fixed incomes: officials, wage-earners, pensioners and annuitants who are unable to increase their capital. These men can no longer meet their accustomed expenses; they must reduce their demand, and this in turn reacts on the incomes of those whose customers they were.

Depreciation of money may result not merely from an inflation of the currency but also from changes with respect to goods. In the theory of changes of value and price we have already had occasion to discuss the effects which may result from the operation of the law of diminishing returns with regard to the value and price of products of the soil. Our explanation must now be amplified. In our earlier discussion we pointed out that the market follows one course when the

effect of the law which increases costs is compensated or even overbalanced by advances of industrial technique or accumulations of capital and another when this is not the case. We shall now have to distinguish these two cases.

The development is more favorable under the first set of conditions. To be sure the historical continuity of price-formation will lead from increased costs of production to increased prices for the products of the soil. The latter are important constituents of the general price level, which will therefore rise. The prices of raw materials which the soil supplies, enter as elements of cost into their finished products. Similarly the cost of subsistence enters into the prices of products, in so far as it influences the rate of wages. Everything will be more expensive, but the marginal utility of food and expenses generally will not be raised. Despite the increased expenditure of money, men will be able on the average to provide for themselves as abundantly or more so than they did before; the per capita budget of goods will not have decreased. If we assume that a hundred weight of wheat was formerly sold for 10 units of the standard money, its price will now be higher, perhaps 12 units. However, since the personal margin of use has remained the same or has even been lowered, the larger price is the expression of the same or a lower marginal utility: i. e., the value of money must have fallen, since the same unit of utility is expressed in more units of money. On "the side of commodities" the value of money has changed.

In the second case the price for products of the soil will rise but the per capita volume of the means of sustenance is also changed. It will fall and the margin of use will be higher. If the price of a hundredweight of wheat rises to twelve units as in the first case, although the relationship of price and quantity is the same, conditions will have changed radically in that the hundredweight of wheat represents a different number of units of utility. In all households the unit quantity of food is represented by a higher marginal sum in the scale of needs and thus an exact foundation for arithmetical comparison is lacking; the increased degree of intensity of the new marginal use cannot be arithmetically compared with the older and lower one. Only one thing is clear: the average personal appraisal of a hundredweight of wheat, i. e., its general subjective economic evaluation is higher. Because this is so the conclusion will be reached that the increased price level is an adequate expression of the changed value of goods. Change has occurred, not in the value of money but in that of wares. Indeed it is not proper to say that the value of money has declined when the price of wheat rises in a transition from

a period of ample supply to another with a restricted supply and a higher rate of marginal expenditure. On the contrary, precisely because money indicates the changed value of goods and the alteration of the general price level, it has shown itself to be an accurate and stable measure of price. Money under these conditions is analogous to the column of mercury in the thermometer which shows itself to be a reliable gauge by registering a higher index with a rise in temperature.

But if the ratio of agricultural products to population becomes permanently and to an increasing extent unfavorable, the entire structure of the national economy must be shaken. Under these conditions, an increasing proportion of the productive means must be devoted to raising the fruits of the soil which are indispensable to the maintainance of life. Industrial technique will not be able to effect further advances. It will even become impossible to maintain the established technological procedure because productive means will have to be withdrawn in greater and greater quantities from industry and turned over to agriculture. Large numbers of individuals will be deprived of their means of earning a livelihood. The total national income will be lowered in both its monetary and its natural forms. Gradually the entire economy of the nation will collapse; its capital will be consumed, yields reduced and industries will be forced to resort to a less intensive use of capital. All this will be accompanied by progressive thinning out of the population and subsequent upheavals of the price-level and the value of money. The course of these latter events, however we shall not trace in our present investigation.

It has become customary to contrast depreciation with the appreciation of money. As the former is the result of an increase of money, so the latter is popularly held to be the result of glutting the market with commodities, until the need of money exceeds the available amount of this medium. Under these conditions it is thought the prices of all commodities and the general price level must fall and the value of money must rise. One may well imagine conditions in which there would be no demand, supported by an adequate supply of money, for the abundant and newly manufactured products and natural values. Even the resort to credit, and payment by means of credit media might not be sufficient to raise the demand to the extent of the supply. Hence producers would have to cut their selling prices in order to dispose of their stocks.

This doctrine of the appreciation of money originates in the fact that its authors have misunderstood, or, at any rate, not altogether properly interpreted the idea of the "need for money." It goes without saying that we cannot impute to the discoverers of the quantitative theory the gross blunder of deducing the demand for money[1] from a "need"[2] for money in daily life. But we are

[1] Geldbedarf.

[2] "Geldbedürfnis.

safe in maintaining that their doctrine of the appreciation of money was largely dictated by their leaning in the theory of the value of money excessively to the pattern of the theory of the value of goods. Especially they draw too close an analogy between the concepts of the need of money and that of goods.

The appreciation of money of which they treat is the exact counterpart of the law of demand applicable to natural values just as depreciation is the counterpart of the law of supply. As a matter of fact the need of money is nearly akin to the need of commodities. In the monetary economy, everyone meets his personal need of goods by first covering the need of money. The latter, like the former, is also influenced in the final analysis by the magnitude of the needs and the law of satiety. On the other hand it must not be forgotten that the monetary need is also determined by the historical value of money. Those who speak of the appreciation of money misjudge the power of this historical value for which every business man makes allowance in calculating his costs and prices. The appreciation of money would thwart the anticipations of every business man, would depress all sales prices and would decrease or wipe out all expected profits. Should it go still further, it would become impossible to recover costs incurred and would bring in its train a universal crisis which would be more ruinous than any crisis engendered by over-production in particular industries. Is it possible to believe that such a crisis will break upon the commercial world just as a general progress in all phases of production and of the preparation of values is being effected?

An old doctrine asserts correctly that a condition of "general overproduction" cannot arise. Partial overproduction is possible inasmuch as a particular type of production may be excessive, passing the general limit and reaching a point at which sales cannot be affected for the surplus product. "General overproduction" is inconceivable. A condition which would seem to warrant the use of this term would not be overproduction at all but would be a general production of surplus. The increased volume of products would bring with them increased sales, "wares being paid for by wares," natural values exchanging for other natural values. Where natural values increase in adjusted proportions there will be no difficulty in arranging for payments without provoking crises. Money will circulate more rapidly as sales are more numerous than before. Means of credit payments will be better organized as all improvements in their organization have been made under the increasing pressure of the need of money. The least favorable case will merely involve the retardation of production, perhaps its premature curtailment; it is possible that not all the natural values which may technically be produced will actually be; but those whose production has been determined upon will surely be sold without engendering a crisis, and therefore also without an appreciation of money.

During such periods of general progress whenever it is possible to stimulate the mining of precious metals, the bullion thus accruing is readily absorbed by commerce without producing the depreciation which at other times would necessarily follow. These mineral resources in their turn are the means of preventing a retardation of progress which it might not otherwise be possible to overcome. During such periods, the increase of money which permits all producible values to be actually turned out, results in the beneficial effect which some authors mistakenly ascribe to it under all circumstances.

The multiplication of the means of payment by credit alone will not overcome

the obstacles to general progress. As they are at present developed, credit media do not enter all channels of payment. They cater to commerce and to the payments of the wealthy classes. Under present conditions ready money is absolutely indispensable to enable the payment of the new groups of workers which flow into industry during periods of industrial advance and to make possible the increased exchanges in rural districts which receive an impetus from the industrial advances. The sums of ready money which were sufficient during the mercantilistic period to carry on the households of wage-earners and the country population, would not even approximately meet the requirements of any industrial country today. Moreover increased amounts of ready money are necessary as a guarantee in developed credit transactions. Despite the admirable improvements in the use of bullion which have been worked out by the inventive genius of the English business communities the amount of actual cash carried by the Bank of England when it first entered business would be much too small to meet the present payments required under the English organization of credit. It is possible that a shortage in the mining of precious metals might give to nations who were unwilling to be hampered in their economic development, the impulse to use for the benefit of their industrial and financial progress the auxiliary paper money which so far has only been resorted to for the exigencies of war.

So far at any rate the most important periods of productive progress have always coincided with those of the most extensive gains in the mining of precious metals. The century of geographical discovery which disclosed new routes to the American sources of gold and silver supply was also the century of the evolution of the national economies of Central and Western Europe from the town and local economies of the Middle Ages. The modern growth of industrialism and capitalism has been accompanied by the discovery of new deposits of gold and silver in numerous newly settled districts. This is not an historical accident. The same spirit of progress, the same inventive intelligence, the same technical imagination, the same practical knowledge and organizing ability produce the two effects. Without the marine compass America would never have been discovered; without modern machinery the mines of South Africa would never have been exploited. The conclusion cannot be drawn from the historical parallelism that all future technical advances must equally increase man's hoards of the precious metals. We are satisfied to say that the trend of a process of appreciation in the value of money, as taught, cannot be reasonably maintained and that a cursory survey of past development shows not even the actual conditions which must be presupposed in a theory of appreciation. It must be left to the economic historian to furnish proof to the contrary by a careful examination of historical data.

While we deny the contention that increased commercial intercourse may lead to an appreciation in the value of money, we admit as a matter of course that an increase of goods, which extends to the margin of the provisioning of the mass of people and lowers the margin of use, must in historical continuity lead to a gradual decrease of the general price level. This is true under the supposition that a counter-effect induced by the law of diminishing returns does not manifest itself. This decrease of prices can no more be traced back to the value of money than can the general increase discussed above. It should properly be interpreted as an expression of the decreased value of goods.

§ 54. Historical Changes in the Value of Money and the Disappearance of Natural Economy

The development of the monetary economy since the century of geographical discovery—Concerning the causes of the present increase in prices.

The instruments of theory will never enable us to ascertain the extent to which the increased production of precious metals after the discovery of America had a share in the depreciation of money which has since taken place. To answer this question economic history should again examine the evidence and determine whether the quantitative theory offers sufficient explanation. There are inconsistencies between the dates of the beginning and end of this process and those which measure the period of the influx of the precious metals. Since Bodin, the quantitative theory has been used exclusively in the dominant explanation of this great phenomenon. It is not particularly in the convincing power of the proofs offered that the reason for the prevalence of this theory is to be sought. The reason lies rather in the fact that much as the quantitative theory has been disputed, it has never yet been supplemented, much less displaced by any other theory which admits of a wholly satisfactory explanation. Nevertheless, a consideration of the economic development of Europe which has taken place since the beginning of the discoveries, leads up to an idea of this kind. There is a temporal parallelism which suggests some sort of causal connection between the two processes of the depreciation of money and the disappearance of the rural natural economy as it was absorbed into the monetary economy.

Theory must at least examine by means of its typifying assumptions the manner in which the gradual absorption of the natural economy was bound to affect the price level and the value of money. At first glance it seems clear that prices which originate in the market are bound to grow with it. Nevertheless such an examination as this has been hitherto omitted. Until now all investigations of the change in the value of money have been undertaken with the tacit assumption that a complete monetary economy had already been established. As a matter of fact, this was anything but true at any time during the century of the great geographical discoveries; even today in Europe it is not wholly so.

The essentials at this point may be explained in a few words. Where the natural economy obtains, the producer in disposing of his wares includes in the money cost of his products only a fractional part of the total costs of production. Therefore the price which he

demands and recovers is lower than it would be with an accurate calculation. That is to say, the producer allows only for the cost of materials. As a general rule, he sets down correctly only the most obvious even of these and neglects altogether the general costs of equipment or plant. Moreover he appraises the cost of his own labor at a very low figure, firmly believing that this is already covered by natural economic yields. In the first instance his sales are always sales by special opportunity; one might say by accident. Even if a producer should occasionally arrange for the production of certain industrial wares under the division of labor, he still continues to live in his own house, and to a large extent to provide all necessaries for himself from his own soil. Even when the further stage has been gradually reached at which the urban tradesman satisfies most of his household needs from the market, the prices of foodstuffs on the basis of which he calculates his costs, are still extremely low. The farmer who is selling his goods in the market does not figure his full expenses, for his own sustenance is still obtained in a natural economic way; he sells only such of his produce as is in excess of his personal wants. Even today in modern European countries, agriculture is not as completely adjusted to the money economy as are urban trade and industrial enterprise. In countries with an economic development such as that now existing in Austria Hungary or even in Germany, the natural economic process is still very prevalent and ties up a large aggregate of economic values which therefore do not attain their full significance in the computation of prices.

Only because of the intensified economic development of the last decades, has the absorption of peasant production by the money economy gone so far. The high money wages of industry have advanced the rates which the farmer is compelled to pay for labor. The towns have ceased to be the only great markets for the produce of the soil; industry has spread over the countryside, creating large markets even there. The mass of products purchased by the farmer have increased relatively as well as absolutely. Side by side with the sale of food-stuffs there has been an increase in the sale of raw materials. The peasant also begins to make pecuniary investments on a larger scale. Domestic agriculture comes more and more under the division of labor and is imbued with the spirit of the money economy. All these facts contribute to increase the outlay of money which the farmer should seek to recover in the price of his goods. Hence there is an increase in the selling prices which he must ask in order to meet his reckoning. Through the interrelationship of all production this process spreads; the enhanced cost of all necessaries of life raises the

cost of industrial wages and, as a result, the price level of industrial products.

The increasing tendency to industry may increase the productivity of the national economy and the general prosperity of the country. It may more abundantly provide all classes of the people with natural values and may lower the margin of use for households throughout the land. None the less, the monetary expression of natural values in the general price level must rise so long as the absorption of natural economic elements persists, for during this period monetary computation penetrates more and more deeply into effective sources of goods which it had hitherto not reached. This expression includes more completely than before, the elements of price formation. Therefore, the continuity of the process must bring it about that to the price which had formerly prevailed and had covered only certain of the elements an addition must be made for the newly included ones. An identical degree of utility is compensated by an increased price; the value of money has been lowered.

The increasing burden of taxation contributes largely to the present increase in the general price level and to the depreciation of money. Taxes on production, being both direct and indirect, as well as those imposed on transfers, increase costs and must be recovered in the sales price. In so far as these payments are used to defray costs of government which directly increase the economic productivity of the country, it is true enough that the increased taxes will fall at a lower rate on the unit of resulting product and that the price level will not be increased by the amount of the tax; on the contrary, it will be reduced. But taxes paid to defray military expenses, interest on loans for mobilization, war debts and the like, increase the rate of cost and the price level. The same is also true of taxes to be applied to school expenses and other similar charges which look to distant improvements that can stimulate productivity only after a long lapse of time. The enormous increase of modern military expenditures has been caused by the system of military preparedness, increasing expenditures in times of peace in order—it is fondly hoped—thus to prevent wars or more speedily to end wars which cannot be prevented and to end them with smaller destruction of values. The proportion of the national wealth which has been destroyed by the last European wars is small in comparison to that caused by the devastations of the Thirty Years War.[1] Admitting that these hopes are justified and

[1] Trans. note: It should be recalled that this was written before the World War. The statement may possibly be true of it. It is less surprising when we recall that it refers to such events as the Balkan War and the Franco-Prussian

that the general prosperity of the country is increased in spite of the enormous expenses of preparations for war, these non-pacific expenditures will necessitate an increase in the prices of natural values. In fact the process which goes on here is the same which we found to occur in the disintegrating natural economy. The increasing preparedness of the government extends the process of the monetary economy to a safeguarding of the provision of commodities which had not hitherto been undertaken. The payment for this service must increase costs, while the war losses against which we seek to insure ourselves do not enter into the costs. The process of the formation of value is thus more comprehensively controlled by the money economy, than it was before. The continuity of price-formation must increase the price and the value of money must fall below its former level.

The striking rise of the general price level which is to be observed in all modern countries, in so far as it cannot be traced to the absorption of the rural natural economy, may be due to three different causes: a depreciation of money owing to increased production of the precious metals; growing burdens of taxation; and the influence of the diminishing returns of the soil. We shall not inquire here whether the decreasing productivity of metal and coal mines is another factor. Neither can the theorist be expected to decide how much of the general effect is to be attributed to any of the three main causes, nor to answer the question whether the increase of the general price level is accompanied by a lowering of the average standard of living.

§ 55. Measuring the Value of Money

Measuring the price level by means of index numbers—The problem of measuring the value of money.

Index numbers are resorted to in order to measure the value of money and the variations of this value. Reduced to its essential elements this method of measurement consists in selecting a number of goods whose market prices are regarded as characteristic of the general price level, in aggregating the prices of all selected articles in the years which are being compared and in accepting the relationship of these sums as the expressions of the variations of the value of money from year to year. The value of money is considered to have fallen or risen by as great a per cent as the sum has increased or decreased. The earliest series of index numbers, that of 1850, contained the wholesale price of 23 articles, one of which was subsequently omitted. The series was confined to the most important food-stuffs and industrial

War, which in the light of the experience of 1914-1918 may hardly be considered as modern warfare.

raw materials. In later series, the number of articles was greatly increased; 34, 114, even 223 prices were noted. In place of average prices, effective prices were observed; retail prices replaced those of the wholesale trade. Wages were inserted by the side of prices of merchandise. One point should be especially observed: consideration was given to the quantities of the selected goods which entered the market.

In all its multifarious forms, the method of index numbers has a fundamental defect. The method is a useful expedient by which to appraise the general price level and its variations through the selection of characteristic prices. However, it by no means measures variations in the value of money. No matter how precisely the method may be elaborated there will always remain a difference of opinion as to whether the ascertained variations are to be traced to the value of money, or whether they have originated independently of that value. For instance after the general crisis of 1873, the index numbers dropped for a number of years. One group, the bimetalists, who expected to derive an argument in favor of their proposals, claimed that this was an expression of the appreciation of money which was bound to occur because silver had been ousted and gold made the exclusive standard. On the other hand, the advocates of the gold standard contended that the phenomenon was the result of the conditions of production in the world-markets. They held that the crisis depressed prices by excessive competition on the part of the supply, whereupon producers had lowered their costs as much as possible in order to adjust their production to the reduced receptivity of the market. Similarly in nearly all such cases two points of view can be maintained for the changed expression of price: the change starts "from the wares" or "from money," or, as it should be more properly stated, it is the outgrowth of changed conditions of the supply of goods or else occurs without such change.

The simple proposition already put forward by Adam Smith is much more to the point than this modern and over-subtle method. He suggests the use of grain which is man's principal food as a standard for the value of money, and for the variations of this value over periods of time or in different localities. He says that the value of precious metals changes but little during short periods of time, but in the long run is subject to great variations. In contrast to this he maintains that the value of grain varies greatly from year to year with the condition of the harvest, but that the average over longer periods shows only trifling fluctuations. It is true that this proposition cannot be accepted to the full extent of Adam Smith's statement. But we are in accord with it with the limitations that in all observed cases the same type of nationality is presupposed; that the conditions of production are not too diverse; and, most im-

portant of all, that the mass-energy of labor is the same. With these limitations it appears to be true that, while man does not control the production of grain quite so completely as regularly to secure an annual harvest that bears a fixed relationship to his needs, in the long run he none the less does steadily maintain the desired proportion. For these longer periods, despite all fluctuations, the average value of grain is held at approximately the same marginal utility. Subject to the limitations mentioned, we may therefore safely conclude that the value of money has been lowered in the same proportion as the average price of grain rises, and vice versa.

Daily experience points the way to a more accurate scientific method of measuring the value of money which might be elaborated. Every traveller visiting a foreign country in which the market prices are different from those to which he has been accustomed at home soon notices the departure from his calculations in the new standard. Also he will have little difficulty in finding an expression for the difference of value in the foreign market and at home. He is likely to determine the general price level of the new market in so far as it affects him personally; but he will not stop there as the method of index numbers erroneously does. He will probably compare the observed price level with the amount of his income and he will reach the conclusion that the value of money is higher if he can purchase more natural values for his household with the prevailing income, and that it is lower if he has to content himself with a smaller quantity of natural values. The scientific method of ascertaining the value of money should start from precisely this basis; it must compare the sums of money that are necessary for a certain provision of natural values with the money income. It should do this for all strata of the people and for all local differences of the price level, thus relating a series of index numbers of prices with one of income.

§ 56. The Money-Form of Capital

The concept of capital in daily speech—Money capital, loan capital, entrepreneur's capital—Private and social capital—The ultimate scientific concept of capital.

In the exchange-economy the natural form of values generally finds expression in a monetary form. This is even more true of capital. By the side of capital in its natural form we find its monetary counterpart. Money has won for itself a most comprehensive place in the thought of people because of its uniformity, its unmistakable characteristics and its adapatibility to numerical expression. This broad understanding of money has generated the ordinary concept of capital. When men speak of capital in daily intercourse, they invariably refer to the monetary form. We have already seen in the theory of the simple economy that there is no uniform scientific concept of capital but rather a number of conflicting ones. However, they are almost without exception in agreement in one respect: with a complete disregard of the current phrase, they are seemingly formed in opposition to it. The same theorists who could not break free from the fetters of daily speech in their ideas of value and other fundamental concepts, fell into the opposite error in defining capital and broke loose from the common usage with bold indifference. It is only recently that a few authors have sought to come in touch with the common meaning.

We ourselves shall conform to the principles of our general methodology. We take it for granted that the wealth of economic experience has shaped the connotation of words dealing not only with other fundamental economic concepts but with capital as well. We are entitled to expect that from this source will flow intimations which coalesce to render invaluable assistance in shaping the scientific principles which we seek. However, it cannot be expected that our progress should end on the threshold of common experience; science, to be true to its calling, must on occasion go far beyond the interests of daily life. Therefore we may need to supplement popular verdicts in one direction or other. But first of all it is incumbent upon us to interpret as carefully as possible the popular ideas that are here significant.

Such concepts, taken from the lips of laymen, are not readily definable. Their application is uncertain; towards the borderland of their associations they are indistinct. This is the case with the concept of capital as we get it from every-day speech. It includes a series of images of capital of which only the central one is clearly outlined and vivid; all the others merge into the twilight of inadequate definition. We are most likely to succeed if we direct our inquiry to the first of these figures, the central one, which is also the one most clearly defined.

The solid nucleus of the popular concept is the idea of monetary capital in the narrowest sense. Every sum of money that has been brought together to be expended in the process of acquisition is called money capital. This includes not only cash reserves but also those much larger sums which are held in other liquid form, especially those already invested at interest during the process of accumulation, provided that they may be cashed or transferred on short notice. Externally there is no difference between monetary capital and those sums of money designated for household expenditure. The two forms are usually held apart but not infrequently they are one mass. They are distinguishable solely by the use intended for them by the owner. Money capital is to yield acquisitive profits; the ready money of the household is to be used directly to cover domestic needs.

The most closely related type of capital to this first kind is the loan form. There is a liquid flow binding it to money capital invested

at interest. All capital lent, that is not money capital, is loan capital, from short term business credits to long term or perpetual mortgage loans and annuities which are usually spoken of as capital investments.

There is a double connection between these two forms of capital. In the first place money capital is offered in the loan market and is transformed by the contracts there made into loan capital. Subsequently the repayment of the loan restores the funds as money capital. In the case of commercial and other short term credits the transactions are executed in rapid succession. The repayment of investment loans may be distributed by instalments over a long span of years. There is generally no repayment of government rentes. But in a well regulated market the creditor has opportunities to dispose of his capital demands and to sell especially those securities listed on the exchange at comparatively stable prices. Thus there is a way for him to turn even long term or irredeemable loan capital into liquid monetary capital. In an unfavorable market he must assume the loss involved in conversion. The entire safety of short term demands is taken for granted and the holder may count on recovering the full nominal value.

The capital assets of an enterprise are another form of capital that is distinguished in ordinary speech. This does not mean the accumulated reserve of money destined to establish or enlarge a business, for this is monetary capital. It means the entire capital which has been invested and is actively used in the enterprise. This includes the liquid cash items which are to cover payments of wages and other current operating expenses, that part outstanding as loan capital and also the remainder which has been transformed into natural capital and furthers the enterprise as such. An entrepreneur receives a yield in natural form as a result of the productive use of capital goods, but he also finds a monetary expression for this yield. He appraises the circulating capital goods in money to determine his working capital; the fixed capital goods in terms of money are his plant investment. Together these two sums are his capital assets which he regards as a numerical expression of a demand on the business. In the same manner he credits accounts receivable which, while not strictly a part of his possessions, must be productive in that they return the customary rate of interest. As each item of his natural capital is consumed in the productive turn-over, he meets the demand for its replacement from the gross monetary yield. The monetary nature of capital is particularly apparent in the rapid turn-over of the components of working capital; at short intervals it is transformed over and over again into monetary or natural form. These periods are longer in the case of capital equipment, but in principle the same relationship holds. Because of the monetary yield all the component parts of the capital of a business are constantly becoming monetary capital, the form in which they were brought into the business. Thus they tend to form a homogeneous mass with money- and loan-capital, a unity which shows itself in the tendency to an equalization of the yield of capital.

It must be admitted that the outlines of the concept become indefinite when the capital of an enterprise approximates a condition of immobility, as with investments of specific capital. In certain situations, when specific equipment goods have become "immobilized," they are denied to have the character of capital. For example when a business man has tied up his wealth in fixed improvements so as to have no working funds, it is usually said that he lacks capital. But by the side of this concept the popular mind harbors the conviction that the whole investment in a business partakes of the characteristics of capital. Along this line the boundaries of the general concept are overstepped, for the realty, which is part of the possessions of the enterprise, is considered as part of the capital on which it trades.

On the other hand money-capital, as it is usually referred to, loses the characteristics of capital whenever it is used by anyone who is not an entrepreneur: when an individual uses it to buy a dwelling, tenement house or the like or when a farmer buys land. In the hands of a builder or contractor a house is capital; in the hands of one who purchases it as an investment, without keeping strict account of its monetary expression as an entrepreneur would do, it is no longer capital. The house has become property, although even in this case the owner would have to consider that, precisely as in the case of capital, the value of the building is little by little being consumed and must be allowed for by a reserve fund created out of the interest received. When an estate is not purchased with the object of resale, it is not regarded as capital. Stocks, held by a banker or speculator, are capital; the nature of those held by an individual for investment is doubtful. Usually they are listed as property, but it is easy to understand how the usages of ordinary speech may vary here because they are so nearly akin to bonds and other market securities that are allied to loan-capital.

The connotations of speech are therefore uncertain. But at the core of all these interpretations is a nucleus that clearly shows the form of capital, a form that is fundamental to all variations. In the habitual meaning capital includes monetary capital and also all other acquisi-

tive property in which monetary capital is invested and which reverts to the monetary type. Capital in this sense I shall designate as the monetary form of capital.

The results of scientific analysis, especially as promoted by the classical school, have been to increase largely our knowledge of capital, as for example, when its natural form was discovered. This we have described in the theory of the simple economy where it was defined as the sum of all capital goods and was recognized as the necessary instrument of all production. In the face of the socialistic criticism of capital, taking its rise in the monetary form, a scientific justification of capital would have been impossible, had not the homogeneous monetary form first been analyzed and the natural form set off as a phenomenon by itself.

These great advances, however, were not achieved without serious mistakes. Thus it was an almost fatal error to transfer to the new concept the traditional name of the old one, and to do so without supplementary explanation. Science has neither the right nor the power to deprive a name that is deeply rooted in popular usage of its traditional meaning, and to force a new connotation upon it. The error, however, was corrected in the further elaboration of terminology, and the natural form of capital was distinguished by the name of productive or natural capital. It is also called social, or socio-economic capital; we prefer to use this term. Although under the existing legal order this economic capital has also been respected as private property, the name is justified by its socio-economic effect as a coöperating factor in production, increasing the national income.

A second grave mistake has been committed and must here be discussed. At first only one form, productive capital, was recognized. It was not until some time later that a second type was recognized which was characterized as acquisitive capital. The natural "enterprise capital" of commerce and its auxiliaries, especially transportation, of service trades, rented dwellings and finally the entire loan- and money-capital are classified as acquisitive capital. We distinguish acquisitive capital from productive capital in so far as the former produces interest for the capitalist without increasing the social economic income. It is held that productive capital is social capital, while acquisitive capital is purely private.

The concept of acquisitive capital represents an important advance of the scientific approach but it requires analysis. It groups together types of capital which differ radically in their application. The "enterprise capital" of commerce and its auxiliary trades coöperates in producing a yield. Therefore, by the definition of production to

which we have adhered from the beginning, it is to be treated as socio-economic capital. That of the service trades, together with rented dwellings and other possessions that are enjoyed directly form a group by themselves. They consist of material goods of the first order, the greater number of which are durable.

In the case of loan-capital or monetary capital—these include most banking and insurance capital—we must distinguish the use to which they are put. Their effect and classification are dependent on whether the loan is used to further production, for other acquisitive enterprise or for consumption. Capital lent for production increases the productive yield. It is secured by the natural form of capital goods into which it is transformed. For the creditor, who counts the demand among his possessions, it is private capital. But in securing the natural form of which the debtor has possession it performs the service of social capital. This effect is reflected back upon the private capital of the creditor of which, therefore, it cannot be said that it is private capital pure and simple. Capital loans for other acquisitive activities, among which we should mention mortgages on rented houses, are secured by goods which remain in permanent use. Capital lent for consumption is covered by the household goods into which it is transformed. Such a loan does not increase the socially available income; the interest which the debtor pays must be met either at the expense of his household or from yields coming from some other source than the use of the loan. The use of these household goods can result in no return for this capital which is the most pronounced form of private capital.

Beside the socially productive capital, with which we class the natural capital of commerce and its auxiliaries, we must distinguish the following forms of private capital: productive loan-capital, most closely resembling social capital and not to be considered by us a purely private capital; acquisitive capital in the narrower sense, consisting of the material possessions of service trades and goods rented for use and including loan-capital destined for lending on these goods; and finally consumptive loan-capital which is pure private capital.

The special definitions of natural social capital and the various types of acquisitive capital are fruitful. Without them the different effects of capital could not be understood. Nevertheless, science cannot stop with these distinctions. It must return under the guidance of ordinary speech to a unifying concept which science need only deepen for purposes of professional employment. The concept delivered by language is held together by the monetary form. In a similar manner science must formulate an ultimate homogeneous concept, compre-

hending by means of the monetary form all the observed types of capital.

In the money economy, if natural capital in the hands of entrepreneurs is properly to perform its social function of increasing the yield, it requires the supplement of money-capital and constant reference to the monetary form. It is only thus that the natural capital forms a unit and may be united with other forms of capital. This homogeneity has always been tacitly assumed by theory, for in asserting the equalizing tendency of interest it presupposes the monetary form of capital in which alone the individual kinds of capital may be compared. If we were to ask the questions, by what means has our era become capitalistic and in what does the nature of capitalism consist, it would be wholly inadequate to point out merely the occurrence of capital goods. The entire importance of capitalistic power is never appraised in the natural form alone, great as is the productive wealth of the goods involved. The ultimate support of this power is to be found in the unifying monetary form and especially in the primary type, money-capital. The latter is the nucleus not only of the practical concept but of the actual power of capital as well. The ruling power of large aggregates of capital is acquired by transforming it into those particular forms which at the time promise the largest rewards.

In the scientific concept of capital the monetary form must not be absent. We shall therefore have to add to the narrower concepts of social capital and acquisitive capital one which will embrace all forms: the natural, the monetary, and even the consumptive loan types. In this sense we shall define the extended ultimate concept of capital as the total mass of the monetary and natural forms treated as a unit.[1] The effect of all individual aggregates is derived from their use as parts of this unit.

§ 57. The Process of Capital-Formation in the Money-Economy

The participating groups of individuals—The money capitalists—The parallelism in the formation of the money-form and the natural form.

The process of the formation of capital in the monetary economy is essentially the same as in the simple economy, but only very rarely does it follow a course so conspicuously transparent and self-contained. Thus, for example, a large land-owner may discover that conditions on

[1] In diesem Sinne definieren wir den erweiterten Schluszbegriff des Kapitals als die *Einheit* der Geldform und Naturalform des Kapitals.

his lands favor the establishment of a factory, through which he could turn to account his agricultural products, without incurring further expenditures in the way of purchasing materials or supplies beyond the unavoidable ones required in paying the wages of the laborers employed in erecting his buildings. Then, if he compensates his laborers largely in natural wages, he would require but little cash or money-capital for the payment of the wages also. In every other respect, he would control the natural conditions for the formation of the productive capital as completely as he would have to in a simple economy. Only rarely, however, is there such an opportune coincidence of conditions; the formation of capital in the money economy would be an exceedingly slow process and would be confined within narrow boundaries, if a conjunction of circumstances so rare and well adapted had to be relied on. In most cases, the requirements for this formation are distributed over a large number of individuals; at least two, and sometimes three groups of persons are usually needed, each group containing a large number of interested individual economies. The manufacturer of machinery usually does not himself make use of the machines which he constructs, as he is forming natural capital. He sells them to other entrepreneurs who use them in their operations. A spinner who is getting ready for his industry will not only purchase the spinning-machine of the manufacturer of such machines, but he will also buy of capital-producing entrepreneurs all the other constituents of the natural capital which he needs for equipment and manufacture. Under the division of labor of the exchange-economy the process of the formation of natural capital is completed only by the joint work of the capital-producing and capital-employing entrepreneur. The machine is not a capital good merely by the fact that it has been built by the former; for, if no one should appear who could make use of it, although technically unobjectionable in its construction, it would not be a part of the national capital; it might not even be a good. It would have to be regarded as an economic blunder of the capital-producing entrepreneur, when he sacrificed money-outlay in its construction. We must add here that even in case an entrepreneur should be found who might wish to use the machine, it would not, for this reason alone, be certified as a part of the natural capital. In order that this can take place, the second entrepreneur must realize an economic gain with the machine. Only when he reaches the stage where he succeeds in realizing the usual net-earnings from his enterprise, has the process of the formation of natural capital been finally terminated.

In order that this may be accomplished for the money-form of capital, the formation of natural capital, which is initiated by the two

groups of entrepreneurs here mentioned, must be supplemented by a companion-process. To the same extent to which capital goods are formed, money-capital will also have to be formed. This is true not only for the increase of capital, but also for its mere preservation which, as we have seen in the theory of the simple economy, makes part of the formation of capital. The formation of money-capital is accomplished by saving or by laying aside money. The saving of capital is accomplished among people of small means by serious self-denial and by the imposition of severe deprivations in their consumption in order to obtain from their limited incomes an excess over and above the expenditures for the preservation of life. What is laid aside in well-to-do and wealthy families is not savings. No "saving" is required in their circumstances. Here it is possible to "lay aside" while living comfortably and luxuriously, for the incomes are so large that they can no longer be exhausted by personal expenses but only by dedications to foreign uses, unless they are squandered in senseless prodigality.

The formation of money-capital is often accomplished by the same individuals who take part in the formation of natural capital. Whenever the business enterprises of the capital-employing entrepreneur prosper, he will be able to make his investments from the surplus over his current expenses. But numerous enterprises are started or enlarged, in which the entrepreneurs do not derive the money-capital required from their own means. Under these circumstances it may be the capital-producing entrepreneur who opens credits to the employers —a proceeding which, however, he will only be able to adopt, when surplus revenues of his own enable him to do so. In cases where neither the one nor the other group of entrepreneurs are able to contribute the capital required, these must turn to a third group of persons, the owners of money-capital who have saved or laid aside money, and whom, in this broader sense, we shall call money-capitalists. These persons may themselves be producers or other traders, who cannot find employment for their reserve-funds in their own businesses; or they may be money-capitalists in the narrower sense, living on money-interest and on annuities, and still able to spare money-capital by way of making loans. Finally they may also be men of small means with small savings. When the money of such men has, by an efficient organization of credit, been scraped into one heap from all parts of the country, it forms enormous aggregates, figuring largely in the capital supply of the largest money-capitalists of the country, the banks.

Where the money-capitalists, as a third group, take an active part

in the process of capital-formation, the process becomes more than ordinarily complicated, and the view of its working is greatly obscured. To this state of facts, then, we will devote our closest attention. The fundamental idea which is to guide us in the labyrinth of tangled relations, is the law of the equation between supply and demand, which we have already demonstrated for the market of natural values and which is valid for the capital-market as well.

In our exposition we shall first make the simplifying assumption that the money-capitalists, to whom the capital-supply is to be ascribed, are themselves producers and have, as such, introduced natural values into the economy. In order that they may thus be able to come forward with offers as money-capitalists, it is necessary that through sale they should have introduced more natural values into the economy, than they withdraw as buyers. From the money-yield which they obtain for the surplus of natural values sold, they form the money-capital, by the loan of which—as we know from our investigations of the national-economic community of payment—they transfer the claim for a corresponding quantity of natural values to the debtors who, in their place, as assignees, exercise the demand. That the spinner, who works with borrowed capital, was able to obtain the spinning machine which he needed from the manufacturer of machines, was only made possible by the fact that the national economy had the disposal of a surplus of natural values. This was brought in by the money-capitalist himself or his predecessor,[1] without, so far, having been conclusively withdrawn by a successor; the spinner finds this surplus, now in the shape of the spinning-machine, ready for his demand.

All complications of the market, no matter how intricate, may be reduced to this type. If the money-capitalist, granting the loan, was not a producer himself, but formed his capital from derived income, from the interest of loan-capital which he already owned, then the debtor who pays the interest in money must on his part have brought in that surplus of natural values, or some predecessor of the debtor must have done so. If the money-capitalist has obtained his money-capital from the sale of realty or other property-possessions, then either the persons to whom he sold or some of their predecessors, must have brought in that surplus. The interconnections become especially complicated by the fact that by no means the entire annual formation of money-capital can be placed to the door of the formation of productive capital. A large proportion of loans is granted for non-productive acquisition and for urban mortgages; an-

[1] Trans. note: For the use of predecessor and successor see § 30. Wieser pictures sales as forming a chain in which a pair of buyers and sellers form the links. Each individual appears once as vendee, once as vendor. In the first capacity he is the successor of the earlier members of the chain; in the latter capacity he is the predecessor of later buyers.

other all too large quota for consumption. Especially the public economies, above all the state, come in for an exceedingly large share of funds for consumptive purposes.

It is not permissible to invert the proposition that, without new money-capital, there can be no new productive capital. It is not correct to say that, with all new money-capital, new productive capital is also being formed. The consumptive-debtor utilizes the right to demand goods, which he has obtained as assignee, so as to withdraw consumptive values from the national economy. Thus his demand furnishes an incentive to prepare that surplus of natural values in consumption goods. While the formation of the productively lent money-capital runs parallel with the augmentation of the national-economic natural capital, this effect does not follow the formation of the consumptively lent money-capital. It is thus that, farther on, the payments of interest and the repayments of the producer-debtor are covered by natural yield-values, which this debtor has been able to form and bring into the national economy, owing to his use of the borrowed capital, while he was not compelled to consume the yield himself. The interest payment and repayment of the consumer-debtor, on the other hand, are not covered in this way. In his hands the borrowed capital does not create a natural fund, securing the debt. Unless he gains other income in addition to what is here indicated—as a rule he does not—the debtor will have to obtain the surplus in natural values, which he is bound to bring in to cover the money-form, by a retrenchment of his own consumption. In case of the public credits, the interest service of which is met by taxation, the relation is still somewhat more complicated. The debtor-state, itself, is not the party to retrench the consumption of natural values. The citizens, paying the taxes, will have to do this in the state's place; their purchasing ability is lessened by the additional taxes, which cover the interest service. The natural values, the purchase of which the citizens will have to abandon, form in the first place the ultimate security required, in order that the chain of payment-community may be closed. The creditors of the state or their assignees dispose in any form of payment determined by the community, of the surplus of natural values, which has to be brought into the economy by the tax-paying citizens.

In the course of the formation of capital as here described, the pure, private form of the consumptive loan-capital also has its place. As regards the saver of capital, it merges indistinguishably with the other forms of money-capital. It forms part of the great unit of the broader capital-concept.

The parallelism, existing between the money-form of capital and its natural security-cover, likewise becomes apparent when the economy of the debtor breaks down. The creditor must wipe from the inventory of his possessions, the money-demand which is no longer recoverable. If the economy of the producer-debtor breaks down because the capital was injudiciously invested, then coincidently with the natural form, the money-form of the capital is also destroyed. In every national economic crisis this process is repeated on a large scale. Extensive aggregates of capital-goods have been unsuitably invested. Their productive employment produces yields far inferior to those expected by the vivid imagination of the speculative impulse. To some extent, perhaps, they have turned out to be wholly unproductive. The losses which consequently result and cut down the estimated figures of the national-economic natural capital, fall to an equal extent upon the capitalists who have advanced the money-capital to the speculating entrepreneurs. The creditors must charge off large amounts with

far-reaching economic results, in order to re-establish the disastrously disturbed equation between money-values and natural values.

§ 58. The Capital Market

Money market—Investment market.

We have already treated quite completely most of the details of the capital market which interest us in the course of our explanation of credit transactions, the advantages of exchange by means of credit, the community of payment and money- and loan-capital. On the whole there is little left for us to do now but to summarize these details.

The capital market may be subdivided into the money and investment markets.

In the money market, transactions are concluded in the most liquid forms of loan capital, that is such as are acceptable for banking security and the discount business which we have described, especially the so-called Lombard transactions, whose details we need not go into. By means of foreign drafts or bills of exchange, the transactions in varieties of foreign money which they represent are also brought within the scope of the money market. In this market the supply comes from banks or individual bankers; the demand from such business men as enjoy credit with the former. The quasi-commercial market for drafts and other liquid loans is only loosely connected with the official money market; on the side both of the demand and of the supply it is differently constituted. The market of the usury business is wholly detached, if, indeed, this may be referred to as a market.

In the investment market, loans for long terms are granted for permanent investment. The German name *Anlage* is probably to be traced to the fact that the capitalist permits the money to "lie" (*liegen*) without being obliged to incur further labor than is involved in selecting the investment and, if need be, taking the necessary steps to insure its safety. These are two functions, however, in regard to which mediating banks may relieve him to a great extent. Closely akin to the investment market for stocks and bonds is that branch of the realty market where real estate is acquired for purposes of investment: rented urban houses and also such country estates as the owner does not wish to farm himself, or cultivates only for pleasure. Real estate, purchased as an investment, is looked upon by the buyer precisely as are securities. Both are sources of a money income which is derived without appreciable effort. The only distinction is that

one investment may be considered safer or more convenient than the other, or that one may offer greater chances of a rise in value at some future date. In the case of real estate, purchased for the purpose of somehow making it productive, still another consideration governs its appraisal. It is looked upon as a means of turning individual effort to better account and frequently a considerable portion of the purchase money is paid with this in view.

All branches of the money and investment market are mutually connected. Equalizing movements may constantly be observed in which funds are transferred from those uses of lower returns to those of higher ones. To this extent theory has the right to assume in idealization a single market striving to realize a single rate of interest. As a matter of fact the movements of capitals are never able to bring about a complete equalization. Even with complete security of the loans, the interests of the different groups composing the supply and the demand are too diverse as regards the period of the loan and a number of other conditions for a central market to form in which the law of the unity of price might prevail. The contrast between the market for commercial paper and the investment market is particularly striking. The more mobile commercial interest rate may always be plainly distinguished from the steadier investment rate or the customary current rate.

For us, the composition of the money and investment markets is primarily of interest in so far as it bears on the problem of the interest on capital with which we must concern ourselves under the theory of income. The explanation of interest which we have attempted in the theory of the simple economy is applicable only to that on productive business capital and, in connection with this, to the interest on productive loans. It is not an adequate explanation to cover interest on natural acquisitive capital or on commodities rented for direct use or on loans secured by these. Nor does the explanation cover interest on capital used for consumptive loans. Each of these capital groups shows in somewhat different form variations of the problem of the interest on capital and thus attains theoretical importance.

In another connection we shall make brief mention of the significance of speculation in the capital market.

§ 59. The Computation in Money

The monetary computation in the process of private and national economy—The arithmetic expression of power.

In every household, constituting a unit of the economic whole, incomes and expenditures are computed in money. In every well managed household, the expenditures should be confined within the limits of the receipts. Even a trifling overstepping of the margin indicated by the relation of expenses to income, is considered improper. But the mere observation of the balance of the figures on either side of

the account does not exhaust the import of the record which is being kept, for this should always include a due regard to the purposes of the expenditures incurred. The account is to furnish the guarantee, that the receipts are never expended for uses whose personal use-value is less than the exchange-value of the sums of money given up and that, therefore, only such uses are permitted as correspond to the personal marginal utility of the money. The money-computation in the household is a computation of utility, precisely like the one as to which the theory of the simple economy has already enlightened us. Like the latter, therefore, it is largely a matter of common sense. It is not merely an approximate numerical expression which is aimed at, when the sums of items on either side of the account are compared. Rather, when by their means arithmetical operations are performed, when they are added, subtracted or subjected to any manner of calculation required by circumstances, the number of units of mass is computed, which are available within the margin of use. The ends of the household are best served when the margin of use is respected for all the units of mass included in the computation.

The natural values, employed in the domestic economy, are appraised directly by their marginal utility. Only those of their number, for the repeated purchase of which sufficient means are available, are, for the sake of simplification, appraised by their purchase-value in money. By the instrument of the marginal utility, this internal natural household-account is combined into one unit with the account of moneys received and expended. The personal acquisition-account is also adjusted to the same unity in every private economy; and similarly the investment-account, containing such possessions as are expected to yield money-returns, and as are appraised according to the exchange-value of their yield.

For the comparison of individual economies of different degrees of wealth, valuation in money is inappropriate. The greater this difference, the less appropriate is such an appraisal. Doubling the amount of the income does not mean doubling the attainable enjoyments of the household; much less does it mean that the enjoyments are a hundredfold increased, if the income is increased a hundredfold. The accounts kept in case of an income of 100 and those kept for an income of 10,000 money-units are not commensurable. They are founded in different personal units, different personal appraisals of the money-unit, of which it is well enough known that the one is larger, the other smaller. However, it is not known to what extent these appraisals are multiples one of the other, or are in other ways arithmetically related.

In order to reach, also, an understanding of the economic money-computation, we will start from the assumption of complete equality of the related individual economies. We assume that for all the incomes, needs and values are the same. The assumption is contrary to all experience; such a condition has never yet existed, perhaps it never will; but we require this idealizing simplification, in order to obtain a preliminary survey.

With an assumption such as this, the economic exchange-value equals the unitary personal exchange-value of all connected individual economies. The money-computation in the national-economic process has, therefore, precisely the significance it would have in the simple economy of a people. We refer to our exposition in the theory of the simple economy; in this connection we confine our remarks to a few points of especial importance, which it is desirable to bring out emphatically. In the first place, it will be observed that in the national-economic process it is not only on the occasion of exchange-transactions, that the computation is made in money; the exchange-value of products and of other natural values, becomes also the arithmetical basis for carrying through operations in the private economies, connected by the division of labor. Planning and final accounting of the operations are, throughout, effected in money. Here all divisible stocks of material and personal values are computed as multiples of marginal value and quantity; by such an accounting the economic success of the acquisitional process is most accurately verified. It should furthermore be observed that also for dealings in capital the computation in money makes it possible to identify the greatest economic success. The accounting of interest and compound interest between creditors and debtors, and in internal management the discounting and capitalization in money have the same economic import which we have demonstrated for the appraisal of capital in the simple economy. Throughout, the money-form coincides with the natural form; throughout, the units of the money-computation are units of the economic utility.

Owing to the stratification of economic society, especially when it has been intensified to power, money-computation in the economic process loses this simple significance. The superior, the more powerful, the dominating strata are able with the given prices to extend their margin of use far beyond the margin of the mass of all other strata. The unit of the national economic value, under the influence of the variously graded personal states of needs, incomes and wealth, breaks up into the most multiformly differentiated units of personal exchange-values, running from the marginal utility of abject misery,

with its maximum tension, to the condition of extreme luxury with its scarcely perceptible strain. Nevertheless, money-computation does not altogether lose its arithmetic significance.

The competitive struggle, in its effect on prices, constantly provides the key for the computation, stratum by stratum, of utility-units in money. Instead of operating with simple social utility-units, units of the stratified marginal utility are employed; but these, too, lead to strictly arithmetical sums. In the case of mass-values as well as in the case of medium and luxury values, the business-man ascertains the arithmetical foundations, in order to keep exact track of the mutual relation of costs and of gains. Enormous as are the variations in the margins of use thus brought about between strata, the calculation as such preserves its full significance at all times in the valuation of partial stocks and their most proximate uses. The exchange value, thus calculated, furnishes an expression as accurate for the estimate of power, as is practically demanded, and this power prevails in most exact adjustment to the existing conditions. The stratification of prices evidences the intention of the wealthy buyers precisely to the extent to which they desire precedence; they receive their desired share of the cheaper products, as regards which they compete with the less wealthy buyers, while they themselves secure the exclusive delivery of the more costly wares, to the acquisition of which they do not wish to admit competitors. In the further stages of the process, the stratified price of the products furnishes the standard for the extent of productive investments which, in the course of economic development, are to be devoted to each of them. Here, too, then, the desire of the wealthy buyers ensures that, in procuring the highest priced products, the greatest productive efforts are to be made. Precisely in this manner the price enforced by the more powerful producer in the market, is accurately adapted to restrain weaker competitors; and that enforced by the supplying monopolist is exactly adapted to wring from purchasers the highest profits which can be realized with the prevailing condition of technical art and the market-situation. From the basis of the price-level of consumption-values, the large entrepreneur or the monopolist extends his calculations with strictly logical continuity; the attribution, the computation of costs and the capital-computation, which he makes, preserve their full significance in that they verify arithmetically, with the utmost exactitude, the attainment of the greatest gain possible, at least as regards the most immediately recognizable partial stocks and yields.

The problem of power has not been disposed of by this formal statement. In order to attack it from the standpoint of actuality, we shall first have to acquaint ourselves with the economic process of acquisition. In that connection we shall see the economic sources of the formation of power in action, so as to enable us to form an opinion as to the meaning of the formation of power itself.

By its services as the instrument of money-computation, money becomes the means of computation in the economic process. It is not simply the "standard of price"; the economic exchange-value is also

computed in money, and similarly the parallel forms of the exchange-yield-value and the use-value;[1] just as it is generally used as the arithmetical expression, where a uniform, comparative expression is required for the values which are active in the economic process.

[1] Anschaffungswert.

PART III

THE CREATION OF THE COMMUNITY OF ACQUISITION AND THE FORMATION OF INCOME

A. Weber, *Ueber den Standort der Industrien*, 2nd ed., 1922; Sombart, *Das moderne Kapitalismus*, 1902; Schumpeter, *Das Grundprinzip der Verteilungslehre*, 1923; Wicksteed, *The Coördination of the Laws of Distribution*, 1894; Sux, *Die Verkehrsmittel in Volks- und Staatswirtschaft*, 1918–22; Davenport, *Economics of Enterprise*, 1913; Marshall, *Industry and Trade*, 2nd ed., 1919; Mitchell, *Business Cycles*, 1913; Pigou, *Economics of Welfare*, 1920; Veblen, *Theory of the Leisure Class*, 1918; Diehl, *Die Lehre von der Production*, 1924; Mayer, *Wesen des Einkommens*, 1887; Schäffle, *Theorie der ausschlieszenden Absatzverhältnisse*, 1867; Schumpeter, *Das Rentenprinzip in der Verteilungslehre*, J. F. G. V., 1907; Naumann, *Städtische Grundrente*, Z. F. V., 1909; Wieser, *Theorie des städt. Grundrente*, 1909; Oppenheimer, *Wert und Kapitalprofit*, 2nd ed., 1922; Budge, *Der Kapitalprofit*, 1920; Mataja, *Unternehmergewinn*, 1884; Brentano, *Das. Arbeitsverhältnis gemäsz dem heutigen Recht*, 1877; and, *Die Lehre von dem Lohnsteigerungen*, J. f. N., 1871; Taussig, *Wages and Capital*, 1896; Herkner, *Arbeiterfrage*, 7th ed., 1921; Zwiedineck, *Lohntheorie und Lohnpolitik*, 1900; Bernhard, *Arbeit*, E. d. V.; Schüller, *Die Nachfrage nach Arbeitskräften*, Archiv, 1911; Pesl, *Mindeslohn*, 1914; Verrijn Stuart, *Die Grundlagen der Lohnbestimmung*, Z. F. Volksw., 1922.

§ 60. The Division of Labor

Horizontal and vertical division of labor—The articulation of labor—Fundamentals and laws of the articulation of labor.

The most striking feature of the entire structure of the economic community of acquisition is the division of labor which is more conspicuous than the community of acquisition itself and was therefore observed at an earlier date. Only subsequently was it realized that the observed division of labor is the expression of an extensive community which unites all those who take part in labor. The division of labor was peculiarly in accord with the ideals of the classical masters; it harmonizes with their theory of labor and with their individualism, both of which place the individual workers in the foreground of theoretical inquiry. From his point of view, Adam Smith could not have found a more suitable introduction to his work on the Wealth of Nations than his remarks concerning the extraordinary effects of