purchase from others many classes of commodities which it could produce as well as or even better than they, such a course is also for the economic interest of the countries with which it trades, since they are thereby enabled to obtain the products of the former country, at a lower, probably much lower, cost than that at which they could hope themselves to produce these, or to obtain them from any other quarter.

CHAPTER III.

MONEY AND ITS VALUE.

159. Exchange Arises out of the Division of Labor.—Men become the producers of that which they expect to consume but in part, if at all. Their choice as to what they shall produce, ceases to be determined by considerations affecting their personal wants, and comes to be determined mainly, if not wholly, by considerations affecting their abilities and aptitudes. They no longer produce that which they desire to eat, drink or wear. They produce that one among many things known to the market which they can produce to the best advantage, let who will, in time, eat, drink or wear it. Their own wants they look to see, in turn, satisfied by the labor of others.

To the market all producers bring their several products, or such part thereof as they do not care individually to consume. From the market each late producer, now become a consumer, carries away that which he is to eat, drink, or wear, or otherwise enjoy. In the market is done that which we call exchange.

The economic function of exchange is to bring producers and consumers together, and thus allow the division of labor to be carried as far as it will increase production. The division of labor has no economic virtue except so far as it increases production. When that point has been reached, a further subdivision of occupations and employments would be useless, or of merely curious interest. Exchange, in turn, has

no virtue except as it allows the division of labor to be carried out. Its sole function, economically, is to enable each species of wealth, each article known to the market, to be produced in the place and by the person where and by whom it can be produced to the greatest advantage.

160. The Economic Function of Money.—In its function of bringing producers and consumers together, exchange discovers the need of the great agent of which we are about to speak—Money. Just as the occasion for exchange arises out of the fact of the division of labor, and as the economic efficiency of exchange is limited to that occasion, so the need of money arises solely out of the fact of exchange, and the economic efficiency of money is limited strictly to the occasion for exchange. The interests of a community require as much exchanging as will secure that division of labor which will achieve the highest productiveness of land, labor and capital; and they require no more exchanging than this. They require as much money as will enable that amount of exchanging to be effected with the least effort and with the greatest assurance of a transfer of real equivalents; and they require no more money than this. No economic efficiency other than or beyond that indicated, can justly be attributed to money.

But how does money facilitate those exchanges which it is for the interest of society to have effected? Just what is the function of money?

161. Double Coincidence in Barter.—Money facilitates exchanges by dispensing with that double coincidence, of wants and of possessions, which barter, *i., e.* exchange without the use of money, involves. We have seen that, so far as the division of labor is carried out, men cease to produce all or even the greater part of what they wish to consume. Producing that which they can produce to the best advantage, they look to others for those particular articles which are required for the supply of their individual wants. The producer and the would-be consumer of each article, therefore, must get together, somehow, or else the wants of the community will remain unsatisfied.

But that each producer for himself should find some person

who has what he wants and at the same time wants what he has, would involve very roundabout exchanges, occupying a great deal of time, and occasioning much delay and frequent disappointments. The bootmaker who wanted a hat for his own use might find many persons who would be glad to get pairs of boots, but had no hats to give in exchange, and several persons who had hats, indeed, to sell, but were already supplied with boots, before he found one person who both had hats and lacked boots. And, moreover, when that person were found, a further difficulty would probably arise from the failure of an exact equivalency between the two articles to be exchanged. A pair of boots might be worth more than a hat; perhaps three pairs of boots might be worth four hats. Yet the bootmaker wants but one hat; the hatter wants but one pair of boots. Things would soon get into a fearful muddle, this way.

But if, by general consent, formal or implied, the producers of the community should hit upon one article which they would all agree to take in exchange for whatever they wished to sell, a vast saving of time and labor, of annoyance and disappointment, would be effected, especially if the article so taken should be one, say, wheat, susceptible of minute division, without loss of utility.

162. Money, the Medium of Exchange.—What shall we call the function which the wheat would in this case perform? Clearly it is something altogether beyond and in addition to its ordinary natural function, as wheat, which is simply to be made into flour, to be, in turn, made into bread. In the use proposed, the wheat would serve another purpose. What shall we call that purpose?

The function performed by the wheat, in the instance given, is that of a Medium of Exchange. The significance of the word medium, in this connection, is found in the fact that the wheat becomes an intermediate thing in the commerce between the producers and the consumers of any and of every article. The wheat is no longer an end, as when used for food, but a means to an end, which end may be boots, or hats, or groceries, or what not. The person who takes wheat for what he has produced may already have more wheat than he could eat in a year. He does not take it with a view to eating it, but because with it he can obtain, in kinds and quantities and at times to suit his wants and convenience, whatever he may wish to eat, drink, or wear, or to warm or house himself withal.

Now, the function which has been described is the Money function. Money is the medium of exchange. Whatever performs this function, does this work, is money, no matter what it is made of, and no matter how it came to be a medium at first, or why it continues to be such. So long as, in any community, there is an article which all producers take freely and as a matter of course, in exchange for whatever they have to sell, instead of looking about, at the time, for the particular things they themselves wish to consume, that article is money, be it white, yellow, or black, hard or soft, animal, vegetable, or mineral. There is no other test of money than this. That which does the money-work is the money-thing. It may do this well; it may do this ill. It may be good money; it may be bad money—but it is money all the same.

163. Universal Acceptability of Money.—We said, all producers, since it is not enough that an article is extensively used in exchange, to constitute it money. Bank checks are used in numerous and important transactions of exchange, yet are not money. It is essential to money that its acceptability should be so nearly universal that practically every person in the community who has any product or service to dispose of will freely, gladly, and of preference, take this thing, money, instead of the particular products or services which he may individually require from others, being well assured that with money he will unfailingly obtain whatever he shall desire, in form and amount and at times to suit his wants.

When any article, no matter what its substance or form, acquires this degree of acceptability, no matter how obtained or how retained, so that each person, in his place in the industrial order, without the expectation of consuming this article, and without reference to the character or credit of the person offering it, takes it freely from any man whenever he has any-

thing to sell, because he knows that any other man will freely take it from him whenever he may wish in his turn to buy, that article becomes money, and remains money while that condition continues. To serve as the medium of exchange is the money-function, and whatever does this is money.

164. Money and Civilization.—It is evident that the introduction of money, even in a primitive state, vastly facilitates exchanges, and renders it easy to carry out the division of labor. It is further evident that the use of money is a condition precedent to an advanced state of industrial society. The division of labor could not without it be carried so far as is involved in complicated manufactures and extended commerce.

"It has been wisely said," remarks M. Chevalier, "that no machine economizes labor like money, and its adoption has been likened to the discovery of letters."

The allusion is probably to the noble sentence of Gibbon: "The value of money has been settled by general consent to express our wants and our property, as letters were invented to express our ideas; and both these institutions, by giving a more active energy to the powers and passions of human nature, have contributed to multiply the objects they were designed to express."

165. Historical Forms of Money.—We have said that any article which acquires a certain degree of acceptability throughout the community, would thereby become money, whatever its material or form. Yet material and even form may have much to do with securing to any given article, at any given time, the requisite degree of acceptability. The industrial habits and the tastes of a people and their social conditions may make that money which among another people would be an impossible money. Rock salt long served the Abyssinians as money; rice, the dwellers on the Coromandel shore; cacoa, the aboriginal Mexicans; olive oil, the inhabitants of the Ionian islands; wampum, the early New Englanders; tobacco, the early Virginians and Marylanders; tea, compressed into small cakes, the Russians; dates, the savages of the African oases; beaver and seal skins, the peoples of

many northern lands. Cattle and sheep were employed as money, alike by the early Greeks, by the Romans who conquered the Greeks, and by the Teutons who conquered the Romans.

166. The Metals as Money.—But, of all substances, the metals have enjoyed the widest use as money, from a remote period. Iron, lead, tin and copper, one or another, have been thus employed in nearly every country whose history is known.

From its numerous and important uses in the domestic arts, in the chase, and in warfare, the first-named metal was the subject of such wide and constant demand as to make its further use as the general medium of exchange, *i. e.*, as money, very simple and natural. The art of mining being in early times very crude, small quantities of iron represented a large amount of labor, and thus contained a high purchasing power. Moreover, in comparison with wheat, cattle, and many other primitive forms of money, iron cost little or nothing to keep and was but little subject to waste, while a given mass could easily be divided into pieces of any required dimensions, which could again be reunited, by fusion, or by welding when heated. The money of Lacedæmon was of iron; the Swedes used money of this metal during and after the exhausting wars of Charles XII.; and iron is still reported to be so used by the inhabitants of Senegambia.

Lead was extensively employed as money by the early Romans and the early English, and is still used in the same way by the Burmese. Tin was used by the Mexicans as money; was long so employed in Sweden, in long, flat blocks; and is even now a medium of exchange among the Chinese and Malays and in Prince of Wales Island.

But more than iron, tin or lead, has copper, in the later centuries, been used as money. Having, from its cost of production, a high value for its bulk, it came to supersede iron in this use, when the latter metal became too cheap to form a convenient money. During the silver famine of the middle ages, copper returned to be the chief money of circulation in Europe. And though, after the revival of silver production

through the discovery of Mexico and Peru, it fell out of use as a principal money of wealthy and prosperous countries, it has remained a considerable element in the monetary circulation of the world, even to this day.

Platinum was for a brief period, between 1828 and 1845, used as money in Russia, where that metal is produced; but the great difficulty of rendering platinum, now from ingots into coin, and again from coin into ingots, prevented the success of this experiment, notwithstanding that platinum is justly regarded as one of the noblest of the metals.

167. The Precious Metals.—All the other metals, however, pale before the light of two transcendent substances, the Precious Metals, so-called, silver and gold. Having numerous important uses in the industrial arts; possessing the highest adaptation for the purposes of ornament and decoration, these metals have always and everywhere exerted, beyond all other objects of human desire, a strange, a mysterious fascination upon the minds of men.

168. Coinage.—Under the title, coinage, we may take account of all methods of determining, for easy popular recognition, the quantity and quality of individual portions of that which is used as money. It is in their adaptations to the art of the coiner that the metals, and especially the precious metals, exhibit their most marked qualifications for use as money. With some kinds of money, indeed, no such mode of determination is required, the divisions being natural, as in the case of the red feathers and shells used as money, or of cattle and sheep, which only need to be counted.

With other, and indeed, most, forms of money, it is necessary to give a customary shape to the pieces to be so used. The Abyssinians, who used rock salt as money, cut it into bricks of uniform dimensions, so that each person taking a brick in exchange might know how much salt he was receiving. Here, the problem was merely mechanical; no chemical tests were required. The salt being of reasonably uniform quality, the receiver was only interested to know its quantity.

With money of gold and silver, and even of copper or iron, however, both the quantity and the quality of each piece

offered may be brought into question, unless some means be adopted by which the piece shall be made to exhibit unmistakably the amount of pure metal it contains. The problem is thus both a mechanical and a chemical one, and is solved by what we call, in the limited sense, Coinage. The metal is melted, and in that state is brought to the required degree of purity, or "fineness." It is then cast into ingots, and by successive mechanical processes, with machinery of great delicacy and power, drawn out to the required thickness, cut into planchets, "milled" around the edges, and stamped on both sides* with devices expressive both of the sovereignty of the nation under whose authority the coins are struck, and of the quality and quantity of the metal contained.

Coinage has generally been regarded as an act of sovereignty, and the counterfeiting of the coin has been widely punished as treason. In England, the King's sovereignty only extended to the coinage of gold and silver, the private coinage of copper not having been prohibited until the present century. So important is the money-function, so strong is the tendency to abuse the privilege of coining, so helpless are the mass of the community, especially the poor and economically weak, under a corrupted coinage, that, even in popular governments, where prerogative is not known, the private minting of money is punished by grave penalties. That coins shall fully perform their office as money, they must be taken readily, without suspicion, or at most, after a brief inspection such as even the ignorant and inexpert can give.

169. What Determines the Value of Money?—It is only the present inquiry which brings the topic of money into the department of exchange. Otherwise, money belongs to the department of production, as clearly as does any other agency

* At first, coins were impressed on one side, as is now the "gall," the only native coin of Cochin China. This allowed the metal to be shaved from the smooth side of the coin. Afterwards characters were stamped on both sides, but the area of the coin was not fully defined, allowing the edges to be clipped, as is largely the case with the Tomans of Persia. Later improvements surrounded the coin with a well-defined rim, while the edges were milled to still further protect the integrity of the piece.

of trade or transportation, cattle, carts, railways or banks. The mining of the precious metals is governed by the laws which regulate the production of other kinds of wealth. The minting of gold and silver is equally a branch of production. Assayers, refiners and coiners are as much producers of wealth as the laborers employed in a pig-iron furnace.

But under the title, Exchange, we may properly inquire why any one article, produced as we find it to be produced, under existing conditions, exchanges for so much of any other article, and not for more or for less. Pre-eminently in respect to iron or copper, silver or gold, when cut into planchets and stamped as coin, do we need to raise this question and discuss it in all simplicity and severity of reasoning, because the subject has been allowed to become involved in a thousand difficulties, from the lack of clear definitions and from the failure rigorously to exclude every thing alien or adventitious. The discussion of the laws of money has engendered so much passion and prejudice as to make it hard to secure a respectful attention, or even a rational attitude of mind towards any statement of monetary doctrine which differs in the minutest particular from that of the hearer. Men who are candid and even liberal in politics and religion become furiously or stupidly fanatical as soon as their views on money are controverted. When Sir Walter Scott made a surly critic say to the author of certain Letters on the Currency, "In your ill-advised tract you have shown yourself as irritable as Balaam and as obstinate as his ass," he evidently intended to characterize the whole race of writers on this theme.

The value of money, like the value of any thing else, is purely a question of demand and supply. The cost of producing money is only important as affecting the supply. Limit the supply,* and it does not matter whether there be any cost of production or not. The advantage of taking that for use as money which has an appreciable, definite, and, as far as may be, constant cost of production, is found in the fact that the

*I have already quoted (par. 120) the remark of Prof. Senior that "any other cause limiting supply is just as efficient a cause of value in an article, as the necessity of labor to its production."

supply of such money will be limited by natural causes, instead of being left to law, convention or accident.

170. What is the Demand for Money?—The demand for money is the occasion for the use of money in effecting exchanges. In other words, it is the amount of money-work to be done.

This is not determined by the gross volume of the wealth of the community, since all that wealth is not to be, in fact, exchanged. For a similar reason, it is not determined by the amount of the annual production of the community.

It is not determined even by the volume of products to be exchanged, inasmuch as some classes of these may require to be exchanged several times, and some but once. Moreover, in spite of the difficulties of barter, many products are, through a fortunate coincidence of wants and of possessions, especially in agricultural communities, exchanged against each other. More important still, the modern organization of commerce, especially through the agency of banks, provides for the creation, and subsequent cancellation, of indebtedness* on account of products given and taken in exchange, to an extent which vastly diminishes the actual use of money in effecting transfers.

171. The Money-Demand a Reality.—Not the less, is the demand for money a reality. Banks and clearing-houses, checks and book credits reduce the occasion for the use of money, but they do not supersede its use altogether, nor are there any signs that they will do so in any future, near or remote. In every community, though in some more than others, goods are offered for money. Men seek money, having in their hands wherewithal to pay for it. Some of them must have money, whatever it cost. With others any appreciable increase in the difficulty of getting money, or any appreciable doubt as to the "goodness" of that which is circulating in the community, does away with the disposition to obtain it, drives them to barter, and thus destroys a portion of the demand for money.

Some part of the exchangers of every community may be

*This function of banks will be spoken of, more at length, under that title in Part VI.

regarded as always on the verge of barter. They could exchange their products for the products of others which they wish to consume, without unreasonable trouble. Others, again, would exchange their products for money in the face of very great difficulties and embarrassments; yet for each of these is a point at which difficulties and embarrassments will give rise to an effort, which will thereafter increase rapidly in force, to resort to barter or to credit, as the means of escaping the use of money. Should the matter proceed far enough, production will even be limited or modified to meet the exigency.

172. Effect of Discredit on the Money-Demand.—Thus, if the money of a country be openly discredited, as in France prior to and during the Hundred Years' War, and, again, during the Revolution; in England, under Henry VIII. and the Protector Somerset; in the United States, during the circulation of the so-called Continental currency; and in Italy, through many dreary periods of her history, men will not only resort increasingly to barter or to credit, but such discredit of the coin or other circulating medium may become a force which will operate powerfully to modify and even to limit production. Men will produce fewer things and those different from what they would have done under conditions more favorable to the division of labor and the consequent exchange of products.

This, however, can never be carried so far as totally to dispense with the use of money. In any society above the barbarous state, something must be used, to some extent, as money, so long as production goes on at all.

We see, thus, that the demand for money has no definite relation to the total wealth, or the annual product of a community, or even to the volume of products to be exchanged. The demand for money varies with the amount of money-work to be done, which, in turn, varies with the industrial organization of communities, with seasons, and with circumstances innumerable. Not the less, however, as we said, is the demand for money a real thing. Goods are offered for money; and, with a given supply, the more goods are so offered, the higher will be the value of money—that is, prices will fall. The fewer goods are offered, the lower will be the value of money—that is, prices will rise.

173. Value and Price.—It will have been noticed that, in the foregoing paragraph, I have used the word price as signifying the money-value of goods. As we stated in a previous chapter, value is the generic term which expresses power-in-exchange. Price is power-in-exchange-for-some-one-article. Where money is used, price commonly expresses power-in exchange-for-money. Where nothing to the contrary is intimated, the price of an article is understood to be the value of that article in terms of money—the amount of money it will command in exchange.

174. What is the Supply of Money?—If such is the demand for money, what is the supply? It is the money-force available to do the money-work required to be done, in the given community, at the given time. The money-force, or the supply of money, is not measured by what is usually called the amount of money, that is, the number of gold dollars or bits of paper used as money, but is composed of two factors—the amount of money and the rapidity of circulation. "The nimble sixpence does the work of the slow shilling." There may be as much money-force in 1000 dollars, each of which passes from hand to hand four times a week, as in 4000 dollars which change owners but once from Monday morning to Saturday night. The rapidity of circulation varies widely among different communities, according to the density of settlement, the prevailing occupations of the people, the facilities for the transportation of freight and passengers. And the rapidity of circulation not only varies according to such general conditions, but it varies from day to day, with the state of trade and the temper of the public mind.

175. The Money Supply a Reality.—But while the money-supply varies thus incessantly, it is none the less a real thing; so real that, at any given time a decrease of the supply of money will enhance its value—that is, will lower prices; and an increase of that supply will reduce its value—that is, will raise prices.

We have spoken of reducing the value of money as equiva-