

11. When people sell grain for money, what is done with the money? Do they eat the money? In selling grain for money, is it the object to get and keep money, or to get money with which to buy something else?

12. If general prices go up, what does that signify in regard to the value of gold or silver?

13. If prices fall, is the general wealth of the country any less? Are there as many articles of value as before prices fell?

## CHAPTER X.

## MONEY.

88. AFTER commodities are produced, and are ready to be exchanged, all means of facilitating the exchange are of great importance. In fact, we exchange goods every day so easily that it never occurs to us to think how it is done, or what wonderful contrivances have been devised for the purpose by mankind through long centuries of experience and usage. Every man who works is actuated by a desire for something, and what he produces gives him the means of getting that which will satisfy his desires. One rich man devotes all his capital and time to employing labor in making thousands of stoves; but stoves cannot in themselves give him food, drink, shelter, or clothing. He cannot eat stoves; but he can exchange his stoves for food, or for any of the great number of things he wants. Yet it would be very troublesome to exchange one commodity directly for another, and therefore men have in the process of time contrived means of overcoming the difficulty. The two great machines discovered for facilitating the exchange of goods are **money** and **credit**. They are **the two tools of exchange** invented only after long trial and experience. At present we shall treat of money only.

89. If there were no money, it would be an extreme inconvenience to be obliged to barter one commodity for another. Anything like the trade and business we see

around us to-day would be impossible without some **common denominator of value**. How can a person know *how many* books or eggs to give for a stove? Money solves this problem at once. We saw in the last chapter that, by finding the relation of the books and the stove to a third commodity, like gold or silver, we can find their relations to one another. On comparing a stove with gold, we find, for example, that it may be exchanged for the quantity of gold in twenty dollars; while a book purchases of gold only that quantity which is in one dollar. Inasmuch as we have agreed to call the quantity of gold for which a commodity may be exchanged its **price**, we get the prices of the two articles. Then we can compare their exchange values by comparing their prices. Thus we find that a stove will exchange for twenty books. So the first function of money we shall call the common denominator of value. Some writers speak of it as a "measure of value"; but it will be better to think of money as a means of **comparing the values of two commodities through a third**, just as we compare two fractions by reducing them both to a common denominator.

90. It must have occurred to us, however, that we cannot compare two things having value (or purchasing power) with a third thing which has no value. Whatever is used to measure the purchasing power (or value) must itself have purchasing power. You could not compare the stove or book with money, unless the money had purchasing power over stoves or books. This third thing, which we use as a **common denominator**, therefore, **must** itself in the nature of things **have value**. It is the same with other measures. Why do we not measure the distance from Boston to New York by saying it is so many *pecks*? Simply because a peck is a unit of capacity, or contents, and *length* is an entirely different thing. We can measure length only with length; we can measure the distance by saying it is so many feet, or yards, or miles,

because a mile is a unit of length. We can no more estimate the value of things in a commodity which has no value, than we can measure length by pecks.

91. We have already found that one duty of money is to serve as a means of comparing value. We shall find that it also does duty as a means of **transferring value**, or as a **medium of exchange**. This use of money is the most familiar to every one. It is difficult to realize how inconvenient it would be to go back to primitive barter, and do without money. Professor Jevons\* says: "Some years since, Mademoiselle Zélie, a singer of the Théâtre Lyrique at Paris, made a professional tour around the world, and gave a concert in the Society Islands. In exchange for an air from *Norma* and a few other songs, she was to receive a third part of the receipts. When counted, her share was found to consist of three pigs, twenty-three turkeys, forty-four chickens, five thousand cocoa-nuts, besides considerable quantities of bananas, lemons, and oranges. At the Halle in Paris, as the prima-donna remarks in her lively letters, printed by M. Wolowski, this amount of live-stock and vegetables might have brought four thousand francs, which would have been good remuneration for five songs. In the Society Islands, however, pieces of money were very scarce; and, as Mademoiselle could not consume any considerable portion of the receipts herself, it became necessary in the mean time to feed the pigs and poultry with the fruit."

The difficulty of barter is that desires do not fit each other; or, if they do, it is a very unusual coincidence. One man having a stove may want a book, eggs, quinine, or twenty things in all, and to make an exchange he must find some one who, while he has a desire for a stove, has all these twenty things to offer. This is very unlikely to occur. Says Mr. Jevons: † "To allow of an act of barter, there must be a double coincidence, which will rarely

\* "Money and Mechanism of Exchange," p. 1. † *Ibid.*, p. 4.

happen. A hunter having returned from a successful chase has plenty of game, and may want arms and ammunition to renew the chase. But those who have arms may happen to be well supplied with game, so that no direct exchange is possible." The same writer tells of the difficulty experienced by Mr. Wallace, the naturalist, in the Malay archipelago. Because "there was no proper currency, he could not procure supplies for dinner without a special bargain and much chaffering upon each occasion. If the vender of fish or other coveted eatables did not meet with the sort of exchange desired, he would pass on, and Mr. Wallace and his party had to go without their dinner."

92. If, now, there were one commodity which every one would be willing to take for his goods—a commodity so familiar to every one for its own value, and for its own power to satisfy a desire, that there would be no hesitation in taking or receiving it—that would obviate all these hindrances arising from barter. It would act like a new and improved tool. Some such commodity has, in fact, been chosen by people in different parts of the world, and always it has been **a commodity which the people of that district value highly**. In Chinese Tartary they use cubes of tea closely pressed together, and the price of a piece of silk is so many cubes of tea in their money. In Abyssinia blocks of rock-salt are used; and in many places furs have served the same purpose. Among our Indians, strings of *wampum* were employed as money. In Europe, long ago, cattle were used as money (and from the word *pecus*, "cattle," came the word *pecunia*, and our word "pecuniary"). Some metal has, however, been found to be more useful for this purpose. We hear that in very poor countries, like Sparta, iron was used; then copper came into common use; but as people grew richer they needed a metal which had greater value, and by common consent they began to adopt silver and gold. These metals had

been wanted and manufactured into ornaments or dishes for their own sake before they were generally used as money. At first, silver, as the cheaper metal, was the one most commonly adopted as money, and it has continued in use as the principal money of commerce even to the present century; but since 1850 gold has become more plentiful, and it has consequently come into more general use.

93. The **reasons why gold and silver serve the purpose of a money best** are very clear. (1) Suppose that, having a pearl, I want to get a basket. Of course, a pearl is worth many baskets. I might say to myself that I can exchange my pearl for something which everybody wants, and then take only a part of that thing and buy my basket; and I might select bread as something which everybody wants. So I get three hundred loaves of bread, and with ten of them buy my basket; but, unless I use the remainder of my bread at once to buy other things with, it will spoil, and I shall lose it all. This leads us to see that the commodity we use as money should be **imperishable**; and this is one reason why gold and silver are chosen. They are very durable. Then (2) the precious metals are **divisible** into any fractions without loss. You can thus exchange a valuable horse for gold, and then with only a small piece of this gold get some less valuable commodity, retaining a large part of the price of the horse. This is why gold is coined into pieces of given weight, each having a different amount. A ten-dollar gold piece can be melted up and made into ten one-dollar pieces without losing its value; or smaller pieces can be united into larger ones. In this way advantage is taken of the divisibility of gold and silver. (3) If bread were used as money, a small value in it would be very bulky. This is not true of the precious metals, and less true of gold than of silver. They are **portable**, and contain a great value in a small bulk. (4) Also, every one has learned what gold and silver look like; they are **cognizable**. People know the difference be-

tween gold and brass; but how many know what platinum looks like, and who could tell it at a glance from another metal. This quality in gold and silver makes them very desirable for money which is passed from hand to hand in ordinary dealings.

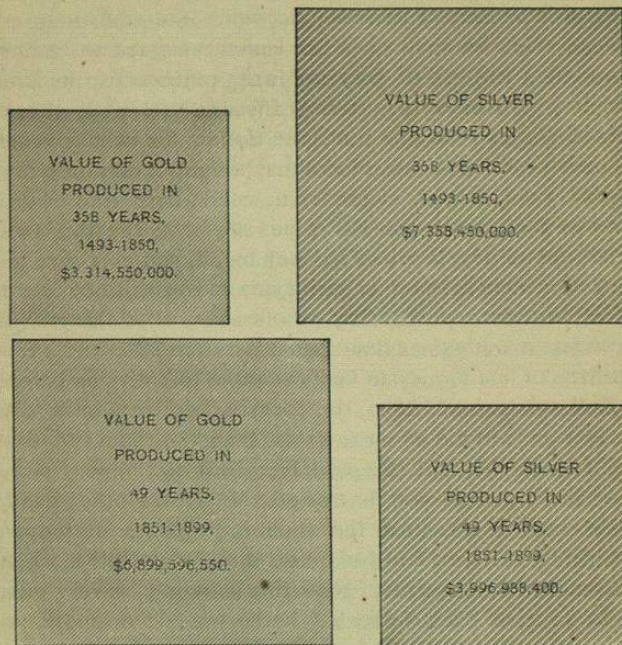
94. After people had adopted the habit of using gold and silver as a medium of exchange, it was a great gain to have some authority so stamp the two metals that every one could know just how much each piece weighed, and how pure the metal was. If some authority, like a government, which could be trusted, had not done this, the seller would be obliged to weigh each piece of gold at every bargain, and test its purity. It would, of course, be intolerable to be obliged thus to test every coin, and therefore the Government establishes a mint, where it changes gold and silver bullion into round pieces, each of which must invariably contain a particular number of grains of gold or silver, and of a specified purity. This is **coining**, and each coin is given a name. At this time the United States calls 23.22 grains Troy of pure gold a **dollar** (and to the pure gold they add alloy to harden the gold, so that the gold and alloy together weigh 25.8 grains). The pure metal plus the alloy makes the "standard" weight. Our gold and silver coins now all contain one tenth alloy. We also coin  $371\frac{1}{4}$  grains of pure silver ( $412\frac{1}{2}$  grains "standard" weight), and call it a dollar. The United States makes no charge (which is called **seigniorage**) for coining gold and silver. It is quite evident from this that the name dollar does not always have the same value, although people often think it does. We get into the habit of using names without thinking what they really mean. The 23.22 grains in a gold dollar may be exchanged sometimes for more, sometimes for less, of other commodities; when it is exchanged for less, its value has fallen relatively to all other commodities, and, even if the name *dollar* remains the same, its value has fallen. One must then offer more

dollars than before for the same commodities. That is, *when money falls in value, prices rise; when money rises in value, prices fall.*

95. To this point have we been brought in explaining, first, the function of money as a *common denominator* (or measure) of value; and, second, that of a *medium of exchange*. Now we shall say a few words in regard to another function, a **means of paying long contracts**, or debts which run over a long term of years. Suppose that I loaned you in 1880 one thousand dollars for twenty years. In that year the thousand dollars bought a certain quantity of corn, wheat, sugar, salt, wood, hats, and shoes. Now in 1900, when you are to pay me back the thousand dollars in money, if prices have changed, you may give me back the same amount of money, but you will not return to me the same purchasing power over other things. If for some reason prices have fallen between 1880 and 1900, it will take less money to buy the same quantity as before of corn, wheat, etc. If so, the thousand dollars you return me in 1900 will be of more value than the thousand dollars I gave you, and it would be unjust to oblige you to give me more than you borrowed. If, on the other hand, prices have risen, then the thousand dollars in money would buy me less than before, so that I should lose while you would be the gainer. Now this is wrong. Every man ought to give back just what he borrowed; no more, no less. A creditor or a debtor is at the mercy of events over which he has no control—such as great changes in the production of gold and silver, or the effect of new inventions. A great change, for example, took place about 1850, when gold was discovered in abundance in California and Australia. How great this has been may be seen in Chart II. The relative amounts of gold and silver produced in two different periods are shown by the relative size of the squares. Thus, in the years since the discovery of America down to 1850, there was less than one half as much

gold as silver produced; but in the forty-nine years after 1850, more than twice as much gold was mined as in

CHART II.—*Relative Production of Gold and Silver before and after 1850.*



the previous three hundred and fifty-eight years.\* This shows what natural changes can take place in the supply

\* The chart is based on the following figures mainly from Dr. Soetbeer:

PERIODS.	Gold.	Per ct.	Silver.	Per ct.
1493-1850.....	\$3,314,553,000	33	\$7,358,450,000	65
1851-1899.....	6,899,596,550	67	3,996,988,400	35
Total.....	\$10,214,149,550		\$11,355,438,400	

of the precious metals, uncontrolled by the laws of any state. Although we have heard a great deal about the vast production of silver in late years, about one and three fourths times as much gold as silver (in value) has been produced in the last fifty years. At other times in the history of the precious metals—once soon after the discovery of America, and again at the end of the eighteenth century—so much more silver than gold was produced that its value was lowered each time. Causes affecting the supply of both gold and silver, therefore, do not always remain the same. Besides these changes, prices may fall owing to improvements in the methods of producing commodities.

96. As we have seen, value is a ratio. The value of money is a relation of money to *all* things which are exchanged for it. A change in any one of the thousands of articles for which money is offered every day modifies the relation between money and other things. Changes in the way of making commodities are constantly going on; so that the amount of every article which is exchangeable for any given quantity of gold is always varying. Hence the value of money (gold or silver) does not remain the same for any length of time; and the **precious metals**, while they are very satisfactory for exchanges which do not take very long to complete, **can not serve as a proper measure of value** during a long term of years. In a garden, well planted with trees, one evergreen was by far the tallest of all; but in a few years there was a great change. Some of the trees had not grown much, while others had shot up marvelously. The former relation of the trees to one another and to the tall evergreen was entirely changed; in fact, several were almost as high as the evergreen. Likewise the relation of commodities to the precious metals is constantly changing, and therefore gold and silver can not serve as a measure of value for long periods. Nor is there another article any better, or even so well, adapted for this purpose.

97. One way suggested to get a standard of payment for long contracts is by a device known as the **multiple standard**. A long contract, like a government or a railway bond, ought not to be settled by paying back the amount of gold or silver borrowed, but by giving the lender a sum which would, at the time of repayment, purchase the amount of commodities for which the money loaned could have been exchanged at the time that it passed from the lender to the borrower. If we should keep a price-list of a large number of articles in common use, and see just how much money it would require to buy a fixed quantity of each of these things, then we could make a unit out of that amount of purchasing power, and give it back (expressed in money), no matter whether it were to take more or less money. This can be better shown by the actual facts, as exhibited by the prices\* of certain necessities of life in New York markets:

ITEMS.	1876.	1880.	1884.
1 bbl. corn-meal.....	\$3 68	\$2 80	\$3 24
2 bbls. flour.....	12 42	11 76	11 18
1,000 bricks.....	7 72	7 78	7 59
500 feet lumber.....	7 65	7 40	8 53
1 ton coal.....	5 53	3 47	4 70
20 lbs. cotton.....	2 58	2 30	2 10
$\frac{1}{2}$ ton hay.....	8 90	7 52	9 16
2 cwt. ice.....	0 34	0 30	0 23
1 cwt. pig-iron.....	1 34	2 06	1 28
2 pair shoes.....	5 60	4 68	4 80
100 lbs. beef.....	9 00	8 80	9 90
100 lbs. pork.....	10 60	6 20	7 90
30 lbs. butter.....	7 20	5 10	5 40
10 doz. eggs.....	2 80	1 60	2 10
10 bushels potatoes.....	6 12	7 50	6 75
40 lbs. rice.....	2 84	2 92	2 40
1 bushel salt.....	0 36	0 30	0 39
100 lbs. sugar.....	10 70	9 00	7 10
1 cord wood.....	2 98	2 98	3 58
20 lbs. wool.....	3 30	3 80	3 00
Total (1 "multiple unit")....	\$111 66	\$98 27	\$101 33

\* Newcomb's "Principles of Political Economy," p. 211.

Now, if a government commission should collect and publish the prices of a large number of commodities in this way, we could know just how much money was necessary to get the same purchasing power at different times. In the table above, in 1876, \$111.66 were required to exchange for the same quantity of goods as could be bought by \$98.27 in 1880. From such a table, if honestly prepared, we could get a **standard for long contracts**. Suppose I had loaned you \$11,166 in 1876, to be repaid in 1880. That bought in 1876 one hundred times as many goods as are included in the table above, or 100 "multiple units." But in 1880, if it is understood that I am to receive back the same amount of purchasing power, or the same value in other commodities, I ought to receive from you only 100 "multiple units" as before. A "multiple unit" in 1880, however, could be bought for \$98.27; therefore, if you give me in money  $100 \times \$98.27$ , or \$9,827, I shall receive all I can justly claim, even if I did give you \$11,166. For \$9,827 of money in 1880 will have the same purchasing power that \$11,166 had in 1876. Neither you nor I had the power to control the change in the purchasing power of money between 1876 and 1880; and so neither of us ought to suffer for it. If you were obliged, as you would be under the present business arrangements, to pay back \$11,166 in 1880, you would be giving me back more purchasing power than you received (or about 113 "multiple units" instead of 100).

98. It must now have distinctly appeared that money is mainly an instrument of exchange, a machine by which goods are transferred in a way to suit the convenience of those among whom the goods are distributed. It has been devised to save us from the great inconveniences of barter. Even when it serves as a common denominator of value, it has no more use than a yardstick. On the other hand, when money is used as a medium of exchange, **an increase in the quantity of money** by which goods are

exchanged does not in any way increase the quantity of the things which are transferred by its means. Money is a means of getting from one commodity to another; just as a railway-car is a means of transportation from one place to another. It is absurd to suppose that an increase of cars would increase the amount of goods carried; and so it is just as absurd to think that an increase of money can increase the things which are exchanged by its instrumentality. Money is like a stairway from one story to another; it is a means to an end, not the end itself. To increase the quantity of money by which goods are exchanged is simply to offer more money than before for the same goods; but he who **sells the goods for more money** (that is, for higher prices) will have to **pay more for the goods he buys**, and he is no better off than when there was less money. If a milkman counts each quart of milk he leaves at the house by one notch cut in a stick, does it increase the number of quarts of milk he gives, if he chooses to cut two notches in the stick for each quart? In that case he merely uses two notches to count where one served before, and that is all. So, if I sell a bushel of wheat for two dollars instead of one, and then give two dollars instead of one for a plowshare, I am no better off than before. Before the increase of money and the rise of prices, I sold the wheat for one dollar, and with the one dollar bought the plowshare. The wheat was equal in value to the plowshare in either case. A man has no more purchasing power when prices are high than when prices are low; when prices are high, he uses more money as "counters," in which are estimated the value of his goods relatively to money, just as when the milkman used two notches instead of one. There are no more goods in existence, and no one is the richer, because prices are high.

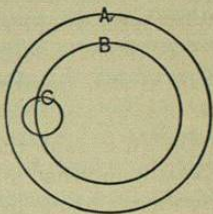
99. Some people say: "Well! a dollar is a dollar, and you cannot make it anything else," implying that what is

named a "dollar" is always equally good because it is so called. This is utterly fallacious. Suppose that we agreed to call 23.22 grains of pure gold a "dollar" (as is the case now). On this supposition a bushel of wheat, for example, may be exchanged for this dollar, or 23.22 grains of gold. But, if the state were to take out twenty per cent of the gold and leave only 18.576 grains in the dollar, would the wheat bear the same relative value to the 18.576 grains that it did to the 23.22 grains? Certainly not. If the "dollar" is lowered in value, it is implied, as we have seen, that the wheat has risen in value. Then, of course, **the dollar has not remained the same**. A dollar is only a name for a given quantity of gold or silver; and, since gold or silver can change in value, certainly the dollar can.

To be sure, a man who had a debt to pay might like to have the dollar lowered; for then his goods would sell for more of the cheapened units, and these cheapened units may be as good as the old ones as a legal payment for his debt. In this way he could relieve himself from paying the full amount of his debt without violating the law. But this is nothing more than to attempt to steal—to cheat the man who loaned him the means, which he made a promise to repay in full. No condemnation can be too severe for this kind of monetary dishonesty. It is bad policy, too, for the next time such a man wishes to borrow, he will not get a loan so easily. Any business-man who fails to meet his engagements will be distrusted by the rest of the business community.

100. Having now discussed the nature and uses of money, it will be easy to distinguish between wealth, capital, and money. Many persons, without thinking, might say that capital was the money a person had, or that his money was his capital or his wealth. These ideas are wholly wrong. We can return to our diagram in section 55. Circle A represents by its area wealth; that part of wealth which is used in the production of other wealth is

capital, and is represented by the area of circle B. Now gold and silver have value, and are included in the wealth of a country, but not all money is used in exchanging goods to be employed for the production of other wealth. If so, then that part of money can not be called capital. It is wealth, but not capital. If the area of circle C represents the amount of money in a country, part of it lies within and part of it without circle B. That is, some money is capital, and some is not. When you take a gold dollar and offer it for a pair of kid gloves, which are purely a luxury, and the use of which does not aid in making anything else, the money is not used as capital. But, if a gold dollar is exchanged for a hammer to be used in building a house, it is capital.



The distinction between money and wealth is thus well explained by Mill: "Money as money satisfies no want; its worth to any one consists in its being a convenient shape in which to receive his incomings of all sorts, which incomings he afterward, at the times which suit him best, converts into the forms in which they can be useful to him. The difference between a country with money and a country altogether without it would be only one of convenience; a saving of time and trouble, like grinding by water instead of by hand, or (to use Adam Smith's illustration) like the benefit derived from roads; and to mistake money for wealth is the same sort of error as to mistake the highway which may be the easiest way of getting to your house or lands for the house and lands themselves."\*

**101. Exercises.**—1. If you want to put a nail through a board, you use a hammer to drive it in. If you have a telescope, and want to exchange it for other things, one of

\* "Principles of Political Economy," vol. i, p. 23.

which is a book, what tool do you use to perform the operation? Could you do it very easily without some tool of exchange?

2. By the use of money how could you determine how much more valuable the telescope was than the book? What term would you apply to this use of money?

3. If gold were to become as cheap as copper, would it be as well fitted for money as now? Why not use pebbles for money?

4. It is said that money is a labor-saving machine. Explain in what manner money saves labor. (Consider the waste of time in barter.)

5. If there were no money, how would a man who made only rivets for pen-knives get along?

6. If two things have the same price, do they have the same value? What is the difference between price and value?

7. Would you take a French as readily as an American coin? Should you know how much gold was in the French coin, or how many dollars it was equal to? Is it of any advantage to have our own coins?

8. If money falls in value, what effect is produced on prices?

9. Why is it unjust to agree to pay a debt in money which does not fall due for very many years? If the same amount of money that was borrowed is paid back, is not that just?

10. Does changing bullion into coin increase the wealth of the country? Was the bullion wealth before it was made into round disks, called coin? Is the wealth greater because there is more coined money in use?

11. When have there been great changes in the supply of gold or silver?

12. If in 1870 I agreed to pay \$1,000 in 1880 for money I borrowed, and if the "multiple unit" in 1870 could be bought for \$125, how many "units" should I



pay back in 1880? If in 1880 the unit could be bought for \$110, how much money ought I in justice to return?

13. If payment of debts were excluded from consideration, would it make a difference whether we had more or less money in our country? Would the higher or lower prices, if general, make a difference to any one but debtors and creditors? If the multiple standard were in use, need we care much about the quantity of money?

14. Is a carriage capital? Is the money paid to a policeman by the city capital? Consider whether the policeman is a productive laborer (see section 53). Is the money paid to a molder in a foundry capital? Why?

15. Name some article which is wealth, but not capital. Mention some use of money when it is not capital.

## CHAPTER XI.

### HOME AND FOREIGN TRADE.

102. To any one looking over a great city during working hours, the confusion of noises and movement of people indicate a variety of occupations which, regarded as a whole, seem like an incoherent jumble, without method or purpose. Chimneys are smoking, machinery is rattling, wagons going in opposite directions are crowding the streets, and people swarm the footways. The complexity of business affairs seems hopelessly intricate, and we might possibly think that what we see is merely the result of chance. Every person is expected to choose an occupation, and in one way or another take some part in this bustle of work or production. In short, all this marvelous world of **trade exists to satisfy human wants**. It is the result of efforts to get those things which satisfy our desires. And it is this seemingly complex organization of the business world which we are now to study. It is complex, because man has summoned to aid him in this struggle for wealth all the resources of invention, all the accumulated skill of centuries, and all the results of civilization. This is also the reason why it is of such great interest. Ships, railways, warehouses, carts, express-wagons, stores, and their thousands and millions of laborers are doing the work of exchanging goods. It is not sufficient simply to produce in Vermont what a man wants in Texas. That must be carried to him and something