

CHAPTER II — METALLIC MONEY

I. HISTORY OF MONEY

It is not in virtue of any express agreement or social contract that certain objects have become *mediums of exchange*, but in consequence of certain advantages which forced them upon men's choice and marked them out for the performance of this high function.

The difficulties of barter (see above, p. 188) obliged men to choose an intermediate commodity to play a part in every act of exchange. They naturally chose the one that was most familiar to them and most commonly used — first of all the wild produce of nature, and later on articles which they had made. The cowrie shells of the coast tribes of Africa, and the cocoanuts and coloured feathers of the South Sea Islands, must have preceded, ethnographically if not chronologically, the arrow-heads of cut flint that are already industrial products.

In patriarchal societies this intermediate commodity was naturally their one and only form of wealth — cattle, whether buffalo, ox, or sheep, — and most Indo-European languages, even the Basque, have left us the memory of this primitive kind of money in the name they give to it.¹ The same fact is recalled by the figure stamped on some ancient coins, such as the bull's head at Athens.

Many other commodities, in different circumstances and in different lands, have played the part of this intermediate commodity — rice in Japan, bricks of tea in Central Asia, furs or blankets in the Hudson Bay Territory, calico or bars of salt in Central Africa. But among them all there is one class of objects that attracted man's attention very early and quickly superseded everything else in all societies that were in any way civilized. These were the precious metals: gold, silver, and copper.

Owing to their chemical properties that make them comparatively incapable of change, these are the only metals that are found in nature in a pure state — gold more so than silver, and silver more than copper. Consequently they were known and used by man before his metallurgical knowledge enabled him to know and use

¹ The chief example is the Latin word *pecunia*, which originally meant a herd of cattle. In Homer all values are reckoned in oxen — the value of the armour of Diomedes and Glaucus, for instance. Hence arose the Greek phrase, "to put an ox on his tongue," meaning to bribe someone to keep silence.

other metals, such as iron. It is remarkable that the ancient legend of four ages — of gold, of silver, of copper, and of iron — arranges these four metals in the precise order in which they became known to man.¹ Their physical properties also — lustre, colour, and malleability — helped to make them much sought after in early times, both for ornament and for industrial purposes, and would be sufficient justification for the important part they have played in all ages and among all races.

These natural properties produce certain economic consequences of the highest importance, which give to the precious metals a very marked superiority over all other commodities. They are as follows:

(1) *Ease of transport.* — No other object is so valuable in proportion to its weight. The weight that a man can carry on his back is about 65 pounds. Now 65 pounds of coal would be worth about 9d.; the same weight of wheat, about 6s.; of wool, 25s. to 30s.; of copper, £2 to £4; of ivory, £30; of raw silk, £60; of silver (at par), £120; and of fine gold, £4,000 (at pre-war prices).

This characteristic is of enormous importance — much more so than would appear at first sight, for this reason. It is plain that if we could do away with the difficulty of transport for any commodity; if we could endow it with the capacity of being everywhere at once; if the whole world could be made into a single market for it; then the result would be that its value would be exactly the same everywhere. Suppose that such a commodity cost less in one country than in another. People would immediately come and transfer it from the first country to the second; and as transport, on our hypothesis, would present no difficulties and cost nothing, the slightest difference in value would suffice to make the operation profitable. Equilibrium, once destroyed, would therefore be instantly restored, just as the level of a liquid is instantly restored if its molecules are perfectly fluid.

Now as the precious metals are of all commodities, except precious stones, those which have the greatest value in the smallest volume, they are also the commodities whose transport is easiest and whose value will therefore most quickly recover its normal level. For 1% of its value, freight and insurance included, a cargo of gold or silver can be transported from one end of the world to the other, whereas the same weight of wheat or coal would cost 20%, 30%, or perhaps 100% of its value, according to the distance. Gold

¹ Gold, in fact, generally appears in nature in a pure state, while silver is always found in combination, as an ore. That is why, in Homer, silver and copper are more valuable, because more scarce, than gold.

rushes with the speed of the wind to the markets where its value is greatest.

It might seem to follow from this that the value of the precious metals ought to be the same, within 1% at any rate, all over the world. This, however, would be an exaggeration. On the contrary, their value is certainly not the same everywhere, and it is naturally lowest in places where they are produced. This explains the incredibly high prices reported so often from mining districts where gold issues from the earth like a spring — Australia half a century ago, and the Transvaal and the Klondyke more recently. None the less, the value of these metals may be considered as fulfilling quite satisfactorily the first requirement of a good measure of value — invariability from place to place.

(2) *Unlimited durability.* — In virtue of chemical properties that make them proof against almost any combination with air, water, or any other substance, gold and silver may be preserved without alteration. There is no other kind of wealth of which this can be said: animal and vegetable products decay, and even some metals, like iron, oxidize and crumble into dust.

This characteristic is almost as important as the first. It has the same effect in regard to *time* as the other has in regard to *place* — that is to say, invariability of value, at least relatively, from one period of time to another. Because of their durability, in virtue of which the same particles of metal may be coined and re coined for century after century, the precious metals are accumulated little by little into a mass of imposing size — something like four thousand million pounds-worth to-day, of which more than half is held by the United States, France, Russia, Germany, and England. Into this mass the supply produced every year is poured, as into a reservoir that is always growing larger, so that occasional variations tend to make less and less difference. In a rapid torrent the smallest increases in volume make enormous changes in the general level, but the greatest increases in the volume of the Rhône only raise the level of Lake Geneva a very few inches. Similarly the river of gold that pours into the world's treasury, whatever increases take place in its volume, can only raise its level very slowly. Thus, although the increase in the production of gold has been enormous in the last five and twenty years — the annual production having risen from £20,000,000 to more than £80,000,000, — yet this production represents only a small fraction of the existing stock of the two metals. Moreover, the whole of this annual supply of gold does not go to swell the stock of money — very far from it: a large part, between

a third and a half, is diverted to industrial uses and to be hoarded in Eastern lands, so that the annual increase in the stock of money is scarcely £60,000,000, which represents a rate of increase of less than 3% on the total of at least 2,400 millions (counting gold alone).

How different is the case with wheat, for example. It does not last, but is consumed the first time it is used. When each new harvest comes along, the granaries are almost empty. If the wheat crop one year were doubled throughout the world, the total stock would be doubled likewise, and the fall in price would be terrible.

At the same time, variations in the output of the precious metals do, in the long run, become perceptible, for even at the small rate of increase of 3% the total stock would be doubled in thirty years. So although the value of these metals offers a sufficient guarantee of stability when only short periods of time are taken into account, it is far from doing so to the same extent when we consider longer periods. Hence arise certain serious disadvantages to which we shall have to return later.

(3) *Identity of quality.* — As the precious metals are what chemists call elements, they are always identical with themselves. An experienced merchant can distinguish Odessa wheat from California wheat, or a tuft of wool from an Australian sheep from one grown on the back of a Spanish merino; but the cleverest goldsmith, or the chemist equipped with the most powerful reagents, can find no difference between Australian gold and gold from the Ural Mountains. There is no need of "samples" here.

(4) *Difficulty of counterfeiting.* — The precious metals can be recognized at once by the eye, the ear, and the touch, owing to their distinctive colour, metallic ring, and weight. They are thus easily distinguished from all other substances, and even from other metals.¹

(5) *Perfect divisibility.* — This must be understood not only in the mechanical sense — gold and silver being, in fact, extraordinarily ductile and malleable — but also in the economic sense. Divide an ingot into a hundred pieces, and you make no change whatever in its value. The value of each piece is exactly proportional to its weight, and the value of all the pieces together is exactly equal to that of the original ingot.²

¹ Nickel coins may be taken for silver ones from their appearance, but the difference is clearly apparent to the sense of touch.

² Precious stones are superior to the precious metals in the first of these five properties — great value in small bulk, — but in all other respects they compare very unfavourably with them. They are very variable in quality, they are capable of being successfully counterfeited, and, above all, they cannot be divided without losing practically the whole of their value.

It is one thing to use the precious metals as an instrument of exchange, and another thing to use them as money, in the strict sense of the term. Progress from the one to the other is marked by three distinct stages.

(1) The precious metals were first used in the form of crude ingots. In every exchange transaction, therefore, these ingots had to be first *weighed* and then *assayed*. The legal forms of ancient Roman law, such as *mancipatio* and its accompanying *libripens*, retained the symbolism of the time when the instrument of exchange — silver or bronze — was weighed. And in China, where coined money was not employed, the merchants could have been seen, until recently, carrying their scales and touchstone at their girdle.

(2) When men grew tired of having to carry out this double process every time they made an exchange, it occurred to them to use shaped ingots, whose weight and fineness were determined beforehand and certified, if necessary, by some official seal or stamp. The lawgiver who first conceived this ingenious plan may claim the glory of having really invented money. For thereafter the ingots were no longer *weighed* but *counted*, and that is the characteristic of money. It seems likely that it was a king of Lydia, a successor of Gyges, who coined the first money, about 700 to 650 B.C. Specimens of his coins may still be seen in the British Museum. They are made neither of gold nor of silver, but of an alloy of these two metals which the Greeks called "electron," and instead of being round they are egg-shaped or bean-shaped, and bear no marks except a few strokes and three indentations. In China also, until quite recently, the ingots often bore the mark of certain business houses, intended to certify their weight and fineness.

(3) One step yet remained to be taken. Not only was the shape of the cubical or irregular ingot somewhat inconvenient, but also, in spite of the stamp, nothing was easier than to "clip" it without detection. It was still necessary to weigh it, therefore, to make sure that it was intact. To remedy these practical drawbacks men were led to adopt the form of coined money that is familiar now to all civilized peoples — little discs covered on both sides and on the edge with raised impressions, so that no one can file them or tamper with them without leaving visible traces on the design.

Thus was reached the typical coin or piece of money in the proper sense of the word, and for hundreds of years it has not been appreciably modified. We can adopt for it the definition given by Jevons "*Coins are ingots of which the weight and fineness are guaranteed by*

the government, and certified by the integrity of designs impressed on the surfaces of the metal."

This is certainly one of the inventions that stand in the front rank in the history of civilization — not in the same rank as the invention of the alphabet, but not far behind it. Imagine what would be the state of commerce and industry — not to mention economic science — if there were no means of measuring value! We should live like savages under a system of barter. Before accepting an order, every manufacturer and every exporter has to calculate his cost price and his selling price, and a farthing more or a farthing less per unit of product may make all the difference for him between fortune and ruin.

Nor is it only a question of profit: it is also a question of justice. It is not for nothing that the allegorical figure of Justice always carries a pair of scales. The exploitation of which the negroes of Africa are victims when they sell their rubber or their ground-nuts, is very largely due to the absence of money, which conceals it. It is a fact well known to colonials that as soon as money begins to be employed in sales, the condition of the natives is very much improved.

II. FUNCTIONS OF MONEY

We have just said that money as a measure of value is one of the finest instruments of civilization. But what about money as a form of wealth? Does it merit a place apart, an exceptional position, among all the kinds of wealth? — That is another question.

The answer given by common opinion is quite definite. In every age and in every place, except among savages, money has occupied an exceptional place in the thoughts and desires of men.

It would be interesting to trace through history the various manifestations of this idea that confounds gold with wealth. We find it in the attempts of the alchemists of the Middle Ages to change other metals into gold and thus to discover what they called the philosopher's stone, thinking far more of an economic revolution than of a chemical discovery. We find it again in the enthusiasm that was aroused in the Old World by the arrival of the first galleons from America, and that led men to imagine that in that Eldorado was to be found the end of all their misery. We find it in the complicated "systems" attempted by all governments during the sixteenth and seventeenth centuries, to attract specie into countries that possessed none, and to prevent its export from those that had

it. And even to-day we see the same notion at work in the anxiety with which statesmen and financiers watch the import and export of specie which is caused by variations in the export and import of merchandise. The celebrated financier, John Law, declared even at the beginning of the eighteenth century that an increase in the amount of coin added to the value of a country.

But if we ask the economists if money is an exceptional kind of wealth, the answer will be very different. We may even say that it was by protesting against the popular idea — which the economists regarded as a prejudice — that political economy first revealed its existence. The science had scarcely been born, and was still in its infancy, when it affirmed through the lips of Boisguillebert (1697) that “it is very certain that money is not a good in itself, and that its quantity has nothing to do with the opulence of a country.” Since then, every economist has treated money with utter disdain, declaring it to be merely a commodity like any other commodity, and even very inferior to others, as being itself incapable of directly satisfying any want or procuring us any enjoyment. Consequently, they say, it is *the only commodity of which it can be said that its abundance or scarcity is a matter of complete indifference*. If there are few coins in a country, each of them will have a greater purchasing power: if there are many, the purchasing power of each will be smaller; so what difference does it make?

These two opinions, however contradictory in appearance, are very easily reconciled. The public is right from the *individual* point of view — the only one in which it is interested. The economists are right if we ignore individuals, for the utility of money is not the same for society as it is for them.

For individuals, money has not one but three distinct utilities:

(1) It is *the only direct instrument of acquisition*. Every piece of money must be regarded as an order drawn on the total stock of existing wealth, and giving the bearer the right to claim a part of this wealth up to the value indicated on the coin.¹

Money may take the place of every other kind of wealth because

¹ Coins are orders that are superior to other credit instruments because they carry their own guarantee with them: their value is assured, in part at least, by the value of the metal they contain. “If you know how to read, with the eyes of the mind, the inscription which a coin bears, you will clearly distinguish the words: ‘Give to the bearer a service equivalent to that which he has given to society, a value that is disclosed, proved, and measured by the value that I myself contain.’” (Bastiat, *Mauduit argent.*) At the same time we must make some demur to the optimistic assumption that every piece of money really represents a *service rendered*.

its possession is enough to procure for us anything that we want. It is like Aladdin's lamp: the genii are enlisted in its service.

It is clearly our individual interest to have as many of these "orders" as possible, and the more we have the richer we are. Of course we know well that, in themselves, they can neither satisfy hunger nor quench thirst. Men have never been stupid enough to imagine that, and, long before it was pointed out by economists, ancient legend had taught the same truth with its picture of King Midas dying of hunger in the midst of the food that his avarice had turned into gold. But, none the less, we all regard these orders as infinitely more convenient than any other form of wealth, and we are perfectly right in doing so.

In fact, given the present organization of society, we know that anyone who desires to obtain an object that he has not actually produced (which is the case with the vast majority of us), can get it only by means of a double process, which consists in, *first*, exchanging the produce of his labour, or his labour itself, for money, and *secondly*, exchanging this money for the object he wishes to acquire. These two operations are called, respectively, *selling* and *buying*.

Now the second of these operations, buying or purchase, is very simple: with money it is always easy to procure what one wants. But the other operation, that of selling, is much more difficult: it is not always easy to procure money with just any object, even one of great value. So the owner of money is much more favourably situated than the owner of goods, for, to satisfy his wants, he has only one very easy step to take, whereas the man who owns goods has to take two steps, one of which is often a very difficult one. It has been well said that a particular commodity answers only to a *special and definite want*, while money meets *any want whatever*, at our own choice. The owner of even a very useful commodity may not know what to do with it. But the owner of money is never at a loss: he can always find someone to accept it, and if by any chance he cannot use it at once, he can always keep it till a more favourable opportunity appears, which is not always possible with other kinds of wealth.

(2) Money has another very important quality, besides that of being the only direct instrument of acquisition. It is *the only instrument for the discharge of debts*. No other kind of wealth enjoys this privilege, for law, as well as custom, recognizes no other method of payment than that of money. Everyone in the commercial or industrial world is always a debtor for larger or smaller amounts, and it would be no use for the merchant or manufacturer to possess

a stock of goods even exceeding the amount of his debts, if he has no money. (It has happened more than once in cases of bankruptcy that the assets were greater than the liabilities, when everything was included.) If he cannot meet his liabilities at the appointed date with that special form of wealth which consists in coined money, he is made bankrupt. Is it surprising, therefore, that men should attach so much importance to a commodity on the possession of which their credit and their honour may at any moment depend?

Money, then, is an instrument of freedom. And besides freeing men from the bondage of debt, we may use the word "freedom" in the wider sense, and say that it frees them also from the original debt that all the sons of Adam seemed to have contracted — the obligation to work.

(3) Money has yet a third part to play — that of *storing and preserving value* until the time when it is needed. This is the part it plays whenever it is hoarded. It is true that what determines this use of money is not so much its character as coin, as the fact that it is a precious metal. In former times it was not only money that was hoarded, but gold and silver vessels and ornaments, and even precious stones as well. But it is more convenient to hoard coins than plate or jewels.

Every individual, therefore, has good grounds for thinking himself more or less rich according to the amount of money he possesses. But if, instead of considering the position of an individual, we look at the mass of individuals that make up society, we get a different point of view. Here it is that the economists' thesis — that the amount of money is a matter of indifference — is verified. It matters little to me, indeed, if the quantity of money in my possession is multiplied by ten, *if it is just the same for everyone else*. In such an event I shall be no wealthier, because wealth is purely relative, and I shall not be able to procure any greater amount of satisfaction than before, since the total amount of wealth on which these "orders" are drawn has not increased. Henceforth each "order" will give me a claim to a share only one-tenth as great as before; each piece of money will have only a tenth of its former purchasing power; or, in other words, all prices will be ten times as high, — and my position will be unchanged.

But let us go a step further and look at countries *in their relations with each other*. Then it will appear that countries, like individuals, have an interest in being well provided with money. If the quantity of money in this country were to be multiplied by ten, this would make no change in the position of Englishmen in relation to

each other, supposing that the increase is the same for them all. But it would make a great difference to this country in relation to other countries, and economists have sometimes been wrong in seeming to deny so obvious a fact, in their fight against the mercantile system. It is true enough that money would depreciate here, owing to its very abundance; but it would keep intact its purchasing power in foreign markets. We should employ it in the purchase of foreign goods, and so it might procure for us an increase of satisfaction proportional to the increase in its amount.

The thesis of the economists that the abundance or scarcity of money is a matter of indifference only becomes absolutely true, therefore, when we consider neither individuals nor even countries, but *the whole human race*. Then, indeed, coined gold and silver has no other utility than as an instrument of measurement. A sufficient quantity is required for the needs of exchange, and neither more nor less than that. As these needs go on increasing progressively, it is as well that the quantity of money should increase correspondingly, and it is even desirable, as we shall see in the next section, that it should increase rather faster than the needs. But it is certain that the discovery of gold mines a hundred times richer than those now existing would not benefit man at all. Such an event would even be disagreeable rather than otherwise, for gold would then be worth no more than copper; so we should have to load our pockets with as cumbrous a kind of money as that which Lycurgus sought to force upon the Spartans.

III. VARIATIONS IN THE PRODUCTION OF GOLD AND SILVER AND THEIR EFFECTS

Gold seems to have been abundant in ancient times, at least relatively to economic needs, which were limited, and relatively also to silver. In Greece the relative values of the two metals were approximately 1 to 10; under the Roman Empire the value of silver and prices do not seem to have been very different from what they are to-day.

But after the invasions of the Teutonic barbarians the accumulated treasures disappeared, and gold and silver became very scarce. Their scarcity, and consequently their value, seems to have reached its highest point in the time of Charlemagne, which means that prices were then at their lowest. A shilling at that time was equivalent to a modern (pre-war) pound.

The production of the precious metals increased enormously as

a result of the discovery of America. There was a veritable flood of specie, and prices rose fivefold in the course of the sixteenth century.

Then production slackened again when the stocks accumulated by the natives were exhausted, and it was necessary to exploit the mines. In the course of the three following centuries the average annual output did not exceed £1,200,000. It increased after the beginning of the nineteenth century, but it was not until after 1850, when the Californian and Australian goldfields were discovered, that the average production exceeded £24,000,000. Then it slackened again with the exhaustion of these mines, but took an unprecedented flight in the last years of the century owing to the exploitation of the mines of the Transvaal and the Klondyke. In 1912 the production of gold alone amounted to nearly a hundred million pounds. Since the war it has again slackened, and in 1919 it fell to about £76,000,000.

The production of silver has fluctuated in very much the same way, though the variations have not been parallel. And if we draw a diagram to show the production of these two metals and the movement of prices for the last thousand years, we shall notice that the movements of the two curves more or less correspond, which seems an indisputable proof of the quantity theory (see above, p. 196).

Will it be the same in the future? It is to be expected that it will. Gold and silver are not so scarce as it is thought: they exist everywhere—in minute quantities, to be sure, but improvements in metallurgy are continually lowering the point below which the extraction of the metal from the ore ceases to be remunerative. It is probable, therefore, that the metals will become increasingly plentiful, and increasingly less valuable in consequence. We should be justified in concluding, then, that in so far as gold and silver remain the monetary standards, the rise in prices will be continuous and unlimited.

But at this very moment we are in the presence of a monetary revolution which is removing gold from circulation and replacing it by bank-notes. During the war, the substitution of paper for metallic money was complete, the gold remaining buried in the vaults of the great banks or being exported in small quantities for making payments abroad, and that not only in belligerent countries but even in neutral ones as well.

The use of gold being thus more and more restricted through the competition of paper money, the paradoxical result followed that while the prices of everything, and notably of all other metals,

increased threefold or even fivefold, *the value of gold diminished*. How can we tell, it will be asked, whether gold has changed its value, since there is only itself by which to measure it? We can tell by comparing its value with that of other commodities, or with that of silver. Or we can say, if this makes it any clearer, that the price of an ingot of gold expressed in bank-notes has risen much less than the price of coal, wheat, iron, or anything else. And the price of an ounce of gold expressed in ounces of silver, which had risen as high as 30, fell again nearly to the par price, 15.¹

It is precisely this fall in the value of gold that has been one of the main causes of the diminution in its output that we noticed just above.

This does not mean, however, that gold will not continue to play an important monetary part and even increase its importance, for by ceasing to be a national form of money it will become an international one. If it is no longer employed in payments between individuals it will be used for payments between nations.

Will this substitution of paper for metallic money result in an acceleration of the secular depreciation of money and the rise of prices that we have just mentioned? To judge from existing facts, which show us a greater rise in prices in five years than took place before in five centuries, the answer must be in the affirmative. But perhaps this reply would be too hasty, for it would be easier, at least for a prudent government, to stabilize prices with paper money whose issue is regulated at will, than with money whose production depends on the chance discovery of mines. In other words, artificial money lends itself better to regulation than natural money (see below, Chapter IV).

The depreciation of the monetary standard is a phenomenon of considerable social importance, and one whose effects must be regarded, on the whole, as beneficial. To begin with, its ordinary result is a rise in prices. Now a rise in prices is a useful stimulus to production; it keeps the spirit of enterprise on the alert; it encourages a rise of wages; it acts as a tonic; it is a symptom of sound economic health. It is true that if these fortunate effects are intelligible enough when the rise in prices is due to an increase in commercial activity and in demand, it ought not to be the same when it bears no relation to the movement of business and is simply

¹ In France the price of a kilogramme of gold rose to 10,000 or 11,000 francs, while its normal pre-war value was 3,100 francs; so its price was trebled. But the price of other commodities rose much higher than this, for the index number rose to over 400, which means a fourfold increase (see above, p. 61).

caused, as in the case we are considering, by the depreciation of money. But this does not matter: appearance has here the virtues of reality.

Such has been the case in Europe since the war. We have lamented the dearness of everything, but the high prices have acted as a stimulus befitting a time when a mighty effort is required from every country to set industry on its feet again. This became plain as soon as the fall began, at the end of 1920, for it acted like a shower of cold water.

Moreover, a fall in the value of money is favourable to debtors, since they can discharge their liabilities by paying a smaller value than they received. To repeat a famous phrase that was applied to the discovery of the mines of the New World, depreciation means a new way to pay old debts. It acts like a fall in the rate of interest, or, still more, like an automatic redemption of capital.¹

It is true that depreciation is just as prejudicial to the interests of the consumer and the creditor as it is favourable to those of the producer and the debtor. But the injury it does them is itself a benefit. As far as the consumer is concerned, he can make up for the increase in his expenses by the increased value of his produce if he is an independent producer, or by his rise in wages if he is a wage-earner. If he consumes without producing anything, so much the worse for him: he is justly punished by the rise in prices. As for the creditor, if he has given credit for short periods, as is customary in commerce, then the depreciation of money does not sensibly affect him. If his credit is for a long period or perpetual, if it is based on investments in government securities, landed property, railway bonds or municipal loans, etc., then he simply belongs to the class of unproductive consumers, and it is good for him to be reminded by the continual reduction in his income that he is playing the part of a parasite and that, if he wants to keep his social position or to hand it on to his children, he will do well to play a more active part, or at least to teach his children to do so. A great French

¹ The position of countries that borrowed hundreds of millions during the war is, from this point of view, singularly disquieting. If the depreciation of money continues and increases, it will trouble them as governments, but as debtors they will be bound to rejoice, since their load of debt will be lightened accordingly. If the currency fell to a tenth of its former value, then the interest on the various public debts would represent only one-tenth of its nominal amount. If, on the other hand, as we hope and try to accomplish, the value of the paper note gets back to par, then the State, which borrowed in depreciated money, will have to pay back twice or three times what it received, which will be an overwhelming burden. This is a contingency that is never mentioned!

financier, Lafitte, who was certainly no socialist, said long ago, speaking of the man of independent means: "He must either work or reduce his wants. The capitalist's part is that of an idler: his task should be to economize, and it is none too heavy a one."

Moreover, these *rentiers* have the less reason for complaint because, if they are sensible, they have plenty of means of avoiding this penalty and counteracting the effects of the fall in the value of money. They can do this either by purchasing securities *below par* — below the price at which the debtor has promised to redeem them — and thus profiting by their increase in value; or else by investing part of their fortune in the *shares* of industrial companies, whose price rises with the rise in the price of the produce, unlike bonds and other securities.

Those who suffer most from the continued depreciation of money are corporations, such as charitable foundations, scientific societies, public institutions, social organizations, etc., which cannot produce anything, since they are not profit-making bodies, and cannot often invest their funds in anything but government securities, so that their income gradually melts away. Yet even for them it is not altogether bad that they should have to renew their life by fresh acts of generosity instead of depending always on the charity of the dead.

IV. CONDITIONS THAT GOOD MONEY MUST FULFIL

All legal money should have a metallic value strictly equal to its nominal value. This is the ruling principle in this matter.¹

Money, as we know, has three functions: it is an instrument of acquisition or purchase, an instrument for the payment of debts, and a means of hoarding wealth. All three functions spring from custom, but they ought to receive the sanction of law. In fact, only the law can compel a creditor or a seller to receive a particular kind of money by way of payment. This is the privilege that makes money what is called *legal tender*. Nor is there any security in saving except in so far as the money that is stored away retains this privilege. But the privilege assumes the fulfilment of the condition indicated above. Here, let us say, is a sovereign. By stamping on this coin the device that represents a pound, the Government

¹ The expositions here and in the next chapter on Monetary Systems have lost much of their interest owing to the disappearance of metallic money from circulation, but they are of great theoretical importance none the less. Besides, this disappearance may be only temporary.

intends to certify that it is really worth a pound, and that everyone can accept it with perfect confidence. If the coin does not possess the value attributed to it, the Government is guilty of actual fraud. During many centuries, unfortunately, rulers have shown few scruples in this respect; but to-day it is a matter of dignity and good faith in which a government would scarcely dare to be found at fault.

Every piece of money, therefore, must be regarded from two points of view: *as a coin, it has a fixed value, which is marked upon its face; as an ingot, its value is identical with the market price of the metal it contains* — for there are markets and price quotations for gold and silver, as well as for wheat and cotton.

Whenever these two values coincide — whenever, for instance, the little lump of metal weighing 123.27447 grains, 11/12 fine, which constitutes a sovereign, has a market value of £1 (corresponding to a price of £3, 17s. 10½d. per ounce¹) — we say that the money is good, or, in technical language, that it is *standard* money. It remains to enquire how this perfect coincidence is established and maintained.

First case. — If the value of the ingot exceeds the value of the coin — if, for instance, a coin that is legally worth a sovereign contains a guinea's-worth of gold, — then the money is said to be *heavy* or over weight. This is a good fault, but it is a fault all the same; and, as we shall see presently, it may prove a serious inconvenience. At the same time there is no need for great anxiety about this contingency, for the following reasons: first, because governments are rarely likely to coin heavy money; if they do so it can only be through ignorance, for it obviously involves them in loss; to make sovereigns each containing a guinea's-worth of gold would be as ruinous a business as for a manufacturer to make rails at £5 a ton with steel that is worth 5 guineas; — and, secondly, because even if the coin were over weight, owing to certain circumstances to be dealt with later, such as a rise in the price of gold after it had been coined, it could not long remain so. In fact, as soon as people knew that the gold in a sovereign was worth a guinea, everyone would rush to realize this profit by treating the money as merchandise — selling it by weight, and continuing this process until the coins had completely disappeared. We shall see later that in bimetallic monetary systems this situation occurs fairly often.

Second case. — If the value of the ingot is lower than that of the coin — if, for instance, a coin that is legally worth a sovereign con-

¹ This refers to an ounce of gold 1½ fine, *i.e.*, eleven parts gold to one part copper; the price of *pure* gold is of course proportionally higher.

tains only nineteen shillingworth of gold, — then the money is said to be *light*. This contingency is much more to be feared than the other, because, unlike the opposite case, it is one that naturally offers a temptation to governments. To coin sovereigns with gold that is only worth nineteen shillings is an alluring proposition for an impecunious and not too scrupulous government, and many of them have, as a matter of fact, succumbed to the temptation: in England the proceedings in this respect of Henry VIII and Edward VI's Council of Regency are sufficiently notorious. Perhaps it will be asked, What harm is there in it? The harm lies in this: that the country will gradually be flooded with debased and false coin; and once such money has got into circulation it never gets removed by natural forces as over-weight money does. On the contrary it remains in circulation, and, as we shall see when we come to *Gresham's Law*, it is one of the hardest of tasks to get rid of it.

To maintain the identity of metallic value and nominal or face value, it is the rule in every good monetary system — and this is a principle of vital importance — to allow anyone who wishes to turn metal into money the right of doing so¹ (not, of course, on his own account, but at the Mint). This is what is called the system of *free coinage*. As long as coinage is free, the equivalence of metallic value and face value is assured, for if the face value of a coin chanced to exceed the metallic value, everyone would hasten to reap the profit that would result from the manufacture of coins. Everyone would buy gold and take it to the Mint to be made into money, until equality of value was again established by the scarcity of uncoined gold and the abundance of coined gold.

It should be possible for good money to be melted down without any loss of value. That is why our picturesque phrase says that good money will stand the "ordeal by fire" — a relic of medieval days, when the justice of a claim was settled by this method. Here we may apply the economic axiom that whenever two objects can be transformed into each other at will they must necessarily be of equal value.

In all countries, however, there are certain kinds of coin which do not fulfil the requirement just described — that is to say, their intrinsic or metallic value is less than their legal or face value. These coins are known as *token money*. They are generally coins of small value, made of copper or silver; they are not used for large payments but only for what is called *small change*. In these circum-

¹ [In actual practice, though this right exists in England, it is never exercised except by the Bank of England, through which passes all the gold that reaches the Mint.]

stances the legislator can, without inconvenience, relax the rigour of monetary principles. But, by abandoning the principle of identity of value, he has also to sacrifice the qualities of good or standard money. That is to say: (1) *he must refuse to make token money legal tender* — no one must be compelled to receive it in payment;¹ and (2) *he must suspend the right of free coinage in the case of token money*, as otherwise everyone would get silver or copper converted into coin, so as to gain the difference between its metallic value and its legal value. The government reserves to itself the right of issuing such quantities of token money as it thinks necessary.²

V. GRESHAM'S LAW

Wherever two kinds of money are in circulation together, the bad money always drives out the good.

This formula expresses one of the most celebrated laws in political economy, bearing the name of the great Elizabethan merchant who is said to have discovered it three centuries ago. But long before Gresham's time, Aristophanes had noted the curious fact that men prefer bad money to good.

What gives this law at first sight the appearance of a paradox, is that it seems to say that bad money is *always* preferred to good. This seems absurd. The whole of economic science is based on the postulate that in all circumstances men prefer the product that is of better quality and that best meets their needs, and the facts of everyday life confirm this. Of two fruits we prefer the best-flavoured, and of two watches the one that goes best. Why, then, should we act differently in the case of money?

But we do not by any means act differently! We behave the same towards money as towards other kinds of wealth: we prefer the good if we are to *keep it for ourselves*, but if we are to give it to our creditors and tradesmen, why should we choose the good if the bad will serve our turn just as well — that is to say, if they are bound to accept it in payment? Gresham's law is no anomaly, therefore, but an application of the hedonistic principle that lies at the base of all political economy: the principle of giving least so as to obtain most.

¹ Thus in England copper coins are legal tender only up to the value of 1s., and silver coins only up to 40s.

² [It goes without saying, perhaps, that in this section and elsewhere we have substituted examples drawn from English currency for the French ones employed in the text, while adhering closely to the author's exposition. It has not seemed necessary to call attention to this fact on every separate occasion.]

It is generally in the case of two kinds of money that are both legal tender, or can serve as such, that Gresham's law comes into play. It should be observed, however, that it applies even in the case of counterfeit coin and money that is out of circulation, in the sense that nine people out of ten, being unfortunate enough to find such money in their purses, are anxious above all things to pass it on, so that the more doubtful its genuineness the faster it circulates. It is like a game of hunt-the-slipper, where an object is passed rapidly from one to another to avoid being caught.

This explains why bad money remains in circulation, but it is less easy to explain why good money disappears. What happens to it?

Well, we make use of it where we cannot make use of the bad money. This happens in these three cases, which are the three outlets by which good money departs: hoarding, payments abroad, and sale by weight.

(1) *Hoarding*. When people want to put money aside and reserve it in case of need, they are sure to conform this time to the ordinary rule, and are not foolish enough to choose the bad coins. They choose the best, because they are keeping them for themselves and it is the good money that offers them most security. They hoard gold in preference to silver, and silver in preference to paper money. And the banks do the same, seeking to increase their supply of gold and putting the silver back into circulation. In this way a certain amount of the good money may disappear from circulation. This first kind of disappearance, however, is only a temporary one.

(2) *Payments abroad* are more important in their effect. For although we have the legal right to use bad money as well as good in paying our debts to our fellow-countrymen, this alternative fails us when we have to pay for purchases abroad. Our foreign creditor, being in no way bound to take our money, will accept it only for the weight of fine metal it contains — that is to say, for its real or metallic value. We cannot think of sending him light-weight coin, therefore. The conclusion that is forced upon us is that we must keep this latter for home trade, where it does as well as the other, and keep the good money for our foreign trade. There lies a second and more important cause of the disappearance of good money.¹

It was thus that the gold money of the belligerent States — or at least all that they could dispose of without depleting too much the

¹ M. Paul Leroy-Beaulieu puts it very well when he says that "*local* money drives out *universal* money."

stocks held by their note-issuing banks — found its way during the war into neutral countries.

(3) The third cause that makes good money disappear very rapidly is its *sale by weight*. This looks a very strange proceeding, and one whose utility is not obvious. Yet in reality it is a very simple matter. As soon as the value of gold rises so that the metallic value of a gold coin is greater than its legal value — as soon as it is *worth more as metal than as money*, — it is plainly to the interest of the owner to use it as metal instead of as money. It is therefore withdrawn from circulation and sent to the market for precious metals. If the value of bronze were to rise considerably, surely many bronze objects — bells, cannon, statues, and so forth — would be melted down to realize the value of the metal they contained? Or again, when spirits of wine rises very much in price, a great deal of wine is sent to the distilleries to be converted into spirit. Similarly, when the value of a precious metal rises, coins made out of it cease to be money and become goods, which their owners are eager to realize by selling them to the merchants, who melt them down either for industrial purposes or to send them as raw material to foreign mints.¹

That is how Gresham's Law operates. Let us see now in what cases it operates. There are three such cases:

(1) Whenever *worn* money is in circulation along with *newly-coined* money. It was exactly in these circumstances that the action of the law was observed by Sir Thomas Gresham. New coins had been made, in Elizabeth's reign, to replace those in circulation, which were completely worn out, more by clipping than by legitimate wear and tear. But it was noted with dismay that the new coins quickly disappeared, while the old ones swarmed more abundantly than ever.²

It is important, therefore, that a government should undertake frequent recoinages, so as to keep its money always fresh and new. Otherwise it will later on find great difficulty in replacing the old money by the new; and great watchfulness is needed, since money wears out rapidly.

¹ It was to prevent this flight of metallic money that during the war all the belligerent nations, including England, prohibited the export of gold, in ingots as well as coin. Yet this measure did not prevent gold and silver coins from being bought and melted down to be smuggled abroad.

² In the case noted by Aristophanes the opposite process occurred: the new money drove out the old. But this was because the situation was reversed: the new money was worse than the old; it was coined, he says, out of less fine metal.

(2) Whenever *depreciated paper money* circulates along with *metallic money*. It is in this case that Gresham's Law was most strikingly illustrated by the war. As soon as the paper money began to be issued the gold very largely disappeared, and was only reluctantly drawn from its hiding-places in response to the patriotic appeals of the various governments.

(3) Whenever *light money* circulates along with *standard money*, and even when *standard money* circulates along with *heavy money*. In this case the lighter money drives out the other. This is the most interesting of the three cases. It appears in almost every country that has adopted a combined gold and silver currency. But an examination of this case would lead us into the question of monometallism and bimetalism, which we shall deal with in the next chapter.