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An Introduction to Economics

BY

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WEALTH
AND
WORK

BY

GEORGE · W
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SECOND
EDITION



GEORGE PHILIP & SON LTD

First Edition . . . October, 1920.
Second Edition . . . March, 1925.

PRINTED IN GREAT BRITAIN BY GEORGE PHILIP AND SON, LIMITED, LONDON

PREFACE



HAVE tried to write a little book for beginners in Economics which shall persuade them to turn to larger works. It is generally agreed that such a book is greatly needed, though many attempts have been made to supply the demand. Both teachers and students will soon judge for themselves whether this book meets their needs, for the laws of economics apply to books on economics, and I would not have it otherwise.

By ' beginners ' I mean beginners in economics, and these are of all ages. A lad who is ' mugging up pol. econ.' for an examination will not find here all the little fag-ends of information which he needs to memorise just to avoid a ' plough,' but a bright lad will, I hope, find something which will help him to pass with some distinction. Older readers, too, who know only too well that the burning questions of the day are economic in character, will, I trust, find here something which will throw light on these questions, and so guide them in forming a sound and just opinion. In order to help both sorts of students by one and the same book it is necessary to drive a clear road through the heart of the subject, and I have tried to do this.

In a word, I have tried to show what the stuff of economics is, how the economist deals with it, and how it affects the wealth and welfare of both citizen and state.

G. W. G.

October 1920.

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CHAPTER I

OUR EVERYDAY LIFE

1. GOODS

 E cannot spend a single day of our lives without observing one or more of three important facts. One thing we must do every day, because unless we do it we shall soon die. We must appropriate to our own use some of the goods or commodities existing around us. No one can eat for us, or wear clothing for us, or take shelter from the weather for us. These things we must do for ourselves, and to do them it is necessary that food, clothing and house-room should be at our disposal. And they must be at our disposal day after day if we are to continue to live, much less to enjoy living. Things which will enable us to do this are to us good things, 'goods' for short, or, as they are also called, 'commodities.'

2. MARKETS

How do most people get the goods which they require? The farmer can get some of the most necessary goods off his farm, as, for example, milk, potatoes, vegetables, bacon and poultry. Even in towns many people have gardens and supply

themselves with some of the goods they need. So with regard to other simple requirements. Father may make a fowl-house, and mother may knit socks and jumpers. In a country like England, however, few people supply the goods they need in this direct way by their own labour. The usual thing in every house is for the goods needed by the household to be purchased in a shop or market—a shop being simply a small market for a given range of goods. Many of the goods we are continually purchasing are not produced in England, yet so great a fact in modern life is the market that we are not surprised to find them there, and indeed would be very vexed if we found they were not there when we needed them and had the money to pay for them. In every market there must be people who need to sell goods as well as the people who need to buy them, and though each group renders the other group an important service, it is clear that their interests are not altogether the same, and that the quantity of goods which passes from the sellers to the buyers will depend upon which of them is in the stronger position.

3. INCOMES

Goods we must have, and it is the usual rule for us to get them by buying them in a market. Every class of goods in the market has a certain price, generally marked plainly on it by means of a ticket, which tells us how much of the commodity the seller is willing to give for a certain coin or coins; and no one can go round a market, at any rate with his eyes open, without observing that goods of the same kind and quality are marked on the stalls or in the windows at the same or

nearly the same prices. In order, therefore, to get the continuous supply of goods which we need we must have a continuous supply of money with which to purchase them. This continuous supply of money is called our 'income.' Most people get their incomes by working for them in a mill or factory, or on the land or the sea. Other people, who are more fortunate, get their incomes because they are the possessors of property, *e.g.* a house or an estate, which they let other people use on condition that they are paid for the use of it. These two classes of incomes—(1) earned and (2) investment or 'unearned'—must be carefully noted. The term 'unearned,' though commonly used, even for some legal purposes, is not a very fortunate one, for it is apt to suggest that people who draw these unearned incomes occupy a favoured position which they do not deserve and should not be allowed to enjoy. Those of us who have to earn our incomes do it all the more easily and securely because people who are fortunate enough to have investment incomes are guaranteed the full enjoyment of them. Moreover, though people with investment incomes do not have to work for their living, they commonly live busy and useful lives, so that society would be the poorer for their absence.

4. THE STUDY OF OUR EVERYDAY LIFE

Goods, markets, and incomes—these are the outstanding facts of our everyday life, and clearly enough they are facts of the highest importance to each one of us. What attitude are we to adopt towards them? We are likely to be misled here because these things, vital as they are, are so common that they do not usually

attract our attention. They are like the atmosphere, which we only notice very plainly when a hurricane is blowing. In this country there are about ten million households, and every morning in every one of them, except when it is banned by deliberate choice, tea is found on the breakfast table. We are not in the least surprised to find it there, though the tea-plant grows only in countries thousands of miles distant. We are in London and want to get to Paris. For Julius Caesar, Roman Imperator though he was, that was a long and serious journey, full of dangers and difficulties; for us before the War it was an easy eight hours' journey in comfort and safety. In fact, this everyday life of ours goes on so smoothly that we do not notice it until something goes wrong, just as nobody remembers that he has teeth until he has toothache. It requires a railway strike to remind us of the fact that but for the railways we could not live our accustomed lives. Clearly, then, it will not be wise to take all these things for granted. They are the facts that require our most careful attention, and the proper examination of them is a task which every one of us should undertake.

5. ECONOMICS OR POLITICAL ECONOMY

The science which undertakes the work of examining these great facts of our everyday life is now generally called Economics, though up to a generation ago its usual name was Political Economy. Economics, like chemistry or botany, is a science. It has its own particular corner in the great vineyard of knowledge to cultivate, and can only get a good crop, as all other sciences get

theirs, by trained observation of appropriate facts and exact reasoning about them when they are once observed. The only mental atmosphere for the economist to breathe is that of the class-room and the dissecting table. Mass meetings are no place for him. They will turn him in a trice from scientist to crank. Economics takes these three great facts of our everyday life—Goods, Markets and Incomes—and seeks to find out the laws which lie at the back of them.

6. THE RULE OF LAW IN THE FACTS OF LIFE

For law there must be. When a thing happens regularly and constantly, we feel quite certain that there is some regular and constant force at work which makes it happen. From the very earliest times men living on the sea-shore observed the rise and fall of the in-shore waters which we call the tides. Twice a day at regular intervals the water begins to rise, reaches an upper limit, and then begins to fall. Such regularity could not be accidental, and men set to work to discover how and why the tides took place, and succeeded so well that the theory of the tides is now known to every school-boy, while sailors are provided with tables which tell them with the closest accuracy the time of the high tide for every important port in the world for every day of the year.

Now just the same regularity can be observed in these outstanding facts of everyday life. Everybody knows, for example, that at the beginning of June strawberries begin to appear in our shops, and are at first very high in price, quite often a shilling a strawberry. Then as the days go on, the quantity of strawberries gets larger and

the price gets smaller, until quite poor people can afford to buy quite fine strawberries. And this happens every year with the regularity of clockwork. Those who have kept their eyes open have of late years noticed another fact about the summer supply of strawberries. The rule still holds good that they are few in number and high in price to begin with, but what we have noticed during the last four years has been that the price of strawberries has never fallen to anything like its old low level. This suggests at once to the inquiring mind that some force has come into existence which keeps the price of strawberries up, and sets it to work to find out what this is. It is the business of the economist to discover this force, to measure its effects, and to find out whether it is a force that is likely to remain in operation in the years to come.

7. THE MEANING OF LAW

The word 'law' is so familiar that we are apt to overlook the fact that we must be careful how we use it lest it should play sad tricks with our arguments. Some words, such as 'horse,' 'potato,' 'planet' and 'England,' call before our minds as soon as they are uttered certain definite external things of which they are the mark or sign, so that all people who are intelligent enough to use them at all mean by them one and the same thing. But 'law' is a many-sided word, always ready to smile at the man who uses it, and to trip him as it smiles.

If a boy is holding a stone in his hand and lets it go, it falls to the ground. All stones act in this way, always have acted like it, and always will

act like it. Moreover, scientists can tell us many interesting facts about a falling stone—how far it has fallen after any number of seconds we like to name, and the rate at which it is falling at any point in its course. This is because the falling of a stone is regulated by the 'law' of gravitation. If you go to Dartmoor for a holiday you will see a great building which, as you will easily learn, is full of men dressed in singular and unpleasant garments, who are hard at work doing disagreeable tasks under the supervision of men in uniform armed with rifles. If you select one of these persons and ask what brought him there, you will be told perhaps that he signed a cheque with somebody else's name—committed forgery, as we say—and in this way stole another man's money. The 'law' of England says that people who steal must be punished, and this is one form the punishment takes for bad cases of stealing. It is a sad sight to see men in this unfortunate position, but we all agree that it is not only right but necessary that theft should be punished. The people of Sparta, one of the city-states of ancient Greece, had very different notions about stealing. They did indeed punish a thief, but for being found out, not for the theft itself: that is to say, they did not feel, as we do, that theft is a breach not only of the law of the land but of the moral code which binds the conscience.

It is clear, however, that the 'law' by which stones fall when loosed is not at all the same kind of thing as the 'law' by which thefts are punished when discovered. The former kind of law cannot under any circumstances be changed by anybody; the second kind of law has greatly changed in the course of history, and is being changed every day by the new laws passed by Parliament.

8. THE LAWS OF POLITICAL ECONOMY

In the special branch of study on which we are now entering it will be our business to see if we can discover laws of the first kind, laws, that is, which cannot be broken by man because they are imposed on him by nature, as part of the unchanging and unchangeable terms on which he must live out his life on earth. The seasonal changes in the price of strawberries suggest by the regularity with which they occur year after year that there are such economic laws at work amongst men. Take another illustration, which also looks a little way ahead and so will be useful to us later on. The wages of bricklayers vary from time to time in the same town, and from town to town at the same time, being higher in very large towns than they are in small country towns. It is therefore useless for you to ask me to find out a law by which I can tell you in advance what will be the weekly wages of John Smith who lives in Abingdon, and if that is the kind of information you are expecting from this little textbook of economics you will be sadly disappointed. There is one thing, however, about the wages of bricklayers, at all times and in all places, that can be stated, namely, that they are always higher than the wages of bricklayers' labourers. Here is another of those constant facts which suggest the constant working of a law precisely similar in kind to the law by which stones fall to the ground when loosed out of the hand.

You have probably heard, however, that Parliament intends to pass a new law which will lay down that no worker shall be employed in this country by any master for less than a certain wage

per week or for more than a certain number of hours per week. A man may, of course, earn more but not less, work fewer hours but not more, unless he is paid extra for each hour. Now this will clearly be a 'law' of the second class, and we shall apparently have both kinds of law at work amongst us in the fixing of wages. Which of them will be the master law? No attempt can be made to answer this question now, but the fact that we are able to put it should show the young student that economics is a science which deals with the very stuff of daily life, and is therefore a study which it is the first duty of every citizen to undertake.

9. ECONOMICS AND CITIZENSHIP

We are living in days when a new spirit is abroad. Our grandfathers were content to accept all the conditions of social life as something imposed upon us and therefore beyond our control. They sang in church on Sunday :—

> 'The rich man in his castle,
> The poor man at his gate,
> God made them, rich and lowly,
> And ordered their estate.'

This was a very comfortable doctrine for the rich and a very stupid one for the poor, and it is all to the good that men have bundled this rubbish into the lumber-room of history, and are prepared to make a careful and reasoned attempt to build a better social order. The one thing that is perfectly clear is that the building of this better social order must proceed in obedience to law, and this is why the study of economics has become a matter of national importance. For the young citizens

who read this book will in a few years be adult citizens, able by their votes and conduct to shape the new order to which we all aspire. Whether they build it ill or well will depend upon the intelligence with which they build. The motive with which men do things has no influence at all on the results of the things they do. A little over a century ago the working classes of this country were abased and nearly ruined by an administration of the Poor Law which, at any rate in its early stages, was prompted by pity for the condition of the agricultural labourer.[1] That sad experiment should warn us of the danger that lies before us if we trust this new building to poor craftsmen merely on the ground that they mean to do well. The laws of political economy issue from the bedrock of human nature, and that is why they, and the results to which they lead, must be known to all citizens.

[1] See Doorly, *England in her Days of Peace*, chap. xix.

CHAPTER II

WEALTH AND WELFARE

1. THE ORIGIN OF NEEDS



VERY man is a bundle of needs. The most important of them he has in common with other animals. First comes the need for food, since without food life itself would soon come to an end. The next thing that all men do, wherever they are to be found, is to provide themselves with some kind of shelter. The Esquimaux must build himself his little air-proof snow hut as a protection against the Arctic winter, and the men of the tropics must build themselves some roof to protect themselves from the scorching rays of the sun. Next in importance is the need for clothing, the urgency of which varies greatly according to climate—the native of India being content with a loin-cloth, while the Laplander requires thick furs. All these are needs of the individual, and apply just as much to Robinson Crusoe on his island as to a lounger in Hyde Park. Then come the needs of man as the head of a family, with a wife and children dependent upon him. Baby boys and girls differ from all other new-born animals in that it is some years before they can do even the smallest things for themselves, and very many years before they can go out into the

world to earn their own living, to marry and to become in turn the founders of families; and this dependence of the human being on family life has greatly widened his circle of needs.

Last of all, and often most important of all in their economic consequences, are those social or conventional needs which arise from the fact that families do not live alone, but all over the world to-day, and as far back as we can trace man on the earth, families have been united in larger groups, which, as the ages rolled on, became great nations such as our own. As soon as these groups began to form themselves, new social forces came into operation. Men wanted not only a house but a fine house; women wanted not only clothing but fine clothing. A Fuegian girl, living in the desolate regions near Cape Horn, will do quite well without a stitch of clothing, but must have her three necklaces, her bracelets and her anklets, and you may be sure that she does her utmost to get them of the very best kind in order that she may 'cut a dash' in her little circle, being in this respect no different at all from the West End lady who is consumed with anxiety about the dress which she is to wear when being presented at Court. The desire to be better, or at any rate to look better, than one's neighbour often has laughable results in the cases we ourselves come across in life or read about in literature, but it has had vast and beneficial results in social life.

2. NEEDS FROM THE ECONOMIC STANDPOINT

It is not the business of the economist to pass any judgment on the character of the needs he is studying. The fact that a man needs a thing is enough for him, and the thing which satisfies

the need is to him a ' good ' or ' commodity.' He may personally think it of the utmost importance that working men should need no beer and many books, or at least very little beer and as many books as possible, but that does not alter the fact that both books and beer rank, as commodities, on the same level with one another, since each of them satisfies a human need. It is just the same with those needs which are satisfied not by material goods but by services rendered by one person to another. The economist may greatly like going to church and be indignant if asked to go to a music-hall, but as the materials of his science, ' artists ' are just as important as preachers, since the services of both satisfy the felt needs of man. This is obvious enough, and, since it is obvious, should be carefully remembered against the time when the reader will have to apply the same principle to cases which are not so obvious. For the young economist is under a constant temptation, which he must resist on peril of becoming a blockhead, to leave off the study of things as they are in order to air his views on things as he thinks they ought to be, and he may then quite easily attach too much importance to things in the book class and far too little to things in the beer class—which would, of course, be extremely unscientific however nice it might sound.

3. THE EXPANSION OF NEEDS

Though we can trace the most highly developed groups of men back to a time when their needs were very few and urgent and were satisfied by goods of a rude and simple sort, we cannot look forward to a time when the catalogue of human needs will be finally closed. Even in the span of

our own lives we find men adding new needs to their list and satisfying old needs in new ways. Business men take advantage of the easy manner in which people can be led to develop a new need, and amass fortunes by making the goods which satisfy them. Our grandfathers got on without bicycles and patent breakfast foods, without typewriters and telephones. It seems but yesterday that the motor-car, now the convenience of the many, was the luxury of the few. The first London 'tube' is only a generation old, yet in the fortnight ending last Christmas Eve (1919) the tubes of London carried over sixty million passengers, an average of ten journeys for every inhabitant of the metropolis.

We can place no term or limit to this process of expansion. In the middle of last century few people took holidays at the seaside or in the country; now millions of people take them, and there is no reason in the nature of things to prevent the coming of the time when a holiday under agreeable and refreshing circumstances will be as normal an event of every year to every person as breakfast is a normal event of every day. While, as pointed out above, it is no part of the scientific duty of an economist to pass judgments on the needs of men, it is part of his duty to point out that what is wanted is the development of needs of a higher character. Men are, and always have been, keen not to suffer hunger, and society owes very much to the fact. It is clear that if the time should come when men were just as keen that others should not be hungry as they are not to be hungry themselves, and just as willing to make efforts to prevent the one as the other, a much better social order would be built on the foundation of this new social need.

4. NEEDS AND GOODS

The relation between needs and goods is the primary and most important fact with which the science of economics is concerned. We must therefore study it more closely, and the only way to do this is to select one need and one commodity which satisfies it and see how they act and react on one another. Here is a very hungry man, just come in from a heavy day's work in an iron foundry. He is feeling the urge of the greatest need possible. He is very hungry and must have food. His wife at once helps him to meat-pie and potatoes. Now as he is a very hungry iron-moulder, you may be pretty sure that there is no plate in the kitchen big enough to hold at one helping all the meat-pie and potatoes he will need, so that when he has cleared it once his wife will help him again and possibly yet again, until he leaves off satisfied and well content, with a hearty word of praise for the good-wife's cooking.

During the meal there has been a marked change in the man's attitude towards the meat-pie. We shall see this better if we suppose, as we are quite at liberty to do, that his wife, instead of giving him a large helping, then a middling-sized one, and then a small one, feeds him instead with a succession of very small helpings. If you will keep your eyes open you will see that this is precisely what she does do when she feeds the baby with bread and milk, for baby gets its food one spoonful at a time and no more. We cannot, however, cross-examine baby as to what goes on in her little mind during the meal, but we can cross-examine her father, the ironmoulder. He would tell us that the first very small helping we

suppose him to get was greatly welcome, so was the second, and so was the third ; but as he went on eating helping after helping, the need for food grew weaker and weaker, so that he became less and less keen on every fresh helping, until at last he came to one which he was quite undecided whether to eat or not, but finally decided to have just that one more to finish off. He was so hungry when the meal began that the first helping of meat-pie had a tremendous attraction for him; the last helping had so little attraction that our ironmoulder only just took it.

This is a very simple illustration, but we shall need the truth it teaches all through our study of economics, and it cannot be mastered too soon. Fix your mind on that last helping of meat-pie, which lingers doubtfully on the narrow margin between being eaten and being left in the dish, and is eaten after all. We will call it the 'marginal' helping, and the study of needs or goods on the margin is one of the chief things with which the economist is occupied.

5. NEEDS AND EFFORTS

In Robert Louis Stevenson's *Kidnapped* it is related that when the *Covenant* of Dysart was wrecked, David Balfour luckily got ashore, and found himself alone on a rocky islet. Soon he got very hungry, and the only food available was the limpets which clung in thousands to the rock ; he had to knock them off with a stone, and at first was a very clumsy workman, and only got nauseating food after all his weary efforts. Of course he swallowed the fish and then threw down the shells, of which there would be quite a little heap after a few meals. On the shores of Denmark

there are vast mounds of empty shells, 'kitchen-middens,' as they are called, and these mounds were made untold ages ago by our primitive ancestors, who had to do as a regular thing what David Balfour had to do only under very exceptional circumstances. And these remote men who lived on shell-fish were very much better off than their ancestors who had been living inland on the Continent, for this shell-fish food, if not very agreeable, was at any rate very plentiful and nourishing, so that those scientists who have studied the upward growth of man from his earliest and rudest beginnings tell us that the discovery of this fish diet was a great landmark in man's progress. Why is this so?

Food is to the human body what fuel is to the steam engine. It is the source of energy. Now if men are so placed that most of the energy, that is of their power to work, which they have got from the meal they have just eaten, has to be used up in making sure of the next meal, their lives are bound to be poor and miserable. So in the very dawn of things, when the people of the kitchen-middens came upon a supply of food which was abundant, certain and easily obtained, they had left over time and energy to devote to the satisfaction of other needs. They could pay more attention to their houses, as we see in the case of the primitive dwellers by the shores of the Swiss lakes; for they, being certain of their food at the price of comparatively little effort, built themselves good houses on piles driven into the shore of the lake just below water-mark. In this way they lived secure from the attack of fierce animals and from surprise by hostile tribes. These lake dwellers found out the art of weaving some kind of textile material, made themselves weapons

and household utensils, and in short marched one or two important stages along the road of human progress.

David Balfour did not get his meal of shell-fish without hard work. Needs are satisfied by goods, and goods are the result of work. Work is human effort directed to the production of goods to supply human needs. The necessity for work has been one of the great boons which nature has given to man. In very hot countries nature supplies freely and plentifully nearly all the goods that men need. Work is almost superfluous, and therefore not much of it is done. This may seem an ideal life, and perhaps it may be for the individual, but it has been the ruin of the race, which has made no material progress since the very earliest ages. At the opposite extreme are the people who inhabit the Arctic and Antarctic regions. They make no progress because their utmost efforts can only succeed in winning a poor life, and they have no margin either of time or energy to devote to making progress. It is the people of the temperate zones, and especially those of Europe, who have been best situated. They have had to work, but their work has been rewarded, and they have constantly been stimulated to further and still more successful efforts.

6. THE EXPANSION OF EFFORTS

The expansion of needs has gone on side by side with the expansion of efforts to satisfy them. Fish is good food for us just as it was for the men of the kitchen-middens, but we no longer have to live on the sea-shore in order to be able to eat it. You may live in the very heart of England and have for your breakfast a fresh herring which was

swimming about over the Dogger Bank the day before. The men who catch your fish go out from Yarmouth in a steam trawler, and fish with nets a mile long in the very places where the fish are to be found in most abundance. And fish trains travelling fifty or sixty miles an hour carry the fresh fish to the markets of inland towns like Leeds and Stoke and Birmingham, and people who rarely see the sea and never catch a fish except for amusement may have fresh fish at any meal they like. The society in which we live is in fact a beautiful and delicate machine for supplying us with goods to satisfy our needs at the very moment when we feel them.

Hence it has come about that in this country, and in all countries like ours, while the needs of people are satisfied with ease and certainty, very few people indeed do any work intended to produce goods to satisfy the needs they themselves feel. The people of a cotton town in Lancashire may not themselves use a single yard of the fabrics they weave, or produce a single ounce of the food they eat; yet they go on producing cloth year after year and getting in return for their efforts at cloth producing a range of commodities and services which, wisely used, give them a firm hold on life. We are about to study the way in which this machine is constructed, the parts of which it consists, the forces which keep it going, and the laws which regulate its results.

7. THE GROWTH OF POPULATION

It has already been pointed out that the satisfaction of one need on easier terms, that is at a smaller output of efforts, than has been the case in the past has always led men to use the time and

energy thus saved in the satisfying of other needs. Now one of the needs human beings keenly feel is the need for family life. In the past one of the chief marks of a progressive society has been an increase in its numbers, which increase has been permitted by an increasing command over those goods which supply the primary needs of food, clothing and shelter.

In the reign of Queen Elizabeth the number of people living between the foot of the Grampians and the English Channel was about six millions. At the present time about forty-two millions of people live in the same area, which, from the economic point of view, is the most important area on the face of the earth. It is quite true that a very large number of them are poor, but so they were in the reign of Elizabeth, and it is certainly true that, taking them in the mass, the forty-two millions are immeasurably better off now than the six millions of a former day. This is a very serious fact, and the consequences of it must be steadily faced.

In the first place, even if the conditions of life in those older days were as ideal as some people pretend, and this is not the case, forty-two millions of people cannot possibly go back to the arrangements and methods by which the six millions managed to get their living. Our big manufacturing towns may, from the point of view of the artist and the dreamer, be blots on the landscape, but they are the means, and, things being what they are, the only means, by which millions can live. A century and a half ago the weaver owned his own loom and did his work in his cottage, putting in his spare time, for he was continually running short of yarn to spin, by pottering about over other jobs. This of course looks, and indeed is,

a nicer way of doing things than we have to-day, when weavers work by the hundred in huge 'sheds' in Yorkshire and Lancashire. If we could give every one of our weavers to-day his own loom in his own cottage, it might well be that he would have a better time of it, but only on condition that the rest of us went very scantily clothed, for while you can get a hand-loom into a cottage you cannot get a power-loom into it, and to-day it is the automatic power-loom that does the weaving. The weaver is still necessary, but only as an attendant upon a machine. So we cannot go back to the old-time methods of economic life.

In the second place, the crowding together of this vast population on so small a space, dependent as they are on the sale of goods and the purchase of food in oversea markets, warns us that it is just as impossible to make radical forward changes as to make the radical backward changes just referred to. The people who want to reconstruct society on a new plan forget that if the new plan did not at once yield the same constant supply of goods as the old one we should all be worse off for the change, while if the supply were seriously less the whole of the people in this country would have to be put on short commons at once, as we learned by the bitter experience of the War. In addition to this practical difficulty, it must be clearly understood that when we speak of society as a machine, the only reason for doing so is to draw attention to the fact that, as in a real machine, one part fits into, supports and helps another, and that there is a motive-power which keeps the machine going. To go beyond this, to suppose that because for some purposes it is useful to speak of society as a machine, it can, like a real machine, be smashed to pieces and one of another and better

sort constructed out of the fragments, is absurd, and is an argument mainly used, in fact, by foolish people who want to get the votes of people more foolish than themselves. The 'revolution' for which some people call would promptly put an end to that outflow of manufactures and inflow of food by which alone the people of our large towns can subsist.

8. THE TWO KINDS OF GOODS

Needs impel men to put forth efforts. Efforts wisely directed result in goods. Goods yield satisfactions. Here we have the chain of events in the economic life of man. It is worth while to note in passing that some needs are satisfied by goods which require no effort on man's part to produce. The familiar example of this class of goods, 'free goods,' as they are usually called, is air. We can live for a few days without food, but we can only live a few minutes without air. Fortunately, however, there is plenty of air for every one of us, to be got without money and without price. Another familiar example is water, the second most urgent necessity of man, since thirst is harder to endure than hunger. Fresh water is a free good to every one living near a sufficient supply of it. In our large towns, however, water is not a free good. True, you can get as much of it as you want simply by turning a tap, but you do not get it for nothing, since father has to pay for it in his water rate. In some parts of the world food itself is a free good, or nearly so, since enough to sustain life can be got by appropriating fruit and shell-fish. If a country under the rule of white men is very large and its population very small, land itself is a free good in the early stages of the country's development. This

was the case when white settlers went to the American continent. Even to-day the Canadian Government tempts people to emigrate thither by offering them a plot of virgin soil for nothing on condition that the emigrant cultivates it.

In our own country, however, the class of free goods is insignificant. There is never enough of any economic good on hand to go all round. Wheat is plentiful, but not plentiful enough for that. Diamonds are few indeed in comparison with the people who would like one. If I want to satisfy one of my needs, and do not already possess the desired good, I can only get it by making it myself or by acquiring it from some one who already possesses it and is willing to hand it over to me for a consideration, the usual consideration being a sum of money.

9. PROPERTY AND WEALTH

There are therefore two important points to be noticed about the goods with which the science of economics concerns itself.

In the first place, every one of these goods belongs to somebody; it is, to use the legal term, the property of a known and definite person called the owner, and no private person can lawfully take possession of and use any good without the owner's consent. This, however, only applies as between one British subject and another. The British State can, and quite frequently does, exercise its sovereign rights and take the property of one of its subjects without his consent, though, of course, not without paying him the market value of the property.

In the second place, goods are measurable. Just as it is easy to say which of two pieces of cloth is the longer by measuring each of them with

a yardstick, so it is possible to measure which of the two pieces of cloth is a better satisfier of a human need than the other by finding the number of shillings which a good judge of cloth is willing to give for each of them. When your mother goes to buy a dress length you see how carefully she tests its power to satisfy her need by examining it, feeling the texture of it and the weight of it, and fraying it at the edge in order to see what it is made of. She does this in order that she may form an opinion as to how many shillings she will be prepared to give for every yard of cloth. Goods, then, are measured in money, that is by their price. This looks simple enough, but you must be prepared later on to learn that the measurement of goods by means of prices is an extremely difficult matter when prices at one time or place are to be compared with those at another. A good yardstick looks to-day, and is to-day, as a measure of cloth just what it was in July 1914. A sovereign looks the same now as it did then, but as a measure of prices it is altogether different.

When a school-boy is asked what he possesses, he is likely to enumerate the goods that belong to him, as, for example, a hoop, a kite, two tops, one cricket bat, seventy-three marbles, a bundle of string, and so on to the end of his possessions. If a man has a very great deal of wealth, it would be very awkward indeed if the only way in which we could say how wealthy he was, would be to make a catalogue of each item; and when we were trying to estimate the wealth of a nation, which for some important reasons we must try to do, the task would have to be given up as impossible if it could only be done in the school-boy way. Since, however, each commodity, that is each separate piece of property a man possesses, can be

priced, that is have its measure in money assigned to it, it is only necessary to do a 'long tot' correctly in order to be able to say how wealthy he is.

10. NATIONAL WEALTH AND INDIVIDUAL WEALTH

The wealth of a country cannot be found by adding together the figures which give the wealth of all the persons in it. It is a very common thing for a man to borrow money to build a house, and he hands over to the lender of the money a document called a mortgage which entitles him to take possession of the house if the loan is not repaid at the time agreed on. The house is wealth to the borrower and the mortgage is wealth to the lender, but the only wealth from the national point of view is the house itself. So it would not do to reckon in our national wealth not only a railway company but the shares in it which belong to the shareholders. It is well to note, too, that some things without which a great deal of our wealth could not be produced are themselves not part of that wealth. The atmosphere of Lancashire is a case in point. The amount of vapour in the air in that part of England makes it possible to spin cotton better there than it can be done in any other part of the world, but no estimate as to the cash value of the Lancashire atmosphere can appear in our estimate of the national wealth.

On one occasion a very notable change was made in the national wealth of the United States in a single moment. This happened when Abraham Lincoln signed the proclamation setting all the slaves free. Up to that moment they had been the property of their masters, and the value of each of them would have appeared in any account of his master's wealth. There was no

change at all in the facts, but a great change in the figures. It has been suggested that in calculating our own national wealth we should look upon each citizen as a slave and give him a value. Looked at in this way, the population of the United Kingdom in the year 1885 was estimated by Professor Nicholson to be 'worth' £47,000,000,000. Arguing in the same way, their value on the outbreak of the War would have been £60,000,000,000. It is better, however, to keep a clear distinction between human beings and wealth.

II. STATISTICS OF NATIONAL WEALTH

A very high authority, Dr. J. C. Stamp, has made a careful estimate of the national wealth of the United Kingdom, and has examined all similar estimates made by investigators for other countries. The results are given by him as follows :—

Country.	Amount in millions of £.	Amount per head of population
United States	42,000	£424
Germany	16,550	244
United Kingdom	14,500	318
France	12,000	303
Russia	12,000	85
Austria-Hungary	6,200	121
Italy	4,480	128
Spain	2,940	144
Argentine	2,400	340
Japan	2,400	44
Canada	2,285	300
Australia	1,530	318
Belgium	1,200	157
Holland	1,050	167
Sweden	940	168
Switzerland	800	205
Denmark	500	176
Norway	220	90

Another important question is the rate at which the national wealth of each country is growing. For example, the wealth of the United States at the outbreak of the War is given in the above table as £42,000,000,000. In the year 1900 the figure was £18,000,000,000, so that since the century opened the wealth of the United States has more than doubled, while its population is only one-third greater now than it was then, so that wealth per head is increasing very much faster than the population is increasing, which is most satisfactory. The following table, which deals with our own country, is taken from Sir Robert Giffen, and gives the best figures known to him or calculated by him over a very long period :—

Year.	Population Millions.	Property. Millions sterling.	Property per head.
England—			
1600 . . .	4½	100	£22
1680 . . .	5½	250	46
1690 . . .	5½	320	58
1720 . . .	6½	370	57
1750 . . .	7	500	71
1800 . . .	9	1,500	167
United Kingdom—			
1812 . . .	17	2,700	160
1822 . . .	21	2,500	120
1833 . . .	25	3,600	144
1845 . . .	28	4,000	143
1865 . . .	30	6,000	200
1875 . . .	33	8,500	260
1890 . . .	37	10,000	270

It is to be noted that while the wealth of the United Kingdom is increasing faster than its population, it is not increasing very much faster, so that this country is not doing anything like

so well from the economic point of view as the United States.

12. DIFFICULTIES IN MEASURING WEALTH

In the above table you will observe that the wealth of all the countries is measured in English pounds sterling, or, in one word, in sovereigns. This is the only way in which it can be done, but there are two great difficulties to be faced before you can argue from one country to another.

The first of these difficulties is that the thing with which we are measuring, namely, the sovereign, is continually changing its power to measure. If a draper had a movable yardstick, which was thirty-five inches long one day and thirty-seven the next, and if, into the bargain, he did not know that the change had taken place, it would be impossible for him to tell you exactly how many yards of material he had in his shop. In the above table the wealth of the United States is put down, when measured in English sovereigns, as three times greater than the wealth of this country, but the position when measured in goods, which are the things that really matter, is certainly very different. There is just as much gold in 1000 sovereigns as in 4866 dollars, but at the time to which the figures refer it is perfectly certain that an Englishman spending £1000 in England in the purchase of certain kinds and quantities of goods would have a much greater pile to show for his money than an American spending 4866 dollars in buying goods of the same kind in America. A notion of what the difference would have been can be obtained from a simple consideration. In New York before the War a family of average size was on the poverty line,

that is to say it could only get the bare necessaries of life, if its income was £4 a week, whereas a family of the same size and income living at the same time in London would have been fairly well off.

In the second place, we must pay attention to the kind of goods which enter into the account. Let us suppose that quite accurate lists of the wealth of two countries, A and B, give them both a total national wealth of £10,000,000,000. Even so we must be very careful before we decide which of the two would be the better country for us to emigrate to. We should want (1) to examine the chief items in the two lists, (2) to know how many inhabitants each contained, and (3) the way in which the wealth was distributed amongst them. If A was abundantly supplied with corn and very ill supplied with pearls, while B was reeking with pearls and lacking in corn, we should not hesitate which to choose. The old and quite absurd idea of the fabulous wealth of India was based on the presence, real or supposed, of precious stones, while Canada, where they are very scarce, is one of the richest countries in the world measured in wealth per head.

13. THE SOURCES OF WEALTH

National wealth varies from time to time in the same country, and from country to country at the same time. England to-day is far wealthier than she was in 1600, and five times as wealthy to-day as Spain is to-day. In the year 1600, however, Spain was a much wealthier country than England. It is the business of the economist to find out why and how these changes in national wealth come about.

We have compared a country to a machine, a wealth-producing machine. Consider two loco-

motives: the first is a small affair pulling a few wagons up and down the siding which runs from some big works into the main line; the second is a veritable monster, the latest type turned out of Crewe works. You do not want telling which of these is the more powerful locomotive. You could not give any reason for it, except perhaps mere size. On the other hand, in a great ship-building yard on the Clyde the other day I saw a room which contained three very large engines and one very small one. These four engines had to supply the power used in the works, and I was told that the little engine, quite a toy to look at, did more of the work than the three big ones put together. So size does not always count in machines, and neither does it in countries. The only person who can tell the unlearned why one machine is more powerful than another, that is, does more work, at a smaller cost in fuel, is an engineer. In the same way, when we want to know why one country, considered as a wealth-producing machine, is more powerful than another, we turn to economics for the answer.

It is very important to get the right answer, in order that, both as workers and as citizens, we may know what to do. If we are ignorant on this matter we may easily make serious and even fatal mistakes.

14. WEALTH AND WELFARE

Before we try to find an answer to this question we will attend to an important distinction. When the Bible tells us that Mordecai 'sought the wealth of his people,' it does not mean that he tried to deprive them of their property. When we pray that the King may be granted 'in health and

wealth long to live,' we are not asking God to make him wealthy, for we can do that ourselves without asking Divine aid. In both these cases the word ' wealth ' has its older and finer meaning of ' welfare,' and it is only because, since the days when the Bible was translated and the Prayer Book written, we have paid more and more attention to the production of goods that wealth has ceased to mean welfare and come to mean only its material basis. But no amount of wealth will compensate either an individual or a country if its growth is accompanied by a weakening of moral fibre and a diminishing enjoyment of the goods of the mind.

CHAPTER III

THE WEALTH-PRODUCING MACHINERY: ITS COMPONENT PARTS AND MOTIVE-POWER

1. VILLAGE SMITHY AND CLYDE SHIPYARD

WE will begin by considering a familiar object of everyday life — a village smithy. It stands on a conveniently situated plot of land by the side of the main road as you enter the village. Within is the blacksmith, who owns the smithy, and his assistant, who earns a weekly wage. In the smithy are heaped various important things, the long rods and bars and tubes of iron which are the raw material from which the smith makes the products of his craft, the forges, the heap of slack with which he builds his fire, anvils, hammers and other tools, and a number of spare parts of ploughs and harrows which he has usually purchased from a maker. As you watch, a plough-boy comes up on the back of a great grey mare which has cast a shoe, and you can watch the process of making the shoe from a length of bar-iron. When the job is finished the blacksmith makes an entry in pencil on a slate which hangs on the wall to the effect that farmer B owes him so much for shoeing his mare. Here you have the process of producing wealth, to wit, a horse-shoe,

from start to finish. It is all very simple, sweet and old-fashioned, and the like of it has been done by the smith and his forebears from time immemorial.

Now imagine yourself in a great shipyard on the banks of the Clyde, flush with the great seaway just as the smithy is flush with the highway. Everything here is on a gigantic scale, and it has need to be, for they are making a sister ship to the *Aquitania*. There are dozens of departments, huge buildings and sheds, lines of railway with little locomotives puffing about them, vast power-houses, giant lathes, huge gantries, travelling cranes, slipways and all the intricate and expensive machinery required to build such a ship. Instead of one master directing one man, you have thousands of men divided into departments and gangs and shifts; job foremen, shop foremen, departmental managers, head manager and managing director. The simple pattern by which the smith makes shoe or share is replaced here by the drawing office, where highly skilled draftsmen work out the designs of the most competent engineers in the country. The slate hanging on the wall is replaced by the counting house and costing department staffed by scores of people. Finally, when the process is complete, the great ship will steam down the Clyde to America, carrying cargo by tens of thousands of tons and passengers by thousands, much as the great grey mare ambled off down the road with the boy on her back and the shoe on her foot.

Different as they are from one another to the eye of the engineer, to the economist the shipyard is only the village smithy writ large. In essentials they are the same. The tiniest living creature is nothing but a cell, an invisible speck of protoplasm

in a containing sac, with a nucleus embedded in it. From the biological point of view William Shakespeare was only an infinite number of these cells, organised in different ways to do different things, amongst them the writing of *Hamlet* and *Macbeth*. The biggest 'works' is, we may say, just an organised mass of economic cells. When you go round the shipyard, you will be pretty sure to find a little corner where they do simple repairs to tools which is no different from the village smithy. I have seen an old-time weaver at work on an old-time loom in one of the biggest weaving sheds in Yorkshire, and in the largest shoe factory in England I have seen a few cobblers in a corner working away just as cobblers did years ago, before the Blake stitcher and the Goodyear welter were heard of.

2. THE FOUR AGENTS OF PRODUCTION

In economic structure both smithy and shipyard are exactly alike, differing only as a cabin differs from a cathedral. Each consists of four things, which the economist speaks of as the four agents or factors of wealth production. To begin with, there is the conveniently situated piece of land on which each of them stands; the shipyard could not be built in the country village, and the smith would not find much demand for his craftsmanship in the streets of a large town. In the next place, there are the people who carry on the work. All goods are produced by human effort, that is by work. In the third place, both in the smithy and in the shipyard, the men who do the work are aided by tools and machinery which are purchased with money for the express purpose of being used in making goods; and everything used for this pur-

pose is called 'capital.' The capital of the smith is worth a few score pounds, the capital of the shipbuilding firm may be worth two or three millions, but they differ in form and value only and not in economic purpose. Finally, even in the smithy there is one man, the master smith, to direct what work shall be done, when it shall be done, how it shall be done, and to decide what shall be the charge for doing it. In a word, he organises the tiny business. So in the shipyard there is some one brain at the centre which organises and controls the vast establishment.

The four agents or factors of production are :— (1) Land, (2) Labour, (3) Capital, and (4) Organisation.

3. THE HISTORY OF THE FOUR AGENTS

It is quite unnecessary to waste words in discussing which of the four agents is of the most importance, since industry cannot be carried on under modern conditions to satisfy the needs of the huge population of this country without the combination of all four. Clearly, however, when looked at from the historical point of view, the four agents of production differ among themselves. Industry could never have made any beginning at all, the simplest and most urgent wants of man could never have been satisfied, unless the land had yielded of its own accord objects capable, either just as they were or after some simple adaptation, of satisfying those needs, and the man who felt the needs had gone to the trouble of appropriating them. It is recorded of the poet Gay that he was so lazy that on one occasion he stood with his hands in his pockets and ate a peach as it grew on the wall. The lazy poet

saved himself the trouble of picking it, but even he could not save himself the trouble of eating it. When we are looking at the beginnings of things we rightly regard land and labour as the primary agents of production. Sir William Petty said that labour is the father and land the mother of wealth.

Man, naked and alone, is worse equipped for the struggle to exist than any other animal. It is impossible to measure, even in millions of years, the time which has elapsed since the bodily form of man grew to be what it is to-day, but in all those millions of years the most important part of him—his brain—has gone on developing. You remember David Balfour on the rocky islet. He could not get the limpets off the rock with his fingers, and he at once took up a stone and knocked them off. That stone was a tool. It was David's capital. Primitive man did precisely the same thing. In the Clyde shipyard you will see a steam hammer the blows of which flatten out a twelve-inch bar of white-hot steel as easily as mother's rolling-pin flattens out the dough when she is making a pie. The Nasmyth hammer began untold millions of years ago when primitive man struck one flint against another to make himself a primitive weapon. 'Flint-knapping,' not yet quite extinct, is the oldest industry in the world.

Man never has lived alone. The family is now, and always has been, the real social unit, and in the family there is necessarily authority on the one hand and obedience on the other. In other words, some rudimentary organisation of industry existed in the earliest time, and has gone on developing ever since. Men organise because they get better results with it than without it. In the village smithy, where everything is simple—the buying of the raw materials, the making of the

goods, the determining when and how they are to be made, and the selling of the finished article—it probably would not matter much if master and man changed places. In the Clyde shipyard the men at the top must be intellectual giants or the whole concern will come to grief, and thousands of men be thrown out of work.

We can arrange the four agents of wealth-production so as to show their order of development in the history of industry:—

I. Two original Factors.
   1. Land and natural agents, or, in one word, Nature.
   2. Labour.

II. Two Factors that have been developed in the evolution of industry.
   3. Capital.
   4. Organisation.

These are the parts of the wealth-producing machine.

4. ECONOMIC MOTIVE-POWER

Every machine requires motive-power to set it at work. The most powerful locomotive ever built would stand idle on the metals till it rusted into a heap of old iron unless the driver and the stoker climbed on to the foot-plate and got steam up. It is time, therefore, to ask ourselves what is the power that keeps the wealth-producing machinery at work.

Every man tries to satisfy his needs with the smallest possible amount of effort. Other things being equal, a man will not cross the street to buy a pound of beefsteak if he can buy it next door. Notice the phrase, 'other things being equal,' because it is a condition which has to be inserted

into all economic arguments. In the case supposed these other things may not be equal. The butcher across the street may give credit and the butcher next door may not; or the butcher across the street may be a personal friend, or a member of the same chapel, or a supporter of the same political party, while the butcher next door may be none of these things; and then the customer crosses the street for his beefsteak, taking more time and spending more energy than he need do to obtain his steak simply because he is not thinking only of satisfying his need but of doing that and pleasing another man at the same time. So long as a man is thinking of nothing but satisfying his needs, he will seek to obtain the largest possible supply of suitable goods at the lowest possible cost either in personal effort or in money. To suppose that he will act in any other way, that he will always and of set purpose insist on giving sixpence halfpenny for a sixpenny article, or working sixty-five minutes for an hour's pay, would be simply foolish. It is just because we can rely on men always acting like this, just as we can always rely on stones falling when loosed from the hand, that it is possible to have a science of economics.

5. PRIVATE PROPERTY

If a commodity is capable of satisfying a man's need, and the man feels the need and the said commodity is at hand, he can only satisfy the need by appropriating the commodity to his own use. In the case of the ironmoulder, which was examined just above, it is clear that he would have continued hungry if, just as the meat-pie was put in front of him, some other person had stepped in and whisked it away. The goods a man wants

must, in short, be his private property if they are to fulfil their purpose.

No attempt can be made here to trace the way in which, during the growth of society from its rude beginning to its present state, this obvious truth has been made the foundation of the present system, by which a man is permitted to acquire as much wealth in as many and different forms as he possibly can by lawful means, while any one who unlawfully attempts to deprive him of a single pennyworth of it is punished for doing so. The necessity for possessing some wealth is forced on each of us by conditions which we did not make and cannot alter, and the desire to possess more and more wealth, so that no possible need shall go unsatisfied, is not only a fact of human nature but has been one of the chief causes of social progress.

Men vary not only in their power to obtain wealth but in their desire to obtain it. Men who succeed in business are generally self-made men. They see and grasp chances which other men either do not see or have not the power to grasp. In a certain town there is a huge factory, the largest of its kind in England, owned by three brothers. Thirty years ago these three men started working on their own account in a small cottage. Because they had quite unusual grit and skill they went on prospering and to prosper, and are now very wealthy, but still very simple-minded men. Should society permit a man to start in a cottage and finish in a palace? The best provisional answer, that is to say an answer which we give now because it is the right answer—we mean to examine it again with an open mind when our studies are a little more advanced—is 'Yes,' and for the following reasons:—

(i) Since men live in society, no one man can amass wealth by fair industrial means without helping those of his fellows who have not the same powers and opportunities as himself. For example, the three brothers just referred to have for many years found constant employment, without the break of a single day, for nearly two thousand people, any three of whom, if they had the same grit and the same skill, might set up on their own account and do the same thing over again. Clearly, however, the three brothers in amassing their wealth have been able to provide work and wages and comfort for hundreds of people, and this is one return they make to society for allowing them to get all the wealth they can, so long as they do it by fair and lawful means.

(ii) In the next place, as society grows, the necessary expenses of governing it increase very rapidly. This was always the case, but national expenditure has for many years been growing more rapidly than it used to do because society is beginning to feel that it has duties and obligations to all its citizens. Wealthy citizens can contribute, and are made to contribute, an ever larger share of this necessary expense.

(iii) No modern state, except Soviet Russia, which is not a stable modern state from which we can argue, makes any attempt during a man's life to hinder him from getting together as much wealth as he can. At his death, however, the state may well step in and claim from the dead man's estate a share, and even a large share, of what he has got together before handing over the remainder to heirs who have done nothing to create the wealth they are now about to enjoy. What the state does at the rich man's death, the rich man should

do of his own accord during his life, that is, he should devote to useful social purposes a reasonable part of the wealth which society, acting, it is true, in its own interest, has given him the opportunity of acquiring. Wealthy Americans frequently do this, and often on an extraordinary scale. The late Mr. Andrew Carnegie spent part of his life in getting a large fortune and the remainder of it in endowing society with institutions intended to carry on work from which society would benefit. Recently Mr. Rockefeller endowed his country with no less a sum than twenty million pounds sterling.

(iv) Looked at from the economic point of view, it is clear that the first interest of us all lies in the amount of wealth produced, and that the best way yet discovered of getting the largest amount of wealth which it is possible to produce under the given circumstances is to allow men to become the owners of all the wealth they can produce, and to enter into binding agreements with one another to produce wealth by combined action and to share it, when produced, on terms which they freely make and which the law will enforce. In order to do this they must be allowed to compete with each other, so as to get, each for himself, the largest share he can of the wealth produced by their united efforts.

6. COMPETITION

Two men, A and B, are said to compete with each other when each of them tries to get C to be his customer for a given article, or his employer for a given job, or his employee in a certain grade of industry. In ages now long gone by the power of A and B to compete with each other was limited

by the fact that most of the things that men did, and the way in which they did them, were not left to their free choice but were forced on them by the customs of the time and the society in which they lived. Take a simple illustration. No man in England to-day is compelled by law to contribute anything towards the maintenance of a minister of religion. Until quite recently, however, the parishioner was not at liberty to contribute or to refrain from contributing to the parson of the parish. He had to make a set payment called a 'tithe,' which was originally one-tenth of all he got from his land, the tenth lamb, the tenth pig, the tenth egg, the tenth sheaf and so on; and the parson stored all these in a building called the 'tithe barn,' of which some are still left in our old-world villages. The tithe was a customary payment, but within the shell of custom the 'economic man' managed to look after himself, as the old proverb witnesses, 'As lean as a tithe pig.' It is of interest to observe that under quite different circumstances amongst quite different people such a customary payment produces the same results, for there is an Indian proverb, 'As lean as a Brahmin's calf.'

When the economist says that, looked at from his own special point of view, competition is the force which keeps the wealth-producing machine going, he simply states a fact which every one can see to be true. All he means is that men usually try to get the largest possible supply of goods with the least possible outlay of work, and that in order to do this they compete with each other. It is quite true, and is getting truer every day, that men engaged in doing the same thing tend to combine with each other instead of competing against each other, and it is therefore

sometimes said that competition is losing its force. But since they combine in order to compete on better terms with a rival group, the force of competition does not cease to act, but only acts along a different line.

The result of competition is that the stronger man, or the stronger group, gets better terms than the weaker man or the weaker group, and this in the long run does good. For men who fail are a drag on society, and it would never do if failure paid as well as success, for that would make nearly all men indifferent as to whether they succeeded or failed, and society would suffer in this way. All men are better, as well as better off, when they possess and use the power to compete on level terms with their fellows. Sweated workers get low wages not because they compete with each other, but because they have no power to compete with their employers, and so exact higher wages from them.

7. THE FOUR PARTNERS

Two out of the four agents of production, the labourer and the organiser, are men. Capital is a mass of things belonging to some one, and the share which the things called capital take in producing wealth is rightly put down to the man who owns them, the capitalist. In the same way every plot of land in an old country like our own is the property of some one, called the landlord, and the share which land takes in producing wealth is put down to the man who owns it, the landlord. Some people think that land and capital ought not to be the property of private persons, and they would like to take society to pieces and build it up again on a new pattern in which land

and capital would not be the property of private persons. People who think in this way do not agree as to what is to be done with the land and capital when this change has been made. Clearly, if it were made, some known person or body of persons would have to be given the power of deciding what should be done with every plot of land and every portion of capital, because if this were not done both land and capital would soon be utterly ruined. Later on we shall have to consider why they want to do it, and what would be the effect of trying to do it. For the present it will be enough to say that they regard the four persons who take part in the production of wealth—(1) the labourer, (2) the landlord, (3) the capitalist and (4) the organiser—as having interests opposed to each other which prevent them from doing all that they might do. In particular, the lot of the labourer is looked upon as so unsatisfactory under the present system that nothing but the radical change which they suggest will ever do him any good.

The economist is not directly concerned with this dispute. He has to do only with facts and reasonings about them. He does not deny that the outward appearance of the wealth-producing machine has changed a good deal in bygone ages, and may change a good deal in time to come. As a scientist, however, he has to deal only with things as they are and men as they are. The clash of interests between the four agents of production is plain enough, and every day affords illustrations of it. From the point reached so far it is clear, however, that they have one great interest in common. They differ about the share that each of them is to have of the goods produced by their joint efforts or contributions.

Their common interest is the size of the product, for the greater that becomes, the greater their share of it is sure to be. They are really the four partners of industry, and the main interest of each of them is the continued success and prosperity of the 'firm,' and the 'firm' is the nation.

We will now examine each of the four agents of production, or partners in industry, separately, in order to observe its special contribution to the production of wealth.

CHAPTER IV

THE FIRST AGENT OF PRODUCTION: LAND

1. THE NATIONAL TERRITORY ON ITS ECONOMIC SIDE



E have seen that countries vary very greatly in their national wealth, that is to say in their power to provide the people who inhabit them with goods to satisfy their needs. The first reason for this is to be found in the national territory itself. The following points have a direct economic bearing:—

(i) Other things being equal, the larger the territory, the greater will the wealth of its people be. In the table giving the national wealth of the various countries it will be seen that the same figure, £2,400,000,000 is given for Japan with an area of 146,000 square miles and the Argentine with an area of 1,153,000 square miles. There are only 8,250,000 people in the Argentine, and there are 58,000,000 in Japan, but owing to their much larger and much better endowed national territory the people of the Argentine are just as well off, taken together, as the people of Japan, and eight times better off taken man by man. Perhaps the most fortunate people in the world in respect to their national territory are the people of the United States. Quite apart from the

wonderful way in which nature has endowed it, the United States is so large that if the population of the whole world emigrated to it in a body, it would not be as thickly populated as England is at the present time.

(ii) Next in importance to size is geographical situation. If a country is conveniently situated on trade routes, or is a convenient centre to which goods may be sent for subsequent distribution, it may do very well indeed even in the absence of other factors. Holland is the great example of this, and Singapore and Hong-Kong are also excellent illustrations of the advantages that accrue from convenient situations.

(iii) It is quite certain that the temperate climate of England, which is neither too hot to prevent continuous work nor too cold to make it profitable, has helped very powerfully to give her people the great economic position which they hold. For climate directly affects national character, and this in turn directly affects the amount of wealth produced.

(iv) Good harbours with rich areas of land lying behind them are of special importance. Galway, though it has one of the finest harbours in the world, is a very small port because it lacks a well-endowed hinterland; while Liverpool, having Lancashire behind it, is one of the greatest ports in the world. Navigable rivers and a surface that lends itself to roads, canals and railways are also of great importance. If the Union of South Africa be compared with the United States, the economic effects of the absence and presence of these means of handling and moving goods are obvious.

(v) The soil of a country is its chief source of wealth. If a country has not only good soil, but

a climate suitable for one or more of the great staple commodities of modern commerce (*e.g.* wheat, wine, wool and cotton), she is bound to do well in wealth production. Science is rapidly helping men to overcome some of the defects of poor soil, and even of unfavourable climate. Rainfall may be increased by planting trees, and barrenness turned into fertility by a good irrigation scheme; but it is of course far better to have these things as the free gifts of nature than as the result of human effort. The minerals found in a country are now of as much economic importance as the soil itself.

2. SHIFTINGS OF ECONOMIC CENTRES

Do what he will, man's command over nature is limited. He has done marvellous things. For example, he has righted the balance when geography had weighted it against him by making the Suez Canal, which once more put Italy and Egypt on one of the great trade routes of the world. He has cut the great American continent into two parts by the Panama Canal, which not only shortens the direct sea voyage from Europe to Asia and Australia by thousands of miles, but renders it much safer. When men belonging to the European type of civilisation carry their science and their practical ability into lands that have lagged behind in economic progress, they can effect wonderful changes in a short time. This has been the case in India, in Egypt, and even within the last year or two in Mesopotamia. On the whole, however, nature's endowment of any particular area of land has to be taken as in the main unalterable.

Hence it has come about that in the course of

the ages there have been great and interesting shiftings of the centres of economic power. 'Westward the course of empire takes its way,' said an eighteenth-century poet, and this is true of political power because it has been true of economic power. Mesopotamia, which British science and skill are now doing so much for, was in ancient times the seat of a powerful empire. In Mashonaland and Mexico there are abundant traces of civilisations so long extinct that not a trace of them remains in records or traditions. The spade of learned men has proved that the glories of Troy existed in fact, and not merely in Homer's imagination. The actual land, with all its natural endowment, may be there unchanged, but the work and wealth based on it have disappeared. On the other hand, Prussia, once 'the sandbushes of the Holy Roman Empire,' became in the two generations before the War as mighty in industry as it was in arms. Why these changes? All sorts of reasons have to be examined before an answer can be given. In general we may say, however, that with the growth of new needs the capacity of different lands to supply satisfactions has greatly changed. The older needs have become not less but more urgent with the increase of the world's population—hence the Argentine and Canada; but the newer needs have called other centres into activity—hence Prussia and the north of England.

3. THE OLD AGE AND THE NEW

In older days it was essential that a land should feed and clothe its own people. There was much trade, but not in the great staples of everyday life. Indeed, so limited was the movement of such goods that plenty and famine might exist side by

side, and the abundance of Kent be unable to relieve the scarcity of Yorkshire. The wealthier lands, therefore, were those with much fertile soil, since almost the whole of economic activity was based immediately on the staple products of agriculture. As a convenient help to the memory, for it is a label not an explanation, we may speak of the older age of wheat and wool. In strong contrast to this is the modern age of coal and iron, the monarch of which is still King Steam, though two rival kings, oil and electricity, are now trying to dethrone him. Coal and iron are so important, and in such constant and imperious demand, that a country which has an abundant supply of them does very well even if its soil be poor. There are reasons for thinking that a bleak island in the Hebrides contains an abundant supply of good iron-ore. If it be true, the other drawbacks of soil, climate and situation will fail to check the economic expansion of the island. For, having what the world needs most, all other things will be added unto it. Wherever they are found, coal and iron drive out wheat and wool. The 'wheat centre,' that is to say, the district where most wheat is grown, is steadily shifting westward in Canada and the United States. Before the War, the number of acres on which wheat was grown in this country was steadily diminishing, and we were becoming more and more dependent on food grown in other lands.

4. ENGLAND'S GOOD FORTUNE

It has been the singular good fortune of England to be well fitted by natural endowments to adapt herself to successive economic changes which were beyond her influence, and in the most im-

portant cases of all to introduce them. Before the invasion of the Anglo-Saxons this island was '*Britannia toto mundo divisa.*' The changes which gave such unexampled value to her geographical position were brought about by other peoples. It was, for example, the English who should have erected an enduring monument to Columbus as one who 'gave another world' to them. When Europe wanted wheat, England was the granary of Gaul; later, when the Low Countries wanted wool, England supplied it. Towards the middle of the eighteenth century the series of rapid changes which we call the Industrial Revolution began here, thanks to the fertile brains of English inventors; but it was our abundant supplies of coal and iron which enabled us to take almost exclusive advantage of the new machinery for more than a generation. Finally, cotton was the corner-stone of the changes, and for the manufacture of cotton our great County Palatine, Lancashire, is so uniquely suited that even to-day she possesses more than a third of the world's cotton spindles.

5. THE STUDY OF A PARTICULAR PLOT OF LAND

In the centre of the city of London is a strong, squat stone building, 'the Old Lady of Threadneedle Street,' whose proper name is the Bank of England. The building stands on three acres of ground, and bank and land together were worth before the War £2,500,000, or about half a crown for every square inch. In the north of Scotland there is land which would not be too cheap at half a crown an acre to a man who had to get his living off it. So far we have been comparing country with country, and have seen that differ-

ences of national territory are the cause of differences in the amount of wealth possessed by the people. Clearly, however, there are differences at least as striking between different portions of the same national territory, and it is to be expected that these differences will have the most important economic consequences. The student should always think and write about land with his mind on definite plots of land with which he is familiar, *e.g.* the farm on which he spends his summer holiday, and the plot of land on the outskirts of his town on which the new factory is being built. It will be well to leave glib talk about land in general to those who are not willing first of all to do a little hard thinking about plots of land under their very eyes.

Now when different plots of land are compared with one another it is seen that very different uses are made of them. Why do not the Governor and Company of the Bank of England pull down the bank and grow cabbages on their three acres? Cabbages are very good things, and there are none too many of them in London. Why does a man who owns three acres in Kent grow strawberries? Has he not heard that our supplies of home-grown corn are very small? Here is another man who owns three acres in Wimbledon, and he is growing, if the term may be allowed, a crop of eight-roomed houses. Has he not read that strawberries have just fetched a shilling apiece in Covent Garden? We may be sure, however, that bank directors, country smallholder and suburban builder know what they are doing. The man who owns land wants to do the best he can with it, and he can only do this by putting it to the most profitable use.

6. THE TWO USES OF LAND

There are two great uses of land: (1) as a source of crops, and (2) as a site for buildings. Further, there are all sorts of crops—wheat, hops, strawberries, grass and so on—and all sorts of buildings—banks, cotton mills, railway stations, villas, cottages and so on. As things are at any particular time, some plots of land are only put to the first use, and some only to the second, but other plots are constantly changing from one use to the other, and from one kind of crop to another. Any one who lives in a growing town will see changes of this kind taking place. Where the town ends and the country begins, he will find houses being put up on land that was growing corn last year. Near the centre of the town he will find dwelling-houses being pulled down to make room for a factory.

To whatever use a particular plot of land is put, a very important law governs the results. When a man sets his potatoes on his allotment he first manures the soil, and so does a farmer before he sows his wheat. This is constantly happening, and there is a constant reason why it should happen. The answer is simple. Suppose the man divided his allotment into two halves, on each of which he sowed potatoes, manuring one half and not manuring the other. All other things being equal, he would get a larger crop of potatoes off the first half than off the second. Note carefully that he would get potatoes off the unmanured ground. Let him put the seed in, and leave nature to do the rest. Nature will give him a crop of potatoes without manure, and will do it year after year on the same plot of land. For example, it has taken fifty years of continuous

cropping without manures to make any perceptible difference in the yield per acre of the wheat-lands of Dakota.

Why does a farmer use fertilisers? Clearly in order to get an addition to his crop. It is equally clear that if the addition to the crop only just paid for the fertiliser, he would have no motive for using it, but since the buying price of the fertiliser is less than the selling price of the wheat it brings into existence, the farmer gladly uses it. Again, the addition to the crop will vary with the amount of fertiliser used. It would not be worth while to sprinkle ten ounces of it on a particular field, and it would be foolish to dig in ten tons of it, since too much manure is worse than none at all. The farmer therefore stops somewhere in between ten ounces and ten tons. Let us suppose, as we are quite entitled to do, that he stops at ten hundredweights, each of which costs him 5s. Why not eleven? Clearly because it would not pay, the addition to the crop due to the eleventh sack not being large enough to make it worth while to use it.

7. THE LAW OF DIMINISHING RETURNS

The farmer stops at the tenth hundredweight because his knowledge of that particular plot of land and of crops and manures tells him that that is just about where he ought to stop. We can, however, put his thoughts into an exact shape as follows:—

Suppose this plot would give 100 bushels of wheat, worth 5s. a bushel, without using fertiliser, which costs 10s. a sack, and that the following table represents the results of adding varying

quantities of fertiliser, all other things remaining exactly the same :—

Sacks of Fertiliser used.	Yield of Wheat in bushels.	Addition due to last sack added in bushels.
0	100	0
1	111	11
2	121	10
3	130	9
4	138	8
5	145	7
6	151	6
7	156	5
8	160	4
9	163	3
10 Marginal sack	165 Margin of cultivation	2 Marginal addition
11	166	1

The first sack pays him handsomely, and each succeeding sack pays him, but in a diminishing degree, till he comes to the ninth. The tenth gives an addition to the crop which only just balances its cost. Beyond this he will not go, since the eleventh sack would result in a loss. Although this is an ideal scale, it represents an obvious truth, since if it were not true, one farmer could grow wheat enough for the whole country by using fertiliser enough. Moreover, actual experiments demonstrate the operation of such a scale of diminishing returns. Of course, all sorts of changes may occur. If, for example, wheat rose to 10s. a bushel, or fertiliser fell to 5s. a sack, the eleventh sack would just pay. Nor do we need to suppose that any farmer is so exact in his practice as our table makes out. He gets as exact as he can, since his success as a farmer depends on the closeness with which he does so.

If a man is using a plot of land for building purposes exactly the same principle guides his conduct. Suppose he is putting up flats in a town where there is no by-law to limit the height of his building. He would be foolish to build only one storey high, and he could, if he liked, build fifty. In fact, he contents himself with six storeys. Why? Simply because the cost of the seventh storey would not be met by the rents he could get for the rooms. If rents went up, or the cost of building went down, a seventh storey might well be added. There is precisely the same relation between the cost of successive storeys and the addition to the yield in rent as there is between the cost of successive sacks of fertiliser and the yield in corn. In both cases the land is used up to the margin of profitableness. The tenth sack is called the marginal sack; the sixth storey the marginal storey.

The case of the farmer applying sack after sack of manure to one plot of land reminds us of the case we have already studied of the ironmoulder's wife giving portion after portion of meat-pie to her hungry husband. In each case we see a law at work which economists call the 'Law of Diminishing Returns.' Whenever we are examining a case in which this law operates, it must always be remembered that all factors are supposed to be fixed except one. It is the number of hundredweights of fertilisers that varies in our particular illustration. All other things, sunlight, rain, the amount of ploughing and harrowing done to the soil, and every other operation that helps to produce the crop, remain the same. Of course, in nature these other things do not remain the same, which is why economics is such a puzzling science, and one in which it will never do to prophesy.

CHAPTER V

THE SECOND AGENT OF PRODUCTION: LABOUR

1. NUMBERS AND WEALTH



UPPOSE there were two countries which, so far as nature's endowment was concerned, were about equally favoured. It is not necessary to suppose that they are as much alike as two penny postage stamps, for nature's endowment, as we have seen, takes various forms. Such an equality in situation, size, soil and minerals as might easily have been attained if Europe and North America had had a different political history is sufficient for our purposes. Given this equality of endowment, it follows that the amount of wealth produced in each country will depend upon the number of people who live in it. Moreover, the same result is reached by considering the history of our own country, for it is clear that all through the centuries her wealth has increased as her population has increased, and indeed much more rapidly.

When the population of Robinson Crusoe's island was doubled by the arrival of Man Friday, it at once happened that Crusoe and Friday working together could produce many times more wealth than Crusoe had been able to produce working by

himself. Naturally, two men by joining their forces can easily get results, even in such simple things as lifting weights and shooting game for food, which one man by himself could never get. Within limits that have perhaps never been reached by any country, and certainly not by any country inhabited by people belonging to the European type of civilisation, an increase of population has been followed by a greater increase in the amount of wealth produced. Economists were at one time greatly concerned with what is called the 'population question.' Robert Malthus published in 1798 the first edition of his famous *Essay on Population*, which for the next half century was one of the most talked about books in the world.

2. MALTHUS ON POPULATION

Malthus taught that the well-being of a country depended upon the relations between the number of its people and the quantity of food they could produce from its soil, for in his day nations were much more dependent on their own resources than they are to-day. He taught, further, that the available food supply increased slowly and in arithmetical progression, while population increased rapidly and in geometrical progression. This teaching can be put into figures as follows :—

Food .	1	2	3	4	5	6
Population .	1	2	4	8	16	32

The interval between successive figures he puts at twenty-five years. A glance at the figures shows that if this theory were true, and nothing hap-

pened to prevent its working out, it would only take a century to make a very grave change for the worse in the economic situation of any country, since each person living at the end of the first century would only have half as much food as each person living at the beginning of it, and the end of the next half century would see them all starving. The hopefulness awakened in men's hearts in the early days of the French Revolution had set some political writers dreaming of a golden age to come, and Malthus, after very patient inquiries into the facts of those days, showed that if the facts remained unaltered these golden hopes could not be realised.

Fortunately the facts have not remained unaltered. New lands have been opened out, including most of America and Australia, which are vast storehouses of food, and while these newer lands have taken on the work of feeding more and more of the white peoples, the older countries of Europe and the oldest states of the American Union have become thickly-peopled hives of industry. The Industrial Revolution, which when Malthus wrote was only in its opening stages in England alone, has made the situation altogether different, so that the older countries have become capable of supporting ever larger numbers in ever-increasing comfort.

3. WORKERS AND NON-WORKERS

With a population of a given size, a good deal depends upon the number who are workers and the number who are non-workers, and this makes it necessary to be quite clear as to what we mean by 'work.' Now it is obvious that two people may be doing the same thing in the same way,

and that one shall be 'at work' and the other not. A golf professional is going round the links with a member of his club. Both are playing golf, and the member may on this particular occasion be playing better golf than the professional. Clearly, however, there is the difference between them that the member is enjoying a game, while the professional is earning his living, and the difference is not altered by the fact that the professional is enjoying the game. A mother tends her sick child in an altogether different frame of mind and under the influence of an altogether different motive from those felt by a trained nurse who is engaged and paid to do precisely as the mother does. Work, therefore, is labour of body or mind undergone by men for the sake of acquiring goods or services with which to satisfy their needs. In the morning a doctor walks to a patient's house—that is work. In the evening he walks to the theatre—that is not work. From the economic point of view work is one of two correlative terms, terms, that is, which always go together in the mind so that one cannot be used without suggesting the other. 'Husband' and 'wife,' 'parent' and 'child,' 'king' and 'subject,' are such pairs of terms. 'Work' and 'wages' make another pair. It is true that one of the commonest and most important kinds of work, the housework done by a wife, is not paid for by money wages, though it has been suggested that a fixed money payment should be due from husband to wife on account of it. The return for the work in this case is, or at any rate should be, beyond reckoning in terms of money; while, if these lower motives are to enter into it, the law adequately safeguards the economic position of the wife.

At the census of 1911 the population in England

and Wales aged ten years and upwards was distributed as follows :—

	Males.	Females.	Total.
In Government service . . .	248,624	50,975	299,599
Army and Navy .	205,817		205,817
Professions (lawyers, doctors, and so on) . . .	367,578	347,043	714,621
Domestic servants .	387,677	1,734,040	2,121,717
Commercial occupations (*i.e.* trading in goods as distinct from producing them) .	2,062,710	151,321	2,214,031
Agriculture and fishing . .	1,165,654	94,822	1,260,476
Industries . .	7,015,605	2,452,533	9,468,138
Non-workers, including all housewives . .	2,208,535	10,026,379	12,234,914
Total .	13,662,200	14,857,113	28,519,313

During the War necessity compelled all the belligerent nations to make a discovery of great economic importance, namely that many kinds of work hitherto done only by men could be done quite as well by women after a short training. To what extent this war-time experiment will affect industry in peace time remains to be seen.

There are many who are fortunate enough, because they possess property which yields them an income, to be exempt from the necessity of working in the ordinary sense of the term. Now it is a narrow view which regards this leisured class as parasites living on the industry of those who work. They do not work themselves, but their property, to the exclusive use of which the

law gives them an unchallengeable right, is their contribution to the national output. In expressing this, the economic view, it must be added, however, that people in this fortunate class should regard their leisure less and less as a personal boon and more and more as a happy opportunity for social service.

4. PRODUCTIVE AND UNPRODUCTIVE LABOUR

A great deal used to be said by economists about the difference between 'productive' and 'unproductive' labour. Productive labour was that which had to do with the bringing into existence of some article ready to satisfy the needs of men, *e.g.* a loaf of bread or a pair of boots. Any labour, including that of the railwayman, the shopkeeper and the errand boy, which was necessary in order to get the loaf on to my table and the boots on to my feet was called productive. Work which did not do anything to produce a material commodity, or to put it in the hands of a consumer, was regarded as unproductive, though the name was by no means intended as a slur upon the labour.

A better view of the subject is gained by asking, 'Productive of what?' If the answer be, as it should be, 'Productive of satisfactions for needs,' very much and very important work left outside the old class of productive labour will be included. Man needs many things besides food and clothing. He often needs recreation at the end of a heavy day's work in order that next morning he may start again with a light heart and full of energy, and the comedian on the music-hall stage who made him laugh himself into this productive frame of mind is, rightly considered, as much a productive labourer as anybody else.

5. STUDY OF A PARTICULAR WORKER

It will be well to adapt to the case of labour the method followed in dealing with land. Just as we then studied a particular plot of land and so brought the problem down to a size at which we could grasp it, so now we will cease to consider labour in this large and general way, and deal with one particular workman. It must be remembered that at present we are at work on an important but very special subject in economics. In the long run the well-being of a nation and of every living soul in it depends upon the amount of wealth that nation is turning out, day by day and year by year, for the use of the people in it. It is quantity of wealth alone we are considering now, since we must take one thing at a time. The division of the wealth when produced amongst those who produce it is left aside now, but only for treatment later. The question to be answered now is, 'Under what conditions personal to himself will the worker raise his output to the maximum?'

(i) The first point to note is that the better the health of the worker the larger will be his output and the better its quality. It has been calculated that if consumption could be stamped out — a task by no means impossible — it would increase the wealth-producing power of the nation by millions per year. Again, the number of children born who die in early infancy is enormous, while many of those who survive do not live as long as they should. Great improvements are taking place. The death-rate of infants is falling very rapidly, and the general death-rate is also falling. 'Science shows more clearly every year that no man can be ill unto himself alone, since

most sick persons are, or are very likely to be, a cause of sickness in others. Hence, every measure which makes the worker healthier increases his output. Many firms employ a doctor and nurses to watch over their workers, in order that cases of illness may be dealt with in their earliest stages. The great importance of good health as a chief factor in wealth producing has been recognised in this country by the establishment of a Ministry of Health to safeguard the health of the people.

(ii) Next in importance to good health comes good education. Experiments show that boys and girls who have reached the upper classes in elementary schools do even simple tasks much better, and consequently earn a higher wage, than those who have not reached the same standard. Moreover, they make far more rapid progress in earning power than the others. The chief object of education is to give boys and girls the power and the desire to enjoy the good things of the mind, but it is no drawback that it also enables them to earn more money when they grow up. Technical education, intended to increase one's power of applying the mind to practical work, obviously has the same results. Before the War our most formidable competitors for the world's trade were America and Germany, and in both these countries far more attention was paid to the education of the worker than was the case in this country. On economic grounds, therefore, it is necessary to give every worker the best education, general and technical, which he is capable of receiving. It will pay him, and by paying him will pay the country.

(iii) Having kept our worker healthy and educated him thoroughly, endowing him with that 'sane mind in a sound body' which was the old

Roman ideal, the next thing is to see that he does that kind of work for which he is best fitted. The kind of work taken up by a boy or girl is far too often left to mere chance, and no attempt is made to sift the opportunities of employment that offer themselves in order to find out which will pay best in the long run. ' Blind alley ' occupations, which lead to nowhere, tempt many boys because at their age they can get a higher wage in them than in a skilled trade. In a free country the choice must always be left to the individual, but since in these early years the individual is not of himself capable of making the best selection, and if he were might often be overruled by parents who were either selfish or ignorant, every possible agency which will enable the wisest choice to be made should be brought into operation. This is the economic ground on which the new Education Act is based. When young people have to continue their education up to the age of eighteen, the final choice of their life's work will more frequently not be made until they are ripe for making it for themselves, and this again will tend greatly to increase the national output of wealth.

(iv) These three considerations are all important. The output of each worker will be greater if he is healthy than if he is unhealthy, greater again if he is well educated than if he is ill educated, and still greater if his line of work has been well chosen than if it has been ill chosen. But all these three things might apply to a slave; would, indeed, apply to him if he had a wise master. Yet slavery disappeared in all countries not only because it was wrong but because it did not pay. Slaves in Athens and Rome were not, as is sometimes thought, men belonging to a black, ignorant and inferior race. They were frequently far better

educated than their masters, and of the same or related races. Aesop was a slave, and his fables have delighted the world's children ever since. Epictetus was a slave, and his golden sayings have all down the centuries been the choice food of cultured minds. Yet slavery disappeared because slavery can never pay since it can never be made pleasurable. The individual worker whom we are studying will not give his greatest output to his country until he finds pleasure in his work.

(v) In order that this may be the case, our worker must work under the best possible conditions. It is impossible to make the work of a coal-miner or a sewerman pleasant, but in all factories and workshops too much attention cannot be paid to making the surroundings of the workman as pleasant as the case permits of. The worker knows quite well that in many cases not very much can be done for him, and therefore welcomes every effort to do what is do-able. A well-known firm employing thousands of women instituted an afternoon cup of tea. It was good for the girls as well as for the dividends. Again, work will be pleasant when the number of hours worked is such that the worker leaves off with a reserve of energy which he can devote to enjoying his leisure hours, and when he gets a wage which he recognises as a fair return for the work done. Pleasure in work will be greatly increased when the worker knows that he is adequately safeguarded against the evils of industrialism, the chief of which is unemployment. He may fairly be called upon to pay part of the cost of safeguarding him, but society, merely because it regards the maximum output as desirable, should help him to do this. Lastly, pleasure in work will be enhanced when the worker feels that the society of which he is a member comes

up to his ideal. It is all for the country's good that the workers should acquire social ideals. If they happen to be wrong ideals, which may easily be the case at the outset and until thought has sifted them and time has tried them, it is for those who know this to put matters right by inspiring the worker with a nobler ideal.

6. LABOUR A PARTNER IN INDUSTRY

From this point onwards, the idea of society as a partnership will become clearer to the student with every addition to his knowledge of economics. A thousand of the finest workmen, selected from the shipyards of the Clyde, the cotton mills of Lancashire and the farms of Norfolk, would produce no wealth if they were placed in the middle of the Sahara because one of their partners, Nature, was for once in an unyielding mood. The case would be different, but not very much different for a long time to come, if they were placed in some new Canadian township hundreds of miles from the resources of civilisation. And this would be the case because now, with Nature quite willing to do for them all that she can do, they would be without tools and machinery, and without expert ' captains of industry ' to organise them for an economic victory.

With these simple but decisive truths in mind we can now proceed to the study of those agents of production, Capital and Organisation, which have been developed during the long but victorious struggle of man to be master of his environment.

CHAPTER VI

THE THIRD AGENT OF PRODUCTION: CAPITAL

1. OBSERVATIONS IN ECONOMICS

THE young student cannot too soon or too firmly master one important truth, namely, that he cannot become an economist by reading this little book, or indeed by reading many big ones. It is just as necessary to use one's eyes in studying economics as in studying botany. Economics is concerned with the doings of men in everyday life, and it is men and their doings which must be watched, precisely as a botanist watches plants. The doings of men in the business of everyday life are recorded day by day in the newspapers, and he would be a somewhat slothful reader of this little book who could pick up any issue of any good newspaper without finding in it something which reinforced or illustrated what he had read here.

2. THE TWO GROUPS OF GOODS

It is by using our eyes that we discover that the goods or commodities around us fall into two distinct groups. Those in the first group are not able to satisfy directly and at once any primary

need felt by man. They neither feed him, nor clothe him, nor provide him a home, nor amuse him. Iron, for example, is one of the most important goods in the world, but if any man dumped a ton of iron-ore on my lawn under the impression that he was doing me a good turn, I should vigorously undeceive him. A pound tin of my favourite tobacco on my study table—that would be quite another affair.

We will therefore take some familiar goods and put them into their right group as follows :—

First Group.	Second Group.
A factory.	A cottage.
A dray-horse.	A hunter.
A motor-lorry.	A touring car.
A sovereign.	A spade-ace guinea.
A bale of raw cotton.	A lady's blouse.
A Jacquard loom.	A bicycle.
'Bradshaw.'	Shakespeare's Works.
A sack of wheat.	A loaf of bread.
An ox.	A roasted sirloin.
A roll of printing paper.	A copy of *The Times*.
A jar of marmalade in a shop.	The same jar on the breakfast table.

The distinction between the two groups is plain. The first group consists of goods used in business life. They are either raw materials, half-manufactured articles, machines, none of which directly satisfy a human need, or they are goods, like the jar of marmalade, which are ready to satisfy human needs but are not yet in the right place for doing so. All these goods, in short, are goods of business life, concerned with the production of wealth, for which reason they are sometimes called 'production-goods.' Goods in the second group are in the hands of private persons, either

in actual use or awaiting the owner's convenience. They directly satisfy our needs when we so use them, and consequently they are sometimes called 'consumption-goods.' Every one of these goods, to whichever class it belongs, is private property, that is it forms an item of the owner's wealth and has a money price. Therefore all of them form part of the wealth of the nation. Those in the first group are indeed part of that wealth, but are that part of it which is devoted to the carrying on of business with a view to producing more wealth in the future. Economists call this part of wealth by a special name—Capital.

3. THE CAPITAL OF A FIRM

Every day there may be found in the leading newspapers large advertisements which inform the public that a new 'company' is to be formed to carry on a certain business, for which purpose a 'capital' of so many pounds, *e.g.* a million in to-day's *Times*, is required. In 1919 no less than £148,000,000 was got together in this country for the purpose of building up new businesses or extending old ones, and it goes without saying that the well-being of the country depends upon this being done continuously. Though Capital is for convenience measured in money, it is not money. Capital is goods, and the first maxim of economics is, 'Think in goods,' and the neglect of it is a constant source of error in argument and bungling in action.

The capital of any firm always consists of one or more of the following things :—

(i) Land and buildings.
(ii) Tools, machines and engines (the 'plant').
(iii) Raw materials.

(iv) Stocks of finished goods.
(v) Patent rights, and any other legal rights to do or use things (such as trade-marks) which have a money value.
(vi) Cash in hand or in the bank.
(vii) Debts owing by customers.
(viii) Goodwill.

When all these items are fairly valued, the totals added together, and all that the firm owes to other firms or people subtracted, the result is the capital of the firm measured in money. Naturally any one or more items may change in price. For example, a Yorkshire firm which had on hand at the outbreak of war an unusually large supply of raw wool had this part of its capital greatly enhanced in price during the War. Again, a wine merchant puts in his cellars a thousand bottles of port. They remain there year after year, looking just the same to the eye, but they get more valuable each year, and consequently the capital of the firm grows each year for this reason.

4. THE ORIGIN OF CAPITAL

The English people cannot be traced back to a time when they had no capital. On the banks of the Mersey there are huge mills in which wheat which has come from the Middle West of Canada and the United States is ground into flour by expensive and perfect machinery. Such a mill is a good specimen of capital. Now the word 'mill' is found, of course in various forms, in all those related languages, living or dead, which prove that the present peoples of Western Europe, the Romans, the ancient Greeks and some of the peoples of India sprang from a common but long-vanished stock which scholars call the Aryans.

The presence of the word 'mill' in all these languages is a proof that the thing 'mill' was used by our common ancestors before the different peoples split off from them. Naturally the Aryan mill would not be such a mill as you will find on the Mersey but rather a quern, the modern representative of which is the mortar and pestle which the chemist uses in his dispensary. But of course we argue back from the mill to the thing which the mill is used for grinding—corn. Hence we learn that as far as we can trace our stock they had learned how to grow corn for food.

In order to trace them farther back still we must learn what is done by the lowest tribes of savages to-day, and amongst the lowest are the black men of Australia, of whom a close observer writes:—'As they neither sowed nor reaped, so they never abstained from eating the whole of any food they had got with a view to the wants of the morrow. If anything was left for Tuesday, it was merely that they had been unable to consume it on Monday. In this they were like the beasts of the forest, to-day they would feast—aye gorge—no matter about the morrow. So they never spared a young animal with a view to its growing bigger.' This last sentence is very important, for as we have learned one lesson from the word 'mill,' so we can learn another from the word 'capital' itself. The word 'capital' is a close relative of the word 'chattel,' a lawyer's word for movable property, and of the word 'cattle.' In these days when every square inch of land in this overcrowded country is the property of some one, it is natural, but quite wrong, to suppose that land was always as important in the economy of a people as it is to-day. In earlier times, however, land was literally as cheap as dirt, and what counted

with our far-away ancestors was the possession of cattle, just as to-day the wealthy Laplander is the one who possesses many reindeer. So in imagination we can picture our ancestors at a time when they were like the Australian black men, and then trace them forward to a later stage when they had done what the Australian black man has never learned to do—tame and rear cattle; and on again to the time when they had learned to grow corn and grind it in a mill; at which time we can dimly piece together certain scraps of information about the way they lived.

Capital began with a surplus of food above immediate needs which was not consumed but carefully kept, and the energy that would otherwise have gone in the search for food used in doing other things intended to increase the future supply of goods. The two marks of capital in its earliest stages were :—

(i) It was a surplus from past efforts.
(ii) It was intended to increase the result of future efforts.

Capital, like Janus, the Roman God of Gates, has two faces, one backward-looking and the other forward-looking. The Aryan mill has developed into the Mersey-side mill, but capital has not changed at all in its economic nature. It still looks behind and before, and is still the property of the man who is able to make it do so.

5. WHAT CAPITAL DOES

It is possible to catch trout by groping for them with the bare hand, and a skilful groper might, after many hours' work, catch enough fish for a

square meal. Primitive man early improved on this, and his bone fish-hooks are found mingling with his own bones. One modern steam trawler will catch fish enough to supply all the people of a large town with all the fish they want. The capitalist, irrespective of any personal work he may do, enters into the partnership of industry because his capital increases the output of the other partners. This it does in three ways :—

(1) It enables men to engage in other work than that of providing simple goods for the satisfaction of their own present needs. The ironmoulder of our illustration might well have gone home to a good meal of excellent meat-pie after spending his day in making some forging for use in a gigantic liner which will not be ready to bring its first cargo of wheat and meat from New York for another eighteen months.

(2) It permits industry to be carried on the results of which will not be reaped for months or years to come.

(3) In the form of powerful engines it enables a few men to do what could not be done by any accumulation of human effort, or, if it could be done, could not be done except at a prohibitive cost. No doubt all the food produced in America for our needs could be brought across the Atlantic in pair-oared boats, but it would take the whole of the present population of America not engaged in growing the corn or making the boats to get it over.

Capital has long passed the tool stage in which it merely assisted labour, or even the machine stage in which it replaced labour, and has itself become a product-maker. It was calculated that the labour power used in growing barley in the United States in 1896, if it had only had the capital power of 1830 at its disposal, would have produced just under

three million bushels, whereas, with the actual capital power of 1896 to aid it, the harvest was nearly seventy million bushels. In other words, nearly ninety-six per cent. of the product was due to capital. Another calculation showed that capital power applied to pin-making increased the efficiency of the labour power no less than ninetyfold.

6. THE WEARING OUT OF CAPITAL

Some forms of capital can only be used once and rapidly wear out. The leather used in making a pair of boots is a case in point. Such capital used to be called 'circulating capital,' because it was contrasted with 'fixed capital,' that is to say capital, *e.g.* the Goodyear welter used in making the shoes, which could be used over and over again. But, sooner or later, all capital wears out. The most powerful locomotive goes to the scrap-heap at last. A road is capital, and there are roads in England to-day along which the Roman legions marched, roads in the same place that is, for the actual road has been made and remade hundreds of times since. Not only does capital wear out by use, but very frequently it has to be scrapped in order to be replaced by newer forms of capital which it will pay better to use even after the loss involved in the scrapping.

The economist often has to say things that appear so simple and commonplace as not to be worth saying. The reason is that extremely important consequences follow from these commonplace truths, and, since the truths are overlooked because they are commonplace, the consequences that follow from them may also be disregarded, and with fatal results.

7. INDUSTRY DEPENDS ON CAPITAL

The first of these truths is that under modern conditions the amount of industry that can be carried on in a country depends on the amount of capital available to carry it on. Consequently, if industry is to be kept at its present level, new capital must be constantly created to replace that which is constantly wearing out. But it will not do to let industry remain on its present level. Those of us alive here and now could very well do with being better off than we are, and can only become better off if industry becomes larger and more productive. But it is not we alone who have to be considered. Every year our population increases by 370,000, that is to say by a population which if it were all crowded on to one area, would require a town nearly as big as Leeds. Think of the capital in Leeds—its houses, its banks, its factories, its railway stations, its trams, its power-houses, its water supply, its sanitary system, its music-halls, its picture palaces and so on. Where are these to come from for the new population unless the old population provides abundant supplies of fresh capital? In the beginning capital depended on industry, and grew slowly because the most painful efforts produced only poor results. As things are now, industry is limited by capital, and if industry is limited by want of new capital, life will be limited too.

8. THE SOCIAL ORIGIN OF NEW CAPITAL

The second of these vital truths refers to the way in which new capital comes into existence. When a company announces that it requires new capital, this new capital is got together in the

following way. People who take up shares in the new company send a cheque to the founders of the company for the amount of new capital they are willing to provide. The company pays the cheques into its bank, and buys the buildings, machines and other parts of the real capital it is going to use by means of cheques on its own bank. The capital goods required by the new company are either in existence or not. If they are, the seller of them to the company provides himself with fresh circulating capital in the form of money with which to go on producing more goods; if they are not in existence, the manufacturers who make them receive the order to make them, and so in both ways new springs of industry are opened up.

The only people who can write these cheques to start a new company are people who in the past have not spent all their income on the needs and pleasures of the moment, but have 'saved.' Incomes are received in money; and when a man receives his income (whether it be the weekly wage of £4 paid to a road-sweeper, or the quarterly warrant for £1250 paid to a Cabinet Minister, or the cheque for £50,000 paid to a prize-fighter) he has to spend it in purchasing goods to satisfy his current needs, that is to say the possession of income in the form of money enables him to buy the only kind of income that matters—goods—and he obtains these goods from an existing stock. If he does not spend all his money income in the purchase of existing goods of the second group (see Section 1 of this chapter) the part which he saves, unless he is foolish enough to put it in a stocking and hide it up the chimney, always gets into the hands of those who are at work, or want to get to work, in producing goods of the first group. A man must still have the mind to save;

he must still put off enjoying good things to-day in order to have more of them to enjoy at some future time. But, granted that he has the mind, our social arrangements are such as to provide him, if he is careful, with easy methods of using his savings to provide the capital society needs. Capital is the result of saving. It was so in the grim dawn of human endeavour, and it is so still.

CHAPTER VII

THE FOURTH AGENT OF PRODUCTION: ORGANISATION

1. A LITTLE STUDY IN SHOPS

LET us once more begin by using our eyes in a little study of shops. Here is the general shop in a small village. The shopkeeper sells a great variety of goods—a pound of bacon, a yard of flannelette, an ounce of tobacco, a stick of toffee and a box of pills in succession. He has not many customers, but each of them has need of a number of things during the week, and the shopkeeper so arranges his stock as to satisfy as many of their demands as he can. In the small town near by you will see a larger shop of an improved kind. It is a double-fronted shop, and one class of goods, groceries and provisions, are found on one side of the shop, and wearing apparel on the other, from a pair of woollen bootikins for baby to a ready-made suit for father. You notice, further, that this shopkeeper has a woman assistant who attends to the clothing half of the shop, and an errand boy who delivers parcels to purchasers. In a still larger town there is a further change. Side by side are two shops kept by different men, the first a grocer and the second a draper, each with one or more assistants and a cart to deliver

the goods. Since the town is larger, each of these men can find enough to do by selling one large general class of goods, of which he obtains in time such a full knowledge that he is able to buy and sell to the best advantage. Farther along the street there is the tobacconist, the ironmonger, the butcher and so on. Last of all there is the London 'Stores,' where everything can be purchased, from toy soldiers to motor-cars.

In a word, the selling of goods is organised in different ways under different conditions. Moreover, we end where we began—in the general shop.

2. JACK-OF-ALL-TRADES OR MASTER OF ONE?

In the making of goods just the same thing may be observed. The village blacksmith does jobs of every kind in iron work. In the Clyde shipyard a man spends all his time in using a pneumatic riveter, with which he drives a rivet into two thick plates of iron in less time than it takes a woman to sew a button on a jacket. Fifty years ago there were men who, after buying the necessary materials, could make a pair of shoes from start to finish. In a modern shoe factory one grade of workman does nothing but feed a machine which makes heels. A Canadian farmer in an outlying township has to be a Jack-of-all-trades. The same was true of a Prussian farmer at the beginning of last century. There was a time when it was true of the English farmer. From the earliest times, however, men devoted themselves to special trades, the names of which clung to the men who engaged in them and became our surnames, *e.g.* Smith, Wainwright, Baker, Fletcher, Fuller and many others.

This early and long-forgotten stage of the pro-

cess with us is still the existing stage in many parts of the world. For example, a certain Indian village contains ninety-three families who till the land and form the basis of the little community. In addition there are families of inferior castes who are servants of the high-caste 'ryot' farmers: one goldsmith family, one carpenter family, one shoemaker family, one watchman family, one ferryman family, three families who are makers of ropes, mats and baskets, one butcher family, and ten families who are the general servants of the village head-men—the civil service, as we should say. All these are paid for their work by a customary share of produce from each of the farmers, for whom they do such jobs as are requested. The difference between this primitive Indian community and our own country is extraordinary now, but we have undoubtedly lived through a similar stage. The Industrial Revolution made such changes that by 1841 there were no less than 1255 different sorts of employment in the cotton trade alone. In the census of 1911 all people who worked on railways were lumped together under the one head of 'Railways,' yet there are over 500 grades of railway servants.

This process by which one man does one job instead of many, or one part only of that job instead of the whole of it, so that from being Jack-of-all-Trades he becomes master of one, is called 'Division of Labour.'

3. DIVISION OF LABOUR: (1) ITS ECONOMIC ORIGIN

Let us suppose that in some old-time village there were two men, A and B, each of whom could make both a coat and a pair of shoes, and

who got their living by doing both of these things for their neighbours. The first of them, A, could make a pair of shoes in eight hours and a coat in six, while the second, B, could make a pair of shoes in nine hours and a coat in ten. If each of them made both a coat and a pair of shoes, there would be two coats and two pairs of shoes as the result of fourteen hours' work by A and nineteen by B. Suppose that they then agreed that A should make both the coats and B both pairs of shoes. The result would be that A would have to work only twelve hours and B only eighteen hours to obtain the same result, and this comes about because each of them spends all his time in doing the task at which he is the better workman.

4. DIVISION OF LABOUR: (2) ITS ADVANTAGES

It is not necessary to suppose that in the choice of a trade such a nice calculation is made as that which we suppose to have been made by A and B. In these days the boy about to enter on a trade finds the division of labour already made for him, and perhaps his choice is due more to accident than to forethought. Once in the trade, however, the mere fact that he has to devote himself only to that trade, or generally only to one operation in it, gives him a quickness and a skill which he could not otherwise attain. Adam Smith pointed out that a workman not accustomed to the trade of pin-making would probably not turn out one pin in a day, and certainly not twenty, whereas he had seen a small factory where ten men, because the work was divided between them and they had suitable tools and machinery, made twelve pounds of pins in a day, or four thousand

eight hundred pins per man. Division of labour increases output by giving each worker special skill and by providing workers of every degree of strength and ability with a chance of finding the work best suited to them.

Adam Smith thought that one of the advantages of division of labour is that when the mind of the worker is fixed on one special task he not only becomes more skilful, and so increases his output, but he is likely to make little inventions which still further improve things. In large works it is a usual practice to invite the employees to make suggestions as to how machinery or processes can be improved, and if their suggestions are adopted they are paid for them. What Adam Smith was thinking of has come about on a very large scale, though not from the efforts of the workers themselves. As soon as a task becomes perfectly simple, so that the worker can do it automatically, just as a skilful pianist plays a difficult and exquisite piece of music, some one is pretty sure to invent a machine for doing it. A modern shoe factory is full of machines which imitate the movements of the fingers of old-time shoemakers.

5. DIVISION OF LABOUR : (3) ITS LIMITS

The extent to which division of labour can be carried depends upon the size of the market for which the goods are being made. In a small factory one man does several things which in a larger factory are each done by a special workman. The principle on which A and B in our illustration divided between them the work of making coats and shoes is at work in the largest modern factory to set the limit to which any further division of labour can be carried.

6. DIVISION OF LABOUR: (4) ITS DISADVANTAGES

From the social point of view the advantages of the division of labour are obviously very great. Output increases by leaps and bounds, and we all get more of the goods we want at a lower cost in our own efforts. One of the earliest of English plays is called ' Gammer Gurton's Needle,' because the plot of it turns on the loss by Gammer Gurton of her needle, which is so serious that the whole village is comically upset by the search for it, and great satisfaction is felt when it is at last discovered where she had left it, in her goodman's breeches. Even in these after-war days the value of a needle to a housewife is insignificant, and we owe the fact to the division of labour. This is the social side, the wholly good side, of the process.

From the workman's point of view, however, there are, or at any rate are likely to be, two disadvantages. The very special and limited power of work which he attains is useless in any other direction, and if he is flung out of work it may not be easy for him to find another job. This will be more likely to happen if his particular kind of work has been taken over by a newly invented machine. The introduction of machinery has been an advantage to the working classes as a whole, but it has sometimes and for short periods been a disadvantage to special classes of workers. However, as the division of labour and the introduction of machinery goes on, a man may more easily cross from a branch of one trade to a branch of another trade, while transference from trade to trade in the undivided state would have been impossible.

There is a danger, too, that a worker who spends all his working hours in repeating incessantly

some small operation may have his capacity to live a full and rounded life stunted, which leads him to pass his leisure hours unprofitably, if not unwholesomely. The blacksmith's striker has a varied working day, with little snatches of talk and laughter; in a Clyde shipyard a man spends the whole working day driving rivets into ship plates with a pneumatic riveter which makes a noise loud enough to deafen a post. The work of the world has to go forward, and these are the conditions under which much of it must be done. Fortunately we are all coming to see that, as the benefit is social, the remedy should in part be social too. The worker must be given time and opportunity for leisure nobly spent and inspired to use them nobly.

The division of labour is not without the possibility of disadvantage for the employer. It is long ages with us since the tanner split off from the shoemaker, though there was a time when our ancestors made a rough sort of boot, as the American Indian makes a moccasin from the hide of an animal he has killed. The modern shoe manufacturer comes between the tanner who is behind him and the wearer of the shoes who is in front of him, and he may be unable either to buy his raw materials or sell his finished articles on good terms. Hence he may try to get control of a tannery to supply him with leather and, looking forward, may get a controlling interest in a large number of retail shops in which to sell his finished goods. In the same way a very large shipyard will be fed from iron works, which in turn are fed from coal and iron mines, the whole chain of connected industries being under one and the same control. In this interesting way we are seeing the reintroduction of ancient forms into modern

industry, just as the London stores is the village shop on a mammoth scale.

7. WHY ORGANISATION IS AN AGENT OF PRODUCTION

And this brings us to an important point. The principle which led to the division of labour was clearly brought out by our study of how A came to be a tailor only and B a shoemaker only. This was the beginning of organisation in industry, and the same rule holds good of it as of other things. Men organise because it pays to organise. In earlier states of society a man was born into a craft; he was a priest by birth, or a farmer by birth, or a smith by birth. Hence we spoke of the 'goldsmith family' in the Indian village whose economic organisation was explained above. Then the time came when a man's calling in life was left to his own choice. The organisation of industry that followed was not the foreseen and desired result of the action of some great man or men forcing their will upon the working and trading population. It was the result of the efforts of each man to do his best for himself and those who depended upon him. Since it was, on balance, a very good result, Adam Smith thought that each man, in doing his best for himself, was led by 'an invisible hand' to do his best for society.

In this little book, intended to lure you on to the further study of economics, organisation is treated as a fourth agent of wealth production. The saying of Sir William Petty (born 1623, died 1687) has already been quoted: 'Labour is the father and land the mother of wealth.'. Petty, therefore, recognised only two agents. One of

the great books on economics which you should go on to read is John Stuart Mill's *Principles of Political Economy*, published in 1848. Mill deals with three agents of production: Land, Labour and Capital. It is easy to see why capital has been added. Petty estimated the wealth of England at £250,000,000, or £46 per head of the population. When Mill wrote, the national wealth had increased to £4,000,000,000, or £143 per head, and this great increase in one hundred and seventy years was due to the growth of capital in the form of the new machinery, the new railways, the new steamships and so on; and therefore it was natural for capital to be studied by economists. Between the time that Mill wrote and the outbreak of the Great War, only two generations passed, yet these two generations added £10,000,000,000 to the national wealth, or two and a half times as much as existed in Mill's day. What is the cause of this great increase in the rate at which our national wealth is growing?

In order to answer this question, let us suppose—

8. A STUDY IN FACTORIES

The young student will by now have observed that he is frequently asked 'to suppose.' Why is this? For a very important reason, which must be clearly understood. Unlike the chemist, the economist cannot make experiments. In a way, statesmen make experiments for him when they pass laws or take any steps which interfere with the ways in which people make or spend their incomes. History, too, makes a sort of experiment which the economist has to consider, and this is why so much light is thrown on the every-day life of our own time by the study of the every-

day life of past, even long past, generations. These two helps are useful, but as they are not, and never can be, equal in teaching value to the exact experiments made by a chemist, the economist can do nothing but 'suppose' his experiments. That is to say, he makes them in his own mind, and if he makes them carefully, going amongst real men to see with his own eyes how they set about the business of life, these mental experiments, which are always introduced with a 'let us suppose,' are very useful.

Let us suppose two factories, near to one another in the same town, of about the same size, carrying on the same manufacture with the same amount and kind of capital, and about the same number of workmen of about the same grade of skill. Such a pair of factories every reader must have seen, so we are not supposing anything unreal. Of two such factories, it quite frequently happens that one does much better than the other. One runs full time, the other is often short of work, a very important matter for the workers; one makes good profits, the other does not; in short, one factory may go on getting larger and wealthier and the other may get poorer and poorer and finally go bankrupt. Some thinkers are puzzled by this, and will dig up out of their minds all sorts of unreal reasons for it, but the workers themselves are never in doubt, for they will tell you, sometimes in quaintly direct speech, that in the failing factory the abilities of the 'governor' are not equal to his task. In a word, organisation in one factory is perfect, and in the other factory very imperfect, which makes all the difference. Indeed, a new profession has come into existence; for experts in organisation are paid big fees to examine the way in which a factory is being carried

on in order to see if they can improve matters, which they often do. Of our two supposed factories, one produced much new wealth and the other, going from bad to worse, in the end did nothing but use up old wealth for no good purpose; and this was because the fourth agent of production, organisation, was strong in one case and weak in the other.

9. THE NEW SORT OF ORGANISATION

The truth is that men have begun to organise themselves for wealth production of set purpose and on scientific lines. Success due to good luck is being replaced more and more by success due to sheer hard thinking. In these days forms of organisation do not slowly come into being as the result of sifting and selection, but are planned in advance, and win the results that were expected. In Adam Smith's younger days all the raw material, machinery and house-room necessary to turn wool into cloth could have been purchased for a few score pounds. When Mill wrote, a full-sized spinning mill and weaving shed, with all the necessary plant, could have been put up for about £100,000. Just after peace was signed, a syndicate was formed in the Lancashire cotton industry with a capital of £6,000,000.

As every worker knows, the more powerful and delicate a machine becomes the higher the type of mechanic who must attend to it. Precisely the same rule holds good of organisation. These great organisations require great business brains to keep them going. No one with any judgment would assert that the 'business brain' is the highest type of brain, or even the most desirable; but it happens to be the kind of brain that society

must have at its command for this special economic purpose. Indeed, in its highest flight the business brain gets into the same upper air as that breathed by Shakespeare, Napoleon and Gladstone. Carlyle spoke of 'Captains of Industry,' and they were good enough then, with only three hundred souls on every square mile of English soil. There are six hundred and fifty of us now, and only 'Marshals of Industry' will serve our turn. The man who thinks otherwise has not grasped the stern realities of our national life.

CHAPTER VIII

MARKETS AND PRICES

1. A PRIMITIVE MARKET

MR. A. W. Howitt in his *Native Tribes of South-East Australia* gives a most interesting account of a primitive market, held between two parties of Australian 'black men.' A man had been killed, and the market was held at an appointed place as a peace-making between those who were held responsible for it and those who sought to avenge it on the principle of a life for a life, whose life being a matter of indifference.

'The men were all armed with boomerang, shield and spear, and fully painted. . . . Immediately behind this armed band were the women carrying all the articles provided for barter. . . . The leader of one of the parties caused one of the articles, a shield or boomerang, to be handed to him. It was passed from the last man to the first, all standing in a row, and each man passing it between the legs of the man in front of him, so that it was not seen until produced to the leader, who stood at the head of the line. He, on receiving it, threw it down between the parties with an important air. Then one of the other side threw on it some article in exchange, for instance

a bundle of cord for tying up the hair. In this way article after article was exchanged, and then the Kumari-kana asked, "Are you peaceable?" In this case the reply, I believe, was "Yes, we are well satisfied." Each person took the articles he had obtained by barter.

'If in these cases the parties are not satisfied, there is first an argument and then a regulated combat between all the men present.'

All the signs and tokens by which a market is distinguished are to be seen in this account. We observe: '(1) Two groups of persons, (2) two lots of commodities, (3) a transfer of commodities from one person or group to another, (4) the satisfaction of each side when commodities thus passed. The comparison is made even closer by our being told that the market became a scene of strenuous argument, often ending in a fight.

In earlier times in our own country something of the sort went on. A market was a place chosen for barter or traffic. It would naturally be a spot convenient for those who had goods to exchange, and it was doubtless indicated by the setting up of the sign of peace, a rude cross, which, in later ages, was replaced by a beautiful stone market cross. Hither on market day the country-women for miles around come with their baskets full of goods produced on their little holdings—butter, eggs, chickens, fruit, vegetables and flowers. At night they go home with their baskets full of groceries, draperies and other household necessities. A market is a place where people exchange goods which they have produced but do not want for goods which they want and have not produced. The Australian black men exchanged commodity for commodity, a boomerang for a bundle of cord. The one man would

not have parted with his boomerang unless he wanted the bundle of cord more than he wanted the boomerang, and the other party to the transaction would not have parted with the bundle of cord unless he wanted the boomerang more than the cord. Just the same rule holds good in an English market town. The countrywoman would not part with her eggs unless she wanted tea more than she did eggs. The only difference is that in this case a third party usually intervenes. A townswoman purchases half a dozen eggs for half a crown, with which the countrywoman purchases a pound of tea from the grocer. Of course it makes a difference, but nothing like so much as many people think. In the case chosen the townswoman may quite well be the grocer's wife, and the half-crown with which the eggs are bought be the very coin that goes back into the grocer's till in payment for the tea.

2. WHAT IS A MARKET?

The markets with which we are most familiar are held in market halls or market places, but from the economic point of view the presence of any special place in which the market is to be held, though usual, is not necessary. The essential thing in a market is a buyer or group of buyers on the one hand, a seller or group of sellers on the other, and a commodity which is to be bought and sold.

Markets range widely in extent. At one end of the scale is the general shop in the country village, which is a small retail market, the chief feature of which is that the buyer of the goods intends to consume them himself. Here many kinds of goods change hands in small quantities

at a time for small amounts of money, and the price of the same article may remain the same for weeks, months and even years. Above the retail market is the wholesale market, from which the retail shopkeepers draw their stocks. A 'wholesale house' supplies a smaller range of goods, because the wholesaler must have a close knowledge of the goods in which he deals, and therefore confines himself to one particular branch, for example, hardware, soft goods or drugs. So far as prices are concerned, the wholesaler occupies a middle position, for the prices at which he buys fluctuate more rapidly than the prices at which he can sell. The price of a sack of flour, for example, moves about much more quickly than the price of a four-pound loaf. People who buy in retail shops dislike frequent price changes; the wholesaler, however, has to submit to them.

The largest markets are often called *Exchanges*. On one exchange only one article is dealt in. A good example is the Cotton Exchange at Liverpool. Here one commodity only, cotton, is dealt in by people who want to buy and sell on a very large scale, even by cargoes at a time. At the end of the building is a large board on which the prices are displayed, and they move up and down frequently, and sometimes very rapidly, during the day. Prices on the Liverpool Cotton Exchange are influenced by prices on the Cotton Exchange at New Orleans, from which the prices are constantly being received by cable, and changes at Liverpool will, in turn, cause changes at New Orleans and in all other places where cotton is bought and sold. Further, the prices of cotton on the Liverpool Exchange are influenced by people who sell cotton which they do not possess and buy cotton which they do not want. Both these classes of people

deal not in cotton, but in the future price of cotton. They are, in short, speculators or gamblers and not traders. The list of markets is closed by the *Stock Exchange*, on which the things which change hands are not merchantable commodities for the use of man, but bits of paper, 'stocks' and 'shares' in companies. The chief Stock Exchanges are in London, Paris and New York, and prices on any one of them change at once when they change on another. As bits of paper, however prettily printed on, can neither be eaten nor worn, it follows that all buyers and sellers of stocks and shares are interested in one thing only—the future price of the stock they buy.

3. THE MARKET REPORT

What is done each day in each of the leading markets is recorded in all the leading newspapers as a guide to business men. For example, *The Times* of this day opens its account of yesterday's home commercial markets as follows :—

'Prices of raw cotton declined further yesterday at Liverpool, where there was more demand in the spot market. Rather heavy liquidation was reported in futures' (which means that the speculators whose doings were described above have burnt their fingers, and are eager to sell the cotton they have not got to other speculators who do not want it but think that in a short time the price will rise). 'At all the wool auctions in London and Liverpool buying continued brisk, with prices firm. The leading metals showed further declines, while dealing was less active. Tin plates experienced a strong market. Plantation rubber again weakened slightly. Indian tea met a poor market, resulting in a further decline in prices.'

There then follow two or three columns giving full particulars of these changes in prices and any available information as to the quantities of the various goods on hand or 'in sight.' Business men study these facts in order that they may form an opinion as to what is going to happen, and act accordingly.

We, however, are students who want to know why these things happen as they do. For one thing, at any rate, we are sure of by this time, namely, that they do not happen by chance or accident, but that, if we search properly, we shall be able to reduce them to law and order, precisely as scientists did in the case of the tides.

4. ANOTHER OF THE ECONOMIST'S DODGES

In this search it will be well to make use of another little dodge which the economist finds very helpful. The market report in *The Times* is the result of the doings of many thousands of people, buyers on the one hand and sellers on the other, and it is much too big a thing for one little brain to hold at a time. This being the case, we will approach the problem warily, step by step, making sure of one step before we take another. It is quite true that to begin with this method sometimes looks a little unreal, but on all occasions we shall, simply by being careful, find ourselves at the end stepping into the real world around us.

This dodge may be called 'Simple cases first.' There is no greater cause of muddy thinking in economics than undue haste to grapple with big problems. The mischief is that muddy thinking is apt to lead straight away to unwise conduct.

5. ONE BUYER AND ONE COMMODITY

Clearly we should begin our search for the law of the market with the simplest possible case, namely, a study of one man and one commodity, and the way has already been prepared for us by the hungry ironmoulder and his meat-pie. Let us suppose that I am rather poor and very fond of tea, and that the supply of tea is so short that there is nothing like enough to go round, which causes the price to be very high. Before I would go without tea altogether for the next six months there is a price, much higher than the price I do pay now, which I should be prepared to pay for one pound of tea, using it, of course, only on special occasions and in small quantities because it had got to last me six months. Put my top price for this pound of tea at 20s., noting that under similar circumstances the top price of a millionaire might be £50, the top price of a publisher £5, and the top price of our ironmoulder 5s.

Now suppose that, owing to the arrival of larger supplies of tea, the price falls to 18s. a pound, at which price, balancing my fondness for tea against my shortness of cash, I decide to purchase another pound. More tea comes, and the price falls to 16s., whereupon I buy a third pound.

In other words, as the price in shillings falls the number of pounds I purchase rises, but as the tea is solely for my own use, it is clear that there is a limit to the quantity I shall buy irrespective of further falls in its price. Suppose that the largest quantity of tea I shall want for my own use in the given period is ten pounds, and that I purchase the ninth pound when the price has fallen to 4s.

The price then falls to 2s., and there is a little conflict in my mind as to whether I am going to buy a tenth pound or not. The conflict arises because my desire for tea is getting towards the point of full satisfaction, satiation-point, as it is called, and I begin to reflect whether, after all, I should not get a more completely satisfactory life if I spent no more on tea and did a theatre for a change. However, tea, being tea, wins the victory and I buy my marginal pound of tea for 2s.

The above argument can be summarised in a table as follows :—

1st lb.	20s.
2nd lb.	18s.
3rd lb.	16s.
4th lb.	14s.
5th lb.	12s.
6th lb.	10s.
7th lb.	8s.
8th lb.	6s.
9th lb.	4s.
10th lb.	2s.
	110s.

Observe the following points: (1) As the price of tea falls the quantity of tea demanded by me rises. (2) While I should be willing to give a total sum of 110s. for the total supply of ten pounds needed by me, what in practice happens is that I buy all the tea I need for 20s. The arrangements of society thus work very greatly in my favour.

6. ONE SELLER AND ONE COMMODITY

The same problem must now be turned round and looked at from the seller's point of view. Let

us suppose that a man is selling pound packets of tea in a country market place on market day, and that he does not possess a single penny piece. As the day goes on he will get very hungry, and as he cannot eat packets of tea he would certainly, when at last pushed to it, sell a packet for 3d. in order to be able to go into the nearest public house and get a bite of bread and cheese and a sup of Government ale. Now suppose him to sell packet after packet for any price he can get. Clearly he would not sell the second packet for 3d. and would stick out for, say, 6d. Food and drink being now safe for an hour or two, he might sell the next packet for 1s., and as his need for money grew less the price at which he would sell his packets of tea would increase as more and more customers came to his stall—every sharp pair of eyes has seen this happen in a market place—so that the last packet on the stall, which is his marginal packet, might go for a very considerable sum if no other tea was available and some wealthy but improvident person came along. In an actual market, of course, he would be almost certain to sell his packets of tea at a fixed price of, say, 2s. a pound, and our social arrangements would work in his favour too, since he would get far more for the earlier pounds of tea than he would be willing to take for them in an emergency. Fortunately, both for buyers and sellers, life jog-trots on a reasonable level, and emergencies such as the above are very rare.

7. ONE BUYER, ONE SELLER AND ONE COMMODITY

These two cases are not so unlike real life as may at first be supposed, because both in the case of the buyer and in that of the seller of tea all that

has been done has been to make very plain and obvious a limit which in real life is there, to be sure, but not quite so plainly as has been made out. The advantage of studying these supposed cases is that it shows us the different ways in which seller and buyer look at the same problem. When we bring them together, it must be remembered that each will still look at the problem in his own way.

Let us now suppose that a dealer, S, has a horse to sell and a farmer, B, wants to buy a horse. S will want to get as much as possible for the horse, and B will want to buy it for as little as possible. S, therefore, comes into the bargain with a price in his mind below which he will not fall, and B with a price above which he will not rise. Suppose that S has fixed upon £50 as his lowest price and B on £60 as his highest. At what price will the horse change hands? No one can say. S may begin by asking £70, and B by offering £40. Each, therefore, has a margin of £20 to higgle with. Neither of them knows the state of the other's mind, but each of them is a good judge of a horse and knows pretty exactly what horses in that part of the country are selling for at that time. S comes down a few pounds at a time, and B goes up a few pounds at a time. Very soon the prices asked and offered get into the real debatable ground between £50 and £60, and soon agreement is reached at, we may suppose, £55, at which price the horse changes hands, just as the boomerang and the bundle of cord did, to the satisfaction of both S and B. It will be easily seen that if there were several sellers each of whom had fixed upon £50 as his lowest price, B would get the horse for £50, though rather than go without it he must be prepared to pay £55; while if there were several buyers each of whom had fixed upon £60 as his

highest price, one of them would at last get the horse at precisely that price.

8. THE COMPETITIVE MARKET OF REAL LIFE

The position that occurs in real life can now be tackled. The usual thing is that a number of sellers of the same commodity and a number of buyers of it meet in the same market, and that a certain quantity of the commodity is on hand in the market. Let the commodity be wheat, and the amount of it in the market 20,000 quarters. Wheat is not a perishable commodity, and fresh supplies of it are always arriving in the corn market. It must be carefully noted that we assume that none of the sellers is obliged to sell and none of the buyers obliged to buy; that every seller will be willing to sell more, and every buyer be determined to buy less, the higher the price rises; while as the price falls the opposite will be the case with each of them. Both sellers and buyers are quite familiar with the course of wheat prices during the last week or two, and with the seasonal variations in prices which occur each year with great regularity. Both groups of men know pretty closely that there are about 20,000 quarters of wheat on hand in the market, and both have some knowledge of the amount of wheat 'in sight,' that is on its way to the market, for the newspapers report the arrivals of grain ships and also the 'cargoes afloat.'

All this amounts to saying, in a word, that both buyers and sellers are keen and informed persons who know exactly what they are about, and intend to make the best, each for himself, of the situation. They will, however, differ amongst themselves; some sellers will be keener to sell, and some buyers

keener to buy, than others. Suppose a seller who is not very keen asks a buyer who is very keen 62s. a quarter, which the buyer will be prepared to pay if necessary, but is not prepared to pay yet awhile. The news of this 'quotation' and its result gets about the market, and it is soon seen that at 62s. no business will be done. A buyer who is not very keen offers a seller who is very keen 59s. The offer is not accepted; the seller is keen, but not at present keen at that price. For the important point about both supply and demand is that 'supply' is really an abbreviation of 'supply at a given price,' while 'demand' is also an abbreviation of 'demand at a given price.' In theory, then, all the sellers in our market and all the buyers 'higgle,' as the saying is, until a price is settled on at which the largest possible quantity of wheat changes hands. It may, for example, on this particular occasion be 60s., at which price 15,000 quarters, which is the effective supply, changes hands at the effective demand price of 60s. This is what is meant by saying that in this market on this day the law of supply and demand fixes the price of wheat at 60s. per quarter.

The above argument may be put into tabular form as follows :—

When the price is shillings	Sellers will offer quarters	Buyers will take quarters
62	20,000	1,000
61	15,000	5,000
60	10,000	10,000
59	5,000	15,000
58	1,000	20,000

Since the quantity of wheat which changes hands must appear *in both columns*, the result of the higgling of the market on this occasion is plain: 10,000 quarters change hands at 60s. a quarter.

9. THE LAW OF SUPPLY AND DEMAND

Because there are many things in our social life which naturally and properly distress all right-thinking people, and because both the supply of goods, the demand for them and the prices at which they change hands, are fixed in the way described in the last section, it has become usual for some people to put down all the shortcomings of our social life to the 'laws of supply and demand,' which are declared to be responsible for these undesirable results.

The young economist will pick his way very slowly and carefully before he arrives at any such conclusion. In the case supposed I had to pay 20s. for my pound of tea, not because the law of supply and demand had begun to operate but because it had ceased to do so. There was no supply of tea worth talking about. It was just the same with the man in the market place who sold his first pound packet of tea for 3d. because the demand side had ceased to exist. In the case of the horse-deal, since both buyer and seller were on level terms with one another, both were satisfied, for each got a result better by £5 than the one he was prepared to take. As for the great wheat market, the fact that it has developed must be accepted as proof that it does work which society must have done.

What is this work? It is the placing of a good well-baked four-pound loaf on each of some eleven million breakfast tables in this country to satisfy the most urgent needs of our people, most of whom would be starving in a day or two if, by some overwhelming social catastrophe, the laws of supply and demand cease to work.

CHAPTER IX

COST OF PRODUCTION

1. MARKET-DAY REFLECTIONS

MARKETS are so common, and the same sort of market is held in the same place, and attended by pretty much the same people, day after day and year after year, that it takes a little effort to realise that, from the special point of view of the economist, a market is a fleeting thing that lasts only for a short time. The changes wrought by time now require our close attention, for time is one of the most important elements which the economist has to handle.

For, clearly, when the market is over for the day, buyers and sellers may be in very different moods as the result of the day's transactions. When a man takes a thing to market, he wants to sell it at a 'profit'—a term which every one understands sufficiently to enable it to be used here for the first time without giving the reader even the slightest shock of surprise; though, later on, much will have to be said about 'profits' in order that a loose and general term of daily life may take on the clearness and sharpness of meaning which the technical terms of all sciences must have. But to want to sell a commodity at a profit, and to be able to do so, are by no means the

same thing. For the time being, however, it will be enough to understand that a man sells a thing at a profit when he sells it for more than it cost him, and, of course, he sells at a loss when he sells it for less than it cost him.

2. ROBINSON CRUSOE'S PIPE

Here is another common and familiar word, 'cost,' which must be looked into, and we cannot look at it better than with the eyes of Daniel Defoe, who was not only a delightful romancer but a sun-clear thinker.

'The second thing I would fain have had,' says Robinson Crusoe, 'was a tobacco-pipe; but it was impossible to me to make one; however, I found a contrivance for that, too, at last.' And after three or four years had elapsed he writes again: 'But I think I was never more vain of my own performance or more joyful for anything I found out than for my being able to make a tobacco-pipe. And though it was a very ugly, clumsy thing when it was done, and only burnt red like earthenware, yet as it was hard and firm, and would draw the smoke, I was exceedingly comforted with it.'

As Robinson Crusoe was alone on his island, he was both manufacturer and consumer, buyer and seller, of his pipe. There is no doubt that he was very satisfied as a buyer with the bargain he had got from himself as a seller, for he was delighted with the deal. Now, what precisely had Crusoe's pipe cost him?

The answer is that to him the cost of the pipe was the efforts he had to make and the sacrifices he had to undergo in order to get it. At breakfast this morning there was a new four-pound loaf on

the table. The *price* of the loaf was the fifteenpence mother paid for it: the *cost* of the loaf is the sum total of all the efforts that men had to exert in order to get the loaf on to the table, beginning with that of the ploughman who ploughed the field in which the wheat was grown, and ending with that of the baker's boy who brought it to the door.

3. COST AND PRICE

Between price and cost, between the coins paid to the baker's boy and the efforts put forth by him and by all who preceded him, there must be some link. That is quite clear, for if there were not the price might be nine farthings or nine pounds, or anything between them according to the whim of the moment. It happens that the price of the loaf is fixed by the Government, but in the case of all articles every intelligent person who goes to buy one knows pretty nearly what will be the price of the article he requires. It is needless to take a five-pound note to buy a bowler hat, and useless to take only one in the expectation of buying a motor-car. The constant appearance of the loaf day after day in millions of houses is to us proof of the existence of a link. Sometimes an article with which we are familiar disappears. For example, where are the cigarette lighters of war days? Where are the ping-pong sets with which we amused ourselves a few years ago? You will rightly argue from the disappearance of these articles to the breaking of the link we are looking for.

4. SHORT PERIODS AND LONG PERIODS

We have seen that prices change more slowly for some goods than for others, and much more

frequently in large wholesale markets than in retail shops. There is one market, with which most readers will be familiar, which will help us in this study of the relations between price and cost. At a seaside holiday resort it is a common sight to see the fishermen selling their night's catch on the quay to the fishmongers of the town. If this market is watched, it will be seen that the price of fish varies greatly and frequently during short periods. If the catch has been a small one and the number of visitors in the town is large, the fishermen will get very good prices for their fish. If the catch has been large and the number of visitors is large, they will get a good price, but if the catch has been large and the number of visitors is well below the level, they will get a poor price.

The fisherman expects this. He knows quite well that at times he will not be able to fish at all because of the weather, that at other times, owing to the habits of the fish, he will have to go farther out and spend more time in order to get the average catch. He knows that there will be these ups and downs in the market, that sometimes the price he will get will be a poor compensation for his efforts, at other times it will be a fair one, and at other times a rich one. He knows quite well that he will have 'to take the fat with the lean,' but feels sure that, whatever may happen during a short time, he will in the long run be able to make the kind of living he expects. He may be disappointed, and we, as is now clear, are at liberty to suppose that he is disappointed and observe the effects.

Let us suppose, therefore, that owing to some change in the fish-eating habits of people—such a change as is said to have taken place in this

country in consequence of the Reformation—fishermen find that there is too much 'lean' and too little 'fat,' that the long run is not making up for the losses of the short run, that after taking into account periods of time long enough to serve as a test of the way things are going he is not getting the grade of living that he used to get. He may have to grin and bear it. He is a fisherman, and knows no other trade. His fishing smack and nets, the little capital he possesses, can be used for nothing but fishing. He, therefore, has to stop in the trade. What he will not do, is to bring up his sons to follow him or invest any little money which he has saved in the good days in the purchase of a new fishing smack. It may be worth while for ageing fishermen to put to sea in an old smack and catch herrings to be sold in London streets at three a penny, and simply foolish for smart young men to invest in a new smack to do the same thing.

5. LONG-PERIOD CHANGES

What alters is the way in which new capital and new labour look at the fishing trade, and decide not to enter into it. Smacks get lost in storms and are not replaced, other smacks get out of repair and are laid up, for it is not worth while to spend money on them. Old fishermen die or retire, and young recruits do not succeed them.

What will be the effect of these long-period changes? Clearly that the supply of fish, taken over a period long enough to serve as a test, will accommodate itself to the permanent change in demand. Then people who want fish will find themselves obliged to pay a price for it which

makes it worth the while of those who remain in the industry to keep them supplied.

The changes which occur during a short period may, of course, work in the opposite direction to that we have supposed above. Owing to the opening up of a newly discovered coal-field close at hand, the fishermen whom we are observing with our mind's eye may get a ready, constant and growing market for their fish, in which case market prices will rule high. This will have the effect of inducing certain changes. Every established industry is capable of growth to meet new demands. New smacks will be built and eagerly manned, fishermen from other ports along the coast—'foreigners' as they are locally called—will bring their fish into this favourable market, and in the end the extra gains garnered by those already in the trade in the early years of the new market will be whittled down by competition to the ordinary level.

During short periods price is fixed by the law of supply and demand. During long periods the price fixed in this way is brought under the influence of a higher law, the law which fixes for men the relation between the efforts they put forth and the return in comfort which they get for them, and in the end it is the higher law which overrules the lower.

6. EXPENSES OF PRODUCTION

The cost of production of a given commodity is therefore not a sum of money but the sum of the human efforts that have been used up in putting it on to the market. As in practice all these efforts are paid for by money, we may speak of the 'expenses of production' of an article, meaning

thereby the different sums of money that have been paid out in compensation for each of the efforts so used up. Here, however, we come across an important point. What are the expenses of production of an article? That will depend once more on the element of time. A fisherman owning his own smack may not go out on Tuesday, either because he did so well on Monday that he can afford to take a rest or because he did so badly that he deems it not worth while to go out again. Big factories, however, cannot be run on this go-as-you-please method, for with them smooth and constant working is very desirable. In every big factory there are some expenses that go on whether any work is done or not. In a coal-mine, for example, the pumping machinery must be kept going and the pit ponies fed and tended on Sundays just as carefully as on Mondays. There are other expenses which are only incurred in doing a particular job. Now every manufacturer likes to keep his plant going and his staff of workers available, especially those of the higher grade who are not easily come by when wanted in a hurry. When, therefore, he is asked at what price he will carry out a certain order, he keeps in mind two very different parts of the expenses to which he will be put if he accepts the contract: (1) The fixed or 'over-head' charges to which he will be put whether he accepts the contract or not, as, for example, the rent of his factory, interest on borrowed capital, salaries, local rates, etc.; and (2) those expenses, 'prime costs,' as they are frequently called, which will only have to be met if the contract is accepted, chiefly for raw materials and the wages of labour. If pushed to it, therefore, by the general state of the market he will undertake the contract at a

price which only just repays him for incurring these prime costs.

In expectation of such untoward times every good firm puts by in the good years a part of its profits in order to equalise matters when these bad times come. Obviously, however, accepting orders on terms which only meet prime costs cannot go on for long. The heads of the firm, therefore, endeavour to get as many 'lines' and markets as possible, in order that when they come to a dead patch in one line or one market they may keep going on other lines for other markets. If any particular class of goods ceases to pay its share of over-head charges they cease to make it at the earliest possible moment. What we have supposed to happen in the case of the fisherman is continually happening within the four corners of a great modern works where the effects of short-period changes are continually watched and counterbalanced by careful and scientific attention to the permanent trend of supply and demand in the world's markets.

7. PRODUCTION ON A LARGE SCALE

The success of every factory depends very largely on accurate methods of 'costing.' Every article turned out has what may be called its life history carefully recorded from the time when it was a mass of raw material or materials to its final state. Some elements of cost vary little for each article, however many of them are turned out. There is ten times as much leather in a thousand pairs of boots of a given grade and size as there is in one hundred pairs of similar boots, and though there is some advantage in buying leather on a large scale there is not enough advantage in that

alone to make it worth while for a manufacturer to try to turn out ten times his accustomed number of boots. What he has to look out for are those parts of cost which grow slowly while his output is growing rapidly.

The results of doing this can be seen on a large scale from the following table relating to the iron and steel manufactures in the United States in the year 1910 as compared with 1850:—

	1850.	1910.
Number of establishments .	468	654
Average product . . .	$43,600	$2,119,000
Average capital . . .	$46,700	$2,282,000
Average number of employees .	53	426

The table shows that while the number of establishments increased slowly and the average number of workers employed in each of them increased only sevenfold the increase in the amount of capital was fiftyfold. In the year 1850 each manufacturer had on an average capital worth 880 dollars for every workman he employed, and turned out product worth 822 dollars for each workman. By 1910 the capital for each worker was worth 5360 dollars and the output just under 5000 dollars.

This is the explanation of the fact that production on a large scale pays better than production on a small scale. Clearly, however, no steel works can go on increasing in size without limit until at last it makes all the steel needed by the world, because although the economies of large-scale production are many they are not inexhaustible; and in all fine work, where the hand and eye of the skilled craftsman count for most, the limit of profitable growth is reached quite early. Even the manufacturer of similar goods of standard makes and sizes comes to the end of his tether at

last, and the proof of this is that he ceases to be able to undersell rivals whose ' plants ' are smaller than his own. It is at this stage that single works cease to grow larger and those who own them turn their attention to combinations of plants. This is the explanation of the growth of those unions of manufacturers which, under various names—Trusts in America, Kartells in Germany, Syndicates in Great Britain—attracted so much attention in the quarter of a century preceding the Great War.

8. PENDULUM AND POINT

The pendulum of a clock swings backwards and forwards over a fixed point in the bottom of the clock. So long as the clock is going the pendulum never rests exactly over this fixed point. It perpetually moves past it from one extreme to another. As the pendulum passes in one direction the force of gravity pulls it back again, and so it ever swings and is never at rest, but if the clock runs down the point at the end of the pendulum rests exactly over the point in the floor of the clock.

Think of market price as the pendulum, and of the law of supply and demand as the force which makes it oscillate backwards and forwards about a fixed point called cost of production. There is perhaps never occasion at which the market price of a commodity is the exact equal of its expenses of production, that is of the sums which would have to be paid to all who take part in producing it in order to persuade them to continue to do so. The man who puts the article on the market knows pretty exactly what the expenses of production are, and as soon as the difference between

the two becomes at all marked he shapes his conduct accordingly. If the difference is in his favour he brings the largest possible supplies on to the market, if it is against him he curtails the supply so as to make his loss as small as possible. Other people watch him, and act accordingly.

What is true of him is true also of all men who are supplying the same article to the same market. For a time, increasing supplies may all be absorbed by the market at top price, and he thrives accordingly, but once the full capacity of the market to purchase at this price has been reached, the return swing of the pendulum begins. At the other end of the swing, the low prices bring into the market circles of customers who were kept out by higher prices, and the movement is reversed. This pendulum-swing of prices can be observed by any one who will watch carefully enough and long enough. It is helped by the fact that high prices for any article drive people to the use of alternative articles. More bread is eaten when the price of meat rises, more oil is burned when the price of gas rises. To-day the high price of coal is causing ships and even railway engines to burn oil instead of coal. This principle of substitution is of increasing importance, since knowledge of market conditions is now open to all.

9. THE THEORY OF VALUE

What an economist has to say about market prices, expenses of production and cost of production is his contribution to what is called 'the theory of value.' Sidney Smith joined the Political Economy Club because he wanted to learn what value was. He resigned, so he said, because he found that the economists knew as

little about it as himself. And indeed, though many long and hard chapters and even books have been written to explain what value is, perhaps the best way of approaching the matter is to see what you feel about it yourself after a careful examination of your own mind, of the ways of your fellow-citizens, and of the shop windows. You know and use very many things which are valuable, and it is through them, and your thoughts about them, that the truth is to be reached.

The starting-point of the inquiry is plain. Everything that has a value must be of some use to somebody. To use the economist's technical term, it possesses 'utility.' This is the one foundation on which value rests, for nobody will value a thing he does not need. Some people argue as if the work of men made an article useful or endowed it with utility. This, to be sure, is generally the case, but not always, and one failure is enough to destroy the argument. There are plenty of books which cost much time and labour to produce and which, as books, are without value because nobody wants to read them. They have, indeed, a value as waste paper, but then they were not made with that ignoble end in view.

In the next place, however much utility a thing may have for me I shall not value it, however much I may need it, if I can always get all I want of it for nothing. A commodity must not only possess utility but scarcity if it is to have a value.

Thirdly, note that I valued my first pound of tea at 20s. The point of view is now changed from the tea to the user of tea. The value is not in the tea itself but in the mind of the tea-drinker. Now value varies, that is to say the feeling in the mind varies. I have not the same

mind for the second pound of tea as I had for the first, although the two packets are alike in all respects. Again, I value other things besides tea, for example a certain coin of the realm made of gold and called a sovereign; and in my mind the sovereign and the first pound of tea, things which are utterly different from one another as commodities, are one and the same, for I would just as lief have one as the other. They are not one and the same in the mind of the millionaire nor in the mind of the ironmoulder.

Again, they do not remain the same in my mind as soon as I find that I can get all the tea I want, for then my feeling towards every pound packet of tea on the market comes to be the same as my feeling towards the last pound of tea I should buy under any circumstances, my marginal pound, as we have learned to call it. Why should it be different, since any one pound of tea is as good as any other? Consequently I balance my desire to obtain this marginal pound of tea against my desire to keep the last sum of money I am willing to spend on tea, namely 2s. Hence, though I should value my first pound of tea precisely as much as I should value a sovereign if it were the only pound I could get, I actually buy it in the shop for 2s.

This is how I should look at the matter if I were the only tea-buyer in the world, but, of course, there are millions of people balancing their desire to obtain tea against their desire not to part with shillings, and, though some people loathe tea overmuch and some love shillings overmuch, we are all pretty close because generations of life in society have forced our tastes and habits into pretty much the same mould. Value is a social result.

10. UNITS OF ECONOMIC POWER

While it cannot be too clearly understood that the value of a commodity does not depend upon the amount of labour used up in producing it, it is also necessary to observe that all valuable commodities have had labour spent on them. The coal in the scuttle on the hearth is, as a material, exactly what it was when it was in the seam at the bottom of the mine, and it owes all its value to the labour of the men who have shifted it from the seam to the scuttle. In a ruder state of society it was natural that things which were being commonly made and commonly used, and which had the same amount of pretty much the same kind of labour spent on them, should have about the same value.

In order to fix the main outlines of the subject we are studying, society has been here likened unto a machine, made up of various parts fitting into and adapted to each other, and driven by its own special motive-power. One of the great advantages which engineers have in making real machines is that they can measure the power they are using in units. Motor-cars, for example, vary in power. We can tell that by watching them, and on inquiring we are told that one is a 10 h.p. car and another a 50 h.p. car, where h.p. or 'horse-power' is the unit used. Unfortunately the economist has no such advantage. If he had, if he could measure the wealth-producing power in units that were always of the same size and efficiency, economics would become an exact science and our troubles would be all but over.

This, however, cannot be done; but since wealth is clearly produced by power, let us suppose that this power can be measured in units. Then

we can see that it would be usual for two commodities that were the product of the same number of units to have the same value if they were constantly being made to satisfy a steady demand. Karl Marx said, quite wrongly, that value was 'congealed labour.' If we change that to 'congealed power,' we shall be on the way to the truth.

II. HOME AND FOREIGN TRADE

Men betake themselves to special trades in which their superior skill gives them an advantage. Many gains come to the men who stick to one task and to the society of which they are members, for the division of labour cannot go far unless other important developments take place as it develops. Law and order must become the rule not the exception, and this grows into a political and legal system; there must be facilities for exchanging goods, and this leads on to markets, money, roads and trade routes.

Clearly, however, special aptitudes in individual men and women are only one cause of the division of labour. There are special aptitudes in places as well as in men. From the very first nature invites men to do special work in special places—to make charcoal in vast virgin forests, to fish in large sheltered shallow bays where the fish come to spawn, to pasture cattle in rich riverside grasslands, and so on unendingly. Where fine clay is abundant—the 'Potteries'[1]; where the best grindstones can be quarried, the best blades can be made, and the Sheffield begins, that is centuries later, to shave half the world. Last of all, the

[1] The fine clay of the 'Potteries' is now worked out, and the supplies come chiefly from Cornwall.

key industries of the new age gravitate towards the coal-fields. Division of labour becomes geographical.

It is easy to see that these two impulses to the division of labour—the human and the geographical—will localise industries, and that they may destroy an industry in one locality to build it better in another. Men and women always liked and still like pretty garments, but only the name Saffron Walden now shows that a yellow dye was once manufactured there from the saffron plant. Even indigo now belies its name, for though it is still grown in India it is mostly manufactured in Germany. The iron industry was shifted bodily from the wooded Weald to the northern coal-fields, and most of the wool-weaving to the West Riding.

The exchange of products between localities that are specially adapted to special industries widens the scope of trade until its regular and continuous flow along clearly marked channels becomes a condition of comfortable human existence. But the nature of trade, its basis in mutual advantage, is not changed thereby. The Louisiana cotton planter sells his raw cotton to New York and to Liverpool. The Kentish hop-grower may on the same day despatch one consignment of hops to Calais, which is almost at his own door, and another to Caithness, which is 600 miles off. All four transactions are trade, just trade, undertaken for precisely the same end on precisely the same grounds. Yet the transactions between New Orleans and New York and between Kent and Caithness are distinguished as home trade; while those between New Orleans and Liverpool and between Kent and Calais are foreign trade.

The economist looks upon the two much discussed branches of trade, the home trade and the

foreign, as a naturalist looks on a rook and a crow. That is to say, they are in all important respects exactly alike, with differences that need and will repay careful study. Our Kentish hop-grower would be puzzled if asked to describe the difference between the two birds or the two deals. He shoots both birds for sport and carries out both deals for profit, and does not bother about the differences.

Politicians make a great deal of fuss about the differences between home trade and foreign trade. These were discussed endlessly in the twelve years before the War, and they will be discussed endlessly again some day. But no attention will be paid here to these discussions, not even to those parts of them which are more or less economic in tone and substance. It will be enough to attend to the real differences.

The silk industry is carried on in both England and France. The manufacturers engaged in it in both countries compete with one another, and this competition ensures that they only get the usual rate of profits and their workers the usual rate of wages. Now if in one of these countries, England, it so happens that the silk industry becomes more important because large numbers of women have 'gone into munitions' and can afford and will have silk blouses, the silk manufacturers will begin to make unusually large profits and their workpeople will get higher wages. This attracts new capital and new labour into the trade, for both labour and capital are mobile, and flow where they are wanted. But it will be mostly English labour and English capital that will flow into the unusually attractive silk trade. The very reverse may be happening in France, but still French capital and labour engaged in the silk trade are not very likely to come to England.

In short, the movement of capital and labour across political frontiers is slow by comparison with the same movements within the same political area. In older times capital was almost as sluggish as labour in moving from one country to another, and it was not till it became rather abundant in this country, and facilities for sending it abroad had been perfected by the banks and the stock exchange, that our superfluous capital went abroad. With regard to labour, though there have been millions of emigrants from Europe to America, it still remains true that 'the labourer is of all luggage the most difficult to be transported.'

It is the free movement of capital and labour that levels profits and wages as between different trades, and keeps prices ever shifting towards cost of production. If their free movement is hindered, this levelling process is interfered with, and to that extent economic laws do not work out the results we attribute to them. Now national frontiers are real barriers to economic movements because of differences of race and language, of money and law, of taste and temperament, and, often enough, because the frontier is hard to cross —a mountain chain like the Pyrenees or a wide ocean like the Atlantic. The character of the results produced is best seen in an extreme case. An African negro, at any rate in the earlier days before he had learned things, would exchange an elephant's tusk with an English trader for a bead necklace. At home the Englishman in return for a bead necklace could only have got something of the same value because its cost of production was the same; but when he got home with his tusk it was perhaps as valuable as a good horse. In short, cost of production as a fixer of values has to be ruled out entirely as between countries which

have no mutual flow of capital and labour, and its effects are diminished when the flow is hindered. This reduces the purely economic differences between home and foreign trade to a mere trifle, much like the differences between raven and crow.

A country pays for its imports by its exports, but both imports and exports, though consisting in large part of goods, contain other things as well. A country 'exports' services as well as goods. Great Britain is a great exporter of services. The chief of them are: First, she carries not only her own goods over the sea in her ships but most of the goods of other countries; secondly, she has rendered the 'young' countries the service of providing them with capital. For the one service she gets freights and for the other interest, but both freights and interest come back as goods. This explains why the value of our imports is always so much greater than our exports. For all our imports are visible goods, while a great part of our exports are these 'invisible' services.

CHAPTER X

MONEY

1. GOODS BUT NO MONEY



OME years since,' says Jevons, 'Mademoiselle Zelie, a singer of the Théâtre Lyrique at Paris, made a professional tour round 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 letter, 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 meantime to feed the pigs and poultry with the fruit.'

This incident shows in the clearest way the inconvenience and waste which the absence of money may cause. Goods which, could they have been

sold for money, would have been very welcome to Mademoiselle Zelie, became an encumbrance to her. Not only did the *prima donna* lose, but the little society lost as well. There was to begin with some waste, but the greatest loss was in social efficiency. Societies which desire the services of fine singers cannot get them on such terms, and what applies to singers applies to engineers, architects, inventors and all other kinds of labour.

2. MONEY BUT NO GOODS

When Robinson Crusoe was rummaging the wreck in search of useful articles he found in a drawer 'about thirty-six pounds value in money, some European coin, some Brazil, some pieces of eight, some gold, some silver.' He was by no means delighted with his find, for he goes on to say: 'I smiled to myself at the sight of this money. O Drug, said I aloud, what art thou good for? Thou art not worth to me, no, not the taking off of the ground, one of those knives is worth all this heap, I have no manner of use for thee, e'en remain where thou art, and go to the bottom as a creature whose life is not worth saving.' But though he was alone on his island, Crusoe was a child of civilisation, and so, 'upon second thoughts,' he wrapped it in a piece of canvas and took it away. Crusoe's case is the exact opposite of the *prima donna's*. She had goods, but there was no money to sell them for: he had money, but no goods to buy with it. Both cases are extremely awkward, but it must be noted very carefully that, while goods and money are both important, the absence of money only causes personal inconvenience and prevents social progress, whereas the absence of goods is fatal.

3. GOODS FOR GOODS

In the absence of money goods must be directly exchanged for goods, as the boomerang was exchanged for a bundle of hair cord by the two Australian 'black men.' This is called 'barter.' Boys in school in England to-day are always bartering one thing for another, a cricket ball for a pocket-knife, and so on. There is one famous case of barter on a large scale. When Solomon set about the building of the Temple he wanted timber of a kind which was not found in Israel but was found in Tyre. So he sent to Hiram, King of Tyre, to tell him of his difficulty. Hiram rejoiced greatly, for his land was rich in timber and poor in corn and oil. He therefore sent to Solomon saying :—

'I will do all thy desire concerning timber of cedar, and concerning timber of fir. My servants shall bring them down from Lebanon into the sea : and I will convey them by sea in floats unto the place that thou shalt appoint me, and will cause them to be discharged there, and thou shalt receive them : and thou shalt accomplish my desire, in giving food for my household.

'So Hiram gave Solomon cedar trees and fir trees according to all his desire.

'And Solomon gave Hiram twenty thousand measures of wheat for food to his household, and twenty measures of pure oil : Thus gave Solomon to Hiram year by year.'

Each of the two kings was able to supply the other with what he needed, and that was enough to make an exchange possible. It must have been a fair exchange, since each of them was satisfied.

One of the results of the Great War was to throw the machinery of exchange out of gear, and this led to the curious result that barter on a large scale was resorted to in South-Eastern Europe

and Russia. Later on, it will be made clear that the progress of society has done nothing but make the primitive practice of bartering goods for goods into a subtle and delicate operation. Trade is still barter, and the young economist must do exactly as Solomon and Hiram did — think in goods.

4. THE COMMON DRUDGE

The best description of money is in a book which contains the best descriptions of most other things. Shakespeare saw the exact nature of money and tells us what it is in the fewest and fittest words that man has ever hit on. In his day gold coins were few and far between, for this country was too poor to afford a gold coinage because she was too undeveloped to need it. The chief metal used for making coins then was silver. When Bassanio, in the *Merchant of Venice*, is making his choice of the three caskets, he addresses the white metal as

> ' thou pale and common drudge
> 'Tween man and man.'

When we were studying markets we supposed that the countrywoman sold her eggs for half a crown and with the coin purchased a pound of tea. Now what exactly had this half-crown done ? It had drudged between man and man, shifting eggs out of a countrywoman's basket into a townswoman's larder and tea off a grocer's shelf into the countrywoman's basket. Money shifts goods about, just as wagons do. Wagons shift goods from one place to another : money shifts goods from one owner to another. The origin of both wagons and money is lost in the mists of antiquity, for the oldest literature in the world makes us

acquainted with the use of both. Joseph said to his brethren: 'Take you wagons out of the land of Egypt for your little ones and for your wives.' When Sarah died, Abraham desired to bury her in the cave in the field of Machpelah, which belonged unto Ephron. The record says:—

'And Abraham weighed to Ephron the silver, which he had named in the audience of the sons of Heth, four hundred shekels of silver, current money with the merchant.'

These words are full of instruction for us. The money was made of silver, for even so early in history the beautiful white metal had come to be an object of desire to all men. The silver was weighed, not counted, because it was not in coins, like our shillings, but in lumps or bars. It was *current* money, money, that is to say, which was familiar to all who saw it. Ephron was a stranger to Abraham but not to his money. It was current money 'with the merchant,' which shows us the class of persons most interested in having money good enough to be current, taken from them when they bought goods in one place and given to them when they sold them in another. Finally, the transaction took place in the audience of the sons of Heth. In our days the seller of the land would hand over the title-deeds or give a receipt for the money. In these early days the business was done in public, so that witnesses to it were available in case of dispute later on.

5. THE TEST OF MONEY

The work of money is to shift goods about, transferring them from one owner to another, and anything which does the work of money is money beyond question. Vehicles for shifting

goods about range from the wheelbarrow at one end of the scale to the 40,000-ton steamship at the other. In the same way money is of varying quality, some kinds of money doing their work well, some moderately well, and some breaking down because the work imposed upon them is too much for them to do, precisely as a wagon may break down under its load. The material of which a wagon is made is always chosen with an eye on the work it has to do. A gardener's wheelbarrow need not be made of steel lined with teak, while a motor-lorry made of match-boarding would be perfectly useless. It is just the same with money. The money-material is important, of course, but it is only important from this point of view. A money-material which will make first-class money at one time with one people will not do at all for another people at another time. Cowrie shells are used as money by the natives on the African coast, and for their time and place they serve quite well. Some years before the War Austria introduced a new gold coinage, but at first the people of the country towns and districts would not use it. They were accustomed to silver thalers and, being somewhat ignorant, looked with suspicion on the new yellow coins. No matter what it is made of, that is money which all persons in the community accept on sight, and without asking any question, in payment for their goods. Each person parts with goods which he does not want in return for money because he knows that he can at any time convenient to himself purchase the goods he wants with the money he has taken in exchange for his own. As soon as hesitation or doubt creeps over the public mind, that which is called money ceases to be good money, and may soon decline into being no money at all.

An amusing experience of the writer's will drive this truth home. Some years ago, in order to illustrate the law of floating bodies, I placed a four-pound weight in a large glass jar containing mercury. The heavy iron weight floated, greatly to the surprise of the children. I then dropped a sovereign into the bowl, and, of course, it sank to the bottom, though it weighed only a trifle in comparison with the mass of iron. The experiment amused the children, but the sequel was rather annoying to the experimenter, for the mercury gave the golden sovereign a silvery appearance, and no tradesman would accept it. It was a perfectly good sovereign, but when I tried to buy an ounce of tobacco or a pound of strawberries with it, the coin was politely but firmly rejected. At last a friendly bank manager, smiling at my difficulty, placed the sickly looking sovereign in one pan of his scales and a healthy sovereign out of his till in the other. As mine was exactly the same weight as his, that settled the matter, for there is no other coin, real or forged, in the world of the same weight. On the counter of one shop where I tried in vain to pass my real but silvery sovereign was nailed a row of base half-crowns and florins, forgeries not worth an honest penny, which the shopkeeper had taken because he thought they were genuine.

The test of money is acceptability. It must be *current* money with the people—*currere* is a Latin word meaning *to run*—running about amongst them with ease and speed on its appointed task of shifting goods about from seller to buyer.

6. THE TEST OF GOOD MONEY

Any commodity, living or dead, will serve as money if a man will take it in exchange for other

commodities, because he knows that when he wants to buy other commodities other people will take it from him. The Latin word for money is *pecunia*, which is connected with another Latin word, *pecus*, which means cattle. In early times cattle were a much-prized commodity, since, as we have already seen, the discovery of the art of keeping domestic animals was one of the greatest steps on the road of human progress. Hence it is natural that cattle should be freely given and taken in exchange amongst undeveloped peoples. Among the ancient Romans and the Ossetes to-day ten sheep equal one cow in value. The standard of value in Homer is always the cow, although there were excellent articles in gold and silver. There is some slight indication that though the ancient Britons of the south and south-east used coined money, probably of tin, when Caesar landed in this island, the less progressive Britons in the west used cattle as a medium of exchange. All sorts of things have been used as money—shells, belts of wampum, skins, bullets, cubes of compressed tea and so on.

But acceptability at the moment when the exchange is made is not enough to make good money. Suppose a man has exchanged a sack of wheat for a calf in the expectation of buying a suit of clothes with it. His expectation may be defeated, and he may suffer loss, by the death of the calf. If eggs were the medium of exchange the coin would have to be spoiled as a coin in order to find out if it was a good one, and if it were not spoiled it would become a bad one within a day or two. Simple considerations like these acted at the very earliest times amongst people who had made any progress in the arts of life, and set them on the look-out for the best possible money-material.

A money-material must be able to satisfy all the following requirements if it is to be good money :—

(i) It must be an object of universal desire throughout the community which is using it. If other communities desire the same money-material with just the same eagerness it becomes still better. If it were in constant demand throughout the world, at any rate amongst all but the least advanced people, it would be the ideal money-material, but such a one has yet to be discovered.

(ii) It must not be subject to rapid changes of value. Even simple men doing simple business must be able to look ahead. If to-day a man sells an article which he does not want for three coins of a given kind with the intention of buying next month an article now priced at the same three coins which he will then want, he will lose if at the end of the month the seller of the article demands four of them. Here, however, a great difficulty arises which must be looked at before we pass on, in order that it may be recognised again when the proper time comes. The article in question may have gone up to four coins without the coins being at all to blame, for in the interval the supply on the market may have run short, which causes the price to rise. The coins only are in question now, and it is essential to a good money-material that its value should be steady. No known material has ever fulfilled this requirement perfectly, and even those that fulfilled it fairly well before the Great War have not done it anything like so well since.

(iii) It must be capable of being divided into very small pieces for the purchase of articles of small value and united in larger masses for large purchases. If cattle were the medium of exchange,

a man might have to go without an ounce of tobacco because the only thing he had to buy it with was one cow, worth half a hundredweight of tobacco.

(iv) It must be convenient to carry about, and it can only be this if it has much value in small compass. The Spartans used iron for their money-material, and so did the Swedes in the seventeenth century; and, indeed, iron does satisfy all the preceding conditions of a good money-material, though it fails completely at this point so far as England is concerned, because if our money was made of iron we should want a wagon for a purse and could bring the shopping home in our pockets.

(v) It must be recognisable at sight by the most ignorant people who use it, and it must not be easy to imitate in some cheap and base material. Perfect money could only be forged at a loss to the forger. Further, it should never be worth any one's while to collect and hoard coins on the ground that they were worth more as material than as money.

(vi) It must be valuable on its own account and not merely because it is the material of which money is made. As money the material will have to have some marks and signs about it which make it recognisable, but the perfect money-material would not change in value if, whether by accident or design, the signs which make it money were obliterated. These were put there by the man who made the money, but it should not be money merely because he put them there, for the very simple reason that when this is the case, and it has often happened, is happening now, and will certainly happen again, the money-maker will manufacture too much money, either to serve his own ends or from sheer ignorance.

7. THE PRECIOUS METALS

The requirements of a good money-material are best satisfied by the precious metals, silver and gold. From the earliest times these metals attracted men by their sheen and the ease with which they could be made into objects of use and beauty, for men developed rude arts at a very early stage in their progress, as is proved by the etchings of mammoths and reindeer on primitive bone weapons, and the paintings on the walls of the caves inhabited by primitive men. The precious metals are not easily won from nature, and occur rarely enough to give them a scarcity value. Being always in keen demand for use in the arts, they have a value as the raw material of personal adornments quite independent of their value as the raw material of coins. In early times, both in the East and the West, they were made into rings which were used both as ornaments and as coins—'ring-money' as it is called, which is depicted in ancient Egyptian paintings and, at any rate until quite recent years, was still manufactured in Birmingham for use in the African trade. In fact, the precious metals constantly shift from one use to the other. The Cavaliers melted down their plate to provide money for the war-chest of Charles the First, and to-day much gold coin is being illicitly collected and melted down for use in the arts.

At first the precious metals were used in bars, so that, as the buying of the cave of Machpelah shows, the silver which was *current money with the merchant* was not counted but weighed. Abraham paid for his land in silver, but he sent Rebecca a present of *jewels of gold.* The shekel was originally

a weight, and did not become a coin until the reign of Simon Maccabaeus in the second century before Christ. Similarly, the original Roman money was the *aes rude*, a formless block of bronze, a specimen of which, weighing over four pounds, has been found at Caere in Etruria.

The period at which the precious metals were first made into coins is not known. They were used in the ancient civilisations of Assyria and Lydia. They are traceable in the Greece of Solon's day and in the Rome of the Kings. The first Roman coin made of gold was struck in 207 B.C. Alexander the Great was as famous as a moneyer as he was as a conqueror, and his gold staters and silver tetradrachms became an international currency because of their beauty and quality, just as the English sovereign did in the nineteenth century. When the present writer, some years before the War, handed the booking clerk at Dresden station three sovereigns to pay for his fare to Nuremberg, they were accepted without a moment's hesitation.

8. THE ROOT OF MISTAKES ABOUT MONEY

It would be difficult to find any other subject concerning which so many grievous mistakes have been made, and so much sheer nonsense written, as money. In practice money is used only for shifting goods about. It is quite true that misers and ignorant people in our own time and country hoard the precious metals, since they can be hidden with ease and do not deteriorate by keeping, and thus provide for a rainy day. This practice, once common everywhere, is still the rule in the Far East. India, for example, absorbs silver almost as readily as a desert absorbs rain. In the civilisation of the West, however, the constant use of

money in buying and selling fixes the minds of people exclusively on the use of money to facilitate the exchange of goods. Now it is quite clear that anything which a seller will always take from a buyer is money, no matter what it is made of. In fact it need not, *in theory*, be made of anything at all. This may look surprising, but it is perfectly true, *in theory*. Everybody is familiar with the coin called a shilling, and the ancient books, manuscripts and charters of English history in Anglo-Saxon times are full of references to shillings. The most ancient of our laws, that of Ethelbert, King of Kent, of the year A.D. 600, says, that if any man in the assembly injures another he is to pay 'fifty shillings to the King.' There was no such thing, however, as a coin called a shilling, and never was until the year 1504, though references to it before that date could be counted by the hundred. This uncoined shilling was simply a 'money of account,' and was supposed to be one-twentieth part of a pound-weight of silver. Hence we still say twenty shillings make one pound, though the pound is not silver and does not weigh anything like a pound.

All mistakes about money, whether they are the practical mistakes of statesmen or the logical mistakes of writers, spring from one root. It is constantly forgotten that money is just as much a commodity as cabbages or castles. It is therefore necessary to pay the closest attention to this point.

9. MONEY AS A COMMODITY: (1) SUPPLY AND DEMAND

Considered as a commodity, it has to be pointed out in the first place that money is like all other commodities, and in the second place that it is unlike all other commodities. Trouble at once

results, both in thought and practice, if either part of this twin-truth is forgotten.

Money is like all other commodities because the material of which it is made is not what is called a 'free good.' Gold and silver have to be wrested from nature by man's efforts. True, they are sometimes found in places where the only effort required is that of appropriating them. Gold, for example, is found in 'placers' in pieces varying from 'dust' to nuggets, and a nugget only wants picking up. All the effort is spent not in picking it up, but in finding it to pick up. On the reefs in South Africa gold-mining is a laborious task, requiring the sinking of deep shafts and the use of expensive machinery.

Being a commodity, money is subject to precisely the same laws as other commodities. In the first place it comes under the influence of the laws of supply and demand. If more of it is produced during a short period, all other things remaining the same—this phrase, always important in economics, is more important here than anywhere else—the same thing happens to money as happens to strawberries in June—its price falls. To talk about the price of that which is itself a price may indeed seem strange, especially to those who insist on forgetting that money is a commodity. A man goes into a shop and purchases six eggs for two shillings. What is the price of the six eggs? The answer is easy—two shillings. What is the price of the two shillings? The answer is just as easy—six eggs. The relation between eggs and shillings is fixed at that moment in this way. Now suppose that, the number of eggs and other things in the country remaining the same, the quantity of money in the country begins to increase very rapidly. It will fall in purchasing power or value,

and particular portions of it will therefore buy fewer goods. Therefore when two shillings are taken into a shop to purchase eggs, the buyer who used to get six now only gets four. The trouble is that while everybody at once understands that he must only expect four eggs instead of six when the supply of eggs decreases, practically nobody can be got to expect to have only four eggs merely on the ground that the quantity of money has increased. The difficulty is partly physical. Every man knows when the number of eggs is decreasing. He may keep fowls, or at least is sure to know some one who does, and the decrease in the number of eggs is obvious to him. The increase in the quantity of money is, however, only obvious to those who will take the trouble to find out the facts, so that most people do not understand this reason for a rise in prices.

There is one other difficulty. Changes in the supply of eggs and strawberries take place every year at known periods. Changes in the supplies of wheat and iron take place more slowly and less frequently, but every one knows that they do take place and allows for their effects. But changes in the supply of money usually take place slowly and imperceptibly, though there have been some occasions in the world's history when the increase was great and rapid. These occasions were: (*a*) the supply of silver consequent upon the discovery of the mines of Potosi in the year 1546, which increased the average annual supply of new silver from £150,000 to £2,100,000; (*b*) the discovery of abundant supplies of gold in Australia and California in the middle of the nineteenth century, and of still more abundant supplies in South Africa in the 'nineties; and (*c*) the extremely rapid increase of paper money in all the combatant

countries during the Great War. On all these occasions the effect of these rapid increases in the supply of money was soon obvious in higher prices.

The value of money, by which is meant its power to purchase commodities, is fixed for short periods by the relation between supply and demand. The meaning of 'supply' and 'demand' in the special case of money must be very carefully noted :—

(i) The supply of money is the quantity of money offered in the purchase of goods. It is not the same thing as the number of separate pieces of money, whatever these may be made of, for, as is clear to everybody, the same coin makes purchase after purchase in the course of a few hours. 'The nimble sixpence,' says the proverb, 'does the work of the slow shilling.' Every time a piece of money is used it forms part of the supply of money, so that its effect depends upon both its value and the number of times it is used. Pieces of money that are not used have no effect upon prices. A sovereign dangling from the end of a watch chain does no work at all.

(ii) The demand for money is the quantity of goods and services offered for sale and hire. The tradesman who is 'dressing' his window is demanding money from the passers-by, and the extent of his demand is the stock in his shop. Goods that are not offered for sale, or do not take the place of those which are, have no effect upon prices. If a man grows potatoes on his allotment and leaves them to rot in the ground, they do not form part of the supply of potatoes. If he digs them up, and either consumes them himself or offers them for sale, they do form part of that supply and, consequently, affect the price of potatoes.

10. MONEY AS A COMMODITY : (2) COST OF PRODUCTION

In the second place, money is like all other commodities inasmuch as those who produce it and offer it for sale act under the influence of precisely the same motives as those who produce all these other commodities. They do the work in order to get a living, and they expect to get in return for the efforts they put forth about the same grade of living, taking the one thing with another, as people who put forth the same amount of similar efforts in producing other goods. If, after a period of trial sufficiently long to enable them to form a sound judgment, they are not doing as well as other people, they will leave off producing the money-material. Consequently, as the supply of it diminishes, its market price rises, and this induces capital and labour to flow back into the industry and thus restore the balance.

The cost of producing gold rises when the amount of human effort required to produce a given quantity is increased. In the case of placer deposits more men will have to search for gold for a longer period in order to get the same amount when the deposits begin to be worked out. In reef-mining, where the gold is found in veins in the quartz, deeper shafts and more expensive machinery may be required in order to produce the same results in standard gold. In both cases the commodity gold, when produced, must be worth a larger supply of commodities than it was before. In other words, the same amount of gold being exchanged for a larger amount of commodities, prices fall.

Placer-mining for gold now provides only a

small fraction of the annual supply. Reef-mining is carried on by companies, who measure the cost of production by the expenses of production. These expenses are all paid in money. They have to buy machinery, coal and chemicals. They have to pay cost of transport and the wages of their labourers. If all these money expenses are increasing, they will have to sell their gold for more money or leave the business. Before the War the price of standard gold was £3, 17s. 10½d. per ounce in London, which was the great gold market of the world although no gold is mined in this country. For a special reason, to be explained shortly, the price of gold per ounce before the war could not vary more than a few pence from the above price, but as a result of the War a very great change has taken place, and gold at the present time is worth over £6 per ounce. This increase in the price of gold is the measure of the increase in its expenses of production measured in money. Similarly, in Germany the Reichsbank is offering to give 6½ marks in paper money for every silver mark presented over its counter. Its cost of production measured in human effort has probably not changed at all.

11. MONEY AS A COMMODITY : (3) THE INDIVIDUAL AND THE COMMUNITY

We now come to those points in which money differs from all other commodities. To begin with, all people desire money, and no man's supply of it can be increased to such an extent that he will not take any more even as a gift. Suppose that on a boy's birthday his father presented him with a pocket-knife. The boy would be delighted, for he had no knife and this was just the sort of

knife he wanted. If his mother then presented him with another precisely like it, he might be delighted but somewhat less. Boys lose pocket-knives almost as readily as they will take them, and a second knife will be useful when this occurs. If, now, relative after relative, and friend after friend, all the birthday through, kept bringing him a present of precisely the same kind of knife, his annoyance would know no bounds. But if the boy's father had given him half a sovereign instead of a knife, and his mother had given him another, the boy's pleasure would know no bounds, though half-sovereigns rained in on him all day.

If this is true when it happens to one individual, would it be true if it happened to all individuals at the same time? Let us suppose that there is a certain community living an isolated life on an island in the Pacific, having no intercourse whatever with any other people, and living, on the whole, an economic life pretty much like our own, but having a money consisting of coins made of a material which cannot be used for anything else but making money. If, by some miracle, it happened that on one particular morning every islander woke up to find that every coin in his possession had changed in the night into two exactly similar coins, would the little community or any individual in it be wealthier for the change? Not in the slightest. It is important to any one individual in a community if he obtains more of the existing stock of money than he had before, because that enables him to obtain more of the existing supply of goods and services. If the money of our supposed island had been made of gold and silver, and the people traded with other countries, the additional coins given them by the miracle would be a boon to the extent to which

they were used in the arts or exported to other countries in payment for useful commodities. Money, just like wagons, shifts goods about, and a country needs just as many wagons and just as much money as it has goods to shift about. To make more wagons or more money is simply waste.

12. MONEY AS A COMMODITY: (4) LEGAL TENDER

Money is unlike other commodities because it is the creation of law. The English Parliament cannot make pea-soup out of egg-shells, or bricks without clay, but it can make money out of anything it likes. The precious metals came to be used as money originally because people fixed on them as the material best suited for the purpose, and some of the most ancient coins are stamped with the heads of gods or heroes. But the making of money was early seen by kings to be a profitable business, and was taken over by them on that account—hence the effigies of kings and rulers on coins with which all are familiar. The famous gold stater of Alexander the Great, already referred to, which was issued at Sidon between 334 and 325 B.C., has the head of Athena on the obverse and a winged Victory on the reverse, but the silver tetradrachm issued by Philip V. of Macedon (220-179 B.C.) has Athena on the reverse and the head of the king on the obverse. In feudal times in Europe no prerogative was more stoutly adhered to by petty rulers than the right of striking coins. Even in England after the Norman Conquest coins were issued by some bishops and feudal magnates.

The reason is obvious. That is a stater, or a noble, or a mark, or a crown, or a shilling, or a franc, or a dollar, or a sovereign which the

Sovereign who issues it declares to be such. Hence, in the Middle Ages, when kings got into debt they debased the coin, that is to say they issued coins having the same name as previous coins but containing a smaller quantity of pure metal. For example, in 1545 Henry VIII. suddenly reduced the amount of fine silver in the testoon or shilling from ten to four grains. In this way he was able to pay, in the new money, for goods purchased at prices fixed in the old money, and make enormous profits on the transaction. That money, whatever it is, which the State declares must be taken by all its subjects in payment of debts is called ' legal tender.'

13. MONEY AS A COMMODITY: (5) GRESHAM'S LAW

Money differs from all other commodities in another way, a very singular one at first sight, but also very natural. During the War many millions of men were supplied by the State with all their clothes, and it was very soon observed that good clothes drove out bad ones, since of two uniforms available ' Tommy ' would be perfectly certain to pick the better. Good commodities of a given kind always drive out of use poorer commodities of the same kind costing the same amount of money. But clearly, in the year 1545, every citizen who had to buy an article worth a testoon and who happened to have one of each sort, ten-grain and four-grain, in his pocket, would give the poor one to the shopkeeper. The better coins were always hoarded and sent abroad to Amsterdam, where they were worth all the silver that was in them. Ever since coins were used it had been observed that ' bad money drives out good money.' This is spoken of as ' Gresham's Law,' a term given

to it by a modern economist, Mr. M'Leod, in honour of Sir Thomas Gresham, the great merchant of London, who founded the Royal Exchange in the reign of Elizabeth, and who was very eager in the reform of the base coinage which Elizabeth had inherited from her father.

Henry VIII. acted very meanly when he reduced the silver in the testoon from ten grains to four. He might have made it one grain, or one-tenth of a grain, or one-hundredth of a grain, and still called it a testoon. He did not go so far as this. This is a refinement of money-making left for later days, for the time came when rulers printed bits of paper by the million, gave them the names of coins, and compelled their subjects to accept them as such.

14. THE ENGLISH COINAGE SYSTEM

The best way of fixing the theory of money in the mind is to apply it to some particular monetary system. The English system is naturally selected for discussion here because it is familiar to those who use this book. Further, the English monetary system provides a good test of the theory of money, for it is generally agreed that it is one of the best the world has ever seen, and all other great countries have copied it more or less closely. It contains both metal money and paper money, coins which are legal tender to any amount and coins which are not, and the relation between these various classes is fixed on sound and simple principles.

(i) The central point of the English system of currency is the sovereign, a beautiful gold coin, large enough to have much purchasing power and small enough to be conveniently handled, and so finely struck that a colourable imitation in base

metals is almost impossible. It is made of standard gold, which is composed of eleven parts of fine gold and one part of alloy, chiefly copper. It weighs 123·27447 grains when struck, and is legal tender so long as it has not been reduced by wear and tear below 122·5 grains. Half-sovereigns of precisely half the weight are struck of the same standard gold. The sovereign is legal tender to any amount. No man can be sued for debt if he has tendered sovereigns in payment of the same. A most important feature of the system is that every British subject has given him by law the right to take gold in bullion to the Mint, to have it assayed and coined into sovereigns free of charge. Twenty pounds of standard gold are coined into 934½ sovereigns, so that one ounce of standard gold and '£3, 17s. 10½d.' are one and the same thing. Hence, before the War, the price of gold intended for use in the arts never varied more than a trifle from this fixed price of £3, 17s. 10½d. per ounce. No man would sell it for less, because the law compelled the Mint to give him that much for it. If gold bullion was scarce and the demand for it was keen, the price might rise a little above the Mint price, because people would pay a little more for it rather than go to the trouble to collect sovereigns to be melted down.

Some countries undertake to coin gold to any amount on demand, but make a charge for doing so. Sometimes the charge is nothing but the bare cost of making the coins. This is called *brassage*. Sometimes, in addition to the cost of coinage, a little of the gold is taken as a profit to the Government. This is called *seigniorage*.

The important thing to remember about the English sovereign is this: hit it with a hammer until it is a shapeless mass, and you can take it to

the Mint and get another sovereign in exchange free of charge. The Mint does nothing to the lump of gold except make it into a convenient shape and put marks on it by which it is known to all the world.

(ii) In addition to the gold coins, there are the silver coins and 'copper' known to all. These are useful for most of the payments of daily family life. In Ben Jonson's *Alchemist*, when Sir Epicure Mammon says that he will have all his base metal turned into gold, Face suggests that there must be some silver 'to give to beggars.'

Before the War the chief point about silver coins was that they were worth a great deal more as coins than as bullion. When the English currency was remodelled in 1816, and sovereigns were struck for the first time, it was also ordered that an ounce of standard silver should be coined into a crown or two half-crowns. In 1816 the silver in half a crown was worth a half-crown, just as the gold in the sovereign was worth a sovereign, but during the course of the nineteenth century, owing to abundant discoveries of new silver, the value of silver fell steadily, until it was only just over 2s. an ounce. If, therefore, before the War any one had hammered half a crown into a shapeless lump of silver, the lump of silver would only have been worth about 1s. Coins of which the metal value is less than the face value are called *token* coins, and they are never legal tender except up to a low limit—up to 40s. in England for silver coins, and up to 1s. for 'coppers.' The profit on making copper and silver coins goes to the Government.

(iii) The English coinage system has been greatly disturbed by the War. The sovereign and half-sovereign have almost completely disappeared

from public view, and their place has been taken by ' currency notes ' for twenty shillings and ten shillings, familiarly known as ' Bradburys.' Exactly what has become of all the sovereigns is not known, but a very large number of them have gone to America in payment for munitions of war. The rise in prices has, of course, affected the precious metals just as it affected all other commodities. The market price of gold bullion is no longer within a penny or two of the Mint price of £3, 17s. 10½d., but has gone up to £6, 7s. 4d. per fine ounce, while silver has risen from a little over 2s. on the day war was declared to 7s. 4½d. per ounce. While gold has appreciated in this country first because it has become scarce, and secondly because it has shared in the general rise of prices, it has depreciated in America, notwithstanding the general rise in prices there, because of the great importations of it from Great Britain and France to pay for war materials. New silver coins are now to be struck, with sevenpenny worth of silver in the new shilling and corresponding amounts in other coins, thus making them ' token ' coins once more.

The English monetary system also contains legal tender made of paper, but this is best left for consideration later.

15. MONEY AS A MEASURE OF VALUE

Just as a yardstick measures cloth, so that by its aid it is possible to say that the quantity of cloth in one bale is three times as great as the quantity in another bale, so money measures the relative values of all other commodities. If in a given market a horse is worth £75 and a cow £25, it follows that a horse is three times as valuable as

a cow. As a measure of value, money is by no means so perfect as a yardstick is as a measure of length. The yardstick does not vary in length from one time to another, and is therefore a constant measure of length in other things. But money, which measures values, is constantly changing in its own value. If, before the War, a housewife had gone out shopping with a sovereign in her purse and had spent it all in the purchase of food for her household, she would have come back with goods which, laid out on the kitchen table, would have made a pile of a certain size. If she went out to-day with a sovereign and spent it in purchasing goods of the same kind, her pile would be very much smaller than before the War. The purchasing power of money has fallen greatly, or, in other words, the cost of living has risen greatly. Food which just before the War could be purchased for 100s. now (1920) costs 270s. If, therefore, on July 1, 1914, B had borrowed £5 from A, and had paid him back on October 1, 1920, A would have got back not much more than a third of what he had lent. True, so far as the law is concerned, B would have been cleared completely of the debt, for he had borrowed legal tender to the amount of £5 and had paid back the same, but A had really lent purchasing power sufficient to buy a certain quantity of goods, and had got back purchasing power not large enough to buy half that quantity. If, instead of lending money, A had given B ten yards of cloth on July 1, 1914, on condition that he received on January 1, 1920, ten yards of precisely the same sort of cloth, he would not have suffered loss, for he would have received that which he stipulated and expected to receive.

When the price of an article changes, the change

may be due (1) to causes which affect the article itself and nothing else, *e.g.* a cheaper method of production, or (2) to causes affecting the money which is paid for it. If on one date forty units of a given commodity are sold for twenty sovereigns, and at a later date cost thirty sovereigns, one of two things has happened—either the commodity has got dearer or the sovereign has got cheaper, that is, has fallen in purchasing power. To decide which is the true cause may be very difficult, but as a general rule the question can be decided by reference to other commodities. If they too have risen in price, and risen to about the same extent, it is plain that the change in price is due to the money and not to the commodity. For any one article may get dearer owing to a variety of causes, but it is impossible that all articles should be affected in the same way and to the same extent at the same time. A general rise in prices is beyond doubt always due to a fall in the purchasing power of money.

Changes in the purchasing power of money are measured in the following way. A large number of staple commodities are selected, and certain quantities of certain qualities are taken and their prices added up. Suppose that the number of articles selected is one hundred, and that on the day taken the price of the selected quantities amounts to 2000s. If at some later date precisely the same quantities of the same commodities are taken, and the price of the whole now amounts to 2200s., it is said that the 'index number' 2000 has risen to 2200. Of course the separate prices will not have changed to the same extent, or even in the same direction, for all articles concerned. Some may have got a little dearer and some much dearer; some a little cheaper and

some much cheaper; and some have remained at the same price. But, on the whole, there has been a rise which is expressed by saying that the index number has risen from 2000 to 2200, or, to put it in the more convenient form of percentages, from 100 to 110.

Most of the leading countries have one or more index numbers, and they are compiled with great skill and care, so that they serve as a good guide to changes in the purchasing power of money. One of the best of them is that calculated for our own country by the *Economist* newspaper, which gives the results early in each month. The basis of this index number is the average price in the years 1901 to 1905 of a large number of well-selected articles in the most important kinds of trade. Starting with 100·0 as the basis, the following changes may be recorded :—

Jan. 1 1914 .	119·2	End of Dec. 1916 .	223·0
April 1 1914 .	118·0	„ June 1917 .	256·6
July 1 1914 .	115·9	„ Dec. 1917 .	263·2
End of July 1914 .	116·6	„ June 1918 .	277·5
„ Dec. 1914 .	127·3	„ Dec. 1918 .	277·0
„ June 1915 .	147·7	„ June 1919 .	281·3
„ Dec. 1915 .	165·1	„ Dec. 1919 .	334·7
„ June 1916 .	191·5	„ Jan. 1920 .	353·1

The other index numbers which are calculated in this country give almost exactly the same result.

16. THE QUANTITY THEORY OF MONEY

If every man made his own money, it would not take him long to find out whether money was changing in its power to purchase goods and services, for his clear and direct knowledge of the matter would soon make it obvious to him that money did not differ in one respect from the other

commodities he was making, namely, that the more separate pieces of money there were in the market the less valuable each of them would become, provided that all other things remained the same. If sovereigns, for example, had no other use except the money use, an increase in the number of sovereigns would be followed by a rise in prices. The quantity of goods to be exchanged remaining the same, and sovereigns having no other work to do except to exchange these goods, each sovereign would do less of the work than it used to do. Money has been compared to wagons. If wagons were multiplied unnecessarily, and every wagon made was also used, then every wagon would have to go about partly empty. So, when money is multiplied unnecessarily, each separate piece of money carries a smaller load of commodities from one owner to another. Since men do not make their own money, but have it made for them by the Government, and since there are various substitutes for coined money, this important truth is generally overlooked.

Suppose that in a given community there were one million articles to be bought and sold, and one million coins to do the work. Then it is quite clear that the level of prices in that community would be expressed by the equation ' 1 commodity equals 1 coin.' If the number of commodities was halved, or the number of coins was doubled, or if the number of commodities remained the same while each coin was used twice where it was only used once, then the equation would have to be altered to read ' 1 commodity equals 2 coins,' that is to say prices would have doubled. In actual life it is impossible to ascertain exactly any one of the three important facts which have to be taken into account, viz. (1) changes in the number of

commodities, (2) changes in the number of coins or substitutes for coins, and (3) changes in the rapidity with which the money circulates. Though it is not possible to ascertain these facts, it is still true that changes in the quantity of money directly affect prices. The connection may not be so close and vital that every change in the amount of money available for use is promptly followed by an exactly equivalent change in the level of prices, but in the long run the change does take place, and this is all the truth that need be claimed for the famous and much debated 'quantity theory of money.'

It is very important that changes in the purchasing power of money should not take place too rapidly. It does not matter to a man if prices rise so long as his income rises in proportion. But in every society there are many people with fixed incomes, incomes, that is, which remain fixed in money amount. Pensioners are a good example of this class, and so are persons who have retired from business and are living on the interest of their savings. There are many classes of workers, too, who find great difficulty in obtaining an increase of wages to meet the increase in prices. Again, rapidly changing prices make business men uncertain of the future and so unwilling to make fresh ventures.

CHAPTER XI

CREDIT AND CONFIDENCE

1. METHODS OF PAYING

LET us suppose that A goes into B's shop to purchase an article, say a book-case. After examining various book-cases, A selects one the price of which is £5, and indicates his intention of buying it at that price. B indicates his intention of selling it at that price, and as soon as they are of one mind, and have expressed it to each other, a legal contract has been entered into between them, the effect of which is that the book-case no longer belongs to B but to A, who, in return, is under a contract to pay B five pounds. We have to consider here the methods by which A can pay, and the differences between them. It will be found that an exact and searching examination of this everyday occurrence will lead to much important economic truth.

(i) To begin with, A can hand to B five sovereigns. This settles the matter as far as both of them are concerned, since B cannot refuse them even if he suddenly altered his mind and wanted to go back on the transaction.

(ii) A might offer to B silver coins to the value of £5. B need not accept them, for silver is legal tender only up to 40s. If he chooses to accept

them, however, the matter is again concluded just as surely as if the £5 had been tendered in gold.

(iii) A may offer B a Bank of England note for £5. This again settles the matter so far as A is concerned, for Bank of England notes, just like sovereigns, are legal tender to any amount. Clearly, however, though so far as A is concerned the transaction is closed, it cannot be completely closed so far as B is concerned. Our social arrangements are not perfect, but they are not so imperfect as to compel a man to hand over a valuable piece of furniture which cost much time and energy to produce in return for a scrap of paper which is nothing but a scrap of paper. If that were so, A might have paid for the book-case with a blank leaf torn out of his pocket-book. The explanation will be given in full later on, but here it is sufficient to say that B takes the Bank of England note for £5 because he knows that five sovereigns are deposited in the bank for every five-pound note which is issued over and above a certain limit, and that up to this limit 'securities,' that is to say other pieces of paper which can at once be sold for gold, are held by the bank. Therefore a five-pound note is simply a receipt for five pounds' worth of gold which the bank is compelled by law to hand over the moment it is asked to do so. Since the gold is there, in pledge as it were, it is always forthcoming on demand. The transaction is over between A and B, but not between B and the bank. 'As safe as the Bank of England' has passed into a proverb, and B takes the note not only because the law compels him to do so, but because there is not the slightest reason why he should not.

(iv) A may hand to B currency notes to the

value of £5. These currency notes, familiarly called 'Bradburys,' were first issued soon after the Great War began and are familiar to all, since all use them. Currency notes are legal tender to any amount, but, while the holder of them is entitled by law to have them encashed for gold on presenting them at the Bank of England, the full amount of gold necessary to cash them all is not held specially in reserve for this purpose. They have an adequate backing of gold, though not a full one. Moreover, they have behind them the credit of the British Government, which issues them and is responsible for them.

(v) A may hand to B his cheque for £5. B is not obliged to take the cheque, since cheques are not legal tender. If he knows A, he will of course take it, but the taking of the cheque does not close the transaction for either of them. B takes the cheque because he believes two things: first, that A has a right to sign the cheque because he has a deposit in the bank on which it is drawn; and secondly, because he believes the bank is sound and has kept A's money in perfect safety. In taking a £5 note B trusts the Bank of England. In taking currency notes worth £5 B trusts the British Government. In taking a cheque for £5 B trusts A and the bank on which the cheque is drawn.

(vi) A may not hand anything at all to B in payment for the book-case, but may simply have the amount of £5 put down to his account in B's books. In this case, though the property in the book-case passes completely from B to A, so that B cannot claim the book-case back again even in default of payment, B trusts A only. So complete is this trust, and so well founded, that merchants do business with each other on the great exchanges

to the extent of millions of pounds every day without any formality. The present writer once saw a great corn merchant order 100,000 bushels of wheat at 5s. per bushel with a mere nod. The transaction was over as quickly as one could buy a newspaper in the street. The nod of a British merchant is as good as his bond, which is why Britain holds the place she does in the trade and commerce of the world.

2. THE GROWTH OF CONFIDENCE

We have already studied the simplest and most primitive form of commercial transactions, and here we have an example of their latest development. It is very important that the student should contrast these two stages—the first known and the last known—on the line of progress. The two parties of Australian 'black men' came together as enemies, and you will remember the precautions that were taken to prevent the boomerang from being taken by force instead of bartered by consent, and the transaction, simple as it was, was accompanied by a regular ritual. At the other end of the scale a price is quoted to the Liverpool corn merchant, and a transaction involving £25,000 is completed in a moment without hesitation on either side. This can only take place when the two parties to the transaction have complete confidence in one another.

But it is not only confidence in one another that is necessary but confidence in the future, and a man's confidence in the future depends mainly on his confidence in the stability of society. Primitive man distrusted his neighbour, that is the first reason why he was primitive man; he also distrusted to-morrow, which is the second reason,

and he distrusted to-morrow because he had not around him the props and pillars of that orderly fabric which we call society. The future was to him unknown and uncertain, and he could make little or no preparation for it. The future is also unknown in detail to the merchant of to-day, but in its wider aspects it is by no means uncertain, for there is a large part of it which is assured by our social arrangements. Whether he lives or dies, the great whole of which he is only a tiny part will go on just as he knows it, for law and order, faithfulness to one's pledged word and confidence in the pledged word of another, have been drilled into him and his fellow-citizens by centuries of social effort.

3. CAPITAL AND CONFIDENCE

Capital has been the chief agent in promoting the growth of confidence. For capital is a surplus of present goods over present needs, and the men or, in earlier time, the groups which owned a surplus would only apply it to increase the production of wealth on condition that they could look ahead with assurance to the time when they would reap their reward. People will not sow corn unless they are to gather the harvest, for if they are to be robbed of the earth's increase it is better, merely on economic grounds, to live from day to day by plucking berries and collecting shell-fish. The first use of a surplus was as a store against 'a rainy day,' or as a means of supporting retainers, but the earliest records of an ordered society, those of Egypt in the twentieth century B.C., show us the business or economic use of a surplus as capital, which depends upon the opportunity of selling a surplus deliberately acquired for 'current money with the merchant,' and

applying the money to industry, or, as we now say, 'investing' it.

Here we see capital in one of its most important aspects, namely, as the link between the past and the future in industry; and the process has gone on until in a modern country like ours very few people indeed devote their present efforts to the production of goods to satisfy their present needs. The everyday work of nearly every one of us is work for to-morrow, sometimes for a long-distant to-morrow, and we can only do it on condition that when to-morrow comes the result will be, accidents apart, more or less exactly what we anticipated. To live and work in this way, we have to enter into all sorts of arrangements with one another, some to work and others to pay wages, some to produce goods and others to purchase them, some to lend capital and others to pay interest. In the course of social evolution we have come to the point where it is an economic necessity for us to believe in one another, as well as a moral duty to be worthy of that belief.

4. SAVING AND HOARDING

In the early stages of economic life it was difficult to dispose of a surplus of goods. The chief thing wanted, and therefore the only thing in constant demand, was food; and it was of little use heaping up supplies of food so much in excess of the needs of the present and the immediate future that they went bad before they were wanted. Fortunately one of the primary needs was for ornament, and ornaments must be small, choice and rare, thus containing much value in small compass. The desire to possess these, and the willingness to produce food and other essential

goods in order to obtain them, caused a great advance. An obvious form of ornament is a metal ring, and the earliest money of Europe was ring money.

When a man had a store of these valuables, his next care was to secure them in safety, and we can see exactly how men acted in olden times by watching what has gone on in Russia during the last year or two. For when a great modern society breaks up under the blows of a revolution, men are thrust back on the habits and practices of forgotten ages. An American correspondent in Soviet Russia says: 'I heard of one ex-millionaire who, under cover of darkness, buried in one of the Moscow parks an iron casket containing hundreds of thousands of dollars' worth of diamonds and other family jewellery, intending to come back and dig them up again when things got quieter. He was so cautious that he refrained from confiding the hiding-place of these valuables even to the members of his immediate family. In consequence, when he suddenly died of heart failure, his secret died with him and his heirs were left destitute.'

The hoarding of treasure was universal in ancient times. Every now and again the newspapers tell us of discoveries of buried treasure. 'Treasure-trove' belongs to the king, though nowadays he always hands it back to the person on whose property it is found. In the reign of Elizabeth, Dr. John Dee, a famous man of the time who was half scientist and half quack, petitioned Lord Burleigh to ask the queen to give him either a pension of £200 a year or the right to search for treasure-trove, half the profits of which he undertook to pay Lord Burleigh. If Dr. Dee thought that the right was worth the

annuity, it means that he expected to clear £400 a year after paying the expenses of searching, or at least £5000 measured in the money of to-day. His application shows us quite clearly how very general hoarding of treasure was in older days. Fortunately the problem of keeping treasure in safety, without any risk of its whereabouts being unknown on the death of its owner, has been solved in all countries like ours.

When treasure is hoarded it is dead. Suppose a man to work very much harder than usual for a spell in order to purchase a diamond, in addition to his usual purchases of food and other daily needs. If he were to present the diamond when purchased to his wife, the return he would get for the extra work he had done would be the pleasure of seeing his wife wear it, and of sharing her satisfaction in her new treasure. The extra work done is emphatically not wasted, since it has its reward in unaccustomed satisfactions. But if, after purchasing the diamond, he buried it in the ground to keep it safe, all the extra work he had done would be absolutely devoid of good either to himself or any one else. The problem which faced man in the earlier stages of his economic life was to find some way in which he could hoard a surplus in safety and at the same time use it in the production of further wealth. This problem was solved by the invention of money and the organisation of credit.

Suppose that a farmer, after he has harvested and sold all his crops, paid his rent and all other expenses for the harvest year just concluded, finds himself in possession of £1000. Suppose, further, that he calculates that he can go forward to the next harvest, living, working, cropping and spending on the same scale as hereto-

fore, for £800, leaving a balance of £200. With this £200 he can, if he chooses, improve his own scale of living. He can buy more and finer clothes for himself and his wife and children, take them for a holiday to London, buy wines and cigars and, in short, have 'a good time,' as we say. There is nothing wrong in this, and indeed it is his duty, under the supposed circumstances, to ask whether he and his are getting all out of life that life has to give them. The point to observe, however, is that all the money he spends in this way does nothing but transfer to him consumption goods out of a stock that already exists. If he decides to devote £50 to a fuller life, he will have £150 left, and, of course, he will want to keep it in perfect safety. In olden times he would have put it into a strong box, made of stout oak heavily clamped with iron bands and fastened with a strong lock. The father of the poet Pope was a linen-draper in the Strand, and when he 'realised' his wealth and retired into the country, he took £20,000 with him in a chest, and drew out of it from time to time all he needed for household expenses. To this day at Oxford, where they are rightfully careful of old things and old words, they still talk of the 'University Chest,' and display Sir Thomas Bodley's chest in the famous library named after him.

But money put away like this does only one thing. The owner may at any future time take some of it out and use it in purchasing part of the then existing stock of goods. What is wanted is some method by which he can always be able to do this at any moment he chooses, while all the time the money is at work in the world. All know how the farmer contrives to do both. He puts the money into his bank.

5. THE ORIGIN OF BANKS

In Chancery Lane there is a firm which makes it its business to take charge of valuables belonging to other people. Wealthy ladies take their valuable jewellery there, lock it up in a safe in a strong and well-guarded vault, and leave it there until they want to wear it at some great function. This is a good example of the division of labour. It being necessary to keep valuables in perfect safety from fire and thieves, a company makes it its special business to do this for people. In the reign of Charles II. what is now done by the Safe Deposit Company was done by the goldsmiths of London. One of the most famous of them was Alderman Backwell, and on 29th April 1670 Prince Rupert lodged with him 12 dishes, 4 dish plates, 3 pair of candlesticks, 1 pair of ditto quill, 5 dozen plates, 1 sweetmeat stand, 2 cannes, 6 sconces, 24 spoons, 24 forks, 2 sugar casters, 12 salts, 1 pepper box, 1 mustard pot, 2 crewetts, 2 snuffer pans, and 2 snuffers—the total value of which was £960, 3s. 9d. The alderman gave the prince a written receipt for these valuables, charged a certain sum for taking care of them, and, of course, undertook to restore them on demand.

The custom grew up of selling these receipts. If Prince Rupert at any time wanted ready cash he could sell Alderman Backwell's receipt to the Duke of York for any agreed sum, and endorse the document to the effect that the goods were to be delivered to the duke. A further extension was made when, instead of passing all the property mentioned in the receipt, only part of it was passed, as, for example, the two sugar casters to Nell Gwynne for £5, the document being noted

accordingly. The goldsmiths, of course, received gold coin as well as gold articles. For example, on 1st February 1666 Samuel Pepys notes in his diary that he had taken £2000 of his own money to another goldsmith, Sir Robert Viner, 'to call for when I please.' He was pleased to call for it three months later, and then got a surprise, for Sir Robert Viner returned him not £2000 but £2035. During the three months the goldsmith had not let the money lie idle. He had used it in trade, doubtless in the form of short loans to city merchants. It became so profitable to do this that the goldsmiths tempted people to deposit money with them by offering them interest on it. Then the economic principle of the division of labour began to tell once more. At this time the goldsmiths still kept on with their original business, and Pepys recalls more than one purchase of plate from Viner. But the selling of gold plate is one thing, and the lending of money another and very different thing, and in time some of the goldsmiths gave up the goldsmithery business and restricted themselves entirely to receiving deposits of money from one set of people and lending them to another. Here is a document which records what had taken place :—

'July 30, 1689.

'Sir,—On sight hereof pray pay unto y^e^ Rev. Doctor Tytus Oates or his ord^r^ y^e^ sum of Fifty Pounds and place y^e^ same to the account of

'Y^r^ assured friend,

'BOLTON.

'Mr. ffra. Child,
'Nr. Temple Barre,
'These.

'£50.'

Mr., afterwards Sir, Francis Child was a de-

scendant of a line of goldsmiths, and is stated to have been the first goldsmith to drop the old side of the business and restrict himself entirely to the new, so that he is called 'the father of English banking.' The firm still carries on business at the same address, No. 1 Fleet Street, London. The Duke of Bolton has money deposited with him and instructs him in this document, the earliest English 'cheque' on record, to pay the sum of fifty pounds to the notorious perjurer of the Popish plot, whose horrible punishment in 1685 had been no less horrible than his offence. Now that James II. was a refugee in France, some of the wealthy Whigs showed their zeal for the cause by assisting the broken idol. The phrase 'or his order' means that Oates need not in person present the cheque to Child, but may endorse it to some one else, who in turn may endorse it to another, and so on until finally it gets to the banker.

Two points must be carefully noted about this interesting transaction :—

(i) Every time the cheque changed hands on its way from the duke to the banker it did the work of forty-seven guineas and thirteen shillings of the then current coin of the realm.

(ii) It was able to do this work simply because everybody who handled the cheque placed confidence in two people, the duke and the banker. They had faith that the former had deposited money with the latter, and that the latter would hand out the £50 to the person who presented the cheque at his bank.

6. CHEQUES AND BANK-NOTES

The banker's profit depends on his being able to use money deposited with him in the interval

between the time of deposit and the time of withdrawal. When the bank opens in the morning he does not know how many people will come to withdraw money or how much they will withdraw, but he has perfect confidence that all his customers will not come to take away all their money. Moreover, during the day fresh sums of money will be deposited with him. All he has to do, therefore, is to have a sum of money on hand large enough to meet the demands of an average day, with a margin for safety. All the rest he can use to finance the business of other people. Let us suppose that Mr. Child had found by experience that if he kept £10 in his till out of every £50 that had been deposited with him, he was able to meet all demands for cash made by his depositors. The position then is that the duke's cheque for £50 is passing from hand to hand in one set of business transactions, and £40 out of the £50 originally deposited are at work 'in the City' financing another set of transactions. The system is perfectly safe so long as the £50 is forthcoming on demand at No. 1 Fleet Street, and it will remain safe so long as the banker only puts the £40 into the hands of men who are skilfully transacting honest business. If they fail to keep their engagements with Mr. Child, Mr. Child will be unable to keep his with the duke.

Banking, then, had its origin with the goldsmiths of London who, as the phrase then went, 'kept running cashes,' or, as the same thing is put to-day, allowed customers to open current accounts on which they could draw by cheque. The original receipts for deposited plate, such as that given by Alderman Backwell to Prince Rupert, grew in time into two distinct things—(1) the cheque and (2) the bank-note.

The duke, as we have seen, drew a cheque in favour of Titus Oates, and the cheque of to-day only differs from it in four respects: (*a*) It is more peremptory and less polite, for failure to pay on sight now means bankruptcy on sight to the banker. (*b*) It is written on a carefully printed form provided by the banker and issued only to his customers as a safeguard against fraud, though, in fact, any one can draw a perfectly valid cheque on any scrap of paper he likes to choose. (*c*) It has impressed on it a twopenny stamp, which is a tax paid to the Government. (*d*) When properly endorsed by the person in whose favour it is drawn, it provides a valid receipt to the payer.

One disadvantage of the cheque is that it depends for its acceptance on the credit of two persons, the man who 'draws,' that is writes it, and the banker on whom it is drawn. A tradesman who does not know Mr. B. will decline to take his cheque, not because he has no faith in the bank, but because he has no faith in Mr. B., who may have stolen a cheque-book and forged the cheque.

Again, cheques are drawn for every conceivable sum of money, and sometimes for very large sums. Pope's father, the linen-draper in the Strand, would doubtless have taken the duke's cheque on Mr. Child in payment of drapery sold to Titus Oates, but the transaction would not have been very conveniently handled unless the doctor had spent precisely £50 on linen, which is not in the least likely. The bankers got over this difficulty by the use of bank-notes, which are specially printed and designed pieces of paper on which a banker promises to pay a definite sum when the note is presented over his counter. The lowest sum for which a bank-note can be issued in this country is now £5, but in Scotland £1 notes are

the favourite, as they were in England in the early days of banking. A bank-note avoids the two inconveniences of a cheque mentioned above. A tradesman takes a bank-note from a perfect stranger because he has faith in the banker who issues it. Being for small amounts, they readily pass from hand to hand in the ordinary retail business of life. A cheque makes a rapid journey from the man who draws it to the bank which pays it, but a bank-note circulates from hand to hand for weeks and even months before it is presented for payment. In 1877 £5 Bank of England notes had an average life of 82 days, and the £10 notes of 66 days. Even the £1000 notes lived as long on the average as 9 days.

7. THE MANUFACTURE OF CREDIT

We have seen that a banker gets his living by inviting people to deposit money with him. The person who deposits the money gets several important benefits. His money is kept in perfect safety; the 'paper' which the banker gives him, whether in the form of a cheque-book or in notes, can be used day by day as he needs it; his cheque-book and his pass-book provide him with a perfectly simple method of keeping his accounts and seeing how he stands; a small rate of interest is generally allowed him on his balance at the bank; by custom he has the right of consulting his banker as to the advisability of business transactions either of a new sort or with strange people; and, finally, it is quite customary for him to be able to borrow money from the bank when necessary. As soon as these advantages became apparent, people readily took advantage of them, and during the eighteenth and early

nineteenth centuries a network of bankers spread all over England, so that even small market towns had their banks.

The advantage to the banker is that he can use by far the greater part of the money deposited with him in loans to business men and in investments in good securities. On these he makes a far larger rate of interest than he allows to his depositors, and, after paying the expenses of his business, which are commonly very small in proportion to the turnover, he may look to do reasonably well himself out of the business. Suppose that a banker has had deposited with him a sum of £50,000, and that his experience shows that if he keeps £10,000 in his till or 'at call,' that is, where he can put his hand on it at a moment's notice, he is quite safe. He *may* argue from this that if he kept £20,000 in his till or at call he could manufacture credit to the extent of another £40,000. The whole of the first £50,000 is actually deposited with him, so that the 'paper' he issues on the strength of it is perfectly safe, providing his investments are 'liquid,' that is instantly convertible into cash, for by recalling these investments he could pay all his depositors all he owed them if they all came at once for all their money. Of the second £50,000 of our supposed case, only £10,000 has been provided by the banker himself. The other £40,000 in the beginning has no tangible wealth to represent it, and everything depends on the way in which the banker's debtors use their credit with him.

In the earlier days of English banking this £40,000 would be represented by bank-notes. For a long time, however, English bankers, with exceptions to be noted later on, have been forbidden by law to issue bank-notes of their own.

In these days the £40,000 with which we are dealing would take the form of advances to business men by means of overdrafts or fictitious deposits. The banker would allow A, B, C, D . . ., who had deposited money with him, to draw cheques on him for a larger amount than they had deposited, and he would allow L, M, N, O . . ., who had deposited no money at all with him, to have an 'open' account with him, that is an agreed sum which had not been deposited at all but simply put to their credit in his books. He demands 'collateral' securities, but unless these are 'liquid,' the whole system may freeze to a standstill. The point to observe is that, whichever method was adopted, the general public would not know of it. To them any one of his bank-notes is as good as any other, whether it belongs to the first batch or the second, and it is impossible for them to know whether a cheque presented to them in payment is drawn on a credit balance or on an overdraft. No harm happens, however, so long as only one pound in five is asked for. This is indeed the case in normal times, but the banker has done something which tends to make the time not normal. Moreover, being human, there is the danger that he may be tempted to continue the process until notes issued by him or cheques drawn on him are current to an amount far beyond his available assets. He has erected a truncated pyramid on its narrow end, and as the broad end gets broader there comes a time when a mere breath will topple it over. Let it be whispered about that he has done this, or let some unusual demand for ready money come along (for example, to market the harvest or to build a new railway in the neighbourhood) which leaves him no time to call in his loans or

realise his 'collateral,' and the game is up. There is a 'run' on his bank, and he and his customers are ruined.

This is no fancy picture. In the earlier days of banking it happened over and over again in this country, and there is in *John Halifax Gentleman* an excellent picture of a run on a country bank in days when, as Miss Martineau says, 'many a man set up for a banker who would at another time have as soon thought of setting up for a king.' In the year 1825 no less than eighty-two banks stopped in a single month. A generation ago it happened very frequently in America, where the banks habitually worked on too narrow a margin. It has not happened in this country since 1886, or in Scotland since 1878. In economic matters this country has many things to its credit, and none of them better deserves credit than the banking system which it has perfected to the admiration of the world. This banking system has its centre in the Bank of England.

8. THE BANK OF ENGLAND

We have seen that the origins of English banking go back to the reigns of Charles II. and James II. After the Revolution of 1688 had placed William III. on the throne, the new king found himself in great financial difficulties. Soon these were made worse by the rivalry between the 'landed interest,' which was in the main Tory, and the 'monied interest,' which was in the main Whig. The 'City' of that day, notwithstanding its political support of the new king, only gave him its financial support on the most onerous terms, and that merely 'by driblets,' as a contemporary writer puts it. Ministers, tired of

going cap in hand to the 'jobbers' for a few score thousands, were therefore anxious for suggestions as to how to raise the money needed to carry on the war against Louis XIV. Two of these suggestions came before the House of Commons. Hugh Chamberlain proposed to establish a Land Bank, which was to issue inconvertible notes on the security of landed property—the very scheme which was carried out a century later in revolutionary France by the *assignats* with such disastrous consequences. Fortunately Chamberlain's scheme was set aside in favour of that of his rival, William Paterson, who proposed that the public should be asked to subscribe a loan to the Government of £1,200,000 at 8 per cent. Large as the rate of interest seems to us, it was probably small compared with that which the stock-jobbers of the day were exacting, and an additional inducement was therefore necessary in order to draw out of the purses of the public a sum of money one-fifth as large again as the total revenue of the country for the previous year.

In the seventeenth century a great deal of importance was attached to the grant of a Royal Charter, such as that possessed by the famous East India Company, mainly because such a charter generally gave those on whom it was conferred some valuable trading monopoly. Paterson's inducement, therefore, was to promise that those who subscribed to the loan should be formed into a company under a Royal Charter, to be called 'The Governor and Company of the Bank of England,' and that no other company whatsoever, and no private firm of more than six partners, should be allowed to carry on a banking business in which they issued 'bills on demand,' or, to give them the popular name they still keep,

'bank-notes.' The bait was effective, for half the capital was subscribed in a few days and the whole in less than a month; whereon the Royal Charter was issued, and the most famous bank in all the world started on its career.

From the first it has had two distinct features :—

(i) As a bank it is as independent as any other bank or any other company or firm whatsoever. Its Governor, Deputy Governor and Court of Directors have always been 'gentlemen of known abilities and integrity, as well as of fortune,' and when one drops out for any reason the others elect his successor.

(ii) It has always been intimately connected with the Government, has always had privileges possessed by no other bank, its principal customer is the Government itself, which keeps its account there just as private persons do, and as it is the creation of Government by special legislation it is the servant of the Government in all times of crisis. Hence, under the orders of the Government, the bank suspended cash payments for over twenty years during the Napoleonic wars, that is to say, Bank of England notes during that period were not changed for gold on demand.

9. THE BANK CHARTER ACT OF 1844

The original charter of the Bank of England was renewed from time to time until 1844, when the position of the bank was settled as it now stands by the Bank Charter Act of 1844. Under this Act the bank is divided into two parts: (1) the Issue Department, which concerns itself solely with issuing bank-notes; and (2) the Banking Department, which carries on the ordinary business of a bank.

The issue department can only issue Bank of England notes on the following terms:—Up to a known but varying amount it can issue bank-notes without any gold to back them. At the outbreak of the Great War this amount was £18,400,000. The security, or 'backing,' for these notes consists of gilt-edged securities, mostly loans to the Government, including the original £1,200,000 lent in 1694. What it comes to, then, is that these notes, though not backed by gold, are backed by the British Government. For every other note issued in normal times the exact quantity of gold which it represents must be placed in the vaults of the bank either in coin or bullion. If a person gets an ordinary banker to change him a £5 note into sovereigns, the banker carefully puts the note away. If, however, a £5 note is changed into gold at the Bank of England itself, the cashier as soon as he has parted with the gold tears the note up.

Deviations from these rules can only be made on the instructions of the Government. One of the first things done by the Government on the outbreak of the Great War was to allow the bank to issue notes without being under the obligation to put the exact corresponding amount of gold into its vaults. The precedent of the Napoleonic wars, however, was not followed, and right throughout the War a person who presented a Bank of England note at the bank itself could get gold for it.

The banking department of the Bank of England carries on the ordinary business of banking, though, naturally enough, the unique position of the bank on its issue side has corresponding effects here. Londoners are familiar with one indication of the special position occupied by the

Bank of England, for every night a platoon of Guards marches from Wellington Barracks to the City to keep watch and ward over 'the Old Lady of Threadneedle Street.'

10. THE JOINT-STOCK BANK

In the later years of the nineteenth century no bank went bankrupt. In the earlier years this was a very common occurrence. This great change for the better is the result of better organisation. The independent country banker often failed because his business was too small to be efficient, that is to say, he was so weak that any extra strain pulled him down. He was not allowed to have more than five partners if he intended to issue his own notes, and as in these days this was the favourite method of creating banking credit, the monopoly given by the Bank of England Charter prevented the getting together of sufficiently large capitals to carry on a sound banking business. But these were the days when the Industrial Revolution was running its course, and it was a distinct drag on the economic development of the country that the banking system was prevented from expanding to meet the growing needs of trade. The difficulty was solved quite easily. In 1833 the London and Westminster Bank was formed. This was a 'joint-stock' bank, with a very large number of shareholders, and they evaded the difficulty about bank-notes by using cheques, the alternative method to which we have already referred.

There was another difficulty in the way, however. Every one knows the sad story of Sir Walter Scott's financial troubles. He entered into a partnership with a publisher named Ballan-

tyne, who attended to the business while Scott worked at poems and novels for him to publish. Unfortunately the firm went bankrupt, and, as a partner in the firm, Scott became responsible for the whole of its debts. Gallantly and honourably he set himself to work to pay off the debt from the proceeds of his pen, and wore himself out with unending labour.

This was the law of partnership. No matter how small a sum a man had contributed to the business of which he was a partner, and no matter how small a part he took in managing it, he was responsible with all his property for all its debts if it failed. That is why Owen in *Rob Roy* was put in the Tolbooth in Glasgow for the debts of the firm of Osbaldistone and Tresham, whose clerk he was, but in which he had invested his small savings. The need for capital became more and more marked as the Industrial Revolution proceeded, and the large capitals required could best be got together by pooling the resources of a large number of individuals. Naturally, however, this was impossible so long as a man who had invested £100 in a new business was responsible with all his property if things went wrong. In addition to this defect, there were other legal difficulties in the way of a company. It could not, for example, have officers through whom it could act, and if any one of the subscribers happened to be a clergyman the company and all its acts were invalid. So changes in the law were made, until at last the Companies Act of 1862 settled the law as it stands. The term 'London Joint City and Midland Bank, Ltd.' means that the capital of this bank is subscribed by, that is belongs to, a number of shareholders, and that the liability of each of these, unlike the liability of Sir Walter Scott, is

limited to the amount of his subscription. He is not in the least likely to lose that, but, and this is the main point, he cannot lose more. The system of limited liability has been of very great advantage to English industry, and in no way has it been more advantageous than in permitting the formation of the great banking companies, generally with their head offices in the city of London, with branches scattered throughout the country. The tendency is for banks to grow larger and larger by the joining together of great banks, hitherto independent, into greater banks, as the London Joint Stock Bank and the London City and Midland Bank were recently joined together to make the London Joint City and Midland Bank.

There is no similarity between the position of an independent banker in a country town a hundred years ago and the manager of the branch of one of our great banks in this same country town to-day. If the latter saw any signs of a 'run' he would not be helpless, for he would only have to wire to his head office to get sufficient sovereigns and £5 notes, *i.e.* legal tender, to pay every customer who called, and the fact that he was paying would in an hour or two prevent them calling.

11. SPENDING AND INVESTING

At the present time practically every penny saved out of income gets into a bank. The workers put their savings into the Penny Bank or the Post Office, while people of means open an account with a bank and make their payments by cheque. In other words, the banks act as great reservoirs of liquid capital, ready to be run off into any channel which promises to be

profitable. In this book you have been taught to think of capital as things not as money, and you have also been taught to think of money as a tool for shifting things about. Every banker is, from this point of view, a transport agency, a sort of glorified common carrier. Now we have got to look at him from another point of view. Just as the farmer puts seed into the ground and gets an increase of thirtyfold or sixtyfold, or maybe a hundredfold, so the banker puts capital into business and gets an increase. Let us go back to our farmer and his £200, which you will remember he divides into two parts, £50 to be spent in shops, railway rides, theatres and holidays, and £150 to be put into his bank.

There is the greatest possible difference between spending money in a shop and putting money into a bank. Here is a bicycle in a shop in the High Street. The farmer buys that for his daughter. Until the bicycle is sold to a person who is going to use it, all the materials used up in making it and all the wages paid to those who made it are, from the economic point of view, unpaid, since if the bicycle rusts out unsold in the shop the shopkeeper has to stand the loss. Therefore, when the farmer buys that bicycle for his daughter to ride, all he does is to bring a long chain of past economic events to a satisfactory end. The daughter is pleased with the bicycle, the farmer is pleased with his daughter's pleasure, and the shopkeeper is pleased at having sold the bicycle.

The money that the farmer puts into the bank is not the end of a chain but the beginning. There is as much difference between the two operations as there is between putting a potato into the oven to bake it for one's dinner and putting it into the ground to produce next year's crop. This will be

seen if we examine two typical cases of men who go into the farmer's bank and ask to see the manager.

12. BANKS AND BUSINESS

The first of these is Mr. Fells, the tanner. He has recently sold to Mr. Last, of Stafford, a large consignment of leather. In the beginning of this chapter we discussed the various ways in which you can pay for an article purchased in a shop. Business men, however, have a special way of their own of paying one another. It is customary, and has been from time immemorial, for the tanner not to expect payment 'on the nail,' as he might put it, for the leather sold to the shoe-manufacturer, but to give him credit for a certain period during which he will turn the leather into boots, sell them, and so be in a position to pay for the leather.

So Mr. Fells despatches the leather to Mr. Last, and then sits down and writes a document, in form very similar to a cheque, which reads as follows :—

£250.

COWFORD, April 21, 1920.

Three months after date pay to me, or my order, the sum of £250 for value received.

JOHN FELLS.

To William Last,
Stafford.

He posts this 'three months' bill'—remember, in passing, that a cheque is a 'bill on demand' or 'on sight'—to Mr. Last, who 'accepts' it by writing his name across the face of it. Somebody in three months' time will take this 'bill' or 'acceptance,' for it is called indifferently by

either name, into Mr. Last's office, who will then pay it or suffer the consequences.

Clearly, however, it would be far better for Mr. Fells to be paid 'on the nail,' if he could only manage it, for he could then put the money into his business, and have it at work for three months, increasing his business and bringing in profit. So he takes the acceptance to the bank, and asks the bank manager what he will give him for it. Of course the manager cannot give him the full £250. But as it is a good bill, since Mr. Fells and Mr. Last are both business men of excellent repute, he will give him pretty close up to the £250, how close depending upon the rate of interest which rules at the time. If this is 5 per cent. per annum, a bill for £250 in three months' time is worth a little under £247, and allowing a little extra for banker's profit and risk, the manager might offer him £245. During the three months, then, Mr. Fells has the use of this money in his business, and the acceptance, which now belongs to the bank, rests in the manager's bill case. It may happen during the three months that the manager would rather have the money than the bill, but a good bill is always saleable, and he can easily dispose of it to a bill-broker in London.

The next person who comes in to see the bank manager is Mr. Spindler, who owns the cotton-spinning mill in the village. The cotton trade is beginning to look up, for there have been one or two very fine harvests in India and China, and in consequence of these the East is now making, and is likely to continue to make, large demands for English cotton goods, and, better still, is able to pay higher prices for them. Mr. Spindler wants to make his mill larger and put in some up-to-date machinery. Can the bank manager

help him? The bank manager knows the position of the cotton trade pretty thoroughly. A mill extension, under a competent man, is practically certain to pay well. He knows that Mr. Spindler, though not a very wealthy manufacturer, is a very competent business man, who has kept his accounts at the bank for some years, and bank accounts tell their own tale to an experienced bank manager. So he allows Mr. Spindler to overdraw his account to the amount of, say, £5000, if he will provide adequate security, which in this case might be the title-deeds of the mill. The result is a new wing to the mill, a new demand for labour, and an extension of business that does the town a great deal of good.

13. CREDIT AND PRICES

Now we come to a very important point. Mr. Fells has £245 to spend which he would not have had but for the bank, and Mr. Spindler has no less than £5000. All they buy, they pay for with cheques on the bank. Now a cheque is not money, for money is legal tender, that which a man is bound to take in payment of a debt, and no man is obliged to take a cheque. The fact is, however, that everybody does take cheques. The business of the country would come to a standstill at once if they did not. But we have seen that if the quantity of goods on hand remains constant while the supply of money increases, prices rise. Is it only an increase of legal tender money that will make prices rise? Certainly not. Whatever does the work of money has the effect of money. Mr. Spindler, who is paying by cheques drawn against an overdraft, has more effect in raising prices than our farmer, who draws cheques

against a smaller amount of money actually deposited in the bank with his own hands. Prices rise because demand increases faster than supply; and, so long as the sellers are paid the prices they ask, it is a matter of indifference at first whether the purchaser intends to pay in gold, in bank-notes, by a three months' bill, by a cheque against a credit account, or by a cheque against an overdraft.

It follows that a rise in prices may begin without an increase in the quantity of money. If any event takes place which makes people who have goods to sell, or services to render, think they can get a higher price, of course they ask it. This took place when all the Chuzzlewit family assembled in the tiny village in which Mr. Pecksniff lived, and the unexpected crowd enabled those who had lodgings to let to get what Mark Tapley called 'race week prices.' So, on a scale as wide as the nation itself, when war breaks out everybody 'holds for a rise,' and goods change hands at higher prices before there is any increase in the quantity of money. Therefore, when the Government sets the printing-press to work to manufacture bank-notes and currency notes, both of which are legal tender, many people argue that it is the rise in prices which causes the increase of money, and not the other way round. What they forget is that if this paper money were not issued, there would not be money enough in the country to keep prices standing on the new level to which they had been lifted by the new force which had come into operation.

A child throws a ball into the air, but it will come down again unless it lodges somewhere, say on the roof of a house. Prices must rise when some great price-raising event occurs, but they will come down again unless the Government

provides a 'roof' for them to rest on, and this 'roof' is always paper money. A banker must have in his till or at call enough money to keep him out of danger. He cannot allow people to increase their overdrafts without increasing his available cash. If, then, the Government prints a large quantity of pretty bits of paper, calls them money, and hands them to the banker, he can of course increase his overdrafts, and supply still more paper money in the form of cheques. If the Government did not print the paper money, this could not be done.

The difficulty is, of course, that when war breaks out the Government wants large supplies of money to buy all the things it needs, and it has no alternative but to raise loans, and no means of raising them except by banking devices which rest on paper money.

During the War some Governments managed their paper money very badly. In Russia, for example, it was printed by wagon-loads, until the price of a knob of sugar came to be 50 Kerensky roubles, and the pre-war value of a rouble in English money was 2s. After the Armistice paper marks were manufactured in Germany to an enormous extent, with disastrous effects on prices.

14. THE FOREIGN EXCHANGES

It is now time to complete our account of the various methods of paying a bill by explaining what happens when the seller lives in one country and the buyer in another. The value of the trade between the various countries in the world was no less than £866,000,000 *for every month* in the year 1919, and this vast sum does not include

the cross-frontier and oversea trade of Germany and the other late enemy countries, for this is not yet available. We began our study of the methods of paying a bill with the sale of a book-case in a retail shop for £5, and at first sight it looks a far cry from that simple case to the payment of these vast sums between merchants scattered all over the world. Fortunately the wit of man, sharpened by his necessities, has during the ages shaped and perfected a tool of exchange which does the work cheaply and thoroughly, so that merchants in London and New York, in Valparaiso and Hong-Kong, transact business together without a hitch.

One of the great oversea trades of the world is in wheat. Young and thinly-peopled countries, such as the mid-West of America, grow wheat for export to the old and thickly-peopled countries of Europe. Let us suppose, therefore, that a New York corn merchant, Jonathan Brown, has sold 2500 bushels of wheat to John Smith of London, and has put the wheat aboard the s.s. *Western* bound for the Thames.

Having done this, Brown sits down and writes a document, in appearance very much like a cheque, which reads as follows :—

£1000.

NEW YORK, October 1, 1920.

Sixty days after this date pay to me or my order the sum of one thousand pounds sterling for value received, and charge the same to my account.

2500 bushels of wheat per s.s. 'Western.'

JONATHAN BROWN.

To John Smith,
London.

This document is called 'a bill of exchange,' a 'foreign' bill (as contrasted with the 'inland'

bill given above), or, from the place of payment, a 'bill on London,' which is the most desired piece of paper in the world amongst merchants.

Note the position. On 1st December some one will come into John Smith's office in London, present this document—known as a *Bill on London*—and demand payment. We need not concern ourselves with Smith, who has two months in which to sell the wheat and get the cash ready with, it is to be hoped, a profit for himself. It is much more important to us to watch Brown, who has a bit of paper entitling him to 1000 sovereigns in London in two months' time and, naturally enough, wants dollars in New York here and now. He can obtain the dollars, of course, if he can find some one who will buy his bill. Who will want to buy it? Clearly, some one in New York who has to pay £1000 in London; and this person, just as clearly, will be some one, whom we will call Jehonadab Jones, who, we will suppose, has purchased cloth for the making of men's suits to the value of £1000 from a London merchant, by name Henry Robinson. Jones has dollars in New York, and wants to pay sovereigns in London. Each of the two men, Brown and Jones, has what the other wants. Jones wants to buy, and Brown wants to sell, a piece of paper which entitles its holder to receive sovereigns in London. Here, then, is the opportunity for a deal, and the only question, which is the usual question for us, is the price. Let us see how this is arrived at.

15. SELLING A 'BILL ON LONDON'

'There is precisely as much gold in 1000 English sovereigns as in 4866 American dollars, so that the

relation between the two currencies is given by the equation, 1 sovereign=4.866 dollars, and this is called the par of exchange. Clearly, however, as this is a matter of business, neither Jones nor Brown will be in a hurry, for Brown would like to get more than 4866 dollars for his bill on London and Jones would like to get it for less. New York is not a wilderness, and they the only two birds in it. Many New Yorkers besides Brown have sold goods to Londoners, and many besides Jones have bought goods from Londoners, and all the former will want to sell bills and all the latter to buy them.

Hence the ordinary law of the market, with which we are now familiar, comes into operation. Suppose that many men have bills to sell and few want to buy them. Then, if all the sellers stick out for the par value of their bills, some of them will lose their market. That is to say, they will have to go without dollars here and now to use in carrying on their business. Brown soon sees how things are going. If he does not sell the bill, he must wait two months and then get his agent in London to collect the sovereigns from Smith and post them over. He will lose time and will be put to expenses into the bargain, and when he gets the sovereigns he will have the further trouble of exchanging them for gold dollars. He can calculate all these expenses—loss of interest on his money, agent's commission, postage and insurance—to a nicety. Suppose them to work out at 26 dollars. Then he might just as well sell his bill here and now for 4840 dollars, and anything he gets above that will be so much to the good. Below 4840 dollars he will prefer to wait for the gold. The 'lower gold point' of the American Exchange on London before the War was therefore 4.84 dollars=£1.

But Brown may be lucky. Buyers of bills may be many and sellers few, and then it is Jones's turn to calculate. He has to get 1000 sovereigns into Robinson's counting-house in London, and Brown's bill will do that admirably, and it is a nuisance that so many people are hanging round Brown. Is Jones to buy the bill no matter what it costs? Certainly not, for he can pack up 4866 dollars in gold, insure them, and post them to Robinson, who, he knows, can sell them to the Bank of England for £1000. He will have to pay him a trifle for this, and he calculates that altogether it will cost him 4.89 dollars. He will therefore bid up to that amount for Smith's bill, but not beyond. The 'upper gold point' of the American Exchange before the War was therefore 4.89 dollars=£1. The par of exchange is 4.86 dollars, and the actual price shifted from day to day.

16. THE URGENCY OF INCREASING EXPORTS

What caused it to shift is now plain. Looking at things from the New York point of view, we see that sellers of bills are American exporters to England, while buyers of bills are importers from England. The exchange is against England when the pound sterling fetches less than 4.86 dollars in New York, that is when payments from England to America are greater than payments from America to England, that is, speaking generally, when England is exporting less than usual to America and importing more than usual from America. The exchange, when against us, can only be put right by heavier exports to America.

When Jones has bought the bill he posts it to

Robinson, who presents it on the appointed day to Smith, who cashes it. In this clever way a debt due by an Englishman to an American is paid by a debt due from an American to an Englishman, and there is no need for the use of coined money except on those rare occasions when the gold point is passed.

We have supposed that in New York Brown went out to sell his bill and came across a purchaser in Jones, but the principle of division of labour makes itself felt here as elsewhere. In practice Brown takes his bill to a 'bill broker,' whose special business it is to buy bills from exporters like Brown and sell them to importers like Jones. In London there is, of course, the same class of men, who meet on the Royal Exchange on Tuesday and Thursday afternoons to transact business. This is in fact the only exchange business now done on the famous old Royal Exchange, which has the Bank of England on one hand and the Mansion House on the other.

So far as the New York-London exchange is concerned, the War has altered the position completely. Up to the present, exchange has been regarded as a matter of payment between merchants. But others beside merchants have to make payments abroad, and the most important amongst them is the Government. The British Government has had to pay so much to America for munitions and for interest on War loans raised in America that the pre-War state of the exchange has completely broken down. Before the War that exchange moved between the upper and lower gold points. Now the lower gold point has been 'unpegged,' and to-day the exchange is down to 3.43 dollars=£1. In other words, the

obligation of an Englishman to pay £1 sterling on demand, which, in the week before the War, was worth 20s. 1d. in New York, is now worth only about 14s. 2d. This is a serious state of things, for one of its effects is to make our four-pound loaf about 5d. dearer than it need be, and it can only be rectified by constantly increasing the volume of our exports.

CHAPTER XII

INCOMES

1. THE MEANING OF INCOME

FROM the moment when a man opens his eyes in the morning until he closes them again at night in sleep he feels a succession of needs which he satisfies by taking for his own use some of the goods that exist around him or by receiving the benefit of services rendered for him by other people. A man's real income is the satisfactions he gets. If every need he feels is adequately satisfied, life can give him no more. Fortunately, life is seldom so unkind to him as to do this. Old needs are only partly satisfied, new needs are constantly being felt, and it is the effort to get them satisfied that carries society ever forward.

The goods and the services which satisfy needs are bought with money. Hence incomes are measured by the amount of money received during a given time—£4 a week, £40 a month, £4000 a year, and so on with infinite variety. If a working man were asked what his wages were he would never dream of saying, 'I get every week the use of two suits of clothes, the use of a six-roomed house and the furniture in it, the use of clean and well-lighted streets, six 4-lb. loaves, 4 lb. of beef-

steak, 8 oz. of sugar, 4 oz. of tea, seven newspapers, the use of two library books, one visit to the pictures, one game of football,' and so on to the end of his list. He sums up the whole when he says, '£4 a week.' The important point to observe is that it is the goods and services that really matter. If they are increased in number and improved in quality, he gets a real increase in his income, whatever has happened to the money in which they are measured. There is precisely the same relation between incomes and money as there is between a bale of cloth and a yardstick. It is the cloth, not the yardstick, that makes the coat; it is the satisfactions, not the money, that make the income.

In the same way the national income is the total of goods and services produced within the nation in a given period and made available for the use of the people. Every one is familiar with a reservoir which supplies a town with water. Before water can come out of the tap in a workman's cottage it has to be pumped into the reservoir, and any change in the reservoir causes a corresponding change in every house. If the pumping machinery fails, or the supply of water is diminished by a drought, the people of the town have to be put on short supply. If all the goods produced in England for English use, together with those obtained from abroad in exchange for our exports, were first of all put into some great national reservoir in the middle of England, everybody would see that the well-being of each one of us depended upon the level of goods in the national reservoir. How many and what kind of goods each one is to be allowed to take out, and on what terms, is indeed a most important matter which we are now about to consider; but before they

can be taken out they have got to be there to take out.

2. THE NATIONAL INCOME AS MEASURED IN MONEY

The money incomes of all private persons added together make the national money income. Suppose a man has an income of £5000 a year, out of which he pays £500 to his private secretary, who in turn pays £50 a year to his servant, who in her turn pays a woman in the village £5 a year for making and laundering her clothes. What is the contribution made by this group to the national income? Are we to consider only the £5000? Clearly not. As each person renders a definite service, the money income received for that service becomes part of the national income without regard to the source from which it comes. The wealthy man parts with £500 of his money income, but he gets in return the real income of his secretary's services, and so on down the list; so that for national purposes the income of the group is £5555.

The best authorities, Professor Bowley and Dr. J. C. Stamp, agree that the national money income of the United Kingdom for the year 1911 was £2,090,000,000 sterling. At the outbreak of the War it had grown to £2,250,000,000, some, but not much, of the growth being due to increased prices. For the present year, 1920, it will perhaps be about £4,400,000,000. The difference between an income measured in money, whether it be the income of a nation or the income of a citizen, and the same income measured in commodities could not be more strongly indicated. The commodity income of this country in 1920 is undoubtedly much less than it was in 1911, for

the difference in available goods is felt in every household, yet the money income has nearly doubled. The goods are fewer in number, but as on an average they are rather more than twice as dear, the growth of money income is easily explained. It is very useful, however, to have the calculation made every now and again as accurately as possible, in order to see how we are getting on.

At the outbreak of war in 1914 the national incomes of different countries were estimated by Dr. J. C. Stamp as follows :—

Country.	Amount in million pounds	Amount per head of the population.
United States	7250	72
United Kingdom	2250	50
Germany	2150	30
France	1500	38
Austria-Hungary	1100	21
Italy	800	23
Japan	325	6
Canada	300	40
Australia	258	54
Spain	230	11

For the year ending July 30, 1919, the income of the United States is estimated at £10,900,000,000. The growth from the figure given in the above table is due partly to natural growth and partly to increased prices.

3. THE DIVISION OF THE NATIONAL INCOME

In the year 1911 persons with incomes of over £160 had to pay income tax, and in order that the tax might be assessed they had to make a return to the Income Tax Commissioners. The total income of those who had more than £160 in this

year was £936,000,000, which, according to Professor Bowley, was divided as follows :—

Owners of land received as rent	£34,000,000
Owners of buildings received as rent	144,000,000
Farmers got from their farms	15,000,000
Investors in Government securities got	48,000,000
The profits of traders, the earnings of capital invested in industrial enterprises at home and abroad, and the incomes of professional men amounted to	528,000,000
Salaries above £160	130,000,000
Income not revealed to the authorities is estimated at	37,000,000
	£936,000,000

Out of the gross total of £2,090,000,000 there was left £1,154,000,000, made up of incomes of less than £160, which Professor Bowley distributes as follows :—

Wages	£782,000,000
Salaries	84,000,000
Independent workers, small employers, farmers, etc.	180,000,000
Unearned incomes below £160	50,000,000
Soldiers and sailors abroad	20,000,000
Old-Age pensions	12,000,000
Agricultural income not otherwise included	26,000,000
	£1,154,000,000

4. THE INCOME OF THE INDIVIDUAL

Some people live on incomes which are given to them. The 'remittance man,' who depends on money sent from home, is well known, and not

much liked, in the Dominions overseas. Irishmen and Italians in America send home large sums for the support of their parents. Incomes of this kind do not concern us for two reasons. In the first place, those who receive them, whatever moral or other right they have to them, have no legal right to them. The persons who pay them can cease to do so whenever they please, and the persons who used to receive them have no legal remedy. In the second place, those who receive them do nothing for them. They are not the economic return for economic services. They correspond to no contribution, either in the present or in the past, to social welfare. They are alms, not incomes, and the economist has no concern with them except to point out that, if these persons are numerous, they are a drain on the national income.

The incomes with which the economist is concerned are legally due from one person to another, so that in case of non-payment the law will step in and enforce the claim. Any one person, A, is under an obligation to pay to another person, B, a stated sum at stated recurring periods (*e.g.* £4 every Friday, or £40 on the first of every month, or £400 on every quarter-day) for one of two reasons :—

B has done work for A, and before the work commenced A and B entered into a contract by which B undertook to do so much work and A to pay him so much for doing it. If B does not do the work, he has no claim to the wages, and if A suffers loss or damage because of B's deliberate and negligent failure to do the work, he has a ground of action against him. If B does the stipulated work, A must pay the stipulated wage or the law will make him. Moreover, the pay-

ment must be made in legal tender money, and if A goes bankrupt before making the payment, the money due to B is paid in full before the rest of his assets are distributed amongst his other creditors. The vast majority of incomes are received on this ground.

Or again, B hands over to A a certain piece of his property, be it a parcel of land, a house, a ship, a horse and cart, a set of tools or a sum of money, each of which is capable under proper usage of enabling A to earn a larger income from his own work than he could earn without it, which is his sole reason for acquiring the use of it. The property is always handed over under a contract by which A agrees to pay B for its use and return it in good condition when the time agreed on is up. B will not hand it over to A if he can make a better use of it himself, and A will not ask for it, much less pay the stated sums at stated times for its use, unless he too makes something out of the transaction.

In short, there are two sources of income, work done and capital lent; and two kinds of income, earned income and investment income. It must be noted that a man's total income may be made up of both kinds. The managing director of a Lancashire mill always owns part of the share capital, and it is also very common for the spinners who work in the mill to buy shares or lend money to the mill at a fixed rate of interest. The man who farms his own land, the skipper who sails his own ship, and the driver who owns his own taxi, are well-known cases in point. Both methods of earning income are as old as the earliest forms of organised human society, and the second is just as useful to society as the first. Yet many people to-day think that there is something blameworthy

about investment incomes. It is held by these critics that, even when no personal blame is attached to the receiver of such incomes, society does wrong to its own best interests in allowing them to continue. Men must work to earn incomes for themselves; they should not be called on, it is said, to work in order to increase the incomes of others. Capital is necessary, but the private ownership of capital is not.

5. INVESTMENT INCOME

In order to get this tangled question lying out straight in one's mind, it is necessary to start from a point upon which all are agreed. The common starting-point is that capital is necessary. It is necessary, for example, to a settler on a fertile plot of virgin soil in Manitoba. He must own a shack, seed, tools, machines, horses, some ready money—and all these are capital. With these he can make a start, and the more he has the better his chance of success. He gets on better still if somebody else owns another piece of capital running past his farm—a railway. So far as keeping himself alive is concerned, he can manage that in a rude way with very little capital. If he is to do what society demands of him, which is not only to keep himself alive but to keep some of us in England alive as well, he must have more capital; and somebody must own railways, grain elevators, cargo steamers and docks, and place them at his disposal. If this is the case in a vast land of virgin soil, it is still more true in a small thickly-peopled country like England. Here capital is almost as urgently necessary as air, and because we happen to have plenty of it—not too much, but a fair supply—it is foolish to suppose that it is here

by happy chance. Moreover, the stock existing at the beginning of any working day is greatly diminished by the end of it. Tons of leather are rubbed off boots by one day's walking. Every machine finishes the day a little nearer to the scrap-heap. To say that capital is necessary is only half the truth. The whole truth is that fresh supplies of capital are necessary every day, and every hour of every day, or the wheels of industry will begin to slow down and our needs to remain unsatisfied.

Since capital is things, and every one of these things is the property of some one known person called a capitalist, and since these things do not change their nature and usefulness if the owner dies, it seems to follow that capital can exist without the capitalist. Suppose that, at a given moment, every capitalist in England was knocked on the head. The capital existing at that moment would remain intact, but only for that moment. The thing that matters just as much—the constantly necessary supplies of new capital—would be affected. They would be killed off too. Capital comes into existence as the result of human efforts. All the people capable of making these efforts have, as we have supposed, been killed. Is it rational to suppose that the murderers would suddenly be endowed with the practical economic good sense of their victims?

Let us now suppose something much less violent than the wholesale slaughter of the capitalists. Let it be determined that their capital shall be taken from them by being nationalised or socialised. In other words, the ownership and control of it pass into the hands of the State, or some group of persons representing the State, but the former owners are allowed a pension during their lives

equal to the income they drew from their capital. The one great change is that henceforth no one is to be a private owner of capital. That is a possible change, for the law which now assures to each man the sole use and enjoyment of his own property may decline to do so. During the Great War the right of Englishmen to use their property in their own way was constantly interfered with by Government officials acting under new laws which gave them the power to do so. People who owned 'dollar securities,' that is shares in American companies, were not allowed to keep them or to deal with them in their own way. They were obliged to hand them to the Treasury, where they received payment for them on terms fixed by the Government.

Property has always been the child of force. In ruder days men kept their own property, or took other people's, by the strength of their right hand. When settled government came, property remained the child of force, but the force that protected it was not that of its owner but that of the community, and the community applies this force through agents who act in its name and in accordance with its laws. The richest person in the world to-day is a woman. At one stage in the growth of society she could not even have owned herself, much less a stupendous fortune, but to-day the whole power of a great State is there to see that she enjoys it in perfect security. But what the law does it could refrain from doing, and its agents would be obliged to act in accordance with the change. There is no question, then, but that the private ownership of capital could be put an end to.

What the law cannot do is to change the nature of men, the motives from which they act and the

results of their action. Imagine a great cotton mill subject to the above change. The owner has hitherto done two things for society: (1) He has operated the mill so as to give constant employment to a large number of workpeople; and (2) he has not only kept the original capital of the mill intact but he has greatly enlarged it, so that he now employs not only his original workpeople but thousands of their grown-up sons and daughters. It is quite true that he has drawn a large income for himself by doing these things, so that he owns a hall, an estate, motor-cars and a yacht, and has a dozen servants to wait on him. But his income is the return for his work and his savings, and society, which must have this work done and these savings made, must now find a man to do it at least as well as he did. He did it, first, because he had the power to do it, and men instinctively exert their powers and find the highest joy in doing so, and, secondly, because he personally reaped all the financial profits of all he did.

Those who would put an end, either gradually or at a single stroke, to the present system of allowing a man to own as much capital as he can get and to use it in his own way for his own advantage do not tell us very clearly whether they think they can replace these two motives, which now give society the services of efficient managers of giant concerns, by other motives just as good from the social point of view. They rather slur over this point, but it is the one point that matters. People who are offended by the sight of extremely wealthy men may rejoice at the disappearance of the former owner, with his cars and yacht and servants, but if the mill loses in efficiency so that it has to charge its customers more for its products, with the result that demand falls off and workers are discharged,

both customers and workers will lose by the change. If the manager under the new system is to have the same income and the same power as the old one, there need be no loss in efficiency, but then there has been no real change of system. In Russia, where all the changes advocated by the most 'advanced thinkers' have been made, the loss of efficiency has been so great as to result in widespread poverty.

In a country like ours, where the highest quality of directing work is required if the millions of people who cannot do it are to get their modest daily wants supplied, the only method of getting it done is to allow those who can do it to get the full reward of it. Any plan that limited incomes would limit efforts, and thus injure the whole society, workers included.

It is just the same with inventions. Some men are inventive geniuses. They invent, as other geniuses paint pictures or write poems, for the mere love of it, and sometimes they neither seek nor get any money reward worth speaking of. But men of this sort are as rare as Raphaels, and society cannot afford to trust to their generous genius. In its own interests it is obliged to guarantee to each inventor, on taking out a patent, the fullest money reward for his work that he can get. It may run to millions of pounds, but it pays society even better than it pays him. All over the world to-day men are at work trying to invent rubber, to manufacture it instead of growing it. If they succeed, a product urgently needed in daily use may be cheap and plentiful instead of rather dear and scarce. Some of them would perhaps go on with their experiments if their reward was to be the bare glory of making the discovery, but it is certain that, if profit were

absent, the stimulus to effort would be diminished and with it the chances of success.

6. INHERITED INCOMES

Another important point must now be attended to. Let it be granted that society should allow a man to reap during his life the largest income he can get from his own work and from investing his savings, because this is the only way it can get the best out of him. Should he be allowed at death to hand on his wealth—the wealth which he has justly won by his services—to an heir who has done nothing? This is the way, of course, in which there has come into existence the class of 'idle rich.' Certainly some men, not many, are very rich, and undoubtedly some of them are idle and extravagant loungers through life, for whom no one can or need feel any sympathy. On the other hand, those who now enjoy inherited incomes are not all rich, and a leisured class benefits society in many ways.

The point that concerns the student of economics is whether the right which a man now has of bequeathing his property to his children is one which is of greater advantage to society than any other plan which has been thought of. Putting the 'idle rich' at their most and worst, are they a class which the poor and hard-worked majority of citizens must tolerate in their own interests? If this question must be answered in the affirmative, it will not be out of any regard for the 'idle rich.'

From every man society requires his utmost, and, since all attempts to compel him to give his utmost are bound to fail, the progress of society depends upon the skill and cunning with which

the best in a man is coaxed out of him. One of the best means of doing this is to take advantage of the affection of men for their children. Most men urgently desire that their children shall continue life on a higher level than that on which they themselves began. The love of power and wealth is one keen spur to industrial energy; the love of children, the desire 'to found a family,' to get 'into the county,' is another, and society must use both. It can only do this by allowing men to hand on to their children at death the wealth they have accumulated during life. To deprive a man of this spur to endeavour would be to deprive society of much of the result of his endeavours. And if the result was, as it certainly would be, greatly to diminish the production of wealth, society as a whole would be poorer, though the idle rich had disappeared. It is not wrong, but right, for a man to be richer than his neighbours if the wealth has been lawfully acquired. There is no defence of the idle rich, but it is their idleness not their wealth that is objectionable. There is a good defence of the system that permits them to be rich and idle, and it is that they are the undesirable result of laws which society has slowly worked out in its own interests. It is undesirable to have a huge blister on one's chest, but it may be there as the result of a mustard plaster which has warded off pneumonia.

In short, the idle rich are one result of a system which has rescued society from wholesale poverty, and in the only country, Russia, from which they have been violently cut out, wholesale poverty has returned.

For the State to take all a man's wealth at death, merely because he was wealthy, would injure society, not help it. To take part of it, even a

large part, for good and necessary reasons, accepted as such by all citizens, is another matter. In 1919 the amount taken by the State in this country by means of the 'Death Duties' from the estates of deceased citizens was £31,000,000.

7. THE INCOME-FIXING FORCES

We have seen that a man's income is always the return in money for something he does for another. It comes either from work or from investment, and is always the result of a contract or bargain. There are always two parties to the contract, a payer of the income and a receiver of it. Further, whether the income be derived from work or from investment, there are generally two groups on each side, and there is no certainty as to which two individuals, one on either side, will finally strike the bargain. Men who can use capital compete with one another for the available supply of it, and men who have capital to invest compete with one another to get the services of the best users of it—those who can pay them most for its use. In the same way, employers and workers stand over against one another in groups, which are coming to be more completely marked off from each other in powerful unions or associations, so that both workers and employers are now largely guided by this group interest, as it may be called. Clearly, then, familiar ground has already been reached. Supply and demand are as powerful here as in fixing the price of a commodity. For an income is nothing but the price of a service, the service of work done for another or of capital handed over to be used by him. Suppose that I can do a certain kind of work, and also that I own a machine which does it automatically and

without attention just as well as I can. Then a man who wants this service rendered can hire either me or my machine—that is, my capital. In either case he gets the service he needs, and in either case he agrees to pay the price because he needs the service, just as he agrees to pay a shilling for a loaf because he needs food. If he hired me my income would be an earned income, and if he hired my machine it would be an investment income, and I deserve the one just as much as the other, for one is just as much the return for a service as the other.

'Is labour a commodity?' is an old and hotly debated question. If the question only means, 'Is there any difference between a mechanic and a machine?' it is an idle one, for there is as much difference between them as there is between a dinner and a diner. Of course, the question 'Is labour a commodity?' cuts deeper than this, and enlightened people are supposed to reply with an emphatic 'No.' If this negative answer means that a mechanic, when exchanging his labour for money, has a different set of mental laws to guide him than when he is exchanging his money for a bicycle, the obvious reply is that this is not, and cannot be, the case. Incomes are prices, no less and no more, and all prices are fixed in the same way and vary under the same influences. Human beings do not come into existence in order to earn incomes, and they have, or should have, nobler things to do than earn them. Once in existence, however, a man must get an income, and he gets it by exchanging one of the two services for money, and then exchanging the money for goods. He cannot skip about from one set of exchange laws to another. In a very real sense, therefore, labour is a commodity, and there is no

insult to the labourer as a man in saying so. Indeed, the question never would have been asked if some people had not supposed that the only sort of labour society had or needed was manual labour, and that the saver and investor of capital did no service at all, either to the user of it or to society. The forces that fix incomes are those that fix prices, and they fix incomes of all classes and of all sizes.

Economics is not able to explain why one of two men is a millionaire and the other a pauper. The explanation would require a complete knowledge of the lives of the two men and of their family histories, which it is no part of the duty of an economist to acquire. Again, the economist cannot merely by means of his science tell a man whose income is small how he can make it larger. That is a thing which the man must find out for himself. The economist is generally a rather poor man, which proves that he has no such knowledge, since, if he had, he would certainly use it to his own advantage. What, then, has the economist to say about incomes?

The two kinds of income, earned income and investment income, are clearly related to the factors or agents of production. Investment incomes are due to those who receive them because they have handed over to others the use of their land or their capital. Earned incomes are due to those who receive them because they have worked for them, either as labourers for an agreed wage or as organisers of industry for a wage, which, though it be truly earned, is uncertain and unfixed. Corresponding with each of the agents of production there is, therefore, a special kind of income due to each for the special part it has played in the production of wealth.

These classes of incomes, and their respective sources, are as follows :—

(i) Income from *Land* is called *Rent.*
(ii) Income from *Capital* is called *Interest.*
(iii) Income from *Labour* is called *Wages.*
(iv) Income from *Organising* is called *Profits.*

Of the income of a given man we can say nothing, to whichever class he belongs. Of the income of his class much can be learned that is both interesting and useful. To take an illustration : When a normal English baby boy is born, it is impossible to say how tall he will grow to be as a man. It is possible to give the limits within which he will grow. So of a Japanese baby boy; and here it is also possible to say in addition that both the lower limit and the upper limit are less than they are for the English boy. In short, there are sometimes laws for classes where there are none, or rather none that can be ascertained, for individuals within the class. This is as true of classes of income as it is of races of men, and it is our next business to see if we can find the laws of class incomes.

CHAPTER XIII

THE FOUR KINDS OF INCOME

1. INCOME FROM LAND : (1) DIFFERENT GRADES OF LAND



UR starting-point is now exactly fixed. We know that an income is a price, and we know something—not indeed everything, but enough to be able to pick the best road—about prices and the way in which they are established. We are not surprised, therefore, when we learn in a boot-shop that a pair of officer's riding-boots costs more than a pair of 'Plimsolls' for a child. The service to be rendered by the boots is a higher and harder one than that to be rendered by the 'Plimsolls,' and the difference in price appears natural to both shopkeeper and customer.

Now one of the most obvious facts about different plots of land is that they differ in their power to render services to those who use them, and therefore differ as to the income they will bring to those who own them. There are some square miles in Sutherland that are of much less use for growing corn than some acres in Suffolk. Far more goods can be sold in a shop with a fifteen-feet frontage to the Strand than could be sold in a shop as big as Selfridge's situated at the top of Snowdon.

The usefulness or serviceability of a plot of land, and therefore its power to yield an income to its owner, depends on two things: (1) the character of the soil and (2) the situation of the plot. If the

land is to be used for a 'crop' of shops or houses, its situation is all-important; if it is to be used for a crop of wheat or potatoes, the situation is still important, since the crops have not only to be grown but to be carried to market, but the fertility of the soil is now also of great importance.

In either case the value of the land depends upon the presence of people who need what the land can supply, while if land has the power to support many people it usually attracts the people it can support. Fertile countries are nearly always thickly peopled, and in thickly peopled countries land always has a high value. For the fundamental fact about land is that the mere quantity of it at the disposal of a given people cannot be varied very much. However numerous Englishmen may become, England will remain the same size. Fortunately, the power of any given area of land to support life depends only in part on its size. Land yields more and more according as it is better cultivated—that is as more labour is put into it and more money spent on it. In one sense, land is the free gift of nature to the people who dwell on it, but, following the usual rule, this gift of nature, land, has to be worked up into a condition in which it can be best used to satisfy needs. So that, from another point of view, an English farm is as much a manufactured article as a pair of boots. Nature gave the raw materials —soil in one case and skin in the other—but man made the finished product.

Whether the fertility of a farm is due to nature or is the result of man's labour makes no difference to the man who is thinking of renting it. There are two points, however, of much practical consequence: (1) Labour and capital devoted to making soil more fertile are 'sunk' for good and

all. There is no alternative use for it. If as much labour and capital had been put into erecting a building for one special purpose and had proved a failure for that purpose, another and a profitable use may be discovered. As a lecture-hall a building may be a failure; as a 'picture-house' it may turn out 'a gold mine.' (2) There is nothing which can be turned to as an alternative to land in its most important use. If tea gets scarce and dear a man can do without it, or take to coffee, but there is nothing but land that can provide standing room.

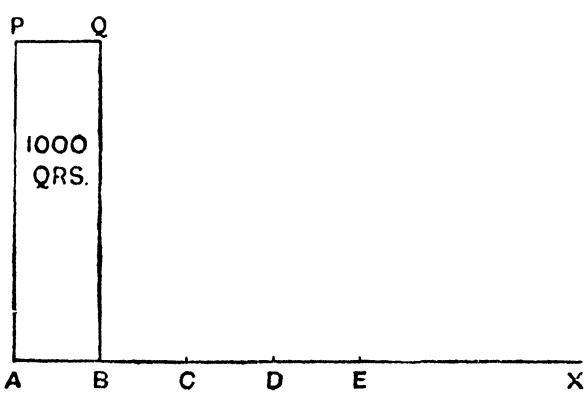
2. INCOME FROM LAND: (2) HOW RENT EMERGES

Since any given body of people, whether it be the 40,000,000 who live on the 58,000 square miles of England and Wales or the 9,000,000 who live on the 3,600,000 square miles of the Dominion of Canada, must live on food grown on land, and since this land is divided into grades of differing fertility, whether this fertility be freely given by nature or 'manufactured' by man, and since, again, the populations of both England and Canada are continuously increasing, we must try to find the law of rent by examining these facts. To do this, it will be necessary for us to make another of those experiments in our own minds which are of so much importance in the study of economics. This time it will be a difficult experiment, requiring us to keep our minds clear and alert, but once made, and made thoroughly well, we shall have mastered the central problem of economics.

Let us suppose, then, that a body of English people, 1000 strong, men, women and children, have emigrated to, and taken possession of, a new colony.

The thousand colonists will want so much food

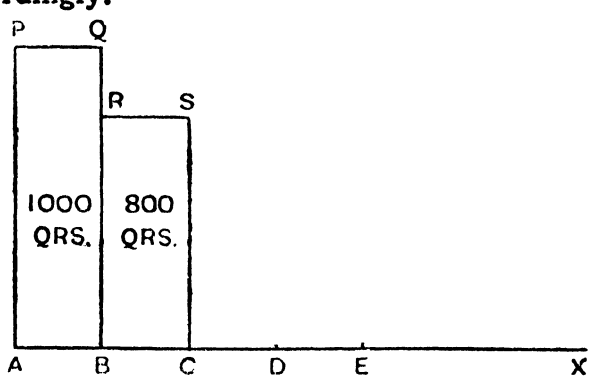
each year. Merely to simplify matters, so as to make the problem easier to handle, we will take the chief food, wheat, as representative of food in general, giving us only one crop to handle instead of many. Soil varies in usefulness for many reasons. Moderately good grass-lands will at first suit our settlers better than rich soil thick with trees and undergrowth; poor soil near their settlement, which has been built where a river enters a good harbour, will suit them better than rich soil farther inland. Being capable English settlers, they will use the plots of land best suited to their case, though these may not be the most fertile lands in the new colony. They will be the most productive in the economic sense, though perhaps not in the agricultural sense, but that helps us since we are studying economics and not agriculture. There will be many different grades of land; we will, again, merely to simplify matters, deal only with four.



In the above diagram AX represents all the land in the colony. It decreases in goodness from A along to X, and we cut off the first four grades,

the first, AB, being better land than the second, BC; BC than CD; and CD than DE. The column on AB, APQB, represents the crop of wheat on AB—say 1000 quarters.

Let us now suppose that the crop APQB is such a good one, and is obtained with so much ease, that the colonists are very well off. Now one certain result of thriving is an increase of population. The first emigrants marry young and have large families. In the 'old colony days' in New England it used to be said that a man and wife would rather have a baby than a present of £100. Other emigrants come in large numbers, as people in the Motherland learn of the abundant wealth of the new colony. The result is obvious. The first-grade land no longer supplies sufficient wheat for the population, and the second-grade land must be put under crop. The diagram wants revising accordingly.

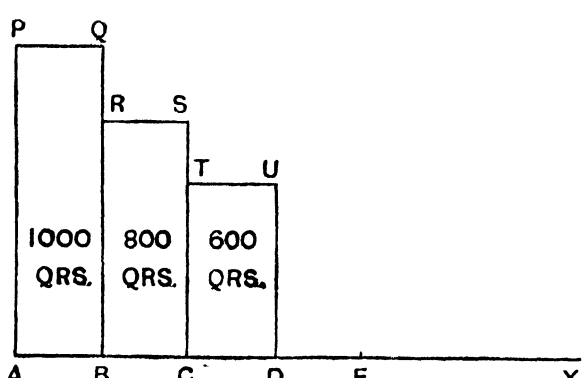


The column BRSC is not so tall as APQB, because it stands on BC, the second-grade land. The men who till BC work just as hard, and use just as much and as good manure and seed, but, since nature does less for them than for the men on AB, their harvest is smaller—say 800 quarters.

Suppose that the men on BC desired to change places with the men on AB. Being settlers in an English colony, they cannot drive them out. They must coax them out by making it worth their while. With the land they have, and with the means at their disposal, they can produce 800 quarters. If, then, they agree to pay the men on AB 200 quarters, they will be in just the same position. This 200 quarters is the economic rent of the first-grade land. It is the difference in the height of the two columns.

3. INCOME FROM LAND: (3) HOW RENT IS MEASURED

Even with a crop of 800 quarters on its second-grade land, life is easy for the settlers, and consequently the population increases, requiring more food, so that the third-grade land must be put under crop, yielding 600 quarters. The diagram is again altered to show the result.



The rent of AB rises from 200 to 400 quarters, and the rent of BC from 0 quarters to 200. CD

pays no rent. Rent, it must be observed, is always measured upwards *from land that pays no rent.* In a new country like Canada this happens under one's eyes and causes no difficulty. There is so much vacant land that any one undertaking to cultivate it can have 160 acres for nothing. He not only pays no rent, he gets the land as a gift. Is there any 'no-rent' land in England? Plenty of it. The owner of it may not be willing to give it away, for there are other motives for keeping it, but he can get no rent for it *as things stand now.* No practical farmer would have it as a gift on condition that he farmed it. Things may not always stand as they stand now. Some day a cheap and abundant manure may be discovered that, like the touch of a fairy's wand, will change Salisbury Plain into a second Bedford Level. Till then, the ownership of Salisbury Plain will be a matter of indifference to everybody, including the owner.

Just as for one purpose we had to study the mind of a hungry man as he ate, one after another, small helpings of meat-pie, and saw that at last he would come to a helping, the marginal helping, which he was undecided whether to eat or not, so now we have been arranging the plots of land which supply a given population with wheat in a similar order. The first plot, because of its productivity—which is due either to its rich soil or its convenient position, or both—is eagerly cultivated because it pays extremely well, and from this first plot we pass in succession to other plots which pay less and less well, until at last we come to one which it only just pays to cultivate. This is the marginal or no-rent land. But what is meant by saying that it only just pays to cultivate?

Men will not devote their capital and labour to growing wheat unless the crop makes it worth their while. In our imaginary colony we suppose that, at a certain stage, it requires 600 quarters of wheat to make it worth while. At that rate the wheat will be grown; at less than that rate, at that state in social progress, it will not be grown. To grow wheat three things are required: (1) Land, (2) Capital (in the shape of seed, manure, ploughs, binders, etc.) and (3) Labour. In a young country like Canada there is an abundant supply of rich virgin land to be had for nothing, so that the land itself counts for nothing in making up the price of the wheat grown on it. It is only the return on the capital and the wages of the labourers that count. If these are met the wheat will be grown. At the stage we have reached in the history of our imaginary colony these are met by a crop of 600 quarters on a plot of third-grade land. Equal plots of second-grade land, on which just as much money has been spent in capital and labour, produce 800 quarters. But we must still reckon only 600 quarters as owing to capital and labour. For we see in England that the wages of an agricultural labourer do not depend on the fertility of the farm he works on, while a farmer with a capital of £2000 will also want the same return on it whether he puts it into a good farm or a bad one. So that our second-grade land has 200 quarters left as rent, and, similarly, our first-grade land has 400. If the cultivator of the land is also the owner, which is the rule in Canada, he gets these extra quarters of wheat. It is these indeed which are the attraction of Canada. The general rule in England is that the land is owned by a landlord, the capital by a farmer, and the work done by labourers for fixed wages—and

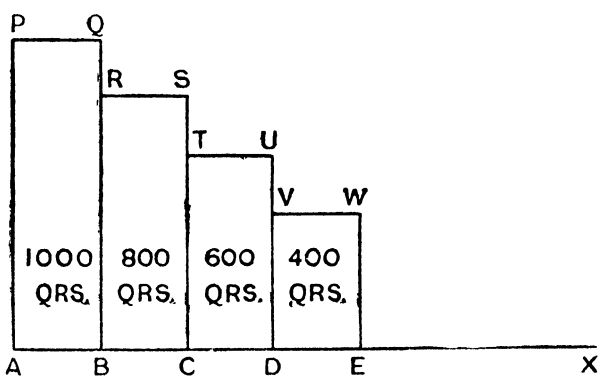
here the landlord gets these extra quarters as his rent.

But though the landlord gets them, he does not fix their number. That is fixed for him, and for the farmer who hands them over to him, by the law of rent. If the landlord tries to exact more, the farmer must give up the farm, since it will no longer pay, for he will be at a disadvantage compared with his competitors on no-rent land. If the farmer tries to get off with less, the landlord will look out for another tenant.

4. INCOME FROM LAND : (4) SOME CONSEQUENCES OF THE LAW OF RENT

There is only one price for the same article in the same market. A buyer of wheat never asks the seller, 'What is your rent?' He grades the wheat and asks the price. So the seller of wheat never says to the buyer, 'I grow my wheat on my own land, and can therefore take less than So-and-so who pays rent.' He, too, grades the wheat and quotes a price. Hence, when we were studying the law of price in a wheat market, rent did not concern us. The price of wheat in a given market must, on an average, be high enough to bring into the market all the wheat wanted by the population which looks to that market for its supplies. Of that supply the wheat grown on the no-rent land is a necessary part. The price of a given quantity of no-rent wheat, as it may be called, is the price of all wheat of the same quality. The rent paid by the wheat-grower does not make part of the price paid by the wheat-buyer. The price of wheat would not alter if rent was abolished. What was rent would remain rent, only some one other than the consumer of wheat would receive it.

Rent increases as population increases. In our supposed colony the growth of population which made it necessary to resort to the third-grade land doubled the rent of the first-grade land. If the return of 600 quarters on the third-grade land is still sufficient to attract fresh immigrants, so that the wheat of the fourth-grade land is required to feed the people, and this land only yields 400 quarters to the standard scale of farming, then the rent of AB will rise to 600 quarters, and the rent of BC to 400 quarters, while CD will now yield a rent of 200 quarters, thus :—



Increase of population, that is, lowers the standard of life on the no-rent land by making it necessary to resort to lower grades of land where nature does less to help. The increase in the price of land, and the consequent increase in the income of the owners of it, as population increases, is to be observed in all young countries as they grow older economically. For example, the average value of an acre of land in the U.S. in 1850 was 11.33 dollars, while by 1910 it had grown to 39.50 dollars. During the Great War we could not get

all our accustomed supplies of wheat from abroad. There was a shrinkage of available wheat-lands for the same population, which is the same thing economically as an increase in population for the same wheat-lands. The Government prevented landlords from raising the rents of 'sitting' tenants and fixed the price that farmers could ask for their wheat, but when agricultural land was sold it fetched very much higher prices because the new owners looked forward to a time when these restrictions would be removed.

While owners of land gain in this way, they are likely to lose in other ways. Let us return to our colony. We placed it on a harbour formed by the mouth of a river. The grades of land so far considered all lie, we suppose, near to the original settlement, and we have watched rent grow as population grew. Just after DE, the fourth-grade land, has been put down to wheat, adventurous settlers who have gone up-stream to look for their 'quarter sections' (as Canadians call their 160 acres) come across great riverside tracts of very rich grass-land which, after being treated, area for area, to the same amount of capital and labour as are used on the original four grades, will yield 1200 quarters. Not even AB, *as wheat-land,* is now worth a string of beads to its owner whether he cultivates it himself or rents it to a farmer. This has actually happened. Wheat was almost driven off English soil when Atlantic steamers and American railways brought the wheat of the mid-West on to the English market. Consequently, the 'seventies and 'eighties of last century were a time of agricultural depression in this country. English farmers had to find other and more profitable uses for their arable land. Much of it was put down to permanent pasture in order to provide

milk and beef for the town populations. A little later, frozen meat and condensed milk were introduced, and again rents suffered.

5. INCOME FROM LAND: (5) THE RENT OF BUILDING-LAND

The rent of building-land is fixed in the same way as the rent of wheat-land, except that, for building purposes, situation is all-important and soil of no importance at all. Even a marsh in the right place is a valuable property. The value of the land now consists in its power to afford office and shop accommodation for business men where they want to do their business, and house-room for people who must live, or think they must, near their work. And apart from any economic reason for living close together, men and women like to do it. Only, up to the present we have done it somewhat unwisely, and have thereby brought on ourselves a host of awkward problems. Just as America now wishes she had never introduced negro slaves because of a mistaken view of cheapness, for what is cheap in the short run may turn out very dear in the long run, so in this country we are now regretting that the earlier stages of our economic evolution have loaded us with the social burden of thousands of miles of mean streets of mean houses, full of workers whose lives and thoughts take tone from their dreary surroundings. Some of the miners of the Rhondda are revolutionaries, and revolution of the sort they desire would ruin the whole of us, themselves included. They are not above criticism of a wise and useful sort, but people who criticise them uncharitably should go and live in the Rhondda. Sound social practice can never be built on un-

sound economics, but at present large masses of men feel their way to their economics, not think it—which this book is trying to help its readers to do—and their feelings take tone from their surroundings, which, in the Rhondda and many other places, are not agreeable.

If you cycle out from the centre of a large city, from the Mansion House in London or the great Town Hall of Manchester, the varying 'fertility' of different parcels of land under a 'crop' of building is just as obvious to the eye as the varying fertility of other parcels of land to crops in the agricultural sense as you cycle from the top of the Pennines into the Vale of York. The no-rent land for building is as plain in the one case as the no-rent land for wheat in the other.

But such a cycle ride out from a big town brings another problem before the eye, and all economic problems should, if possible, be seen in this way. We have got the law of rent out of a study of varying grades of land used for a single crop. Wheat was taken and dealt with at length, and the law of rent thus made clear has now been shortly applied to building-land. On the outskirts of any big town, however, one sees parcels of land that are, as it were, wondering whether they should stick to wheat or take to houses. They are plainly 'some-rent' land for wheat but as yet 'no-rent' land for houses. Rent does not enter into price when only one crop, wheat for example, is considered by itself. But the rent of wheat-land does become part of the price of house-room when the change from wheat to houses takes place.

We can now leave the income from land, but with one final note. The 'rent' of a building is fixed in a different way from the rent, commonly called the 'ground rent' by way of distinction,

of the land on which it is built. Every building is a piece of capital, and the income from capital is now to be considered.

6. INCOME FROM CAPITAL: (1) MEASURING THE FUTURE

Suppose you were shown a bag containing £100 and told that you could have it as your very own at once or exactly a year hence. Which date would you choose? Clearly you would take it at once. There is really no explanation of why you do this, any more than there is of why you breathe or think. You simply do it. The present is always of more value than the future.

Suppose, however, that the alternative put before you was not quite so simple. Let there be two bags, one of which contains exactly £100 and the other more than £100. If you choose the former, you can have it at once; but if you choose the latter, you must wait exactly a year for it. Clearly, your choice is now not so easily made as in the former case. It all depends on how much there is in the second bag. To assist you, you are told as follows: '101'—you select the 100 bag; '102'—you take the 100 bag after a moment's thought; '103'—well, now one must really consider, but, after considering, you still prefer the 100 bag; '104'—things are getting serious: nobody would have thought, until he came face to face with the prospect, that one little pound extra would make him pucker his brows so desperately, but after all you prefer the 100 bag now; '105'—that settles it. You have made up your mind, and select the second bag. The result can be put in the form of an equation, thus:—

£100 on June 30, 1920 = £105 on June 30, 1921.

The sums are different in quantity, but not in value. £100 now is to you precisely the same thing as £105 in a year's time. You have measured the future, or rather one year of it, and found it equal to £5 in the £100. If, instead of having the money given to you, you were lending it to some one else as a business transaction, you would only lend £100 now for a year on condition that you got £105 back. Strictly speaking, you neither gain nor lose, since you get back the very thing you lent the borrower. You would, at the end of the year, get back your capital of £100 together with £5, the income it had yielded you. The £5 is called 'interest,' and, for the sake of convenience, interest is reckoned in percentages.

It has already been pointed out that the degree of progress won by any race depends on the power they acquire to look into and plan for the future. Now capital provides the bridge between the industry of to-day and that of to-morrow. Capital always looks ahead. It knows there is a gap between present use and future advantage. Again, capital is itself an agent of production, something by which more is produced than would have been produced without it. In business men need capital, but not for the satisfaction of present personal needs. They borrow it for their own advancement in wealth. Moreover, the same men are continually lending it, as well as borrowing it, and to them it appears, as indeed it is, right to ask and to give money for the use of money.

This view, however, is quite modern. In olden times it was thought wrong to take interest on money. For centuries the Church prohibited it as a sin, and the Jews, who cared not for the censures of the Church, became Europe's money-lenders. If a man lent another a hundred cattle,

it was not hard to see the reasonableness of his asking for five calves as a return, but money was 'a breed of barren metal.' The borrowing of money for business use was not frequent. Borrowers were needy persons, who required money for pressing personal use, and the lender who exacted 'usury'—that is money paid for the use of money—took advantage of their necessity. When the importance of capital began to be realised, the Church had to give way, though very unwillingly, but the State still tried to limit the evil, as it was deemed, by 'usury laws,' which fixed a legal rate of interest and made it an offence to take more. The English Usury Laws were abolished in 1854, but the merciless way in which some money-lenders bled their victims led to the Money-Lenders' Act of 1900. There is no set limit fixed, but the judge can decide in any case that comes before him whether the interest charged on a loan is excessive and order it to be reduced.

7. INCOME FROM CAPITAL: (2) KINDS OF INVESTMENT

In studying the income derived from capital it is necessary to speak of capital as money. For new capital, as we have seen, comes into existence as a surplus of income over expenditure. Nearly all incomes are paid in money, and nearly all expenditure is incurred in money, and the surplus is always a sum of money in a strong-box or an entry in the books of a bank. For all that, capital is things, not money, and money cannot be used as capital unless it is turned into things. This turning of saved money into capital is called investing it.

When a man hands over his capital to another,

his first care is to ensure that he will be able to get it back intact if and when he wants it. The future is not, and never can be, absolutely certain. The country in which the capital is to be invested may not be safe. No Englishman to-day would invest sixpence in a business in Russia, and he would think long before investing it in Mexico. In England, on the other hand, our political habits and arrangements, our constitution and laws, our capacity for ordered citizen life and our determination to stand by the system we ourselves have shaped, are so firmly established that the future, so far as it depends on the social system itself, is as certain as human care and foresight can make it. From the business point of view this is a great advantage, and familiarity with it must not make us careless of it. An Englishman investing his capital in England, or in a country of the same social type, has no risk of social instability to take into account. The Great War has wholly deprived Russia of this advantage, and even disciplined Germany has in part lost it.

The risk to capital with us is due to the simple fact that no human being is certain of his own future, of the future of the man to whom he lends his money, or of the future of the business in which it is proposed to invest it. On the other hand, men differ very greatly in their attitude to the risks of the future. At one extreme is the man who never puts his hand out farther than he can draw it back. He always plays for safety. At the other is the man who loves to take risks because of the excitement of the game. He ventures neck or nothing. Between the extremes are the great body of men who, with varying degrees of skill, estimate the risk of every proposed investment and act accordingly. They take the risk, but

demand to be paid for taking it, and the greater the risk the greater the payment.

One of the commonest ways of investing capital is to put it into a new limited liability company, and such a company generally arranges its shares in groups which appeal to different types of investors. New companies seeking capital, or old companies asking for fresh capital, nearly always advertise in the newspapers, and they offer something like the following terms. For convenience, let us assume that the shares are all for £100, and are issued at par—that is at full value:—

(i) 1000 *Debentures at* 5½ *per cent.*—If an investor buys one of these shares, the payment to him of £5, 10s. per annum is a first charge on the profits of the company. Nobody else can get a penny till he has got his £5, 10s. There is some risk in the investment, but that is the risk of not making an average profit of £5500, which is enough to clear him. He knows the character and reputation of the directors; he knows, too, the openings there are for a new business of this sort, and he judges that profits of this amount are sure to be made. Moreover, if the company fails, he is a creditor to the full amount of his investment.

(ii) 2000 *Cumulative Preference Shares at* 6 *per cent.*—An investor who buys one of these shares ranks after the debenture holder. He is not a creditor of the company, but a shareholder in it, and thus a partaker of the risk. But he is 'preferred' before the ordinary shareholder, and any dividend he does not get one year accumulates, and must be paid on the first opportunity. His risk is slightly greater, and to tempt him the company offers 6 per cent.

(iii) 5000 *Preference Shares at* 7 *per cent.*—In the case of these shares the owner is still 'preferred,'

but dividends unpaid in one year are lost to him for good. A still greater risk is rewarded with an additional 1 per cent.

(iv) 10,000 *Ordinary Shares.*—No dividend is mentioned in the case of ordinary shares. When the preceding classes of shareholders have had their claims satisfied out of the profits to be distributed, the ordinary shareholders take all the rest. Since they are guaranteed nothing, they get the highest return which the finances of the company permit.

8. INCOME FROM CAPITAL: (3) INVESTING AND SPECULATING

No new company, even when it is undertaking a well-established kind of business, can be considered a perfectly safe investment. For the only test of perfect safety is the power to get back all the money invested the moment it is wanted. The nearest approach one can get to this in England is to lend money to the Government or put it in one of the big banks which allow interest on current accounts. There are always certain old businesses, or companies, too, which offer a security nearly as good—the big railway companies are cases in point. A capital of £100 deposited in a bank can be got out any minute during the hours the bank is open. But when capital is invested in shares, the shares have to be sold to get it back. The price they will fetch cannot be foreseen, or even whether any purchaser will buy them. 'Consols' —money lent to the British Government—and shares in old steadily paying first-class companies can always be sold, and, during short periods, at about what they are bought for. But the rate of interest on such 'gilt-edged' securities is always

the lowest. A man puts his capital into them when he wants to get the highest possible degree of security, and for this he is content with the lowest rate of interest. He is investing, not speculating.

Let us suppose that at the time the above company is 'floated' the return on these gilt-edged stocks (often called 'trustee' securities because they are the only securities trust-funds may be invested in) is 5 per cent. Suppose further that the company is such a success that year after year the ordinary shareholder gets a dividend of 20 per cent.

Then the debentures would sell for £110, the cumulative preference shares for £120, the preference shares for £140 and the ordinary shares for £400. If an ordinary shareholder sells out he multiplies his original capital by four, and by reinvesting this in gilt-edged securities can turn his speculative income of £20 a year into an investment income of the same amount.

If an income is the price of a service, what service has he rendered? The answer is clear. The success of the company proves that it was needed by society, according to the standard of need then prevalent. The economist passes no judgment on the standard. He is content to note its operation. The shareholder has rendered the service of satisfying this need, and it could not have been satisfied without him.

9. INCOME FROM CAPITAL: (4) THE RATE OF INTEREST

Old companies of good standing which are inviting the public to invest fresh capital at the present time (June 1920) are offering a dividend of 8 per cent. on their new cumulative preference

shares. Former cumulative preference shares of the same company are getting 7 per cent. if they are about a year old, and about 5 per cent. if they were issued before the War. Business men talk of the 'price' of 'money,' by which they mean what rate per cent. they will ask if they are lenders or expect to pay if they are borrowers. Firms that find themselves with a big balance in hand will lend it 'to the market' for a short time, sometimes only for a day or two. It is worth doing, since £365,000 lent to the market for three days at 5 per cent. will bring in £150, and the money is kept safe into the bargain. Under these circumstances the 'price' of 'short money' is 5 per cent.

The price of money follows the same law as the price of potatoes. On any given day, or, more exactly, at any given moment, the price of money depends upon demand and supply. Bankers are busy all day dealing with customers who want to borrow money for business purposes; on some days they are busier than on others. How much they can lend depends, of course, on how much they have got, which depends on those customers who come in to deposit money, which again depends on how trade is going. As all the head offices of the big banks are close together in 'the City'—you could walk past them all in a few minutes—they know pretty exactly how things are going.

They are, however, not left to their own devices. The head offices of all the banks bank at 'the Bank'—this means, of course, the Bank of England. Now one of the chief things men go to their banks for is to have their bills discounted; in other words, they want the paper promises to pay which their customers have given them turned into a deposit

in their banks on which they can draw cheques. Moreover, all the gold which is not either in people's pockets or in bank tills pours into the Bank of England for safe keeping.

Thus it comes about that the Governor and Directors of the Bank of England know better than any one else how much money borrowers are asking for and how much there is to lend. They meet every Thursday morning and decide at what rate they will discount bills. At the present time the rate is 7 per cent., so that a customer who asks the Bank to discount a first-class three months' bill for £1000, drawn on the day of presentation, is charged £17, 10s. This makes him thoughtful, for he remembers his father telling him how in the wonderful year, 1864, it was done for £5, and how in the awful year, 1867, it cost the very sum he is paying in 1920. When the Bank of England raises the 'bank rate,' all other banks and firms do the same, and, just as a rise in the price of potatoes checks the eating of potatoes, so a rise in the bank rate—that is, in the 'price' of money—checks the borrowing of money. A fall in the rate has precisely the opposite effect.

The long-period value of any commodity is determined by its cost of production. Does that apply to capital? Precisely. The cost of production of new capital is the reward which must be paid to induce people to go on saving and investing. For capital already saved, as for potatoes already grown, people will take what they can get in the market, and the bank rate settles that, but the rate influences the growth of supplies of new capital.

If a high rate of interest prevails for a fairly long period, new capital accumulates rapidly under the stimulus it provides, while a low average

rate tends to make people spend more and save less.

As capital accumulates in a country, it flows off into the most productive channels, so that it earns a high rate of interest. One by one these more productive channels get filled up, and those who save new capital have to keep a sharp look-out for new channels. We are considering here not the day-to-day changes in the money market but the slow yet sure changes in the structure of the national industry. Just as in our supposed colony the best land was taken up first, so in the same colony the best paying industries—farming itself being the chief—first attract capital into them. Later, just as the lower grades of land are taken up, so capital finds it first harder, and at last impossible, to get its old reward.

But capital differs from land in being capable of indefinite extension. Little or nothing can be added to the available supply of land, but there is no obvious limit fixed to the amount of capital a country can raise if openings for its use are found. At first, productive openings are so numerous that any average man can find them and can devote his own capital and his energy to them. Later on, the finding of new openings for capital becomes harder, and is taken over by a set of men who are expert at using capital in the best ways. This is why, in old countries like England, the greater part of business is done on borrowed capital. But the men who borrow the capital need not, and in fact do not, pay a much higher rate on it than the inexpert users of it who saved it would get if they used it in businesses of their own. The return on all capital is in the long run fixed by the return on that part of it which is used in the least productive way. The borrowers of

it, like the owners of the first-class land in our colony, get a sort of rent out of it, because of their greater ability in finding new and highly productive ways of applying it. But it is generally mere luck or priority in time that puts a man on high-grade land in a young country, while in an old country it takes the keenest brains to find new uses for capital that will enrich society as well as themselves.

10. INCOME FROM WORK: (1) THE PARTIES TO THE WAGE CONTRACT

Income derived from work is called wages. Work is human effort of body or mind, or both, put forth in order to get the goods or services which satisfy human needs. 'Work' and 'wages' are, therefore, related terms, each of which implies the other. A distinction has already been drawn between efforts which have for their aim the obtaining of an income and precisely the same efforts which have other aims. The club member and the golf professional going round the links together, the alpinist and his guide climbing the same mountain, are familiar cases.

The essential point about wages is that they are the result of a contract. The work to be done and the wage to be paid for doing it are fixed in advance. When no such contract is made, the income derived from work, however hardly it may be earned, is not rightly to be described as wages. A man who runs his own factory just as truly works as any of his employees, but, since he cannot make a contract with himself, the income he gets from his work is not wages. Later on, we shall have to see what his income is and how it is fixed.

The wages question is of the greatest importance simply because it concerns by far the greater number of citizens. Most incomes are earned incomes, and most earned incomes are the wages of manual labour, skilled or unskilled. Everything learned so far convinces us that wages are not likely to be the result of chance, happy or unhappy. At first sight, rents look haphazard enough, but the law which fixes rents is, we now know, not very difficult to find out, while it produces its effects, slowly, maybe, but very surely, in the life we see around us. If a number of men in a given trade—ironmoulders, for example—demanded an increase of 15s. a week in wages, what decides whether they will get it? Clearly, it cannot be merely the fact that they have asked for it, for in that case they might as well have asked for £15 a week while they were about it. The limit they set to their demand shows that they themselves recognise the existence of law somewhere, for a limit must have a law to fix it. If, on the other hand, they do not get 15s., but have to be content with 5s. offered them by their employers, it is obvious that before the demand was made neither masters nor men had hit upon the right wage.

If we are to seek for the law of wages with a reasonable prospect of finding it, it is clearly necessary to start with an employer and a worker who are settling a wage contract. The employer will not want to pay a single shilling a week more than is necessary, and the worker will not want to take a shilling less than is necessary. If either of them is compelled, there is no true contract, for a contract is the willing assent of two minds to one and the same bargain.

II. INCOME FROM WORK: (2) SLAVERY, SERFDOM AND SWEATING

At this point, therefore, it will be well to glance at three cases in which the person who does the work is not a free agent.

(i) The first of these unfree workers is the slave. Some animals keep other animals in slavery. Scientists tell us that certain species of ants make slaves of aphides, 'ant-cows,' as they are popularly called, and, from the most ancient times down to our own, slavery has been a familiar institution among men. It has died out, or been abolished, in all countries of our own type. Nowhere in the world to-day does the law allow white men to keep slaves. At first sight it might appear that no employer of free labour could be in such an advantageous position as the slave-owner. All the slave-owner has to do is to keep his slaves alive in good working condition. The meanest food, the meanest clothing and the meanest quarters are all the slave usually gets, and there is the lash to keep him at his work. Yet the competition of free labour always defeats the slave. The slave has no motive to become efficient other than fear of the lash. He can only use the simplest and poorest tools. He is deliberately kept ignorant. In the *Annual Register* for 1816 we read: 'An ordinance has been passed in the city of Savannah by which any one who teaches a person of colour, either a slave or free, to read or write, or causes such person to be so taught, is subjected to a fine of 30 dollars for each offence; and every person of colour who shall keep a school to teach reading or writing is subjected to a fine of 30 dollars, or to be imprisoned and whipped 39 lashes.'

Slave labour butchers the soil and wastes the capital of the slave-owner. It is only practicable for low-grade agricultural work in warm countries where land is abundant. Slavery does not pay the slave-owner, and it ruins the slave state. Moral forces hastened the end of slavery, but it would probably have died out not because it was wrong but because it was unprofitable.

(ii) The next unfree worker to be noticed is the serf or villein of the Middle Ages. Whatever his ancestors had been, and the point is not decided, the serf was in a better position than the slave. True, he was born to work on his lord's manor, but the unpaid work he had to do on his lord's land—his 'boon-days'—and the payments in kind he had to make to his lord, such as thirty eggs at Easter and a goose at Michaelmas, were fixed and certain, and were written in the court roll of the manor. By and by English lawyers, a profession to whom the Englishman owes a debt of gratitude he can never repay and nearly always forgets, said that, so long as the serf did all the things that the court roll said he had to do, his lord could not turn him out or deny the inheritance to his heir. In England serfdom died out very early. In 1618 a man named Caley brought an action at law to compel a man named Pigg to hand over a horse, not because he, Pigg, had entered into a contract to do so, but because he was Caley's serf. The court said 'Rubbish' in legal language, and their decision put an end even to the fiction of serfdom in England. It was not until 1799 that a similar decision was reached by the law courts of Scotland. By that time the French Revolution had abolished serfdom in France. It was abolished in Prussia in 1809, and in Russia in 1861.

When the reward of labour is the result of custom it is outside the law of wages for which we are seeking. Not altogether outside it, perhaps. There are a large number of people to-day, even in England, who receive customary fees for the work they do. Solicitors and Oxford 'coaches' are cases in point. One solicitor makes a better income than another not by charging higher fees, which he is not allowed to do, but by getting a larger number of clients, or clients with work for him to do that carries the highest scale of fees.

(iii) There is no legal contract between the slave and his owner. There is a legal contract between the person who pays a customary fee or wage and the person who receives it; but, and this is the point, it is not the amount of the payment that is the subject of the contract but only the fact that a known payment has to be made. There used to be, however, a third class of wage payments which were true legal contracts. Suppose that in the year 1913 an agricultural labourer in Oxfordshire had agreed to work 72 hours a week for a wage of 10s., or an East End sempstress to stitch shirts for 6d. apiece and find her own thread. These, from the strictly legal point of view at that time, would have been true wage contracts in the sense that if the labourer or the sempstress had gone before the court to claim a higher wage the law would have refused to compel payment. It would have assumed that both the labourer and the sempstress had entered into their contracts with a free mind. Of course, in practice the poor workers did nothing of the sort. They were obliged to take low wages or go without wages altogether. Low-paid labour of this sort is called 'sweated labour.' To-day both the Oxfordshire farmer and the East London manu-

facturer who paid such a wage would find themselves haled before a law court, compelled to refund the difference between the wages they had paid and those the law now says they must pay, and then handsomely fined into the bargain.

Where the worker is sweated, or where the worker's wage is fixed by law, economics has nothing to say, except that sweated labour, like serf labour and slave labour, is not only poorly paid, but always yields a poor income to the employer. The owners of East London sweat-shops and the farmers of Oxfordshire did very little better than the workers they sweated. It is very probable that sweating, like serfdom and slavery in earlier times, would have died out in time in face of the competition of labour that was not only legally but economically free. But as we have seen, it was law that killed off slavery and serfdom before they had died a natural death, and every one now agrees that what the law can do to hasten the disappearance of sweating ought to be done.

12. INCOME FROM WORK: (3) THE SOURCE OF WAGES

Just before pay-time in any given works, an observer is likely to see a clerk going to the office carrying a substantial leather bag, which not unfrequently is chained to his waist. He is coming from the bank to the pay-office with the week's wages of the workers. The source of wages appears, therefore, to be the employer's bank balance. But before the employer can draw on his bank, he must have deposited money there to draw on. This is provided by the cheques sent in by the customers to whom he has sold the goods turned out of his works. The apparent source of

wages is thus altogether different from the real source.

The real source of wages is the output of the factory. Suppose that on a given pay-day the employer has to pay 100 workers £5 each, that his balance in the bank is precisely £500, that there are no cheques from customers available to pay in, and that the bank manager has declined to allow him an overdraft. For that one week it makes no difference to the workers. The money is due to them, and the law says it must be paid to them and to nobody else. Whatever creditor a manufacturer can fob off from week to week, the one person he must pay 'on the nail' is his worker. Things may be all right from the workers' point of view for that week, but since the factory has got to shut down, things are all wrong, even from the workers' point of view, for the following weeks. They have got to find fresh employment, and that may not be easy.

Employers and workers have, therefore, one big interest in common, an interest that overrides all separate and conflicting interests. This common interest is the continuous running of the factory, which can only be assured by the continuous sale of its products to customers at prices which permit the employer to keep a bank balance large enough to meet all the demands upon it.

The customer is king. What he will not buy, it is no use making. The ironmoulders in our illustration did not ask for an advance of more than 15s. because they felt that that was all they could get out of the customer in any circumstance. The employers refused the 15s. because they knew that they could only get 5s. out of the customer, and with 5s. the ironmoulders of our illustration had to be content.

On strictly economic matters the economist is entitled to pass a judgment, and he says, by right of knowledge, that even from the strictly economic point of view, apart from all higher considerations, it is of the greatest importance that the wages of labour should be as high as possible. "Low wages and low profits are economic twins. No wage can be too high, provided that it is an earned wage. But it is output that earns wages. Any policy that leads to a smaller output leads to lower wages, and, inevitably, also to smaller profits. Who starts the policy does not in the least matter. Either employer or worker may limit output owing to a mistaken view of his own interests or the interests of his class. The employer may limit it by paying a wage which does not induce the worker to put forth his greatest energy. The worker may limit it by doing less work in a day than he could do. He may 'Ca' Canny,' as the saying is. He fails to induce his employer to get the best machinery, since a first-rate tool is thrown away on a second-rate worker. If you continue your study of economics you will spend much of your time in wondering that men should be so fond of taking roundabout roads to wrong places. The spirits that come from the vast deeps of industry are seldom the spirits that are called for.

13. INCOME FROM WORK: (4) THE MARGINAL WORKER

It is all-important to realise that the real source of wages is the output of the worker. Let us now see whether we can get a closer knowledge of the relation between the two. Let us suppose that an employer has at his disposal a certain fixed quantity of capital with which he proposes to

make a certain commodity. The capital will consist of a building, a stock of machinery and tools, a supply of raw materials, and a sum of money with which to pay wages. There is nothing at all out of the way in our supposing this, for men are constantly seen doing what we suppose this man to do—namely, building and equipping a factory ready to start operations. In all factories there are various kinds of workmen —*e.g.* clickers, stitchers, welters, finishers and many others in a boot factory. In order to make things simpler, however, let us suppose that our employer only needs one kind of worker. Further, in all grades of work there are grades of workers. Some clickers are better than others. In a Lancashire weaving-shed a man generally looks after four looms; and no worker is treated any differently from another in regard to the supply of power, yarn and patterns, and the looms are all alike. Yet there are quite noticeable differences in the amount of cloth turned out by different sets of four looms because of differences in the skill or assiduity of the weaver. The differences, however, are not very great; therefore, if we suppose all our workers to be of the same skill, we shall not be spoiling our argument by supposing what we ought not to suppose.

Here, then, is the employer, with his factory all complete, waiting to begin. In actual life, of course, he would start on a Monday morning with a certain number of men engaged beforehand at a fixed wage—say 40s. a week. The only difference we make is to suppose him to engage the men one at a time, at 40s. each, and watch the result as he adds each new man to his staff.

While no men are at work in a factory there is, of course, no output. At the other end of

the scale you can imagine so many workers in the factory that they are jammed together like herrings in a barrel, so that again there would be no output. We have here, then, two extremes, no workers and too many workers, and the output in each case is nothing. It is quite clear that, starting with one workman and adding workmen one after the other, the employer would at last come to the marginal man, as we have learned to call him. It is things on the margin that the economist is constantly studying. The first man turns out product worth, we will suppose, 10s. a week, but as his wages are 40s. the employer loses. When the second man is put on the staff, the two together can do much more than twice the work of one. Their product is, therefore, worth 30s., of which 20s. is due to the second man. The rest of the story can be put in the form of a table :—

Number of workers.	Total product.	Product added by the last man.
0	0	0
1	10	10
2	30	20
3	70	40
4	160	80
5	260	100
6	410	150
:	:	:
98	6720	42
99	6761	41
100	6801	40

The table tells a story, and very plainly. As man after man is added the product at first goes up by leaps and bounds. The sixth man, for instance, adds 150s. to the value of the output, of which he takes 40s. in wages. The employer has, of course, a good deal to do with his money

besides pay wages. He has to pay the rent of the land on which his factory is built, interest on the capital which he has borrowed to build and equip the factory, the purchase price of his raw material and so on. As he goes on adding man after man there inevitably comes a time when the addition to the output made by the last man is approaching the 40s. which he is going to receive as wages. Look at the ninety-ninth man, for example, who adds 41s. to the product and takes 40s. in wages. Still it is worth the employer's while to take him on, for he gets a shilling by doing so, and a shilling is better than nothing. Moreover, another man is still needed to round off the efficiency of the whole enterprise. So the hundredth man is taken on, and, as we see from the table, he is the marginal man. To take on another would mean a loss, not a gain.

Now, apart from the fact that these men all agreed to work for 40s., there is the other fact that they are all, as we suppose, as much alike as workers as peas in a pod. The sixth worker adds 150s. to the value of the product, not because of his superiority as a worker, but because of his place in the scale. He is entitled by contract to 40s. just like the first man and the hundredth man, and, economically as well as legally, he is entitled to no more.

It is possible now to get a first idea of the law of wages, and it is this: The wages of all workers are equal to the output of the marginal worker.

One important point must not slip out of the student's mind. The supply of capital which this employer had at his disposal was taken as fixed. That is why he stops at the hundredth man. A competitor higher up the street, building a much larger factory because he had a much

larger supply of capital, might not stop till he came to the three-hundredth man. No matter where he stopped, he would stop for the reason which looks us in the face from the above table.

The employer is constantly on the watch for the marginal man, or, what amounts to the same thing, he regards the number of workmen as fixed, and looks out for the marginal bit of capital to put at their disposal. That is to say, in real life the amount of capital and the number of workers are both shifting quantities, and what the employer does is to try to combine them so that the theoretical result shown in the above table is the practical result realised in the factory. Notice, further, that if the wage agreed on beforehand had been 41s., the marginal man would have been the ninety-ninth; whereas if the agreed wage had been 39s., the hundred and first man would have been added to make the margin. In real life, when a man equips a new factory he has a quite close idea of how many men he will want in each grade of work. He knows it by experience, and experience is only the accumulated knowledge of hundreds of men in a given industry who, for generations past, have been making experiments of the sort described in the table. We only suppose our employer to do very precisely, methodically and scientifically, what all employers do as well as they possibly can, knowing that the penalty for not doing it very well will be a small amount of profits, while the penalty for doing it badly will be bankruptcy.

14. INCOME FROM WORK: (5) FIXING THE MARGIN

One half of the law of wages has been obtained by studying an employer at work, engaging a

succession of men to do a certain kind of work, in a factory of a certain size, at a wage agreed on beforehand. This half of the law says, 'The wages of all workers equal the output of the marginal worker.' But the contract wage of 40s. is not fixed by the employer alone. It is a wage to which the worker must be a consenting party. It remains, therefore, to look into the mind of the worker as he makes this wage contract. 'Why 40s.?'

On the day when this wage of 40s. is fixed everything depends on which of the two men, employer or worker, is in the stronger position for making the bargain. If work is plentiful and workers scarce, the employer will occupy the weaker position, while he will occupy the stronger one if work is scarce and workers plentiful. 'Two masters, one man, wages high; two men, one master, wages low,' is a plain and sound theory of wage-fixing known to all. During short periods the margin is fixed by supply and demand. The 'labour market' has this point of similarity with the wheat market.

This assumes that masters compete with one another for men, and men with one another for masters. Nowadays, however, the wage contract in most trades is settled by collective bargaining between representatives of unions of employers and representatives of unions of workers, so that when a man is taken on he must get, and the employer must pay, the trade union rate. The regulated competition of groups is substituted for the blind competition of individuals. Competition is not abolished, as many seem to think, but perfected. For successful competition depends upon knowledge of the market and of the power to remain out of it when its conditions are

unfavourable. Those who act as negotiators for each group know pretty well what the state of the trade is, while if the negotiations end in a strike or lock-out the unions on each side have funds for the support of their members.

In the long run, then, the relation between supply and demand still fixes the wage. Each side has to remember that the goods produced have to be sold to customers, that the number sold depends upon the price asked, and that wages are always an important part of the expenses of production which determine price. Moreover, competition makes itself felt in other directions, for it can no more be abolished than gravity. These negotiations between unions of employers and employed only settle wage *rates*, what shall be paid when a man is taken on. Whether he is kept on depends on himself. Competition amongst workers in the same union settles not what a man shall get when employed but who shall get employment and keep it longest. In the same way employers, the wage they have to pay being settled in advance, compete with one another to get the most efficient workers. One method of doing this is to perfect their machinery and equipment, for the best tool requires and attracts the best man. Another method is to devote much money and thought to making the factory a centre of all sorts of profitable and agreeable social activities, so that a man's work brings him not only the wages he could get elsewhere but an additional income of services and satisfactions. The good master and the good man will get together, for competition weeds out the indifferent masters and indifferent men that stand between them. The clash of interests still persists, but settlement of any difficulties that arise is made

easier by the presence of a common interest, felt by both, in the background.

15. INCOME FROM WORK: (6) SHIFTING THE MARGIN

This is the first part of the answer to the question 'Why 40s.?' It is the market price fixed by the competition either of individuals or of groups, each bent on getting as much and giving as little as possible. Other things remaining precisely the same, the employer would make it 39s., and the worker would make it 41s., if he could. On its purely economic side, then, it gives a 'square deal' at the time and place it is fixed. But from the very day it is fixed forces begin to operate which will at last compel a change. The common interest of both parties to the wage contract is the continuous running of the factory in which it is earned and paid. The wage, then, must induce the employer to continue to run the factory and the employees to continue to work in it. Moreover, as time goes on, some employers and some employees drop out, and the wage must, therefore, induce successors to take their place. We have now to neglect the day-to-day workings of supply and demand and take a longer view.

What the worker will take at need as the wages of one particular week may differ very considerably from what he will take for a long period. There is a point below which in the long run he will not go, as well as a point above which he cannot climb. For all classes of workers the wage they earn must give them the standard of comfort which they demand. Every trade has its own economic and social status. Railwaymen, for example, have recently argued that they must

have another increase in wages because dockers have been awarded a wage of 16s. a day and this had upset the relation between the two callings. The rapid changes in wage rates during the last five years have had the effect of giving higher wages to unskilled men in some trades than to skilled men in similar or even closely related trades. A lawyer's clerk in a small country town may now earn less than the agricultural labourers around him, while in 1914 he earned more than twice as much. When the fixing of a wage causes these displacements, the social level has to smooth itself out again. If, taking into account a period long enough to give a true average, the workers in any given trade do not get a wage which will satisfy them, young workers, knowing this fact, do not come into the trade in sufficient numbers to fill the places of those who leave it. For example, at the census of 1901 there were 115,995 bricklayers in this country. By 1911 the number had fallen to 102,752. It went on falling until the outbreak of war, at which time it was only about 74,000. The dearth of domestic servants, schoolmasters and curates is explained in this way.

Again, what an employer will pay as the wages of one particular week may differ very greatly from what he will pay throughout a long period. No wage is too large if it is earned, and the test of earning is simple enough. Wages appear in price, and if for a long period the employer continues to produce the goods and the customer to pay the price, the wage, however high, even the £2000 a year earned by some workers in the iron trade, is an economic wage. If the customer declines to pay the price, the only part of the price which the employer can himself 'cut' is

his own share—his profits. And just as it takes a certain level of wages to keep workers permanently in an industry, so it takes a certain level of profits to keep employers permanently in it.

16. INCOME FROM WORK: (7) WAGES AND OUTPUT

That wages depend on output is a truth which no one denies and of which no one takes much notice. When we were looking for the law of wages, it was supposed that a given employer took on man after man at 40s. a week until he came to the marginal man who in one week added to the value of the output exactly the 40s. which he received in wages. We have been engaged so far in answering the question 'Why 40s.?' It now remains to complete the subject of wages by asking another very important question 'Why a week?'

In our supposed case the employer's sole concern was to ascertain the output of each man whom he added to the staff. True, the wage contracted for was a weekly wage, a six-day week we will assume, but the length of the period was of no consequence to him, for he was only concerned with output during the period in relation to wages due for that period. The time-basis of the contract was a six-day period, but it would have been no disadvantage to him if it had been a three-day period, provided that the relation between output and wages remained unaltered. So, if I contract with a man to carry my bag to the station and put it on the 10 o'clock train for a payment of half a crown, it is no concern of mine whether he takes half an hour or an hour to do the job, provided that I and my bag both get the

train. The workers would, in the circumstances, get three days' leisure without loss of income. Clearly, while in the circumstances supposed—and they must never be forgotten and never changed during the course of an economic argument—it would not matter to the employer that his workers were idle during these three days, it would matter to him that his machinery was idle and so earning nothing for him. To do the best possible for himself, our employer must either get a second set of workers to come in for the second three days at 40s. each or persuade the first set to work the full six days for 80s. This looks simple enough, but to get it done, or even to get anything like it done, is in practice impossible. Employers, as a class, show as little inclination to double wages as workers do, as a class, to double output.

17. INCOME FROM ORGANISING: (1) THE REPRESENTATIVE EMPLOYER

Of the four kinds of income, as incomes are seen from the economist's standpoint, three have now been studied. Rent, interest and wages are not in the long run fixed by chance, but each of them conforms to law. In any given case the legal rent, as fixed by the contract between the man who is to pay it and the man who is to receive it, may differ from the economic rent, and when it is said that rent obeys a law what is meant is that, in the long run, the difference in this case between the legal rent and the economic rent will make itself felt, and the parties to the contract will be obliged to revise its terms. What is true of rent is also true of interest and wages. The economic law is constantly at work applying pressure to the

facts of each particular case, and shaping them according to its own decisions. In economics law does not act instantaneously. It is not a policeman who arrests a criminal the moment he finds him committing a crime. It is a potter gradually shaping a plastic material to his will.

The fourth kind of income remains to be studied. This is the income of the employer, which is called profits. Profits are like wages in one very important respect. They are earned incomes, the return for work done. They differ from wages because no legal contract fixes them in the first place. No employer knows on 1st January what his income during the coming year will be, for it is never the result of a bargain between himself and another. We have already seen that employers vary greatly among themselves. The smith in the country village who employs only one striker looks to the outer eye a very different person from the owner of a Clyde shipyard. They differ, however, only in the same way as a half-rood allotment differs from the Bedford estates or from a Texas cattle ranch as large as an English county. The one is small in size and simple in structure, the other is large and complicated; but careful searching will show that these are differences only to the eye and not to the mind.

An employer, as the economist sees him, is a man who organises the other three agents of production in order to get the best possible result out of a given combination of each of them. We have already seen that, as capital accumulates in a country, it becomes more and more difficult to find uses for it that will give the old high returns, in consequence of which the use of capital is taken over from those who have saved it by men who, by natural gifts and business training, are capable

of making the best use of it. Before the War it used to take in this country about £180,000,000 a year to replace the capital that had been worn out in the year. In addition to this about £300,000,000 was saved each year and applied to new investments—about half of it at home and the other half abroad, mainly in the Dominions and America. The people who saved this vast sum invested it—that is, they handed it over to the heads of firms and companies. While a great deal of capital in business still belongs to the men who run the business, it is a general rule, which gets a wider application every year, that businesses are run on borrowed capital.

Consider any factory you know. Obviously it stands on a piece of land for which rent has to be paid. The building itself and all the engines, machinery, tools and raw materials in it are capital, on which interest must be paid. The workers in the factory all receive wages. We may, therefore, regard a representative employer as a man who (1) rents land, (2) borrows capital and (3) employs workers. The rent of the land, the interest on the capital, the wages of the workers are fixed by economic laws which he did not make and cannot in the long run control or coerce. On the other hand, neither the landlord nor the capitalist nor the worker can, in the long run, exact from him more than economic law entitles them to ; he is not their slave any more than they are his. Clearly, however, the man who runs a factory would not keep it up, as in fact he does do, year after year, decade after decade, and even by descent from father to son for century after century, unless he got something out of it. What he gets out of it is called his profits. Sometimes the employer owns the land on which his factory is

built and all the capital in the firm. This need not puzzle us, since he will expect to get out of the land and the capital the same income that he would get if he placed them at the disposal of others.

18. INCOME FROM ORGANISING: (2) THE RENT OF ABILITY

Just as plots of land differ in fertility, so employers differ in skill. Suppose that two men, A and B, set up business in the same industry in the same town, with the same amount of capital at their disposal and the same number of workers of the same grade of skill. It does not in the least follow that A and B will make the same income out of these two similar businesses. The industrial life of every town, especially if it is a town famous for some great staple industry, so that comparison is easier, makes it clear that employers differ very greatly from one another in organising skill. And, just as a plot of land yields a higher income because of its greater fertility, so an employer gets a larger income because of his greater skill. Profits are, to a great extent, the rent of ability. Consequently the skilful employer finds it easy to get new capital into his business. If he has started on his own account, he may turn the business into a company, and then everybody who knows him and has capital to invest will take shares in the new company, because they expect to get a high rate of interest on capital lodged in such good hands. Moreover, as the business grows, he can afford to pay high salaries to capable men to help him in the organising work. The skill of an employer is often shown most clearly in the site he selects for a new factory. He may divine, by

a sort of prophetic gift, the industrial possibilities of a spot which hitherto has been neglected. He may transfer a soap business from the middle of Lancashire to the banks of the Mersey; he may shift a metal works from the Black Country to the coast of South Wales; and if before shifting he buys the land he may reap a very large gain, so that in this case it would be difficult to say whether his profits are the rent of his ability or the rent of the land he purchased for a mere song because he had the ability to see the industrial use that could be made of it. Perhaps we may say that it is rent of ability to him and rent of land to his successors.

19. INCOME FROM ORGANISING: (3) MONOPOLY AND COMPETITION

If a certain organiser of industry is the only maker of a given article, there is no connection between the cost of producing the article and the price at which it sells. If I went out into my garden one morning and found that during the night a large meteoric stone made of pure gold had dropped down from the sky, the fact that the gold had cost me nothing would not make the slightest difference in the price I should ask for it. I should ask the same, and get the same, as a West Australian placer-miner who had toiled and moiled alone in the bush for twelve months to get the same quantity of gold. This does not mean that a monopolist can do what he likes. If I went into my garden and found, not that a lump of gold had fallen from the sky but that a spring of wonderful medicinal water had burst out of the ground, it would be foolish for me to sell it at 20s. a bottle if I could only sell one bottle a month, while it would

be much better business to sell a thousand bottles a day at 3d. each. In most cases the monopolist is faced by the fact that if he charges too much for his product people will go without it, or at least will reduce their demand for it to such an extent that he loses by attempting to exact too high a price.

As soon as there is more than one producer of the same article for the same market, competition begins to exert its effects. If there are a number of men, A, B, C, D, . . . X, making it, none of them can do as he likes. Competition keeps down the price to the cost of production, but—and here comes the vital question—whose cost of production, A's, B's, . . . or X's ? A is, we will suppose, an organiser of supreme ability, whose business has old and firm connections, whose factory is up to date, conveniently situated, with a railway on one side and a tidal water on the other, and with a large town near by to provide a steady market. X, on the other hand, is miserably deficient in all respects, and B, C, D, etc., vary, none being so good as A, and none so bad as X. Whose cost of production fixes the price ?

The answer is just the same as in the case of wheat which has been grown on lands of different fertility. The price paid for any article must in the long run be large enough to call forth all the supply which the market needs. If the market needs the products of X, it will have to pay the price of X. But there is only one price for the same article in the same market. Consequently, all the other producers, from A to W, will get an advantage exactly corresponding to the advantage which each of them has over X. This will be, as it were, a rent of ability, the chief point about which is that it has no effect upon price. The

huge profits of A are not filched out of the pockets of his customers, as many people suppose. No one denies that X must get a price which covers his cost of production. No one expects that customer Y should get his article cheaper because he buys it from A than customer Z who buys it from X, because there is no economic motive for such a favour. The large profits of A are not exacted from his customers, but are the result of his own advantages for production, and are, therefore, his not only in law but in economics.

The high profits which A makes are a constant temptation to other people, and he can only continue to make them if he holds a position which no competitor can successfully attack. Moreover, when a fall in demand, followed by a fall in prices, cuts X out of the market, the profits of all the others from A to W are reduced. If all the customers who dropped out were X's, all the other customers might go on buying at the old price from the other manufacturers. This is, of course, never the case. All alike feel the 'slump,' and all try to tempt their full supply of orders by lowering prices. In all this it is supposed that A, B, C, D, . . . X actively compete against one another, and that power to compete depends on power to reduce prices and still continue in business. This leads us to look more narrowly into the income called profits which make a man continue in business.

20. INCOME FROM ORGANISING: (4) PROFITS, STRICTLY DEFINED, TEND TO DISAPPEAR

What any given employer speaks of as his profits' is the sum of money which, at the end of a given accounting period, half a year or a year

as the case may be, he can transfer from the banking account of his business to his own private account. Let us suppose that the capital of his business is £50,000, and that he has kept it in good condition by 'writing down' existing assets and building up a capital amount. That is, having bought a machine for £1000 out of the original £50,000, he does not continue to reckon the machine as worth £1000, but values it fairly each year—say at £700 on one occasion—and then puts £300 of his good earnings into a separate account, so as to have a full £1000 of capital. If he does this, he can at any moment sell the business as a going concern for the full £50,000 he put into it. At the end of a business year his position will then be as follows :—

In the first place, the business must yield him at least as large an income as he could get by selling out and investing the £50,000 in gilt-edged securities. If the rate of interest at the time on such securities is 5 per cent., the smallest income he will expect from the business is £2500. On the score of interest alone he cannot expect any more, for his capital remains intact.

In the second place, he will expect the business to yield him, in addition to the interest on his capital, a salary for the work he does in managing it. There is no need to guess at this amount, for he can form a pretty close estimate of what he would have to pay a man to take the work of management off his shoulders, and do it as well as he himself does it, if he decided to keep the business as his own property but to retire from the work of running it. Moreover, he can fix this sum with reference to any special ability he possesses for managing this particular line of business, so that he includes the rent of ability to which his brains

entitle him. Suppose this salary to be £2500, making a total of £5000.

All the services he renders to the business, and all the risks he runs, have now been fully compensated. He put £50,000 into the business. He could sell it for £50,000, and since he is able to do this because he has kept the capital of the business up to its original standard by replacements and additions out of income, he is not entitled to any other reward for the risk he ran in making his original investment. He is entitled to the same interest on the capital he invested in his business as if he had invested it in a gilt-edged security and lived on the proceeds without doing any work. He has got it. But he has not lived in idleness. He has worked very hard in running his business, devoting his time and talents to it without stint. He is, therefore, entitled to the same reward, after doing this for himself, as if he had done it for another. Every economic factor that contributes to the business has been fully remunerated at the current market rate, and the total is £5000.

Now suppose that the capitalist employer whose special case we have in mind found, when he struck his accounts on the day in question, that the sum he could transfer to his own private account was £6000. It is this extra £1000 on which attention must now be fixed. It is a pity that the word 'profits' is always used to denote the full £6000, of which £2500 is certainly interest and another £2500 a kind of self-paid wages. For the rest of this section we shall call the £1000, and nothing but the £1000, 'Profits,' in order to have a convenient name for it while we talk about it. Income it certainly is. But an income has been defined as the price of a service. Of what service is this £1000 the price?

The answer is that profits—*i.e.* the £1000—are the price which society must pay for the benefit it receives from services of go-ahead men. Profits are the price of enterprising service as distinct from humdrum and routine service of a sort which has a known or knowable price; and the law of profits is that they tend to become zero. Suppose that our capitalist employer gets his £6000 by putting on the market a new or improved article, *x*, at the price of 20s. Competition will soon have the effect of bringing into the business a competitor who will sell the article for, say, 19s., and be content with a total yield of £5500, which cuts profits down to £500. But £500 for nothing is extremely well worth having, and other competitors will come along who will sell *x* for a gradually diminishing price which will have the effect of cutting profits, in the special sense of the original £1000, down to nothing. Enterprise, when first undertaken, rightly gets an income of its own. But enterprise is easily imitated, and so in time loses its reward. It is a disappearing income. It is like the income from a patent, which disappears the moment the patent runs out and anybody is at liberty to use it.

21. COMBINATIONS TO SAFEGUARD INCOME

In order to discover the laws which fix the different kinds of income, it has been taken for granted throughout that the receivers of income compete with one another. All builders of houses, for example, compete with one another to get the services of bricklayers, and this competition is a force which lifts wages. Bricklayers, on the other hand, are supposed to compete with one another in order to get work, and this competition is a

force which keeps wages down. In theory the two forces, like weights in the opposite scale of a balance in equilibrium, give a result which is fair to both sides. In practice the results may turn out to be not very fair, and consequently competition is gradually giving way in the modern world to combination. Workers unite in trade unions, and capitalists make groupings of their own which are called by various names according to the degree of combination which exists.

When a man has got his capital sunk in a given business, it is impossible for him to change over to another. Similarly, when a workman has been trained to do a given kind of work, it is usually impossible for him to earn his living in another way. Owners of cotton mills cannot turn their cotton mills into coal-mines if they find that the cotton manufacture is not paying as well as they would like, nor can their spinners and weavers, if dissatisfied with their wages, become engineers or clerks. The fresh capital that has been saved, and the young labour that is seeking employment, can avoid the cotton industry, but the capitalists and the workers who are already pledged to it must make the best they can of it, and they may find that combining with one another pays them better than competing with one another. In fact, both sides of the cotton industry, employers and workers, are organised thoroughly.

Every combination to safeguard income tries to achieve its purpose by controlling the price of what the members of it have to sell. The members undertake not to sell below a given rate fixed by the combination, not to compete with each other, or only to compete in certain ways, and to take united action against outsiders who attempt to interfere with their plans. Inasmuch as supply

is one of the two factors in fixing prices, and the fixing of prices is the end of all their efforts, combinations of all kinds make it their special business to regulate supply.

Now it cannot be said that any one of these things is wrong. The liberty that men have to compete with one another carries obviously with it the right to combine with one another. It is easy enough to imagine a case in which the supply of a commodity or service without which it is impossible for society to carry on might get into the hands of an unscrupulous 'combine' who would exact for the commodity or the service they controlled an exorbitant price. Society could not be expected to stand idly by while this sort of thing went on. In practice, however, the powers of any combination are likely to remain far short of the limit which heated fancy ascribes to them.

CONCLUSION

ECONOMICS is the unseen thread on which the history of mankind is strung. Battles and treaties, the doings of kings and emperors, the rise and fall of nations, are the beads that are seen. The age-old struggle of men for better conditions, falsely called the greed of gold, is the one thing that gives unity to history, and fits the scattered fragments together into a picture of progress.

In these days keen minds are challenging not indeed the fact of progress in the past, but an over-confident assurance of progress in the future. The tornado that struck Western civilisation in August 1914 seemed to justify their questionings. Man is not born to progress as the sparks fly

upwards. Progress is neither the gift of the gods, nor the decree of fate, nor the result of accident. It is a product of human effort, hammered out on the anvil of time. If the effort ceases, if the strokes fail because the stalwart hands weaken, or miss their blow because the keen eye glazes, the product will cease to gladden the hearts of men.

Economics is the study of the present in the light of the past. It has been well said by Dunoyer that the business of the economist is not to oppose, not even to propose, but to teach. And his teaching is twofold. To those who would stereotype things as they are, he teaches the fact of the almost infinite progress that has been made since primitive man struck one flint against another to shape for himself a weapon against misery. To those who think that great changes can at once be made, he teaches the fact of the almost infinite time that has elapsed since these ancient men won their first victory over their surroundings. In a word, he teaches confidence and caution.

He teaches confidence, since he can show that the rate of progress has quickened amazingly during the last century, because a series of great inventions—the railway, the steamship, the telegraph, the telephone, the linotype, 'wireless,' the aeroplane—have brought men so close together that immediate common action, known to, approved of, and affecting vast numbers of men, is now possible. Blind groping, sporadic action, ignorant fits and starts of reform, are no longer the only way in which the onward path can be found and the feet of men set marching along it. Everything that brings men together in a free State peopled by free citizens urges them to act together intelligently. The economist sees the united employers in a nation-wide industry not

over against the united workers. He rejoices. A friendly talk over a friendly cigar can now do more than the heart-burnings and revolts of a hundred of the older years. The economist preaches confidence, but it is confidence in alert, intelligent, responsible men—not in featherheads and fools.

He teaches caution, since he can show that stable and fruitful social changes are built up on changes in the make-up and outlook of human beings, and the heart of man is as a clock that gains a second in a century. It takes ages to see any difference. One of the oldest human skulls known to anthropologists is cloven with a stone celt. Life in those far-off misty days was, then, not so very different from life in the trenches only two short years ago. Reforms that suppose that a man will work better for the State or a Guild than he does for a private person are built out of hopes and founded on dreams. He will work better for a better wage, says the cautious economist, whose only concern is to show the worker how to get this better wage by wise conduct based on accurate thinking.

Printed by George Philip & Son, Ltd., London

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