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THE SCIENCE OF PRICES

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SCIENCE OF PRICES

A HANDBOOK OF ECONOMICS

(PRODUCTION, CONSUMPTION AND VALUE)

BY

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PREFACE

IN his *Political Economy for Egyptian Students*, first published in 1910, the writer tried to carry out for a special class of students his idea of what a text-book of Economics should be. Part of that book was extended in 1916 into *The Mechanism of Exchange*, a handbook of currency banking and trade for English students; and its success has encouraged the writer to attempt a text-book on similar lines dealing with the general theory of Economics—the Theory of Value.

In a text-book there is little room for originality. The principles of Economics are now well established, but they have to be applied under conditions which vary from one country to another, and are constantly changing. That is inevitable because the raw material of Economics is human nature, which acts and reacts differently under different conditions. It is to the late Alfred Marshall more than to any other economist that we owe the development of the human side of Economics; the very name that he gave it—the “science of everyday life”—breathes the new spirit of the subject. It is on Marshall, therefore, that this book is mainly based. His statement of economic theory is full and well balanced; and while the present generation may well be chary of repeating Mill’s statement¹ that “there is nothing in the laws of value which remains for the present or any future writer to clear up, the theory of the subject is complete”, at least Marshall’s own generation has added nothing fundamental to his statement of it, nor is it easy to see in what direction such additions are likely to be required in future.

¹ *Principles*, III: i. 1.

Marshall's books, however, have unfortunately proved very difficult to young students on their first introduction to the subject; they cannot easily follow the thread of his argument. The writer has never forgotten his own first despairing struggle to trace unaided the consecutive line of reasoning through the *Economics of Industry*; and it has ever since seemed to him that the greatest service he could render to would-be students of Economics was to put Marshall's theory before them in a form at once simple and easily followed, and yet not inaccurate or misleading through its omission of the refinements and qualifications which are characteristic of Marshall's own exposition.

The writer's first object in this book is therefore to make plain to his readers what Economics is, namely, the systematic study of their ordinary business and social relations, in the world in which they make and spend their money. The essential point is to make it clear that there *is* a science of everyday life; that life is not merely a chaotic welter of brute force, euphemistically called Competition, but that the modern individualist system is really a system which has on the whole, during the past century and a half, worked for the good of the one class of the community to which all belong, namely, the consumers. While industrialism brought great evils in its train, it is now certain that many of these evils are not inherent in the system, but can and will be eliminated, or at least greatly modified, as the world gets to understand the system better.

The next point is to show the student how to apply the principles of this system to the conditions of his own life; he must learn how to handle everyday problems, where to get hold of the facts, and how to test and prove them. Economic materials are often in the form of statistics, which are no less useful as a safeguard against the danger of hasty generalisations than they are dangerous as pitfalls to the unwary or prejudiced. The statistics given in the Appendix are therefore meant as examples to be used in teaching the student how to handle statistics.

In the same way some outlines of the historical side of Economics have been included, simply as an illustration of the fact that every economic problem has a history, and to show the student where such history may be found, and how it is to be handled and studied.

In selecting illustrations the writer has made rather free use of the cotton industry in all its branches, not only because it happens to be the one he knows most about, but because it is one of the greatest industries in this country and indeed in the world, and is perhaps the most completely organised and highly specialised industry of modern times. Nothing can happen in the world that does not affect the cotton trade; there is no economic problem of to-day that cannot be illustrated from the experience of the cotton industry in one part of the world or another.

An elementary text-book should not be overburdened with acknowledgements or references. After nearly thirty years of teaching it is often difficult to remember whether the exact form of a statement is one's own or unconsciously borrowed. In any case frequent references to authorities are worse than useless to the elementary student. The writer has therefore confined himself to giving, at the end of each chapter, references to the books or sections of books on which it is mainly based, which should also serve the student as a guide to further reading. The latter is specially necessary in such subjects as Trade Unions, which cannot possibly be dealt with adequately in a general text-book.

JOHN A. TODD.

LIVERPOOL, *February* 1925.

TO THE
MEMORY OF
THREE BALLIOL MEN
ADAM SMITH (1723-1790)
SNELL EXHIBITIONER, 1740-1746
ALFRED MARSHALL (1842-1924)
FELLOW AND LECTURER IN POLITICAL ECONOMY, 1883-1884
ARTHUR LIONEL SMITH (1850-1924)
MASTER, 1916-1924

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CHAPTER I

INTRODUCTORY

What is Economics?—Old definitions *v.* new—Scope of Economics: its relation to other sciences—Economic laws and methods.

At first sight it may seem strange that although Economics has been taught as a science or preached as a gospel for at least 150 years, its teachers do not seem even yet to have agreed upon a definition of the science, nor even upon its name, for the old name of Political Economy and the new name of Economics or Economic Science seem still to be used indifferently.

The divergence of the definitions can best be brought out by quoting a few of them from standard authors:—

Political Economy is “the science of the laws which regulate the production, accumulation, distribution, and consumption of those articles or products that are necessarily useful or agreeable to man, and possess exchangeable value”. It is “the science of values”. “Its object is to point out the means by which the industry of man may be rendered most productive of wealth, to ascertain the circumstances most favourable to its accumulation, the proportions in which it is divided, and the mode in which it may be most advantageously consumed” (J. R. McCulloch, *Principles of Political Economy*, 1825). Old definitions.

“Writers on Political Economy profess to teach or to investigate the nature of wealth and the laws of its production and distribution, including directly or remotely the operation of all the causes by which the condition of mankind, or of any society of human beings, in respect to this universal object of human desire, is made prosperous or the reverse. Not that any treatise on Political Economy can discuss or even enumerate all these causes, but it undertakes to set forth as much

as is known of the laws and principles according to which they operate " (John Stuart Mill, *Principles of Political Economy*, 1847).

" Political Economy or Economics is the name of that part of knowledge which relates to wealth. Political Economy has to do with no other subject whatever than wealth " (F. A. Walker, *Political Economy*, 1883).

Compare with these the following definitions, or rather suggestions leading up to a definition, by Marshall :—

Marshall's.

" Political Economy or Economics is a study of man's actions in the ordinary business of life. It enquires how he gets his income and how he uses it " (*Economics of Industry*).

" It examines that part of individual and social action which is most closely connected with the attainment and with the use of the material requisites of well-being. Thus it is on the one side a study of wealth and on the other, and more important side, a part of the study of man," or, again, it is " that part of the social science of man's action in society that deals with his efforts to supply his wants, in so far as the efforts and wants are capable of being measured in terms of wealth, or its general representative, money " (*Principles of Economics*).

The difference.

The difference between the definitions of the older economists and the ideas of Marshall is more than a mere question of words ; it marks the whole growth of Economics from Mill to Marshall. What it means is that Economics is not a science of material things, but a study of human nature in regard to these things. Economics is *the science of the motives or notions of value which actuate men in the acquisition and use of wealth*. It is the *science of everyday life*.

This first attempt at a definition raises three questions : (1) What do we mean by science ? (2) Is it possible to apply scientific methods to a subject matter so complex and variable as human nature ? and (3) What need is there for such study of a subject so apparently simple as everyday life ?

(1) WHAT IS SCIENCE ? The word of course means simply knowledge, but it may be described as " knowledge with a purpose ". A science is a systematic body of knowledge regarding a certain subject, a collection of the general principles or leading truths relating to a particular branch of knowledge, arranged in

systematic order. It seeks to discover the necessary relations connecting the facts with which it deals, the general laws which show what things will happen under certain circumstances; its object is to apply these laws in future to produce certain desired results.

(2) A science requires a definite subject matter capable of methodical treatment, so as to arrive at universal laws or general principles governing the facts with which it deals. The subject matter of the science of Economics is (elliptically) wealth; and wealth means things that satisfy human wants. Economics studies the nature of human wants, and the efforts which men make to satisfy them. It is the science of human efforts to supply human wants. The laws of Economics are the laws of supply and demand, that is to say, the rules which govern (a) the cost of production of goods, and (b) the prices which men are willing to pay for them.

Subject
matter of
Economics.

If all men were like Robinson Crusoe, living alone on separate islands by their own individual efforts, it would obviously be impossible to lay down any such laws as to the nature of their wants or the efforts which they would make to supply them. Each man would be a law unto himself, with his own ideas of the relative value of different things, which would vary not only according to his own particular idiosyncrasies, but also with his own special circumstances and peculiar physical needs, as to food, clothing, and housing, and all of these would depend largely on the climate and resources of his particular island. But that is not how the world lives to-day. Even Robinson Crusoe found things much better after the arrival of Man Friday, and in modern life men live in communities; they are all individuals in a huge social organisation, all dependent on each other's efforts to supply their wants. In other words, man is a social animal; he naturally seeks the society of his fellow-men, in the first place for the pleasure of their society, and in the second place to have their assistance in supplying his wants. Families, tribes, towns, nations, empires are all associations of individuals for mutual pleasure, protection, and assistance. In

Social
organisation

such a community every man's efforts are directed to supplying the wants of others as well as his own, for every man depends on the efforts of others to help in supplying his wants. The relations which thus arise between men, as to their wants and their efforts, are the subject of our science. It is therefore a social science, because it deals with the actions of men not merely as individuals, but as members of an organised society.

Now among great numbers of people similarity of wants and efforts is manifested, and similarity is the basis of scientific law. Thus, in logic, the syllogism is based on two premisses, each of which is an equation or statement of similarity between two things, and from these premisses a conclusion is drawn; but this brings us to the root difficulty of the whole matter. The statement that one thing is "like" another implies some means of measurement and comparison of the two things, and how is it possible to measure human wants or human efforts? There is only one method available. It is impossible to tell *how much* any man wants any particular thing, such as a pound of tobacco, or how much a particular man dislikes to undergo the exertion or discomfort of doing a certain piece of work, such as digging fifty square yards of garden on a hot day; but it is comparatively easy to find out how much that man is prepared to *pay* for the tobacco, or what wage we must pay the gardener to induce him to do that piece of digging. If it is found that the gardener's wage is 10s. a day, and he buys 4 oz. of tobacco each week at 10d. per oz. (which is 3s. 4d. a week), then it may safely be argued that he would rather do a day's work than go without tobacco for three weeks. In the same way it will be found that nearly everything involves directly or indirectly some question of payment. We have to pay for most things we require; we have to be paid for most things we do. Thus money becomes at least a rough-and-ready means of measurement of the comparative strength of our desires for particular commodities, or of our unwillingness to undergo certain efforts or "discomforts"; and by this means of measurement it is possible to find out whether one man desires a certain commodity more

Money
measures
human
motives.

than another commodity, or more than another man, or whether one man requires to be paid more for his labour than another, or more for one job than another. Here then is a standard of measurement which makes a rough comparison possible, and provides a method by which we may arrive at certain similarities; upon these we may gradually build up enough knowledge of many men to justify a general statement about the relative intensity of their desires for different things.

This method, however, can only be applied to those motives or notions of value which can be measured by a money payment. Thus Economics becomes the *science of measurable motives*, and as the means of measurement is price, it becomes by implication the *Science of Prices*, or the *Theory of Values*. What motives are measurable.

The restriction of the scope of Economics to those motives which are measurable in terms of money seems at first sight very narrow; but as a matter of fact the motives which can be measured by prices are very numerous and very important. Most things a matter of money. They include almost all the motives which actuate men in the ordinary affairs of everyday life, and not merely in "business" in the narrow sense of the word. It must be remembered that the things men pay or are paid for include a great deal more than those which they buy or sell in a shop. In particular, they include an enormous number of *services* rendered by people of all kinds, and without which under modern conditions one could not possibly live. Man's wants include a great deal more than food, clothing, and housing. To take only the question of housing, it is not enough that he should have a house to live in. He must also have some one to keep his house for him, to cook his meals, make his bed, and so on, if he himself has to spend his time in earning his living outside the house. The running of the house also includes many services which he does not think of as things to be paid for, such as gas, water, and electric supplies and drainage. Outside the house he is supplied with many public services—clean and well-paved streets to walk on, provided by the municipality at a price in the form of rates, a tramcar to take him to his business, at a price in the form of a ticket, and so on. He

Payment for
services.

requires policemen to protect his property, soldiers and sailors to protect his country, a postman to deliver his letters, and an infinitude of other services of all kinds which must be paid for just as surely as his lunch in town, though the payment may be disguised in many different forms. Again, what is it all for? It is in order that he may be able to render certain services, for which he is paid. If he is a joiner making tables, or a shoemaker producing boots, he knows what he is being paid for, and how much he is paid for the table or the pair of boots. But if he is a machine tender in a boot factory, and his work consists mainly of watching a machine which punches holes in a piece of leather, he knows that that piece of leather will some day form part of a pair of boots, but he has no idea what part of the price of the boots is his payment for the particular job of punching these holes. Again, if he is a corporation tramway official, it probably does not occur to him that he is being paid a fraction of the price of each tramway ticket for his share in maintaining the organisation of the service.

Social
relations.

Thus our whole life is made up of paying and being paid; and a science that covers every transaction which involves a payment is not only an enormously wide science, but an extraordinarily important and interesting one. The fact is that living in a huge co-operative society, which is what the modern social organisation really is, men are all involved, whether they realise it or not, in social relations to each other, which ought to produce a sense of responsibility. We ought to feel that if the workers in a certain trade or service are underpaid, it is we, the consumers, who are underpaying them, and that equally whether they are corporation servants or members of some other public utility service such as a railway, or the women who make shirts for us in a clothing factory. It is these social relations which are the subject matter of Economics; and to say that such a science is sordid because it looks *primarily* at the money value of things is simply to misunderstand the whole thing. When Carlyle wrote so scathingly of the "cash payment for the sole nexus"¹

¹ *Past and Present*, I.-vi. and II.-vi.

between employer and employed, he was only emphasising the need of recognition of some moral responsibility beyond the cash payment. That moral responsibility *as such* is not the business of Economics ; but no human being, who has realised the social relations which these cash payments mean, could be content to accept the cash payment as the beginning and end of the whole thing. Thus the economist must remember that his particular subject is only part of a great all-embracing social science which includes many other departments as well as Economics.

This limitation or rather demarcation of the scope of Economics is essential to its efficiency in its proper place, and it has important effects on the methods of Economics and the nature of its laws. The duty of the economist is to inquire into facts, not in the first place to discuss the right or wrong of things. In the course of his inquiries he is bound to come across many things of which he will instinctively disapprove ; but if he allows himself to be drawn into the discussion of these moral or ethical questions his inquiry as an economist is likely to suffer. As a matter of fact, the distinction between the economic and the ethical aspects of a question can never be completely enforced. But the economist must be constantly trying to remember on which side of the fence he is for the moment, and if, when he is on the economic side trying to find out the facts, he can forget his feelings on the subject, the result of his inquiry into the facts is likely to be much more reliable.

This danger of the scientific accuracy of the economist's conclusions being spoilt by moral or political bias is well illustrated by the disfavour into which Economics fell during the nineteenth century, through its coming to be identified in the minds of the working classes with class interests. They felt, and with some reason, that the economists were always on the side of the capitalists and employers. The doctrines of Malthus as applied to the position of the working classes by his successors, and especially by Mill in the theory of the Fixed Wages Fund, really justified the name of the Dismal Science, which still clung

Demarca-
tion of
Economics.

Danger of
bias.

to Economics right up to the beginning of the present century. Any young student of Economics to-day, taking Mill as his introduction to the subject, can hardly fail to receive the impression that Political Economy in those days was really the Science of Wealth in the worst sense, for throughout the whole book runs what many would now regard as the deification of Capital. Considering the times in which Mill lived, when the wonderful wealth-producing power of machinery was new, it would not be fair to blame Mill and his contemporaries for being a little blinded by it; but it is not surprising that Karl Marx, looking at the other side of the picture, was driven to the conclusion that there must be something wrong with all these complacent theories, or else that the only thing for the proletariat to do was to smash the whole capitalist system by a class war and set up something else in its place. The economist as such, therefore, must not take sides; but as a man his Economics ought to enable him to take sides intelligently. Perhaps the matter may best be put in this way that it is the duty of the economist in the first place to find out the facts, then of the social reformer to propose remedies, and again of the economist to consider the probable economic effects of the proposed reform and whether it is likely to produce the desired result. Too often it is the ungrateful task of the economist to prove, as in the case of the Poor Law abuses before 1834, and to a less extent to-day, that the benevolent intentions of the reformers have had most undesirable results. Economics, therefore, cannot be a complete science. It is only one of many branches of sociology, but as in other sciences, specialisation, which is the meaning of division of labour, is particularly necessary in social questions. Again, as in other sciences, however, the economist must keep in the closest touch with all the other branches which go to make up the complete social science.

Economics
and social
reform.

Nature of
economic
laws.

This limitation of the scope of Economics also has an important effect on the nature of economic laws. In the first place it is necessary to be clear as to what law means, or rather how many

different kinds of law there are. There are, for example, (1) moral laws like the Ten Commandments. Many of these have been embodied in (2) parliamentary laws, civil or criminal, while others have not. Finally, there are (3) physical laws of nature. Perhaps the distinction may be best put in this way: a moral law means that one *ought not* to do certain things; a legal enactment says, "You *must not* do that thing, or the courts will interfere to prevent or punish you"; while a physical or natural law says, "You *cannot* do this thing without certain physical results happening".

Under which of these categories are we to place economic laws, such as the laws of supply and demand? In the first place, they are obviously not moral laws; they are not precepts, but uniformities or statements of fact. The form in which they would be stated is not, for example, "Men *ought* to buy in the cheapest market", but "Most men do". Second, they are not legal commands or prohibitions, indeed sometimes these latter are said to be interfering with the laws of supply and demand. During the War the Defence of the Realm Act did so very seriously when, for example, it forbade trading with the enemy, or charging more than sixpence for a pound of sugar. Third, economic laws are "psychical" not physical. They deal with what men are likely to do, not with the laws of inanimate nature. It will be shown later on that some of the so-called economic laws which are found in text-books really break this rule; the Law of Diminishing Return, for example, which is the foundation of the Ricardian Theory of Rent, is really a natural law of agriculture. Economic laws are, strictly speaking, "only those statements by which it is expressed or implied that a certain line of conduct will be adopted by a social group".¹ Finally, economic laws are not exact, like the laws of the physical sciences. They do not state that *all* men do so and so, but merely that *most* men would. Take, for example, the so-called law that men will always buy in the cheapest market. That is

Various kinds of law.

Only statements of tendencies.

¹ Pierson, *Principles of Economics*, vol. i. p. 19.

not always true ; some people prefer to buy in an expensive and fashionable shop, simply because it is fashionable and expensive. Economic laws do not "assume the form of precise quantitative statement";¹ it is easy, for example, to say that a rise in the price of a commodity will tend to check the consumption, but it is never possible to say exactly *how much* the consumption will be reduced by, say, a ten per cent increase of the price. Thus an economic law is merely a statement of a tendency, an indication of what is likely to happen, but no "exact numerical expression is found for the degree of force with which the tendency in question operates".² But while all this is true, these economic laws are sufficiently general and *often enough* true to be very valuable ; and as the questions upon which Economics desires to lay down the law usually affect very large numbers of people, the exceptions may be so small a part of the total that they merely serve to prove the rule.

Induction
and
deduction.

In following out his inquiry, the economist may adopt two different methods—the inductive and the deductive. Induction, or the historical method, means the discovery and comparison of many individual instances with a view to finding certain points of similarity which may gradually be built up into a general statement or law. Deduction is the method by which such laws or general principles are applied to other facts or new circumstances, so as to arrive at new conclusions. Each of these methods has its advantages. The inductive or historical method, which includes statistics, is necessarily the first step. One must observe and note many cases before even guessing at the probable law which governs all similar cases ; but the only usefulness of the laws so discovered is that they may be applied under the deductive method to new facts and circumstances. The proper relations between them may be thus stated. By applying the inductive method to many cases, a general principle may be at least tentatively arrived at. This

¹ Cairnes, *Character and Logical Method of Political Economy*, p. 108, quoting Herschel.

² Cairnes, p. 108.

general principle may then be applied by deduction to other cases, where the actual result is known, and if the result of the deduction is in accordance with facts, its truth is fairly demonstrated, and it may with greater confidence be applied again to new cases where the result is not already known. But it is always desirable to test the results obtained through the deductive method by fresh reference to actual facts, whenever possible.

In regard to his methods, however, the economist is at a disadvantage compared with students of the exact sciences in that he can very seldom adopt the latter's method of experiment as the engineer can do by making a model. If the chemist wishes to know how two substances will act when brought together, he can try it and see. But it is very difficult for the economist to do so, because he cannot, like the chemist, isolate his facts. That is why one so often finds in discussions of economic questions the reservation "other things being equal". It is as if the chemist in his experiment were constantly afraid that his chemicals were impure, and that the results were not the characteristic action of the two things he desires to test, but were largely due to the impurities. Thus, in everyday economic problems, which deal with large numbers of individuals, the result may be seriously affected by individual idiosyncrasies, or by some disturbing causes due to outside conditions which cannot be estimated or discounted. Experiment.

Finally, with regard to methods, Economics must above all things be practical, if it is to be of real use to ordinary people in their everyday life. It is true that the exploration of its scientific groundwork, the careful elaboration of its principles, is a matter for the academic student with time and the proper mental equipment and scientific training at his disposal; but for the ordinary man Economics must be essentially an applied science. He has to "live Economics", and what he wants from his teacher is to be shown how to see life—his own life—through economic spectacles. That life is full of economic problems; he wants to be able to recognise them by their Economic spectacles.

names, to know where and how to look for the facts, and how to compare the conditions of his own particular problem with those under which similar problems have arisen elsewhere or in other times. It is his own everyday life that he wants to study and understand, in the light of the experience of others and the theoretical principles which the scientists have worked out for him.

To return to the question of the name of the science; if it were only a question of a name it would hardly be worth discussing, but it is more than that. The old name, Political Economy, is now undesirable, because these two words have each acquired in popular use an objectionable meaning, which has nothing whatever to do with their original meaning as the name of the science. "Political" methods are the last thing we want in Economics, though, unfortunately, many economic problems have again become the playthings of party politics. And "economy", especially in these latest days, has become a byword. Mere "saving money" is certainly not the whole of Economics.

Economics
vs. Political
Economy.

But the dropping of the old name is due to more than the mere desire to escape evil associations. Political Economy in the true sense of the words was a correct description of the science in the time of Adam Smith. In those days the functions of the state were all-embracing, the life of the individual was controlled and directed at every turn by laws and regulations, mostly prohibiting something, and the meaning of Adam Smith's great doctrine of economic freedom was that the state should mind its own business and leave the people to mind theirs, viz. to get their living in the best way they could, subject to the minimum amount of necessary control, the maintenance of law and order, of national defence, and of the state itself. Political Economy therefore meant the management of the affairs and property of the state, and Adam Smith's great object was to show that, according to the laws of nature (including human nature), things would work out for the greatest good of the greatest number if individuals were as far as possible left alone

to work out their own salvation. It is these natural laws that form the subject matter of Economics, which simply means the laws of property (*οἶκος*=a house) or wealth, or better still the management of the affairs of the household in the widest sense of the word.

MARSHALL, *Economics of Industry*, Book I. chap. i. sec. 1; chaps. iii.-v., and Appendix A. (Third Edition, 1923 reprint.)

MARSHALL, *Principles of Economics*, Book I. chap. i. sec. 1; chaps. ii.-iv., and Appendices C and D. (Eighth Edition, 1922.)

CHAPTER II

DEFINITIONS

Importance and difficulty of economic definitions—Value and wealth—
Utility and exchange value—Production and consumption—Labour—
The factors of production.

DEFINITIONS are the tools of an abstract science. To define means "to determine or to ascertain the extent of the meaning of a word, to ascertain the signification of a term, to explain what a word is understood to express".

Importance
of defini-
tions.

The importance of exact and careful definitions cannot be too strongly impressed upon the student who is entering on his first experience of abstract science. It is essential alike to clear thinking and to logical argument that he should carefully consider his definitions, and settle as exactly as possible what he means to include under each word and, still more important perhaps, what he means to exclude. Otherwise he may find that unconsciously he has been using a word with different shades of meaning, or that his inability to convince an opponent in debate is due to the fact that the latter is using certain words in a different sense from himself.

Intension
and
extension.

The process of definition involves two ideas, which are known to logicians as intension and extension. The "intension" of a term means the number of qualities which are implied by the term, and which must be possessed by each person or thing that is to come within the definition. The "extension" of a term, on the other hand, means the number of persons or things to which that term may be applied. Employing these technical

terms, it is obvious that the greater the intension of a term, the smaller will be its extension ; the more precisely and fully one specifies the qualities of the particular class one has in mind, the smaller will be the number of individuals who come within that class. Thus the general term ship includes a very large genus, which is immediately restricted if the definition is confined to one class of ships, *e.g.* steamships. If again there is added to the intension of the term the possession of turbines, the size of the class is still further reduced, and so on. Note how this bears out the statement made above that the important matter in a definition is to know what it is to exclude. Thus, in discussing " money ", it is necessary to specify whether credit instruments are included, such as cheques, or only currency, and in the latter case whether paper currency as well as metallic money is included, or still further, whether only Government paper money is intended, or whether bank-notes are to be included.

The difficulty of arriving at exact definitions in Economics is greatly increased by the fact that, Economics being the science of everyday life, the economist must use everyday language in which to express himself ; and as the words employed are all in common use, they have already acquired a certain popular meaning, or several different shades of meaning. It might seem simpler to throw over these words and adopt special scientific terms from Greek or Latin ; but by doing so more would be lost in the practical usefulness of the science to ordinary people than would be gained in scientific exactness.

Popular meanings.

The first definition is naturally that of wealth, the subject matter of the science, and inseparably connected with it value, for wealth is simply everything that has value.

The word value is commonly used in either of two main senses, clearly distinguishable from each other.

(1) Value means the utility, pleasure, or satisfaction which one derives from the use or consumption of some desirable object. This may be called utility, desirability, or value in use. It means something entirely personal to the owner of the commodity, representing merely his own particular idea of the worth

Value.

Subjective
value.

of it to him. It is what is called in philosophic terms "subjective" value. It is a value placed upon the commodity by the man himself, and it does not matter whether any one else thinks the thing of value or not; for it is independent of, and may even be opposed to, the generally accepted idea of utility. It is *his* idea of its value, and it *is* worth that to him because he thinks it is. The value is created by his desire, and nothing else affects it.

Intrinsic
value.

The term intrinsic value is sometimes applied to this idea of subjective utility, but it is misleading and dangerous. There is no such thing in Economics as intrinsic value in the sense of a "real" value, whether people realise it or not. Value means the capacity to satisfy some human want. If nobody wants a thing it has no economic value, and it is beside the question to argue that they ought to want it, just as much as it is beside the question to argue that whisky should have no value because people ought not to want it. As a matter of fact even in business experience there are sometimes extraordinary developments, when market values seem to get entirely away from intrinsic values. A striking case in point was recently seen in the cotton trade when Egyptian cotton, which is of longer staple and finer quality and is "intrinsicly" much better than American, was actually selling at a lower price, because it so happened that at the time there was a serious scarcity of the ordinary "bread-and-butter" American cotton, and those who wanted that could not use Egyptian, because their machinery was not adapted to it. It was as if cream were selling for less than the price of milk, because there are people who do not like cream or cannot digest it. The fact is that this idea of intrinsic value is only the result of a difference of opinion about subjective utility. It means that people have different ideas of the utility of particular commodities, especially works of art, and certain of them wish to enforce their particular notions of value on other people by claiming for their ideas a peculiar virtue or sanctity. But after all these notions of value are only a matter of taste which may change.

(2) The value of an article depends on how much of other commodities one can get in exchange for it; in other words, the idea of value is "relative" or "objective". Value in this sense means that one thing is worth more or less than something else. This is called exchange value; it is the result of a process of comparison and selection. In practice this root idea of the meaning of exchange value is apt to be obscured by the fact that in real life one does not compare the value of every commodity directly with another. Instead, men have developed the habit of comparing everything with one universal commodity, money, and so arriving at the relative value of different commodities by comparing them all with this standard instead of with each other. Thus exchange value becomes price, which is simply exchange value expressed in terms of money. But in careful thinking one must not forget that price is only a means of expressing the relative value of two commodities to each other. It is not convenient to speak of a pound of tea being worth 6 lb. of sugar, but that is what one means by saying that a pound of tea costs 3s. and a pound of sugar 6d.

Which, then, of these two ideas—utility or exchange value—is to be adopted as the basis of the economic definition of value? In point of time it is clear that the abstract idea of subjective utility precedes the idea of exchange value. A man must have formed his own idea of the utility of each of the different articles to himself before he can pass on to the second step of comparing these subjective values with each other. It is therefore clearly utility which gives rise to exchange value; desirability, the capacity to satisfy human wants, is the sole source or cause of value. But, on the other hand, it is not till the second process is reached, that of comparison, that one's ideas of value become in any degree precise or definite. The common saying that "we never know how much we value anything till we have to do without it" only partially expresses the essential truth of the idea of value, which is that we never know *how much* we value a thing till we come to *exchange it for something else*. In other words, while utility in the economic sense is the sole source

Relative or
exchange
value.

Relation of
utility to
exchange
value.

or root cause of value, it is exchange which measures and determines value. The idea of utility is personal and intangible, while that of exchange value is definite and measurable; but the two are not necessarily, nor even usually, the same.

Measurable values.

Economics can only deal with such notions of value as can be measured in some way. Exchange value can be measured, utility cannot; the former must therefore be adopted as the economic definition of value. Henceforth, when value is spoken of without a qualifying adjective, it means exchange value. When it is necessary, as it may often be, to speak of the subjective utility which lies at the root of all exchange values, it must be called utility, or subjective value.

Wealth.

Apply this distinction then to the definition of wealth. The root cause of all wealth is utility. Nothing can be wealth which does not possess the capacity of satisfying human desire; but many things that are desirable have no exchange value. In logical terms, All wealth consists of desirable things or "Goods", but not all goods are to be reckoned as wealth. The word "goods", which Marshall adopted, is peculiarly unsatisfactory, because in ordinary usage it has a very definite meaning (soft goods, or a goods train, for example), which is entirely opposed to the sense required here. Economic "goods" include not merely merchandise, not even merely a man's material possessions, such as his house, furniture, books, pictures, etc., but all desirable things, everything that is capable of satisfying a human want; and that, as will be seen later, includes services. It seems impossible, however, to find an English word that fully and exactly expresses that meaning, and rather than adopt or invent a Greek word it seems better to retain the term "goods", even if it has to be in quotation marks.

Classification of "Goods".

In order to arrive at a definition of wealth, it is necessary to classify these "goods" and see which of them are to be included in the definition.

"Goods" may be either

(a) *Material*—all useful material things, or

(b) *Personal*, which, again, may be divided into

- (i.) *External*, which are derived from others, such as services, and
- (ii.) *Internal*—a man's own faculties or capacities for action or enjoyment, like the love of music or of outdoor recreation.

Again goods may be classified as either

(1) *Free*—those desirable things which are afforded by nature in unlimited quantities and without appreciable effort, such as air, and which are not normally capable of being appropriated by one individual as his own property to the exclusion of others, and

(2) *Exchangeable*—goods which are by nature movable or transferable (and therefore capable of appropriation), and are limited in quantity, and not free.

Which of these different kinds of goods can be included in the definition of wealth, remembering that the object is to exclude all those goods of which the value cannot be measured by exchange? Clearly, personal internal goods must be excluded, because they are entirely personal to the man himself, and cannot be transferred to any one else. Again, those goods which are free gifts of nature cannot be bought or sold, because no one will buy them, being able to get as much as he wants for nothing. Wealth in the economic sense of the word must therefore be defined as including (1) *all those material goods which are not free, and (2) those external personal goods which can be used to obtain such material goods, or can be obtained in exchange for them.* This simply means *all those goods which have exchange value.*

Definition of
wealth.

By thus analysing and explaining this definition Marshall removed the misconceptions which had arisen round the old definition of wealth as merely everything that has money value. While fully realising that all money value depends on utility, he showed why it was necessary to exclude certain elements from the ordinary definition of wealth, because that must be confined to measurable values.

Personal
wealth.

But sometimes it is necessary to speak of the wealth of an individual in a wider sense, so as to include everything that is of utility to him. This may be called "personal wealth", which includes all the elements of wealth, as already defined, and also his own artistic or intellectual tastes or pleasures, that is to say, it also includes personal internal goods.

National
wealth.

Again, one may wish to speak of wealth from the national or social point of view. This includes not only the total nett wealth of all the individuals which compose the nation, excluding, of course, claims by one against another, which are only cross entries, but also those items of national utility, called common or collective goods, which belong to the nation, but not to any one individual, such as climate, geographical position, navigable rivers, natural harbours, etc. Note that this idea of national wealth is much wider than the technical term "Crown property"—the wealth of the Government—though the terms overlap to some extent. Foreshores, for example, and navigable rivers are part of the state domain which includes many other forms of wealth of the usual kind, such as public buildings which are merely held by the Government in trust for the public.

The science of human efforts to supply human wants may divide its work into two main departments—production and consumption. What exactly do these mean?

Production.

Man cannot create matter; he cannot make anything except out of something else; he cannot make a piece of wood, but he can make a table out of a piece of wood. The human race possesses in itself nothing but the power to labour. Men require for the exercise of that power certain raw materials upon which they may work, or out of which they may make weapons or tools or things to consume or enjoy. These materials are the gift of nature. Man takes them, and by means of labour converts them into other forms which are capable of satisfying human wants. This process is not in the strictest sense creation; it is merely adaptation. Production, therefore, is the process of adapting things to human wants, of making them useful; it is the

creation of utilities, but not of matter. Even agriculture is not making things grow; it is only putting the seed in the prepared ground, where the forces of nature produce the crop.

In the same way consumption does not mean destruction of matter, for matter is indestructible; it is merely the destruction or conversion of utilities. Man takes wood and coal and makes a fire. He has not destroyed the matter of which the wood and coal were composed; he has simply converted them into other forms of matter, some of these not visible, but none the less existent. He has destroyed the utility of the wood and coal for his present purpose of providing heat, but he has produced heat, which he can apply to many other purposes, including the production of power.

Note, however, that sometimes there may be negative production, which means the prevention of destruction. Thus the services of the police in protecting property from a riotous mob, or of the wardens of the protective banks which prevent the flooding of agricultural land, are clearly valuable, because without them the productive labours of others would be in vain.

The idea of labour is commonly confined to the manual labour of those who are loosely called the working classes. But there are many other forms of labour which may be as hard, that is to say, as exhausting, as manual labour, though in a different way, and sometimes even more productive, such as the brain labour of the inventor who discovers some method of economising manual labour. Again, there are many forms of exertion, as in athletics, which are not labour in the economic sense, but a labour of love. The economic test of labour is not in the nature of the work so much as in the motive which inspires the worker. Thus labour may be defined as *any exertion of mind or body undergone partly or wholly with a view to some good other than the pleasure derived directly from the work*. Note that this produces the peculiar effect that what is properly defined as labour in the case of one person may not be labour in the case of another, or

for the same person under different conditions. The exertion of a boy playing football for his school cannot be defined as labour, but if later on he becomes a professional player, then it will come within the definition. Or if a man works in his own garden because he likes it, that is not labour in the economic sense ; but if he hires a gardener to do the work for him, that is labour. In fact the point was never more neatly put than by an old Irishman who said that "work's not work unless you're paid for doing it".

It may be noted that this is the first case (but will not be the last) in which it will be found that a really satisfactory and simple definition is impossible, because the turning-point of the definition is not in the thing itself, but in the intentions of some person regarding it. That, however, is to be expected in Economics, which is the science of human motives or notions of value in regard to things.

Productive
labour.

Arising out of the definition of labour there was among the earlier economists a long-standing controversy with regard to the definition of what they called "productive" labour. That controversy would not be worth recalling now, except for the fact that it throws an interesting and useful light on the definitions already discussed, particularly that of wealth. Obviously the question of what is productive labour immediately raises another question—productive of what?—and the only answer that can be given to that question must be, productive of wealth. Now, if the definition of wealth were confined to material goods, obviously a great deal of labour which consists only in services rendered, such as, for example, education, produces directly no material result, and would therefore be classed as unproductive. So in the same way would be those of the doctor, the musician, the domestic servant, or the missionary. But as such a result is absurd, the question is referred back to the definition of wealth, and especially to the fact that certain kinds of services are included in the definition of wealth, namely those which have exchange value. The point is worth discussing, because it shows how difficult it is to establish a definition, which will be

at once clear and easily applied. It will be remembered that Services. personal or non-material goods were divided into those services which a man can render to some one else, and those forms of satisfaction which he himself derives from his own capacities for action or enjoyment. Take, for example, a man of high musical culture, but who has no performing skill, either vocal or instrumental, which would enable him to earn anything through his musical knowledge. In that case the enjoyment which he gets out of attending the musical performances of other people is entirely personal to himself, and has no exchange value. If, however, he should discover an unsuspected capacity to describe and discuss these performances, as the result of which he found it possible to earn an income as a musical critic, he would then be able, as they say, to "turn his gifts to account", in other words, to make money out of his musical knowledge, and would then be in a position to render services which would have exchange value. His labour would then become productive.

It would be easy to carry this argument further, until it would involve some apparently very paradoxical results; but it does make the reader face the question, "How far are services to be included in the definition of wealth?" The answer is, "Just in as far as they are turned into money"; and the logic of this conclusion is not confined to services. It applies to all forms of wealth. Wealth consists of all things that satisfy human wants and can be exchanged. It does not matter how foolish or regrettable the want may appear to other people; as long as some one wants the thing and is prepared to pay for it, it must come within the economic definition of wealth.

Lastly, production involves the use of various agents or Factors of production. factors of production. Strictly speaking, the two primary elements of production are nature and human labour; but in modern Economics these have been developed and distinguished into four factors of production—land, labour, capital, and organisation; and the remunerations which these different

factors of production receive—their shares in the joint product—are called rent, wages, interest, and profits. All of these will require fuller definition in later chapters.

MARSHALL, *Economics of Industry*, Book II. chaps. i., ii., and iii.

MARSHALL, *Principles of Economics*, Book II. chaps. i., ii., and iii.

CHAPTER III

THE PUZZLE OF VALUE

The central problem of Economics : the relation between exchange value (or price) and utility—Utility varies, but prices are uniform—How is the uniform or market price fixed : by demand or by cost of production ?—Equilibrium of supply and demand.

THE discussion in the previous chapter of the meaning and definition of value may seem to be wasting a great deal of labour over a very simple matter, but it is all leading up to the fundamental question of the whole subject, which is : Why should the value or price of any commodity be what it is ? Why, for example, should a bottle of cider cost only a shilling, while a bottle of champagne costs £1 ? The fact is that the values of things are often very puzzling ; and in many cases it is extremely difficult to detect any apparent relation between utility and exchange value or prices. It is easy, for example, to think of many commodities which are of infinite " value " in the sense of utility, but of which the exchange value or price is very small, such as water or salt ; while, on the other hand, there are many others which command very high prices, but apparently possess very little utility. Take, for example, the relative prices of coal and diamonds, though here by the way the difficulty is due to a play on words. To say that diamonds have very little utility as compared with coal is really begging the question of what subjective utility means, by importing into the definition an ethical meaning of what people *ought to* regard as useful. As

Utility &
value.

already pointed out, utility, in the economic sense of the term, means nothing more nor less than the capacity to satisfy a human want, regardless of whether that want is wise or foolish ; and if people desire diamonds to such an extent that they are willing to pay a high price for them, then the utility of diamonds to them must be great. The question still remains, however, why should some people place such a high value on these commodities ?

Utility
varies.

Again, the byword that " tastes differ " is the popular expression of the fact that the subjective utility of the same commodity varies to different people ; but the exchange value or price is the same to every one. The teetotaller does not pay any less for a bottle of whisky than any one else, though he has " no use for it " ; nor would he sell it for any less than its market value on that account.

Again, take the simple case of barter that used to figure so often in travellers'-tales of the poor foolish native who was willing to barter rough gems of great value for a few trumpery beads or bangles. Did it ever occur to the reader to consider that transaction from the " poor ignorant native's " point of view ? Here were strange beings, come from some unheard of country, in a ship of incredible size, who were prepared to give away quantities of the most wonderful ornaments ever seen, in exchange for a few rough stones which the poor native could pick up any day merely by going to the part of the beach where he knew they were to be found, and which possessed neither beauty nor anything else to make them attractive in the eyes of a sane man ! What could the native think but that these foreigners were utterly mad ? And this is simply an extreme case of what happens in every case of exchange. Each party considers that the utility of what the other fellow offers is greater than that of what he is willing to accept in exchange. In other words, to each of the parties the subjective utility of the one commodity is greater than that of the other, but their notions of greater and less are reversed ; yet the fact that an exchange takes place proves that the *exchange* value of the two

to different
people

articles is the same. Clearly, therefore, utility and exchange value are not the same thing, even in the mind of the same person at the same time.

Further, the utility of a commodity varies at different times even to the same person. What would one not give for a drink on a hot day at the top of a high mountain? But the same drink before starting would have had much less value. Yet prices do not change according to the varying intensity of man's desire at one time or another. They are on the whole uniform, and this uniformity is more or less world wide.

This idea of uniformity of price is a thing to which people in Western countries are so accustomed (or at least were so accustomed before the War) that they had come to look upon it as natural and the only right way. The Oriental method of haggling over prices seems to them childish and hardly even honest, but to the Oriental mind the Western way of fixed prices is incomprehensible. The fact is that the system of uniform market price is peculiarly and exclusively Western, and during the War there was almost nothing which annoyed one so much as to find that it had mysteriously broken down; that the same proprietary article was being sold in shops on opposite sides of the same street at different prices. The fact is that most people had never taken the trouble to think "Why should prices be uniform?" and "What fixes the uniform market price?"

Once more, why do prices and even values vary from time to time? Note that this involves two ideas. Prices may change in the sense of a rise or fall of the general level of prices, as shown by the Index Numbers;¹ but if the movement were simultaneous and uniform for everything (which it never is), there would be no change in the value of anything. But there are also alterations in the relative prices of commodities, which involve a change in values. Consider, for instance, the following list of the comparative prices of rubber and cotton:—

¹ See *Mechanism of Exchange*, chap. v.

Date.	Rubber.	Cotton.	Value of 1 lb. of Rubber.
	Pence per lb.	Pence per lb.	Approximately
1910	105	8	13 lbs. of cotton.
1914	27½	7	4 " "
1918	27½	22	1½ " "
1920	23	25	1½ " "
1924	{ 1st half 12.	18	1½ " "
	{ 2nd " 15	15	1 " "

Clearly the real values of rubber and cotton, that is to say, their relative values, have varied enormously in this period. Why?

The
problem of
prices.

This, then, recalls the third question referred to on p. 2, namely, why should it be necessary to have a science of prices? It seems that value is a difficult problem, which requires careful thinking to puzzle it out; that the prices of commodities are not simple, nor all to be explained by one rule. The theory of value, therefore, is just the question of how prices are fixed; it must explain the ratio or rate of exchange between different things, as expressed by the relative amounts of one common commodity, money, for which all other things are exchanged, that is to say, by their prices.

Supply and
demand.

The definition of Economics as the science of human efforts to supply human wants indicates the two sides to this question—efforts and wants, supply and demand. Which of these fixes prices—the cost of the human efforts, or the strength of the human wants? Is price fixed by cost of production or by demand? It will be necessary to discuss these two sides separately. On the demand side the nature of human wants must be considered. It will be found that there are certain natural laws which govern human wants more or less precisely, and from these a law can be derived with regard to the effect of demand on price and also of price on demand. Taking supply in the same way, there are certain general rules affecting the supply of commodities and their cost of production from which it is possible to infer how far price depends on cost of production, and how the supply of any commodity depends on its price.

Then the results of the inquiry into these two sides of the question must be brought together to see how they fit into each other. If the laws of supply and demand act against each other, how are they balanced or brought to equilibrium? For market price is the price which brings supply and demand to equilibrium, the price at which the quantity of any commodity offered for sale will be the same as the quantity which people are willing to buy. Thus market price "equates" or balances supply and demand. How does it do it? Is it supply or demand that rules the price? Which fixes price?

The answer to that question is, "Neither alone, but both together". One might as well ask, "Which blade of a pair of scissors does the cutting?" But that illustration may be carried further. Watch a man, a woman, and a tailor using a pair of scissors. The ordinary man moves both blades, the woman moves the lower blade, the tailor rests the lower blade of the big shears on his cutting board and moves the upper blade only. In the same way sometimes the influence of supply is greater than that of demand and sometimes the reverse. How, then, is the share of each fixed? In what cases does the cost of production have the predominating influence, and in what cases demand? In what way does each influence price? The theory of value, therefore, means the theory of the equilibrium or balancing of supply and demand; it explains how supply and demand work upon each other, how each of them affects price, and how in turn price reacts on each of them.

The chief contribution of modern economists to the development of economic theory is in regard to the demand side of the equation. The classical economists had expounded very fully the effect of cost of production on price and the tendency of competition to cut prices down to the cost of production. In doing so they had worked out a very interesting series of laws of supply, such as the laws of Diminishing and Increasing Return, the theory of Rent, and the ideas of Market Price, Normal Price, etc.; but it apparently never occurred to them that it was necessary or possible to apply similar methods of

Marshall's
analogies.

detailed study to demand, on which as a rule they said very little at all. Jevons and the Austrian economists, however, broke new ground in that direction, and Marshall developed the subject in a very interesting way, largely on the analogy of the previous treatment of supply; indeed it was almost as if he had deliberately set himself to show that every argument or line of thought that his predecessors had developed for supply could equally well be applied *mutatis mutandis* to demand. Consider, for example, the following parallel table of laws or theories and their terminology:—

<i>Supply.</i>	<i>Demand.</i>
Law of diminishing return.	Law of diminishing utility.
Marginal cost of production.	Marginal utility.
Marginal producer.	Marginal consumer.
Producer's surplus or rent.	Consumer's surplus or rent.
Supply price.	Demand price.

It was perhaps natural that as this treatment of demand was new, Marshall should put it first in his discussion of the theory of value, but to the student approaching the subject for the first time this arrangement has one disadvantage. The terminology of the subject, especially the idea of the margin, is unfamiliar; but it seems more natural and is more easily understood in the case of supply, especially of land, than of demand. Having mastered the terminology in the case of supply, it should be easier for him then to apply it by analogy to the case of demand, where the same terms are used in a more figurative sense to denote mental conditions.

It seems preferable, therefore, to take supply first, and to work out the theory on that side where it has the advantage of being more commonly understood and accepted; and the writer proposes to reverse Marshall's order in that way.

SMART, *Introduction to the Theory of Value.*

CHAPTER IV

SUPPLY

The factors of production: Land, Labour, Capital, and Organisation—The meaning of "Supply Price"—Sources of supply and remuneration.

THE question which runs through the whole of the next five chapters is how far the market price of any commodity is fixed by the cost of its production. If a motor cycle costs say five times as much as the pedal-driven machine, is it because it costs five times as much to make it? If the price of a staple raw material falls, as rubber has done in recent years (see Table on p. 28), is it because the cost of production has been reduced? The illustrations given in the previous chapter have shown how difficult it is to find any connection between the prices of many commodities and their apparent utility. It would be just as easy here to produce many cases in which the prices show no apparent relation to cost of production, such as a picture by a well-known artist, a first edition of Shakespeare, a Parisian model in a milliner's shop, or a large diamond. Yet to the Western mind it seems a natural thing to expect that in most cases prices ought to bear some relation to the cost of production. So strongly ingrained is this idea that if some article, such as a new patent, is being sold at a high price, people are inclined to say, "What a swindle; it can't cost half that to produce it!"

Cost of
production
and prices.

Again, it seems natural that if the price of a commodity rises, the effect should be to induce the growers or manufacturers to increase their production, and the reverse if prices fall; and that is the form in which the problem is to be examined in the

Effect of
price on
supply.

following chapters. Is it true that the supply of a commodity depends upon the price which the producers can obtain for it, that if a sufficient price is not offered the supply will be reduced, or that if an increased supply is wanted, it is only necessary to offer an adequate price and the desired supply will be forthcoming? It is easy to produce many cases in which that has happened; but in order to prove that such is the law of supply, it is necessary to find out how and why it happens so, and whether it always happens. In other words, the problem is the relation between supply and price, or the effect of price on supply. Marshall put this in a very useful phrase when he spoke of the "supply price" of any commodity. When he said that any particular quantity of a commodity has its supply price, he meant that if a certain price is offered, the supply will be so much; if the price is raised, the supply will increase; if the price falls, the supply will decrease; in other words, there is a direct causal connection between the price offered and the supply produced. The first thing then is to prove that this law is true, and next to find out exactly how the price affects the supply. A little consideration will show that the increase is not always in direct proportion to the rise of price; in the case of manufactured articles a relatively small increase of price may produce a very large increase of the supply; or, on the contrary, in the case of natural crops, like cotton or wool, a substantial increase of the price may produce a comparatively small increase of the supply. On the other hand there are many cases, such as motor-cars, in which a reduction in price has coincided with a very large increase of the supply. What then is the relation between price and supply on the one hand and between cost of production and price on the other hand?

Supply
price

The method of tackling this problem is as follows: Under modern conditions the supply of any commodity is a complex problem involving the combination of four different factors of production, as they are called, namely, land, which includes all raw materials, labour of all kinds, capital, including tools and machinery, and the fourth factor of production added by

Marshall, which he called Organisation, meaning the services of the employer, who is essential in modern production under the factory system. In the old days of the independent artisan, raw materials and labour were the main factors, capital being confined to a few very simple tools ; but under the modern system of large-scale production by machinery in huge factories, capital and organisation have become the most striking features of the system, and it will be necessary to study them very fully.

of each
factor of
production.

If the theory which lies behind the idea of supply price is true of production as a whole, it ought to be true of each of these four factors of production separately ; so that if, for example, the world wants a larger area of land put under a particular crop, it should be possible to get that increased area simply by paying a higher price to the owner or cultivator of the land. In the same way, but reversing the case, if it is found that the workers in a certain industry are being consistently underpaid, one would expect to find the supply of labour in that trade diminishing. Again, if the investor in a particular class of securities finds that the normal return to that class of investments is dwindling, it should become more and more difficult to get new issues of that class taken up by the investing public ; and finally, if a new industry, such as artificial silk, apparently offers tempting profits to those who care to take the risks of going into the business, can it be assumed that the result will be a rush on the part of employers and capitalists to go into that trade ? Thus each of the four factors of production must be taken separately, and the question is whether the supply of land, labour, capital, and organisation respectively depends on the amount of the remuneration obtainable by that factor of production. To answer this question it is necessary to consider the sources of supply of each factor of production separately, and to find out in each case whether these sources are such as would be affected by the remuneration obtainable.

MARSHALL, *Economics of Industry*, Book IV. chap i.

MARSHALL, *Principles of Economics*, Book IV. chap i.

CHAPTER V

LAND

Nature's share in production—Limits of the supply of land—Law of diminishing return or increasing cost—Ricardo's theory of rent—Intensive and extensive cultivation—Rent of building land—Supply price and rent of land—Other forms of rent.

Full meaning.

LAND in the economic sense means not merely the surface of the earth available for cultivation or building, but also all the raw materials and forces which nature provides for the use of man ; in other words, nature's whole share in production.

The supply of land

At first sight it would seem that the supply of land cannot be in any way affected by the rent obtainable for it, or the price of its produce. The area of the earth's surface, and the quantity of the raw materials which the globe contains, are fixed, and the supply is incapable of being made either greater or less by any effort of man. How, then, can land have a supply price ? It is not, however, the absolute amount of land or raw materials in existence in the world that matters ; but rather the amount available for the uses to which man wishes to put them. What man wants is not merely land, but land suitable and convenient for his purposes ; not merely raw materials, but raw materials in a place and in a condition in which he can make use of them. If the world is short of cotton it is little consolation to know that there are millions of acres of good cotton land in the heart of Africa, but remote from any feasible means of transport, or that Brazil could grow as many millions of bales of cotton as the United States if the necessary labour and capital were available.

Or again, if the world's gold supply is inadequate, of what avail is it to know that there must be plenty of gold-bearing strata still untouched, if only we knew where to look for them ?

To make land available for cultivation, or to make raw materials available for production, requires in every case the expenditure of a certain amount of labour, and the use of certain tools or machinery, which are capital. Thus, although nature's potential contribution to production is fixed in amount, the actual supply of land and raw materials available for production is dependent on other things than nature alone ; in other words, the supply of the factor of production called land depends on labour and capital as well as on nature herself. Now the supply of labour and capital is not limited, and, as will be found in subsequent chapters, it depends on the remuneration obtainable for them ; that is to say that labour and capital have their supply price. The question is, then, whether labour and capital when applied to land lose this characteristic, or whether they still have their supply price when applied to agriculture or to the production of raw materials such as coal or iron.

involves
labour and
capital.

The powers of nature under the application of labour and capital produce a peculiar result. It has been observed that when labour and capital are applied to agriculture, the return obtained does not always keep pace with the increased expenditure. Beyond a certain point each successive application of labour and capital to the same piece of land yields less additional return than that which preceded it. This has been called the Law of Diminishing Return, which may be thus stated : *Beyond a certain point, every increase in labour and capital applied to land produces in general a less than proportionate return.*

But the name diminishing return is unfortunate. To the novice it may convey the idea that the *total* return from land diminishes with increased expenditure, which of course is obviously not true. What the law means is that the *additional* return received as the result of further expenditure is less than the *additional* outlay. To meet this objection it has been suggested that the name "disproportionate return" should be

Law of
diminishing
return

used ; but there is another way in which the matter can be put more clearly, as follows : If the extra return per acre due to the additional expenditure is less than before, the practical effect will be that the cost of production *per unit* of the additional return will be higher than that of the previous units. Thus if land has been giving a return of 32 bushels of wheat for an expenditure of say £5 per acre, that works out at a cost of 3s. 1½d. per bushel. But if additional wheat is required and the expenditure per acre is increased to £6, but the yield is only raised to 36 bushels per acre, then obviously the cost of each additional bushel of wheat grown on that land will be 3s. 4d., or nearly 7 per cent more than before. Surely, then, it would be much clearer if this were called the *Law of Increasing Cost* and stated in this way : “ *Beyond a certain point every increase in the production of raw materials or the supply of natural resources can only be secured at an increasing cost in labour and capital* ”.

or increasing
cost.

Idea of the
margin

The application of this natural law of production to agricultural conditions was first pointed out by Anderson about 1777, followed by Malthus in 1814, but Ricardó worked it out fully in 1817, and every other economist since then has followed him. It has led to the development of an elaborate terminology which must be considered, because it contains one idea in particular, that of the margin, which now runs through the whole of economic theory. The argument may be briefly stated as follows :—

The law of diminishing return does not necessarily, nor even as a rule, come into play in the early stages of agriculture. In pioneer farming with virgin land in a new country where population is scanty, the return to the small amount of labour available may be quite satisfactory ; yet if more labour were available for better cultivation the results would be still more profitable. Again, if capital were available in the form of agricultural machinery, the return might immediately be increased to such an extent as would quickly cover the cost of the capital. But as cultivation goes on year after year and the supply of labour and capital increases, better and more expensive methods of cultivation will be applied ; indeed they will become necessary,

because the longer the land is under cultivation the further it recedes from the condition of virgin soil, and unless it is possible to adopt a scientific system of rotation of crops which will prevent the exhaustion of the soil, it will probably be necessary to make large use of fertilisers.

Thus the cost of production per acre increases faster than the increase of the yield per acre, and the cost of production per unit of the crop begins to rise. It then becomes a question whether it is better to continue cultivation on this scale of increasing outlay on the existing area, or whether it would be better to go farther out and take in more virgin land, assuming that to be still available. Note that it is not to be assumed that the order in which land is taken up in a new country is in accordance with its physical qualities ; on the contrary, it is more likely to be dictated by nearness to the sea, by which the first settlers arrived, and safety from native attacks, or in modern times nearness to the railway, which provides the essential transport for exportable crops. But for whatever reason, the land first taken up was presumably the most profitable at the time ; and however the conditions may change (as, for example, by the extension of the railway) the problem is always cropping up again, whether it is better to cultivate more intensively the land already under crop, or to push on to new or inferior land. In either case, as the situation develops, there comes a point at which a certain part of the land is just on the margin of paying or not, under existing conditions ; and this idea of the margin is the pivot of the whole argument. The "marginal land" is that which under present conditions is just paying because the yield just covers the cost of production.¹ In the same way the last application or "dose" of labour and capital, in the form of further cultivation or fertiliser, which just gives a return sufficient to cover its cost, has been called the marginal dose. The return derived from the marginal land or marginal dose is described as the marginal return, and the cost of production on that land as the marginal cost of production.

under
different
conditions.

Marginal
terminology.

¹ For the definition of cost of production, see note on Table, p. 42.

Intensive
 & extensive
 cultivation

There are various different forms in which this law of increasing cost may show itself, according to circumstances. Taking agricultural land in the first place, there are two opposite systems of cultivation, known as intensive and extensive cultivation, to which the law applies in different ways. Intensive cultivation means applying a large quantity of labour and capital to a small piece of ground, as in market gardening, while extensive cultivation means applying the available amount of labour and capital to a large area, as in wheat-farming in Western Canada. The law of increasing cost may be applied with equal truth to either of these methods. In the case of intensive cultivation, it means that after a certain point has been reached it will not pay to devote any more labour and capital to the same small piece of ground, but that it would pay better to take in more land. On the other hand, even when virgin land is cheap, and it seems most profitable to extend the circle of cultivation over a large area, a point will ultimately be reached when, instead of taking in new land farther away from the market, it would pay better to cultivate more highly the land which is nearest to the market. In either case the result is the same—after a time a point is reached when it no longer pays to continue the particular methods previously followed, because a further application of labour and capital according to these methods will not yield an additional return equivalent to the extra expenditure.

a physical
 law.

This law of diminishing return (as mentioned incidentally in a previous chapter) is really a law of nature ; and though, in the form in which it is now stated as the law of increasing cost, it has the appearance of an economic law, it is still none the less really a physical law. Even the laws of nature, however, may at times seem to be in abeyance, or even set at defiance by man. Our grandfathers would no doubt have said that to fly in a machine heavier than air was impossible, because it was against the law of gravity. They could understand a balloon, where the lifting power of a gas lighter than air would overcome the power of gravity ; but they naturally could not foresee the modern flying machine, because even if they understood the action of a

bird's wing, they could not have imagined any form of engine which would be powerful enough to carry its own fuel and its own weight so easily as the internal combustion engine driven by petrol now does.

In the same way this natural law of increasing cost of the products of nature may seem to be in abeyance at times or may apparently be overcome by man's power of invention. Thus, as already described, there is a stage in the early development of a new country where increased labour and capital produce more than a proportionate return, because the point of diminishing return has not yet been reached; and as long as there is unlimited virgin land on which to start afresh, the day of diminishing return may be indefinitely postponed. In a huge continent like America, when the primitive methods of the agricultural pioneers had exhausted the virgin soil near the sea, they had only to move on and begin again. Even now they have not really occupied the whole continent, great areas of good land having been passed over, or only inadequately cultivated and then abandoned in the continual westward movement. So much did this strike the later economic writers that they were inclined to say that the law of diminishing return applied only in old-established agricultural countries such as England, where there was no virgin land left. In modern times, however, this modification of the apparent action of the law has been carried still further; because experience has shown that the adoption of improved methods of agriculture, such as the rotation of crops, better drainage, or modern chemical fertilisers, may so alter the whole conditions of agriculture that the operation of the law is pushed backwards for a further period. As the result of such experience, and in view of the great possibilities which still lie ahead of scientific agriculture, it is doubtful whether even now a great part of the land of England has finally reached the point of diminishing return. It is claimed that, given the required labour and capital and the necessary initiative and imagination, the additional scientific knowledge now available would make it possible to put back the clock again, as it were, and bring once more into progressive

Modifica-
tions of
the law.

The position
in England.

agriculture much of the land which has now reached an apparently static condition.

Finally, it is obvious that just as the introduction of a new and more profitable crop may materially alter the factors of the economic equation involved in a particular form of agriculture, so a change in the price of the produce due to extraneous causes may entirely alter the result, and give a different answer to the equation. If the market price of a crop rises, without a proportionate increase in the items which make up its cost of production, it may very well pay to extend cultivation to lands which, under the conditions previously existing, were not capable of producing the crop at a profit. That lesson was taught us again during the War, when, owing to the pressing demand for home-grown food and the rise of prices, it was found profitable (as well as necessary in the national interest) to break up for corn a great deal of land which for many years had been turned over to grass because cattle paid better than corn.

Effect of
price on
diminishing
return.

Thus it will be seen that the law of increasing cost, though fundamentally a physical law, is subject to as many modifications as any economic law; and the practical result is that, like an economic law, it is safer to treat it as only the statement of a tendency which must not be applied in any dogmatic way, because, until all the conditions of the particular case are known, it is impossible to say exactly how the problem will work out. But this does not affect the fundamental truth of the law that if man requires to draw upon nature for a larger supply of raw materials, or any other of her sometimes niggardly gifts, he must be prepared to face the time when the cost of the efforts necessary to enforce his desires upon nature will increase. The more the world wants out of nature, the more it is likely to cost per unit in the long run.

Nature's
law of cost.

The law of increasing cost, taken along with the limited supply of land, produces a peculiar effect on the price of the commodities produced by the soil. Strictly speaking, so long as any part of the earth's surface remains unoccupied by man, the

limit of the supply of land has not been reached. But when it is remembered that the qualities of the soil vary greatly, that there is always good land and bad land, it is apparent that the best land must be limited in quantity, and owing to the law of diminishing return, the total amount of crop which can be taken out of all the best land is more or less a fixed quantity. Now, if the demand of the market for the products of land is so great that the best lands alone are insufficient to meet it, other and poorer lands will require to be put under cultivation to increase the supply. The superior qualities of the good soil, however, will show themselves in the higher yield which it gives in proportion to the amount of labour and capital expended on it, or in the lower cost of production for an equal yield, which comes to the same thing. The crop grown on the best land will cost less per unit than that of the poor land ; or, in technical terms, there are now differential costs of production. But when the crops of the best and worst land alike come to the market, the price which they fetch will depend on their quality (which for the sake of the argument is assumed to be the same) and not on their cost of production. If the demand is so great as to require all the wheat in the market, the product of good and bad land alike, the owner of the good land will not sell his crop for any lower price than the owner of the poor land, simply because it cost him less. In the same market there cannot be two prices for the same commodity at the same time. Now, the owner of the poorest land must get enough for his crop to pay the cost of growing it ; unless he can do so it will not pay him to go on producing. But if the owner of the poor land can get his cost of production for his crop, then the owner of the better land, whose cost of production per bushel is less, will be receiving something more than his cost of production ; in other words, the owner of the best land will be earning a surplus over his cost of production.

Differential costs of production.

Economic surplus.

This may be made clearer by a concrete illustration. Imagine four farms of one hundred acres each, A, B, C, and D, graded in quality from the best down to the worst, the

inferiority showing itself both in lower yield per acre and higher cost of production, thus :—

Area 100 Acres.	Yield of Wheat (Bushels).		Cost of Production.*		Total Price @ 3/9 per Bushel.	Pure Rent or Economic Surplus		
	Per Acre.	Total.	Total.	Per Bushel.		Per Bushel.	Total.	Per Acre.
A	36	3,600	10,800s. (£540)	3s.	13,500s. (£675)	9d.	2,700s. (£135)	27s.
B	34	3,400	11,050s. (£552 : 10s.)	3s. 3d.	12,750s. (£637 : 10s.)	6d.	1,700s. (£85)	17s.
C	32	3,200	11,200s. (£560)	3s. 6d.	12,000s. (£600)	3d.	800s. (£40)	8s.
D	30	3,000	11,250s. (£562 : 10s.)	3s. 9d.	11,250s. (£562 : 10s.)	..	..	..
Totals	..	13,200	44,300s. (£2215)	..	49,500s. (£2475)	..	5,200s. (£260)	..

* Including seed, manure, wages, the farmer's own remuneration, rates and taxes, also interest and depreciation on capital, both landlord's and tenant's.

Price fixed
by marginal
cost of
production.

If the demand of the market is not less than 13,200 bushels then D's crop will be required to make up the total, and he will not sell it for less than 3s. 9d. per bushel, because that is his cost of production. In that case the economic rents of A, B, and C will be as shown in the right-hand columns.

Economic
surplus.

Putting this into economic language, the market price of wheat is fixed by the cost of production of wheat grown on the marginal land, that is, by the marginal or highest cost of production, while the owners of better land will be earning a surplus. This "economic surplus", as it is called, may be defined as *a surplus due to the possession of a superior instrument of production*. It is an excess of price over cost of production, the difference between a uniform market price and differential costs of production. There is clearly no such surplus except in the case of the wheat grown on the better land; the price received for the wheat grown on the poor land is just enough to recoup the producer for the labour and capital spent on the crop, including, remember, his own labour if he works on the land

himself, whether as a labourer in the field with the others or as organiser and supervisor of the whole system of production.

Now this theory of economic surplus is, as a theory, perfectly simple and easily understood ; but when it comes to translating it into practice it is perhaps the most difficult of all economic theories. For this theoretical idea of economic surplus is the basis of the everyday idea of rent with which every one is painfully familiar, the rent of agricultural land, of fisheries, grouse moors, and deer forests, the rent of his house or office, the ground rent of building land, and the rent of minerals, which is called mining royalties. How does this come about ? It will be less difficult to see first how it works out in the simplest case of agricultural land.

The first difficulty is to see how this idea of a surplus in the hands of the producer of wheat on the superior land becomes a payment of rent to a landlord. The explanation lies in the fact that the surplus is due, not to the exertions or skill of the farmer, but to the fact that his land is better than his neighbour's ; it is due to the natural and inherent qualities, what Ricardo called the " original and indestructible powers of the soil " ; in other words, it is due to nature, not to man. In a sense, therefore, it has not been " earned " by the producer ; it is not the result of his labour. Clearly, then, it " belongs " to the land, and not to the farmer ; and if, as is so often the case in older countries, the land does not belong to the farmer, but to a landlord, then this surplus will naturally go to the owner of the land. It is not necessary in the meantime to discuss the question of how the landlord comes to be the " owner " of the land, and the nature and economic consequences of his ownership ; but this much is clear. Here are two farmers working equally hard and skilfully on two farms of different natural quality, which produce very different results. If the farmer of the poor land gets out of the price of his crop a return which covers all his expenditure but no more, it is not " fair " as between the two farmers that the other should get something more than that. Suppose, for example, that both farms had originally belonged to one man,

How
economic
surplus
becomes
" rent ".

A
differential
payment.

who on retiring gave one farm to one son and the other to another, on condition that they should keep him for the rest of his days, it would obviously be reasonable that the son who got the better farm should pay a larger share of the old man's maintenance than the other; he can afford to do so because the land yields more. This, then, is the origin of the rent paid to the landlord; the economic surplus *due to* the possession of a superior instrument has become a *payment for* its possession. It is a differential payment due to differential costs of production; and if the payment is rightly adjusted, both farmers will find themselves left with an equal remuneration after paying their rents. Rent, then, is the surplus yield due to the superior quality of the better land, and theoretically the marginal land should pay no rent at all, because it yields no surplus over cost of production. But here is another stumbling-block to the ordinary man. Who ever heard of land that pays *no* rent? The answer to that requires the explanation of two points.

"No-rent"
land.

In the first place, there *is* a great deal of land in England, and still more obviously in Scotland, for which actually no rent is paid. Every farm contains in itself varying qualities of land; in the North, for example, some good arable land, some hill land, of almost no value at all, because it will carry nothing but a handful of sheep to a hundred acres, and even that only in summer, and other land which is worthless—bog or scrub. Now the prospective tenant making an offer for the farm as a whole must take all that into consideration, but his offer is in the form of an average rate for the whole farm, say, £1 per acre, taking good and bad land together. The best of it is worth much more than that; the worst may be worth nothing at all.

Again, in defining rent as the surplus over cost of production, it must be remembered that cost of production includes both labour and capital, and capital includes all the farmer's outlay, not only on seed, manure, etc., but also on machinery and working animals, and, if he be his own landlord, on buildings and often on the improvement of the land by drainage, etc.

Now, under the system of tenant farming which is common in England, most of the fixed capital is provided by the landlord, who has to provide and maintain the necessary buildings, roads, fences, drains, etc., and on this expenditure he naturally expects a return as interest on his capital. This is of course part of the cost of production which must be covered by the price of the crop; but it is paid by the tenant to the landlord as part of the actual rent, from which indeed it is never distinguished in practice. But in its real economic character it is not rent, that is to say, not economic surplus at all. It is the supply price of capital, and therefore part of the cost of production, while economic rent is the surplus of price over cost of production. Every farm must pay the landlord something in this way, and it therefore seems that there is no land which does not pay rent in the everyday sense of the word. How, then, is it possible to distinguish this kind of rent from the true economic surplus? It is useless to explain to the farmer that it is not rent at all; it is part of what he knows as rent, what he pays to his landlord, and is quite indistinguishable in his eyes or in practice from any other kind of rent. The only course, therefore, seems to be to qualify it by some phrase which will indicate its real nature, say, "Interest rent". As a matter of fact it is very doubtful whether in England before the War much of the agricultural land was paying any real economic rent at all, except in the best districts. In the poorer districts the actual rents were hardly enough to cover the interest rent, that is to say, the interest charges on the capital spent in quite recent times on the buildings, etc.

There is, however, still another difficulty, due to the discrepancy between the use of economic terms and their actual meaning to ordinary people. The economic rent is essentially a surplus or residue; it is what is left over out of the price after deducting the farmer's cost of production, and if, say, in a bad season, or as the result of a fall of prices, there is no such surplus, there should be no rent payable. But nothing could be further from the truth than this as a description of rent in the ordinary

"Interest
rent."

Economic
rent is
residual.

sense of the word, for under the English system rent is the first charge on the whole produce of the land and the whole assets of the tenant ; it is a sacred contractual obligation, privileged and protected in every way.

Legal
character
of actual
rent.

The explanation is that under this tenant-farming system the legal character of actual rent has been changed ; the risk of there being a surplus or not has been transferred from the landlord to the tenant, and the " rent " becomes simply a fixed payment which the tenant binds himself to make to the landlord whether he earns it or not. Of course the tenant does this with his eyes open ; he knows the risk and takes it intelligently, and he does not do it for nothing. The rent he offers to the landlord is such that with ordinary luck in the seasons the tenant will make a little more than what he has to pay to the landlord, and if by good management, or good luck in the weather and the markets, the balance is large, it all goes into the tenant's pocket. In England farmers have become accustomed to this system, and it suits English conditions probably better than any other, especially as the whole responsibility for good husbandry is on the tenant, subject only to the landlord's power to enforce the conditions of the lease on that score. But note that this does not affect the real character of rent *in the long run*. Taking it all over, the actual rent must over a period of years coincide with the real economic surplus of the land, or one or other party would soon regret his bargain ; and as even the longest lease must come to an end, the opportunity does come to readjust its terms. Thus the general level of actual rents is always *tending* to the real level of economic rent, in spite of every legal and conventional obstacle.

The
reconciliation.

Rent as the
income
from land.

But this again produces another difficulty. When a man buys an estate he does so on the basis of so many years' purchase of its rent-roll, that is to say, he calculates the price he is willing to pay, say, at twenty-five times the clear revenue which the rents ought to yield him, which in effect means that he expects to get a return of four per cent on his capital. But economic rent is a very different thing from interest on capital ; it is nature's

surplus, which is essentially variable, with the result that in bad times the landlord finds his "return on capital" a vanishing quantity, though of course in good times it would be the other way about. And he cannot help himself. What he has bought is not a "fixed interest-bearing" security, but a share in nature's bounty or otherwise, and he must take the risks of his bargain.

It is perhaps even more difficult to see the application of the idea of rent to the case of urban land used for building, but the only difference is that the superiority of one site over another depends, not on any natural qualities of the soil, but generally on the accidental fact that large numbers of people wish to live in one place or near a certain centre. The result is that it is impossible for every one to get accommodation there, and the limited amount of space available goes to the highest bidders. The superiority for which they pay rent is an artificial superiority of position or situation, created by man himself; but the result is the same. The owner of ground near the centre of a large city, who builds houses or business premises on it, will be able to draw from his property much higher rents than the owner of another property farther out, who may have spent just as much capital on his buildings. The resulting surplus to the one owner is a rent of the purest economic kind, which, it may be noted in passing, becomes capitalised in the value of the land. Of course the rents which the tenants of both premises pay to their respective landlords consist, as before, of two items: (i.) interest on the capital spent on the buildings, and (ii.) real economic rent or surplus, a payment for the possession of an instrument which they themselves consider superior.

It is necessary now to consider the relation of this rent or economic surplus to price. The question may be put in this form: Does rent enter into cost of production? Does price depend on rent? Is it because a tenant farmer pays a high rent for his land that he must get a high price for his crops? No;

the answer is the reverse. Rent depends on price, not price on rent. Rent is the difference between market price, which is fixed by the high cost of production on the poorest land, and the lower cost of production on the better land. The reason why the farmer pays a high rent is because his land is so much better than his neighbour's that he gets bigger crops out of it. His unit cost of production is less, but his price is the same; and the surplus, which is due to the natural qualities of the soil, goes to the owner of the soil, the landlord, as rent.

If rent were abolished.

This question as to the effect of rent on cost of production may be put in another form. Suppose all rents were abolished, would the price of corn fall? If by rent is meant only the true economic surplus, the answer is easy. Taking the illustration on p. 42, D pays no economic rent because he earns no surplus; he would therefore gain nothing by the abolition of rent in that sense, and his cost of production would be as before. He must therefore continue to charge the same price, and the others would do the same. The result would simply be that they would make the same surplus as before, but instead of paying it to the landlord as before, would retain it for themselves. But of course if actual rents were abolished, including interest rent; then D also would benefit by that in the first place, and would therefore be able to reduce his cost of production and his price, and the others would be compelled to follow suit, but only to the extent of D's reduction.

Shop rents and prices.

A similar question frequently arises in regard to shop rents. It is said that the shopkeeper in a busy street must charge higher prices because of the big rent he has to pay. This is only partly true. So far as his "rent" consists of interest on the capital spent in building large and elaborately fitted premises, then it is really interest on capital or interest rent, and as such it is part of the cost of production and must be covered by the price. But if the high rent represents the real economic rent of a favourable situation which brings business, then the rent he pays for the site (and incidentally also the interest rent of his large premises) should be covered by the profits of his larger

turn-over, without charging any higher prices than others less favourably situated.

Theoretically, therefore, true economic rent can never enter into cost of production ; but there is one case in which it really does do so in effect, namely, that of an established agricultural country where it is proposed to introduce a new crop in competition with those already grown. During the War, for instance, great efforts were made to introduce flax-growing into certain parts of England and Scotland, where it had completely died out during the past century. The farmers who were asked to set aside land for this crop naturally wanted an assurance that they would not lose by it ; and they had to be guaranteed a price for the flax which would cover not only the true economic cost of production of the crop, but also the rent of the land. They argued that the land was already growing other crops which gave a yield sufficient to pay the rent, and unless the new crop would do the same they would not touch it. Thus in effect the rent actually paid by the existing crops did enter into the cost of production of the new competing crop.

Where rent
does enter
into cost of
production.

Such an exception, however, must not be allowed to blind us to the danger of the popular idea that rent should be included in cost of production. That danger is that if, owing to high prices due to temporary and extraneous causes, rents go up for a time, it may be argued by the farmers, when things return to normal again, that high prices must be maintained or they cannot pay their rents. That was the argument which led to the terrible protective system of the Corn Laws after the Napoleonic wars, and of course the answer is simply that rents must come down again. It was to avoid this difficulty that the Rent Restriction Acts were passed during the Great War, but they were really ineffective ; they only put the rent into some one else's pocket. For it must be emphasised that the emergence of rent is a natural phenomenon, which cannot possibly be evaded so long as there are differential costs of production. A very peculiar case of this is seen in the coal-mining industry as brought out by the Report of the Commission of 1919. The conditions under

High rents
and prices.

Mining
rents.

which coal is produced vary greatly ; for example, as to the depth of the shaft required to reach the seam, the character of the coal (whether gassy or not), the amount of water found in the pit, the thickness of the seam, and the character of the strata, which greatly affects the cost of propping or maintaining the roads, etc., underground. All these affect the cost of "getting" the coal and bringing it to the surface. During the War, costs rose to such a height that many of the poorer pits could only be maintained on a paying basis by raising the price to a level far above what was necessary to cover the cost of other pits more favourably placed. These were therefore drawing huge "rents" in the form of profits, and owing to the national emergency the country had to have every possible ton of coal. The result was in effect that the Government had to guarantee the worst pits these high prices, and then to take away with the other hand by special taxation the huge profits which they were thus throwing into the hands of the other colliery owners.

Unearned
increment.

It is in cases like this and the enormous ground rents of populous cities that the hardship of economic rent to the community becomes so obvious that it has led to persistent outcry and the coining of the name "unearned increment". As already pointed out, all economic surplus is in a sense unearned, even the rent of the best agricultural land, though there it seems somehow more "natural". But the case of ground rents, especially in congested city areas and new suburbs of rapidly growing towns, where the landowner is apparently doing nothing to help that growth, but is quietly and inevitably growing richer at the expense of the community, does seem to deserve special treatment. Thus John Stuart Mill wrote : "Suppose that there is a kind of income which constantly tends to increase, without any exertion or sacrifice on the part of the owners ; those owners constituting a class in the community, whom the natural course of things progressively enriches consistently with complete passiveness on their own part. In such a case it would be no violation of the principles on which private property is grounded, if the state should appropriate this increase of wealth, or part

of it, as it arises. This would not properly be taking anything from anybody; it would merely be applying an accession of wealth, created by circumstances, to the benefit of society, instead of allowing it to become an unearned appendage to the riches of a particular class. Now this is actually the case with rent."¹

It is of course easy to show that land is by no means the only case of unearned increment, and indeed that only in certain limited cases does land yield any such golden harvest; but the obvious hardship of the case of urban land has concentrated attention upon it and has lent force to the agitation for what is called the taxation of land values. All that can be said here on that subject is to admit what is entirely beyond question, the theoretical soundness of the claim that "rent", wherever it is pure economic surplus, is a peculiarly fit subject for special taxation. Whether it is practicable to devise a scheme of taxation which would accurately discriminate between pure economic surplus and all the other items which make up rent in the ordinary sense of the word, and which would also meet fairly the claim of those landowners whose land has fallen in value through causes equally beyond their control, is another question altogether. Probably nothing less than the complete nationalisation of land would meet the difficulty, and the difficulties and drawbacks of that proposal must be left for later discussion.

What, then, is our conclusion with regard to land? Has it a supply price? Does the amount of the crop or raw materials obtained from the soil, or the supply of houses built upon it, depend upon the remuneration offered—on the price of the crop, or the raw materials, or the rent obtainable for the houses? As already explained, the question really means, Do labour and capital, when applied to land, have a supply price? The answer to that question is certainly in the affirmative, but with a condition. The amount of land devoted to the cultivation of

Taxation of
land values.

Supply
price of
land

¹ *Principles*, V. ii. 5.

a particular crop, and therefore the supply of the crop itself, will certainly respond to the inducement of a high price for the crop, but the inducement offered will probably have to be steadily increased as the amount demanded increases. On the other hand, the supply will certainly fall off if the price obtainable is not sufficient to remunerate the producers as they think they deserve.

Is not rent.

Owing to the varying qualities of the soil, however, the better land will always produce more crop than others for an equal amount of labour and capital, so that the better land yields a surplus as compared with the others. This surplus or economic rent is not the supply price of land ; indeed, the idea of supply price does not apply to nature's share in production at all, while the idea of rent or surplus is the economic antithesis of a supply price. The root of the matter is that labour and capital applied to land must receive their supply price, even when applied to the worst land in cultivation, the marginal land. The price of the crop must therefore always be at least high enough to cover the marginal cost of production, which is the supply price of the labour and capital applied to the marginal field. But if the supply price is covered even on the marginal field, obviously it will be exceeded in the case of all the better land. The capital and labour applied to the good land not only earns its supply price, but also receives something more, a surplus due to the superior qualities of the soil.

Is rent permanent ?

This surplus, being due to the superiority of the soil, will be permanent so long as the superiority remains, but the duration of the superiority depends upon the nature or cause of it. If it is due to the inherent natural qualities of the soil, it will last practically for ever ; but it may be due only to some accidental advantage of situation which may or may not be permanent. Building land near a large town, for example, may yield a very high surplus or rent, which, however, would disappear if the means of communication were improved, enabling other lands at a little distance to come into the market. Again, the high rents of the fashionable quarters of a town will fall if the

amenity of the district disappears, as it may do for no other reason than a mere change of fashion.

Lastly, it must be noticed that in any case of limited supply, ^{Scarcity rent.} whether more or less permanent as the result of an established monopoly, or purely temporary as the result of an accidental or short-lived scarcity, the fortunate few who can supply what the market wants will make an extra profit or rent for the time being, and this extra surplus is really for the time being a rent of the same nature as that above explained, though generally less permanent. This may be called Scarcity Rent, and its chief peculiarity is that for the time being even the marginal producer is able to secure a price higher than his cost of production, and thus to command a "rent" which will last until increased production brings supplies once more up to the point where competition again cuts down the price to his cost of production. This is most easily seen in the case of house rents due to a temporary scarcity, because the increased supply of houses is necessarily a slow business, as has been so painfully demonstrated since the War. Thus the permanence of economic rent, even in the case of land, is really only a matter of degree; while, as will be seen later, there are other forms of rent, ^{Other forms of rent.} such as the surplus profits of those who have the good fortune to be first in the development of a new and profitable industry, which only differ from the rent of land in being still less permanent.

MARSHALL, *Economics of Industry*, Book IV. chaps. ii. and iii., and Book VI. chap. ix.

MARSHALL, *Principles of Economics*, Book IV. chaps. ii. and iii., and Book VI. chap. ix.

CHAPTER VI

SYSTEMS OF LAND TENURE

- (1) *Agricultural*—Occupying proprietors—Tenant system—*Metayer* system—Long leases—Large *v.* small holdings. (2) *Urban*—Freehold *v.* leasehold—The Scotch feuing system.

Various interests.

IN the case of agricultural tenure there is of course only one question involved, namely, the relations between the owner of the land and the occupier or cultivator of it. Whatever buildings may be involved “go with the land” and are only ancillary to the contract. But in the case of urban tenures there are two questions: (1) the relations between the owner of the ground (the ground landlord) and the owner of the buildings erected upon it, for these owners are frequently not the same person; and (2) the relations between the owner of the building (who is called the landlord whether he owns the land or not) and the tenant or occupier of the premises. These different relations raise questions so entirely distinct that they must be taken separately.

I. AGRICULTURAL TENURES

Occupying ownership.

The most natural system is that the owner of the land should occupy and cultivate it himself. This has many obvious advantages, especially the energetic and efficient cultivation which is generally the result. The love of land is inborn in human nature. Every man likes to have a piece of land which he can call his own, to labour on it, and to reap the crops from it. Such a proprietor is naturally likely to take more interest in his land than one who is not the owner.

The opposite extreme is the modern tenant system, under which the ground and buildings are let by the owner to a tenant, who undertakes the whole duties and risks of management and cultivation, agreeing to pay to the landlord a certain sum of rent, fixed in advance. The main feature of this system, as already pointed out, is that the whole onus or risk of the business is transferred to the tenant; the landlord's rent is a fixed sum, payable independently of whether it is earned or not. This is perhaps the main objection to the system.

Tenant
system.

Half-way between these two extremes is the *metayer* or crop-sharing system, under which the landlord lets the ground and buildings to a tenant under an agreement that the proceeds of the land are to be shared between them in certain proportions. This system certainly possesses many of the advantages of the occupying proprietor system; it makes landlord and tenant really partners in the adventure, as they ought to be, and maintains their mutual interest in the well-being and good management of the land.

Metayer.

The question of the relative advantages and disadvantages of these various systems is bound up with another question, whether it is better to have large farms or small holdings. The answers to both of these questions depend largely on the circumstances of the country and of the land, the nature of the crops most suitable to the soil, and the methods of cultivation adopted. For example, where land is under crops requiring highly intensive cultivation, such as vines or cotton, small holdings and peasant proprietors are likely to produce the best results; but if the subdivision of land into small holdings is carried too far the result may be that, even with intensive cultivation, the land will not yield enough to provide a reasonable living, and the owner of the small plot is condemned to labour so constant and excessive as actually to be harmful in its effects. These evils have been well illustrated in France, where they have been intensified by the system of equal division of the land among all the children of the owner, as against the English system of primogeniture or inheritance of the land by

Large v.
small
holdings.

the eldest son, a system designed to prevent the splitting up of the estates of the large landed families. Again, take the opposite case of sheep-runs in Australia, which pay best when managed on an enormous scale, because from the nature of the work it is suitable for organisation on a large scale. There can be no doubt of the advantages of large-scale production in agriculture generally where the circumstances are appropriate—the advantageous employment of capital in improvements of all kinds, as well as in implements, stock, etc.; the more economical handling of large crops in large quantities; the opportunities of division of labour; and, generally speaking, all the advantages of a large turn-over.

Capital
required.

These questions also turn largely on the amount of capital required. In England, where large buildings and expensive roads, fences, drains, etc., are required, which involve a large outlay of capital, it is a very good thing for the farmer to be able in effect to borrow the bulk of his capital by working as tenant under a wealthy landlord who can afford the capital expenditure, so long as he gets a fair return of interest on it. The supply of capital is one of the most difficult factors in the question of small holdings. On the other hand, the impoverishment of many of the proprietors of large landed estates and their inability either to sell them owing to the law of entail, or to provide the necessary capital for their development, or even their adequate maintenance, has in many cases arrested the development of modern farming.

Long v.
short leases.

As to the relative advantages of long and short leases, where the system of cultivation involves schemes of more than a year's duration, where, for example, a long rotation of crops is in vogue, or where the tenants provide manure of which the effect is not exhausted for several years, it is clearly necessary that the tenant should have some fixity of tenure, or else that there should be a system of payment of compensation to the tenant if he leaves the farm before obtaining the full benefit of his improvements. Again, under short leases there is danger that the tenant, having no fixity of tenure, may be inclined to adopt

a short-sighted policy in dealing with the land, working so as to secure only the largest possible yield for himself for the time being, and regardless of the fact that his methods may be impoverishing the soil for his successors.

Where a system of tenant farmers is necessary it would seem desirable to adopt some form of the *metayer* system, because of the intimate relations which it requires between landlord and tenant. It is the landlord's interest not only to get as large a crop as possible, but also to look to the future, while the system is necessarily much more equitable to the tenant, in respect that it does not throw the whole loss of a bad crop upon him. But the advantages of the system are the very reasons which have sometimes led to its abandonment. Many landlords prefer a system under which they receive a fixed income, without any trouble or risk. Such a system, especially if it leads to absentee landlords who take no interest in their estates, is likely to produce results disastrous to the interests not only of the landlords, but of agriculture generally. It is probable that the best hope for the future of agriculture in most countries lies in a system of peasant proprietors of farms of moderate size, with a system of organised co-operation to provide the more costly implements for common use, as well as to undertake the purchase of seeds, manures, etc., and the disposal of their produce.

Difficulties
of *metayer*.

Co-operation.

The position of agriculture in England is so peculiar (being even entirely different from the conditions ruling in Scotland) and the problems of land tenure involved are so complex, that it would be impossible, owing to considerations of space, even if it were within the writer's knowledge, to deal with it at all here, especially as the whole conditions of the problem have been completely changed by the War and by subsequent legislation. Some idea of the position before the War may be obtained from the first Report of the Land Inquiry Committee published in 1913. Of the post-War position probably the best outline available is in the Reports of the Agricultural Tribunal of Investigation, 1924 (Cmd. 2145).

Conditions
in England.

II. URBAN TENURES OF BUILDING LAND

In England there are now only two forms of tenure of urban land of any great importance, namely, freehold and leasehold. The new Law of Property Act of 1922 goes far to abolish all that remained of the innumerable old forms of land tenure which still served to recall the traditional growth of the English system.

Freehold.

The freehold system requires little comment ; it is as near to complete ownership as can well be, subject only to public burdens, and in certain cases other money payments of fixed amount, such as chief rent, or building restrictions, easements (servitudes), and the like. From the economic point of view the main feature is that the freeholder is the permanent owner of the land, and any future increase of its value accrues entirely to him.

Leasehold.

Under the leasehold system, on the other hand, the lessee's rights are limited to a period of years, say 19, 99, or 999, after which the land with all the buildings upon it reverts to the landlord without any compensation to the leaseholder, who indeed is liable for dilapidations if the property has not been maintained up to the end of the lease. Such a system presents to the economist a very curious problem. Obviously the building leaseholder must see his way to recover his expenditure on the buildings during the period of his lease, which means that the rent of the house must cover not only interest on capital, but also an allowance for depreciation or sinking fund, which in the case of short leases must be very heavy. On the other hand, the landlord, knowing that the freehold will return to him after a comparatively short interval, can theoretically afford to let the ground at a lower rate than if he were parting with it for ever, because the leaseholder has only a limited interest in the increased value of the land, if any.

Scotch
feuing
system.

The Scotch feuing system, on the other hand, is the modern survival of the ancient feudal tenure, of which most of the nomenclature is retained. In effect it is practically an ever-

lasting leasehold. The feuar is the real proprietor of the land, subject only to the public burdens, all of which are payable by him, and the rights of the "superior", who corresponds to the ground landlord. These rights are confined to the receipt of the feu-duty or ground rent and the enforcement of the building restrictions, both in the interests of the estate and of the other feuars, who have an independent right to enforce them for the preservation of the amenity of the estate and their own properties. All future increase of the value of the ground accrues to the feuar, on whom of course any future increase of the public burdens also falls. Theoretically the land, with all the buildings thereon, may revert to the superior if the feuar fails to pay the feu-duty for two years; but that contingency is very unlikely to arise, because, quite apart from any increase of the land value, the value of the buildings is likely to be many times the amount of the feu-duty, and the feuar would lose everything.

Rights of
the feuar.

The advantages of this system from the point of view of the feuar are obvious; it gives him security and permanence of tenure, and enables him in effect to borrow the capital value of the land from the superior at a low rate of interest, because the security is extremely good. The landlord can easily realise his capital at any time by selling the feu-duty; as a matter of fact these are a favourite form of investment for insurance companies, trustees, and the like, who desire a permanent fixed income. From the economic point of view its main disadvantage is that the superior is parting with the land for ever, and must if possible capitalise the expected future increase of value in the price charged for the land. He may therefore, in the case of land which is rising or likely to rise in value, have to wait a long time before the speculative builder is prepared to pay the price which in the superior's view adequately discounts this future value; and while the superior is thus biding his time, the development of a town may be held up by the refusal of the superior to accept the *present* value of the land.

The systems
compared.

The balance of advantage of these two systems is to a large extent dependent on the character of the buildings required,

in view of the climatic conditions of the country and of the temperament of the people. The Scotchman builds a house to stand the climate, and to be handed down to future generations. He would scorn to build a house calculated to last only ninety-nine years, and regards the shoddy building of the ordinary English suburb as only the natural result of the short leasehold system. On the other hand, the permanence and inviolability of the building restrictions under the Scotch feu-contract may become a serious obstacle to the necessary conversion of a residential estate to other purposes when the character of the neighbourhood has changed, though as a rule this is done by general if tacit consent. Under the English system the periodic falling-in of the leases of a whole block of land, all granted originally about the same date, enables the ground landlord to adopt a comprehensive scheme of reconstruction, such as has recently led to the rebuilding of the whole area of Regent Street, London. If the leasehold system were modified by the payment to the leaseholder of compensation for the value of the buildings at the expiry of the lease, or a right to renew it on equitable terms, the worst evils of the system would probably be eliminated, including the hardship to the tenants who have to live in houses gradually falling to pieces as the end of the lease approaches.

MARSHALL, *Economics of Industry*, Book VI. chap. x.

MARSHALL, *Principles of Economics*, Book VI. chap. x.

NICHOLSON, *Principles of Political Economy*, vol. i. pp. 138 *et seq.*

Reports of the Land Inquiry Committee, vol. i. (Rural), 1913; vol. ii. (Urban), 1914.

Reports of the Agricultural Tribunal of Investigation, 1923 and 1924 (Cmd. 1842, 2002 and 2145).

CHAPTER VII

LABOUR

The sources of supply of labour—The Malthusian theory—Modern theory of population—The supply price of labour—Mobility of labour—Real *v.* nominal wages—Real *v.* nominal cost of labour—Industrial efficiency—Scientific management—Industrial fatigue—Welfare work.

LABOUR is the second of what may be called the primary factors of production. The fundamental question here again is whether labour has its supply price, whether the supply of labour depends on the remuneration offered for it. This question falls into two parts: (1) Does the supply of labour in general, the total quantity of the working population of a country, depend on economic conditions? and (2) Does the supply of labour in a particular industry respond to fluctuations in the level of wages in that industry compared with others? If one trade for some reason finds itself falling behind others in the struggle to maintain the standard of living, will the result be a movement of labour out of that trade or a check on the supply of new labour coming into it which will gradually reduce the supply? Or, on the other hand, if one trade finds its labour supply falling below requirements, can the shortage be remedied by raising wages? This last question may be put in still another form, which, as will be found later on, has very important implications. If the supply of labour in a particular trade or grade of industry is ample for the demand, is it safe to assume that there is nothing wrong with the wage conditions of that section of the community?

Supply price of labour.

War
experience.

During the War and afterwards this country had some very strange experiences on these lines; there was not only an extraordinary shortage of labour in general, which of course was to be expected, but also an entirely unprecedented shortage in particular sections of labour, such as domestic service, because for the first time there was a real alternative—munitions. Finally, there were certain heart-searching disturbances of the apparent relative values of different kinds of labour; when, for example, Mr. Lloyd George said in Parliament that in these days it was easier to find a Cabinet Minister than a skilled engineer, and (was it cause and effect?) when the engine-drivers on the American railways were earning more than the salary of the governor of a state. Since 1920 things have come back again to something like pre-War normal, but this tremendous upheaval has provided a new version of an old problem. What was the cause of all this disturbance? Was it simply the normal working of economic laws under abnormal conditions of supply and demand?

That, then, is what is meant by the question whether labour has its supply price, and the method of attacking the question is as before. The first step is to consider the sources of supply of labour generally, and also of particular kinds of labour, and then to consider whether these sources are such that the supply is likely to be affected by the price.

Sources of
supply.

The sources of the supply of labour in an industrial country may be treated under three heads: (1) The growth of mere numbers, the raw material of the labour supply; (2) the conditions which affect the physical health and strength of the labourers; and (3) the training necessary for their technical and industrial efficiency.

Malthusian
theory

I. *The Growth of Population.*—The Malthusian theory of population was that the population of a country always tends to increase more rapidly than its food-supply. The increase of population may be compared to a geometrical progression, which increases by multiplication, while the increase

of food-supply is only by arithmetical progression, that is, by addition. The former is of course bound to outstrip the latter. Unless, therefore, the excess of population is either kept down by such causes as war and natural catastrophes, or else restricted by voluntary effort on the part of men, the only course open to nature is to wipe out the excess by starvation and misery. Hence Malthus argued, in order to avoid such cruel remedies, measures of voluntary restriction should be adopted.

There is much truth in this argument theoretically, and from the point of view of Malthus' time the fear of over-population was natural, for in those days every country was dependent almost entirely on its own food-supply. But modern developments of the means of communication with distant lands have entirely altered, not the truth of the theory, but its practical force. If England had still been dependent on her own food-supplies alone, her population would long ago have exceeded the available supply. Malthus could not foresee that by the introduction of steamships she would be able to draw her food-supplies from the farthest parts of the world. The theory is as true as ever, but now it must be applied, not to any single country, but to the world as a whole. Should the time come when the whole area of the earth's surface is fully occupied by man and the world is within sight of reaching the ultimate capacity of its possible food-supply, then the Malthusian theory will again be of great importance. But that time is still a very long way off, and before it comes it is possible that some chemical means will be discovered of extending the available food-supplies so as to postpone again the practical application of the theory.

In the modern theory of population, however, there will be found a further answer to the fear of over-population. That theory may be stated as follows :—

The growth of population depends on (1) migration, the balance of immigration over emigration, which generally tells against old countries and in favour of new; and (2) natural increase, or the excess of births over deaths.

Migration.

(i.) **MIGRATION.**—It is very easy to exaggerate the effects of migration, both from the point of view of the country which dreads being overwhelmed by hordes of undesirable immigrants, as in the United States to-day, and also from the opposite point of view of the country which is afraid of losing by emigration more than it can afford of the hardiest and most enterprising of its people. In view of the latter aspect of the question in England to-day, a few statistics of the flow of migration in this country before and since the War are given in Table III. in the Statistical Appendix.

Age of marriage.

(ii.) **NATURAL INCREASE.**—The number of births depends on whether the average age of marriage in a country is late or early. This is largely influenced by (a) climate, being always earlier in hot climates than in cold ; and (b) the expense of maintaining a family, which depends largely on one's class or station in life, and the standard of living which obtains in the country. Statistics have brought out the striking fact that among the lower classes men reach their maximum earnings at an early age, and therefore marry early and have large families. This tendency diminishes as we rise in the social scale to the skilled artisan classes, whose period of training or apprenticeship is longer, with the consequent postponement of the age of full earnings. But in the upper and middle classes, where men devote themselves to businesses or professions requiring long training or experience, and do not reach their maximum income till comparatively late in life, they do not care to marry until they have made a fair position, though still short of maximum earnings. The result is that the age of marriage is much later, and the average number of children in the family much smaller.

Dangers of neo-Malthusian theories.

Herein lies the danger of the Malthusian theory. The classes who have the smallest families are just those who, from their position and education, are the best able to bring up children who would be of use to the state, whereas those who are least desirable are those of whom the supply is largest. If, through the spread of the modern doctrines associated with the name of Malthus among the more or less educated classes, who are the

most likely to be reached and influenced by them, the natural increase of these classes is still further checked, the tendency will be for the increase of the lower classes to swamp the upper classes altogether. If, then, the bulk of the new population is to be of the lower classes, our principal duty must be to see that this population is always being raised above the class in which it is born ; but herein lies the evil paradox of the whole question. As soon as these lower classes begin to rise above the lowest level, whenever they become at least sufficiently educated to appreciate their own position, and accustomed to a standard of living even a little above the bare subsistence level, the natural desire to maintain that improvement for the next generation and to give their children at least as good a start in life as they had themselves, leads to the realisation that the more mouths there are to feed out of a limited wage, the less there will be to put in each. Thus, semi-consciously perhaps, a tendency to self-restraint and birth control emerges ; and the present age, with its general recognition of the rights of women to equal consideration, has led to an increasing reluctance to face the cost of parenthood. The result is a steady reduction in the birth-rate which would be very alarming indeed if it had not been to a large extent compensated by the simultaneous reduction of the death-rate, and especially of infantile mortality. In view of the importance of this question a few statistics of population and of birth-, death-, and marriage-rates are given in Table III. in the Statistical Appendix.

It seems, therefore, that the danger with regard to population is two-fold. (i.) That the population of the country as a whole may cease to grow, or may even, as was the case in France before the War, show a positive decline, and that to the writer's mind is still the greatest calamity that can overtake any nation. People forget that every new mouth brings a new pair of hands with it, and under our modern industrial organisation each man ought to be able to produce more than enough for himself. (ii.) That the average quality of the population may be reduced through the weight of increase of the population being at the wrong end of

the scale. If the Neo-Malthusians could limit the reproduction of those physically and mentally unfit, and secure an increased birth-rate among those better fitted, all would be well ; but in the meantime that is an unattainable ideal. Again it must be remembered that the rearing of healthy children is at least as much a matter of environment as of heredity. Even the unwanted babies of the lowest classes show at birth a wonderfully high standard of potential fitness, if only they had a chance of being brought up decently. Thus the one thing most necessary, and which will give the quickest and highest return on our investment, is to improve the conditions under which the children of the lowest classes are brought up. The next step, therefore, is to consider how the necessary physical efficiency and training of labour are to be secured.

II. The influences which affect the physical health and efficiency of labour may also be classified as follows :—

Health and
Strength.

(1) Physical conditions, such as climate, for a temperate climate is obviously more suitable to industrial vigour than a hot climate. Again, the nature of the food-supply of the working classes is of great importance ; and lastly, the sanitary conditions of the country. Economically speaking, disease is wasteful. Every man who dies prematurely of disease is as much a loss to his country as a man killed in war or by an accident in the factory ; every man maimed or incapacitated by disease is not only a loss, but actually a burden to his country, which has now to feed and maintain him without receiving anything from him in return.

Mental
fitness.

(2) Mental and moral conditions. The character of the working classes, their general state of education, or want of it, their status as free members of a well-governed state, and the moral and intellectual development or backwardness of the country, all have a direct effect on the productive efficiency of labour. It would be hard to find a better illustration of this than in the comparison of the working population of the cotton industry in Lancashire, the United States, and India. In the first the workers are the most highly skilled and the most self-respecting

of any in the country, if not in the world ; in the second the labour is the sweepings of Europe, the machinery " fool-proof ", and the industry is the most despised in the country ; in the third wages *and* output are very low. The *quality* of the output in these three sections of the industry follows the same order of precedence.

(3) The character and conditions of the daily occupation. Occupation.
 If the population of a country is largely engaged in healthy outdoor occupations, the general condition of the people is likely to be much better than if their principal occupations are such as to cramp or weaken them, or if the conditions of labour are such as to impair their health and destroy their efficiency. Hence the importance of maintaining agriculture in England in spite of adverse economic conditions.

In all these directions it is obvious that a great deal depends on the amount of money which the working classes have at their disposal. Mainly a matter of money. If a man's wage is raised he will be able to afford better food, better housing, and better conditions of life generally. It is clear, then, that in order to secure a large supply of healthy and efficient labour, the labourers must be provided with a wage sufficient to supply the necessary conditions of such a life as will make them healthy and efficient, or, as it is called, to maintain a fair standard of living. In short, the supply of efficient labour depends on the working classes being able to obtain a sufficient wage ; in other words, physically efficient labour has its supply price.

III. In regard to the education and training of labour the same treatment by classification may be adopted. Industrial efficiency. The main departments of the training of labour are : (1) The education and environment which tend to develop the general intelligence of a man rather than any special manual dexterity. This development depends mainly on the general conditions of life under which a man is brought up, his early home training, a well-directed system of general education, and the cultivation of all those faculties which go to make up general intelligence—the faculty of observation, of intelligent reasoning, of ready wit, and of quick-

ness to act intelligently and on one's own initiative. (2) In addition to this general training, a workman requires more or less of special training or manual dexterity, the kind of skill or handicraft which can only be obtained by long practice at a particular employment, and which is only of use in that particular trade.

Modern
tendencies.

The tendency in modern industry is to diminish the amount of labour requiring mere manual dexterity, and to make general intelligence more important. Purely mechanical labour is rapidly disappearing, mainly owing to the introduction of machinery to take over such work. What is wanted is not a man who possesses only the manual dexterity required for a certain kind of work, but a man of general intelligence who can turn to one job or another as need arises. Whenever a job becomes purely mechanical a machine is invented to do the work, and the man who could do the work by hand is not wanted. His place is taken by the man who can attend to the machine intelligently.

Mobility of
labour.

This development of general intelligence, as opposed to mere manual dexterity, has a very important effect. In the old days a man who had devoted the early years of his industrial life to learning one trade must remain in that trade, because his special skill was of no use in any other, and if his own trade failed he was likely to be thrown out of work altogether, and to fall into the ranks of unskilled labour. But nowadays a man who has learned to attend to the machinery of one trade can, if there is no work for him in that trade, turn to another where, if the machinery is not the same as he was brought up to, it is at least so far similar that he can soon adapt himself to the new work. One of the surprises of the War was the extent to which it proved possible to develop the mobility of labour. The withdrawal of men generally for military service, the insatiable demand for labour in those industries which produced military supplies, such as the woollen trade and munitions, and the reduction of demand for labour in other trades, especially the cotton trade at first and the building trade later owing to the suppression of all new building, led to the most unprecedented

dislocation of the normal distribution of labour, and every man was forced to turn his hand to whatever job he could find, or whatever work was most pressing in the national interest.

The result of the modern development of mobility of labour is that the old lines of division, vertical and horizontal, between different trades are becoming less distinct, and a man can more easily move from one trade to another.¹ The effect on the supply of labour in particular trades, or in particular grades of employment, is very marked. There is nothing to prevent an intelligent labourer from rising to the higher grade of a skilled workman ; and if a man who has learned one trade finds that his occupation in that trade is gone, he can turn to another. The result is that the supply of labour in any particular trade adjusts itself much more readily to the demand than was formerly the case, or, in economic language, the mobility of labour is greater. This has a direct and very important bearing on the question whether labour has its supply price ; whether the supply of labour in a particular trade depends on the price offered for it. In modern industrial countries the tendency is all in favour of an affirmative answer to this question. The supply of labour in any particular grade of labour, or in any particular trade, does depend on the rate of wages offered, because all the elements of the supply of labour are such as to be easily affected by the inducement offered. In other words, labour has its supply price.

In considering the relative advantages of one trade or another from the workman's point of view, it is necessary to go deeper than the money wages offered, and to consider not merely the nominal or money wages, but rather the real wages or net advantages of each trade. The following points may be noted with regard to the difference between real and nominal wages :—

(1) The purchasing power of the money wages. If, for example, the general level of prices in one country or district is higher than in another, the real value of wages will be affected accordingly.

¹ But see Chap. XVI. as to the effect of trade unions.

The value of money depends on how much it will buy; and although wages in one country are higher than in another, the workman in the second case may really be better off owing to the lower prices of the commodities on which he spends his money.

Real wages
in England.

The history of real wages in England during the past fifty years shows an almost unprecedented record of great movements. (See Table VII.) From 1873 to 1896 the Index Numbers of general prices fell pretty steadily, so that the slight rise of nominal wages masked a very decided rise of real wages. From 1896 to 1913 (with a check during the Boer War period) prices were rising again, and nominal wages had great difficulty in keeping pace, with the result that the world passed through a period of industrial unrest, of which people were slow to understand the real meaning. On the complicated movements of real wages during the War period see Bowley's *Wages and Prices in the United Kingdom, 1914-1920*. During the post-War boom it is doubtful whether the rise of wages kept pace with the new and bewilderingly rapid rise of prices; while, as the result of the subsequent deflation with its attendant reductions of wages and short time and unemployment, it is certain that real earnings in many industries have again receded even below pre-War levels.

Tools and
training.

(2) In some trades the workman requires to incur certain expenses in equipping himself for his trade, purchasing tools, etc.; again, certain trades require a long and expensive training. A professional man, for example, has not only to pay out money for his education, but he has also to pass through a long period of training during which he earns little or nothing, and a further period of waiting till a connection is established. This must be taken into account in measuring the advantages of the profession when he is fully-qualified and able to begin earning.

Allowances.

(3) In many trades the actual money wages are supplemented by certain additional allowances; a domestic servant, for example, may receive board and lodging and perhaps also a uniform in addition to his wages; or the employee of an institution may receive a free house with certain allowances of coal or

gas, and have his taxes paid for him by his employers. All these are simply so much added to the money wages.

(4) The employees in some trades can increase their incomes by supplementary earnings from some other occupation in their spare time. Or, again, while the working man himself receives a certain amount of money wages, his wife or family may be able to add to the family income by finding suitable employment in the district. Thus, the total income of the household may be higher than in some other district where the head of the family could earn higher wages, but there is no work for the others. This proved a serious stumbling-block during the War to the desired mobility of skilled labour, as in the case of the transfer of skilled engineers from Nottingham, where the lace and hosiery trades offered ample employment for women, to Coventry where there was nothing of the kind. To meet this difficulty, supplementary industries have in many cases been established to take advantage of such a reservoir of unemployed labour.

(5) Again, a workman must consider whether the employment in one trade is likely to be permanent or intermittent; if, as in a seasonal trade, he is only to be employed during part of the year and idle the rest of the time, it might pay him better to have a constant job at lower wages. Many outdoor occupations cannot be carried on in bad weather; hence the controversy in the building trade over broken time and the guaranteed week.

(6) Certainty or uncertainty of success is an element which is seldom duly considered. The professions, for example, are always judged by the public according to the highest prizes, and not, as they should be, according to the average income of all their members, including the large number who fail to make their way at all. Notice also that in the case of the professions there is another consideration. The life, the nature of the work, is certainly more attractive to many people than purely commercial pursuits. The difference may be put in this way. The workman or the commercial man lives *by* his work,

The professional ideal.

the professional man ought to live *in* his work ; if he is inspired by the true professional ideal, he should, like the artist, find his greatest reward in the consciousness of good work well done. Again, many professions carry a certain advantage in respect of social position, such as the church in England ; but in some cases this is counterbalanced by the extra expense which a professional man is compelled to incur in keeping up his position.

Working life.

(7) Duration of the power to labour. If the work is so hard and exhausting that the workman finds himself at a comparatively early age too old for work, or if the risks of industrial accident are high, as in coal-mining, then the high wages he earns during his active life require to be discounted, because he ought to be laying aside something all the time as a provision for old age or premature disablement. This case is not confined to the ranks of manual labour. The professional man must save something against the time when age will inevitably impair, if it does not altogether terminate his earning capacity ; while even worse than the risk of early death, which can be covered by insurance to provide for his dependents, is the tragedy of the premature failure of earning capacity, through failure of body or mind. Against this take the case of a government position which carries a pension ; that is equivalent to a higher salary, because it saves the necessity of setting aside part of one's present income against the future ; but in some cases it is little more than deferred pay.

Working environment.

(8) The conditions of labour. The workman must deliver his commodity, that is, his labour, in person ; he must go himself wherever his labour is required. The workman cannot be separated from the conditions under which he is expected to work. If these are unpleasant, unhealthy, or dangerous, it follows that such work should be better paid than other work which can be done under more pleasant conditions. Yet this very question raises what has been called the "evil paradox", that the dirtiest work in the world is always the worst paid, because the only people who will do it are those who are reduced

to the lowest ebb, and therefore must take anything they can get.

(9) Lastly, in connection with the mobility of labour, it must be remembered that the training of labour is an investment of capital, and this suggests two questions: (i.) Is the return to the investment always sure to come? and (ii.) Will it come to the man who made the investment? For example, under the old apprenticeship system, the master was bound to give his apprentice a thorough training in his craft, in return for which the apprentice, who during the early years of the contract was worth little or nothing to his master, was bound to serve the same master for a few more years at a low wage, so as to recompense the master for the early loss. But in modern times the bonds of apprenticeship had been very lightly regarded by the apprentices, who thought nothing of going off to another master as soon as they were fit to earn something like a journeyman's wage. The result was that the masters, knowing this, took less interest in training the apprentices, and the old system, which was of great value in its day, was disappearing. This tendency was accentuated by the difficulty of giving an apprentice an all-round knowledge of a trade which, owing to the enormous scale of modern factories, had become more and more specialised and subdivided, each "shop" or department becoming almost a factory in itself. But in recent years the revival of interest in technical training, alike on the part of the masters, the trade unions, and the education authorities, has led to renewed efforts to overcome this difficulty.

One reason for this increased anxiety as to the industrial training of youths was the realisation of the danger of "blind-alley" trades, a phrase coined by the Poor Law Commission of 1909 for those occupations which, by offering comparatively high wages for unskilled labour at an early age, attract far more young men than they can carry through to adequate pay and good work in adult life. The maximum wage is soon reached, and, being unskilled labour, it is comparatively low and not even secure, for there is always an ample supply of young men still

Apprentice-
ship.

Blind-alley
trades.

coming in, while to find any other more promising opening as an unskilled adult is almost impossible. It is to a large extent from these blind-alley occupations that the ranks of casual labour are constantly recruited.

Again, if a youth, having finished his apprenticeship to a skilled trade, finds that, owing to changed conditions, the trade has declined so far that he is not wanted, what is he to do? And such a state of affairs is becoming increasingly common nowadays as industry becomes more complex and more specialised. Foreign competition or the discovery of new methods may at any time cause the ruin of a particular industry, and those who were engaged in it are turned adrift. The difficulty of accurately forecasting the probable demand for labour in any particular trade is thus becoming always greater, but at the same time, as already explained, owing to the increasing importance of general intelligence in all trades and the greater similarity of the machines used in different trades, it is much easier for labour to find something else to do. In other words, while the risk of making such mistakes in modern industry is greatly increased, so also is there greater facility in remedying the mistake when made.

Real v.
nominal cost
of labour.

The question of wages and the value of labour may also be looked at from the point of view of the employer. Thus the distinction between real and nominal cost of labour points to the fact that the lowest paid labour is not always the cheapest from the employer's point of view. Cheap labour is likely to be inefficient, while a good man, as the saying goes, is always worth his wages. The real value of labour to the employer depends on its efficiency. If by giving his men shorter hours, better wages, or better conditions of labour, an employer finds that their efficiency is more than proportionately increased, it will be to his interest to do so. The increased product due to the greater efficiency of their labour will recompense the employer for the extra wages paid. This argument is the real justification of the efforts of trade unions to improve the position of the

working man ; but it must be confessed that far more has been done in this direction by benevolent and far-seeing employers, such as Henry Ford, than by any other agency.

The system of "piecework", or payment of wages at fixed rates according to the amount of work done, is an attempt to meet this difficulty. Under this system a good workman can earn high wages in proportion to his efficiency. This system and its modern ramifications and modifications will be discussed later on.

Payment by results.

This question of industrial efficiency has been responsible in the present century for a number of very interesting developments. The first of these had its origin in the United States under the title of Scientific Management, but has come to be known in this country as "Taylorism", from the name of its author. It was a system of quasi-scientific study of the individual mechanical motions required from the worker in any industrial process, and it was directed to secure the highest possible manual dexterity and efficiency at the lowest cost in energy and time. Each single operation was reduced to its component motions and timed by stop-watches, so as to discover the quickest and easiest way of doing it, and the maximum output that could be obtained by the interposition of rest periods and so on. Then the whole process was standardised and stereotyped in the most rigid uniformity, which reduced the human machine to the nearest possible reproduction of its power-driven counterpart. This system, however, became odious through its association in certain cases with the exploitation of the workers who received but a tithe of the resulting gain. In England this system has given place to a really humanitarian study of the whole question of industrial fatigue and efficiency, which under the aegis of the Industrial Fatigue Research Board has developed into the modern science of Industrial Psychology, and has already resulted in many most promising and suggestive lines of inquiry.

Taylorism.

Industrial fatigue.

Another well-intentioned though sometimes misguided line of activity in industrial affairs has been the growth of welfare

Welfare
work.

work, an attempt to extend the benevolent interest of the employer in his workers not only into every branch of the work in the factory itself, such as ambulance work, rest rooms, canteens, etc., and the provision of recreation, but even into the personal health and home life of the workers. The sturdy independence of the better classes of the workers, especially in certain industries such as cotton, has made the task of the welfare workers anything but easy, but where the masters have approached the work in the proper spirit of co-operation, not condescension, and the staff selected have been of the right kind, the results of the work have been on the whole good. They have at least done something to remove the reproach of the entire lack of personal relation between the modern employer (especially when he himself is only the employee of a limited company) and his enormous staff.

The extension of this desire to secure improved relations between master and man, in the direction of giving the workers some share in the control of the factory as it affects themselves, is still in its infancy, but has already shown how much it can do not only to make these relations more human and friendly, but also to lead to greater industrial efficiency. (See Chapter XVII.)

Labour is
perishable.

In discussing the relations between employers and workmen one point must be remembered which specially affects the interests of the working man. Labour is perishable, no commodity more so. If the labourer cannot find a purchaser for his labour to-day, its value is absolutely lost to the world; he cannot do to-day's work to-morrow. The workman, then, must take whatever price he can get for his labour to-day, because the average working man has no reserve. This obviously puts the workman in a very unfair position for bargaining with the master, who, while he may lose something by not being able to get the labour he requires to-day, is at least not so utterly dependent as the workman on the day's work for the day's bread. This is the principal argument of the trade unions in defence of their policy of combining many workmen together in one association for mutual assistance and strength.

What gives added importance to this argument is the fact that the effects on labour of the failure to obtain a sufficient wage to maintain efficiency are, as it is called, cumulative. If a man loses his job and cannot find another means of making a living, what is to become of him? His own efficiency is bound to suffer, and if he is long out of work the chances are that when he succeeds in finding another job he is no longer fit for good work, either because of weakness or of bad habits acquired while out of work. So he is compelled to take what he can get; he has fallen below the level of inefficiency into the sink of casual labour. But the matter does not end there. What of his family? The father can only manage to eke out a scanty living by odd jobs or begging; how can the children be brought up healthy or efficient workers? The misfortunes of the father, then, are visited on the children. Not only has one good workman been lost to industry, but the next generation has also been submerged.

Effect of
low wages
is cumula-
tive.

It is the existence of such things as these that makes the life of the working classes in large industrial towns a study full of pathos and heart-searching to thoughtful men. These evils are the results of economic friction, due to the want of mobility of labour. Every effort made to cure them is not only morally good, but, from the purely economic point of view, is money well spent.

MARSHALL, *Economics of Industry*, Book IV. chaps. iv., v., and vi.; Book VI. chaps. iii., iv., and v., and Appendix D.

MARSHALL, *Principles of Economics*, Book IV. chaps. iv., v., and vi.; Book VI. chaps. iii., iv., and v.

CHAPTER VIII

CAPITAL

What is capital?—Why does it get interest?—The sources of supply of capital—The supply price of capital—The rate of interest—Different kinds of capital.

As opposed to land and labour which have been described as the primary factors of production, capital is only derived from the products of these two. All the tools and materials which are now capital available for further production were once the immediate product of labour upon land; the farmer's seed corn of this year was part of his harvest of last year, which he might have consumed during the winter as food. Thus capital is fundamentally only the accumulated products of land and labour. At the same time it is not intended to convey the idea that capital is in any sense less of a direct producer than labour. In these days when most things are actually made by machinery, and the man's share is only to tend and feed the machine, such an idea would be entirely misleading.

Capital v.
the
capitalist.

At the outset it is necessary to clear up the confusion between the functions in production of this material *capital* such as a machine, and the services frequently rendered by the *capitalist* in an entirely different though rarely separable capacity, as the organiser of the whole business of production. Marshall rendered a great service by emphasising this distinction to the extent of creating a fourth factor of production which he called, for lack of a better name, Organisation. This chapter, then, is only concerned with the capitalist as the owner of capital. As far as

possible it is desirable to regard him as a different person from the employer who runs the business. The best way to do so is to think of the capitalists as the shareholders of a joint stock company, while the employer is only the managing director of the business, in which he does not even hold a share.

As before, the object of the inquiry is to find out what is capital, what are its functions in production, the nature of its remuneration, and whether it has a supply price. To do that it is necessary to consider the sources of supply and to see whether they are such that the amount of the supply is likely to be affected by the price, that is to say, by the rate of interest.

There have been many bitter controversies as to the nature and definition of capital. Without entering into these in the meantime, it may be noted that every conception of capital implies two root ideas:—(1) Productiveness: the fact that in some way capital produces, or helps to produce, more than would be possible without it; (2) prospectiveness: that the supply of capital is due to people looking forward and trying to provide for the future. These ideas correspond to the two sides of our problem, demand and supply. It is because of its productiveness that people want capital; they know it will pay them, and so they can afford to pay interest for it. It is because of their prospectiveness that other people have capital to lend; they are willing to save for the sake of the future income derived from the interest. The same ideas may be traced in the various definitions of capital. Mill spoke of it as the accumulated products of former labour destined for the production of future wealth. Adam Smith called it "that part of a person's whole stock which he expects is to afford him a revenue". These two sides of the idea of capital must be examined separately.

Nature of capital.

I. THE PRODUCTIVITY OF CAPITAL.—Why does capital get interest? In the first place, let it be made quite clear what is meant by interest. Take a concrete example; suppose that the owner of a small factory begins business with £10,000, the bulk of which is spent on the factory, machinery, etc. At the end of the first year, after paying for his raw materials, coals, wages,

What is interest?

etc., he finds that he has a surplus of £2000 left over. This may be called gross profits. How much of it is interest? To arrive at that he must set aside the other items which are clearly not interest. (1) His machinery, buildings, etc., are not so good as they were at the beginning of the year. They have suffered by ordinary wear and tear, and in course of time will be worn out or become obsolete and require renewal. To prepare for this he must set aside a depreciation or renewal fund. This is clearly not interest; it is simply preserving his capital intact. Suppose he writes off £500 for this item. (2) His first year may have been a particularly good one and he knows that future years cannot always be so good. He may have bad debts next year, or incur some heavy loss through "bad stock", seasonal goods which fail to sell and must be "slaughtered", or a new style or design which fails to hit the public taste, or again he may "get on the wrong side of the market" in the purchase of his raw materials. He must lay aside something to provide for such contingencies—a reserve fund. This, again, is clearly not interest. It is only a premium of insurance against the risks which are inherent in all business enterprise. Say another £500 for this. (3) There is still £1000 left, and now we ask the manufacturer where this comes from. Why have the public paid him so much more than his apparent cost of production? His answer is that unless he could make as much as that he would never have gone into the business at all. "I have £10,000 of capital in this business," he says, "on which I had a steady income before I came here of 4 per cent, or £400. I was earning a salary of £600 a year myself in another business. What would have been the good of going into this business, unless I could make at least as much here?" This points to the explanation of the £1000 surplus. Part of it is the employer's own salary; he considers that he is worth at least that; he could get it anywhere else, and must get it out of his own business too. The rest is what is called the usual rate of interest. Interest, then, is a return for the use of capital apart from any consideration of risk or of skill in conducting business. It may

Depreciation.

Reserves.

Employer's salary.

Pure interest.

be defined as *that annual return to capital which can be obtained, as a rule, without personal services and without risk.*

It may make things clearer to consider how these figures would appear in the balance sheet of the supposed limited company running such a factory. Depreciation would be written off before profits were struck at all, and also the £600 which would become the managing director's salary. This would leave profits of £900 out of which a 4 per cent dividend would be declared, the balance of £500 being carried to reserve, or simply carried forward to next year's accounts, which comes to the same thing.

A limited
company.

This illustration brings out clearly how it is that interest emerges. It is a surplus of value. The manufacturer throws his capital into a state of solution, as it were, and at the end of the year it comes back to him, with something added to it. That addition is interest. Where has it come from?

There have been many answers to this question, as, for example, (1) that interest is a payment for something the capital has *done*, as for the use of a tool which doubles the worker's output, or of a machine which does the work of a dozen men with only one man to watch and feed it; (2) that it is a payment for the *use* of capital, as for the loan of seed or money to buy coal or raw materials; or (3) turning to the other side of the question, that it is a payment to the capitalist by way of recompense to him for not using up his wealth, but setting it aside as capital instead. All these theories contain part of the truth, but they do not go to the root of the matter. The first two only touch the most obvious uses of capital; the third really begs the question. Why should we pay a man merely for denying himself something, unless we are going to gain something by his self-denial? It is not because saving involves a sacrifice that the borrower is prepared to reward the saver; he cannot afford to do so unless he can somehow make the capital produce the interest. In other words this argument only goes back again to the fundamental question. *How* does capital produce? The answer to that question involves anticipation of the whole

Various
theories of
interest.

argument of the following chapter, but it may be briefly indicated here :—

The real cause.

The main feature of modern industry and the factory system is what is called long-period production. In the old days every small craftsman did his day's work, sold his product, and went home at night with the money in his pocket ; but it is very different now. The capitalist employer takes many men into his factory ; he brings in raw materials from remote parts of the world ; he buys machinery which has taken many years to invent, improve, and construct ; he sets his labourers to work with his machinery on his raw materials, all of which he has paid for in advance out of his capital ; he takes their products and scatters them far and wide over the world to seek purchasers ; and then he must wait till the goods are sold and paid for. He produces on a large scale and for a market remote both in time and distance. The essential point is the time involved ; from the first commencement of the process of production to the last stage of sale and payment months may pass. The manufacturer has to "lie out of his money" for a long time.

How capital produces.

The striking thing about this system is that it pays. The reasons will be explained later on ; the fact may be assumed in the meantime, that long-period production on a large scale leads to far greater production. Out of the price of the product when it finally comes in, the manufacturer is not only able to repay to himself all that he has advanced, but he has something left over—interest on his advances ; and this is only fair. It was only because of the manufacturer's capital that the system was possible at all. All those under him had to be paid as they went along. The producers of the raw materials could not wait any longer for their money. The workmen could not afford to wait for their wages till the goods were sold and paid for. They had to get their wages in cash. If, then, it is the capital that makes the system possible, and if the extra product is due to the system, is it not right that part of the profit should go to the owner of the capital ?

Interest, then, is in this sense a payment for time, or a discount against time. Time itself produces the interest, just as a barrel of wine set aside to mature acquires additional value simply through time. Interest rests on an acknowledged fact of human nature, that most men prefer a present good to a future one ; they would rather have a little less just now than wait for something more later on. The man who has sufficient prospectiveness to see that waiting will bring the greater profit deserves the reward. Interest, then, is the price of waiting.

A payment
for time.

II. THE SUPPLY OF CAPITAL.—It remains to consider interest from the point of view of supply, as the necessary inducement to lead to the accumulation of capital ; in other words, as the supply price of capital.

The idea which is at the root of all accumulation of capital is the investment of present effort in things to supply future wants. Now, in human nature the greatest inducement to such a sacrifice is the powerful motive of family affection. It is in the family relations most of all that the need of providing for the future emerges, and that the inducement is strongest. There is of course always a certain hoarding instinct in men which may lead to the accumulation of wealth for the mere wealth's sake, but that is not the action of a normal person. Most people save in order to provide for the future, either for themselves or for those who are dearest to them and are dependent on them. Note that this desire to save is largely independent of the hope of receiving interest ; it is a matter of necessity due to the intense realisation of a greater future need. The payment of a few pounds per annum as an insurance premium may be none too easy for a young married man, but what would happen to his wife and family if they were left entirely unprovided for ? The same few pounds a year then would make a much greater difference. Of course, the prospect of every pound being doubled by the long accumulation of interest strengthens the good resolution, but it is not the prime cause of it. It is a natural instinct that makes the child save the last few sweets at the bottom of the box

Induce-
ments to
saving.

till to-morrow ; there will not be any more of them to-morrow, but they will be sweeter because they are so few. It is, to anticipate the theory of demand, a case of the different marginal utility of present as against future uses. (See Chapter X.)

Necessary conditions.

To lead to the accumulation of capital, however, two things are necessary besides the faculty of foreseeing the future and realising the necessity of providing for it. These are (1) security and (2) the possession of a surplus.

Security.

(1) *Security*, that is, security that men will be allowed to enjoy in peace the fruits of their saving. This implies (a) security of protection from foreign enemies, that there is no fear of their savings being destroyed or taken away by a foreign invader ; (b) security of good government at home, that they need not fear the injustice or greed of the government itself, as in the form of unequal taxation ; and again (c) security of justice, that they may be safe against injustice from their fellow-men, because they can have recourse to a just and equitable court of law, which will readily enforce the due fulfilment of contracts ; (d) lastly, it implies security of good investments, that safe and reasonably profitable investments can be had in which savings may be placed without fear of loss.

Modern conditions.

In all these respects, but perhaps especially the last, England is peculiarly fortunate, indeed far more so than was commonly recognised before the War. Long immunity from foreign attack had created a feeling of security of which only the Zeppelin raids made us realise the value. The justice of our government was a thing every one simply took for granted like the incorruptibility of our judges. The atmosphere of the sanctity of property and of contracts had resulted in a high commercial morality, and it created a sense of confidence in gilt-edged securities and trust investments which was one of England's most valuable assets as the financial centre of the world. The development of joint stock companies provided an easy method of securing a large aggregate capital from many small individual investors, and at the same time by limiting the risk of each shareholder, enabled them to take great risks on small amounts, which made it possible

to find capital for speculative adventures. The stock exchanges provide a system of markets for investment money, which make it possible at any moment, either to find an investment for spare funds, or to realise the amount invested if it is required for some other purpose. Finally, the modern system of banking provides, by means of deposits and discounts, not only a safe storehouse for money temporarily at a loose end, but also a great reservoir of short loan capital upon which merchants and manufacturers can draw by the system of discounts and advances for their temporary requirements in financing their business. Thus the supply of capital of all kinds has created the demand, and the profitable employment of the supply made it possible to offer the inducement which maintained the supply.¹

Investment facilities.

(2) *The Possession of a Surplus.*—This does not mean that one must have more money than one knows what to do with, in order to save up capital. It is remarkable how many people with very slender incomes manage to save a good deal, especially when it is recalled that the education of a skilled artisan, and still more of a professional man, is simply an investment of capital by himself or his parents. Much has been done in modern industrial countries to facilitate the saving of small sums by providing safe investments, for example, savings banks, people's banks, mutual banks, building societies, funeral and sick benefit societies, co-operative societies, trade unions, etc. Some of these serve a double purpose by enabling the members to borrow economically when necessary, as well as to save when they have opportunity. One of the discoveries of the War was the possibility of interesting the smallest investors in government securities through the sale of War Saving Certificates. The peculiar form in which the investment was offered (£1 for 15s. 6d.), thus, as it were, capitalising and enabling the lender to visualise the inducement offered, was a stroke of financial genius.

Small savings.

The accumulation of wealth in whatever form, and its devotion to capital, implies necessarily the sacrifice or postponing

¹ For a full description of the English Banking System see the same writer's *The Mechanism of Exchange*.

Effect of
interest.

of present gratification, and interest is the inducement that must be offered to make people undergo such sacrifices. It hardly needs arguing that the degree of willingness to undergo the sacrifice will depend largely on the strength of the inducement ; that is, on the rate of interest offered. It is clear that an increase in the rate of interest will be likely to increase the accumulation of capital. Of course, there are some people who, as already noted, are so strongly imbued with the idea of saving against a rainy day that they would hoard money in an old stocking, even if there were no banks to put it in, or would put money in the bank even if they got no interest at all upon it ; and again, there are people who, having made up their mind to save enough to give them a certain fixed income, will have to save more if the rate of interest falls. But, these notwithstanding, it may be taken that, generally speaking, the supply of capital depends on the inducement offered, that is, on the rate of interest obtainable.

Mobility of
capital

Certainly experience shows that if in one particular trade, capital receives a higher remuneration than in other trades, capital will tend to flow into that trade. In other words, capital has its supply price.

Unfortunately the converse is not always so true ; that capital will leave a trade where it does not receive a sufficient rate of interest. A manufacturer who has sunk his capital in machinery and buildings for a particular trade may not be able to shift it, because to do so would mean throwing away all his machinery as scrap iron. Rather than face such a loss, he may be content to go on working at a very low rate of interest. But here, too, it tells in the long run, for new capital will not go into such a trade. Thus, even in this case as certainly in the other, capital has its supply price.

is slow.

This will be clearer if it be kept in view that the supply of capital is not a stock or store of fixed amount, but a constant stream. Capital in the form of buildings or machinery, for example, is gradually but constantly being destroyed by wear and tear, or by mere lapse of time as things become old-fashioned, and it requires frequent renewal or replacement. At the same

time, the supply of new capital from the gradual accumulation of savings is also constant. The continuous competition of the new supply and the new demand fixes the rate of interest, not only for them, but also for all existing bargains, the terms of which are altered to the new level as occasion arises for their renewal.

Demand for capital.

Note in passing that the effect of a low rate of interest is to increase the demand for capital, because in many cases where it is doubtful whether labour or machinery would be the more profitable, the balance may be turned against the machinery on account of the high rate of interest, which, of course, directly affects the working cost of the machinery. But with a lower rate of interest the machinery pays, and is promptly substituted. Thus the lower rate of interest creates an increased demand for capital, which, of itself, tends to send the rate up again.

There have been many attempts to classify capital. The main points to be kept in view are (1) that the test of whether or not a thing is capital at all, as well as the classification of it under one kind of capital or another, depends not so much on the nature of the thing itself as on the use to which, in the case in question, it is to be put; and (2) that these classifications of capital are never exclusive or permanent. What falls under one head at one time may at another time, or when looked at from a different point of view, be regarded as of a different kind altogether.

Classification of capital.

The main classifications are as follows: Capital may be of a kind which serves its purpose without immediate destruction, such as pictures, which we enjoy by looking at them, or a house to live in. These will be consumed or destroyed in course of time, though perhaps a very long time. It is difficult to find a name which properly expresses this idea. Marshall called it consumption capital, because it consists of goods intended for direct consumption or enjoyment in their present form; but the name is peculiarly unfortunate, because the one point to be stressed in regard to such forms of capital is that they are not

"Enjoyment" capital.

consumed in a single use, but remain to be enjoyed over a considerable period. Perhaps the nearest approach to a suitable term would therefore be Enjoyment capital.

On the other hand, a large part of the capital used in trade is destroyed in the very act of use. The manufacturer when he commences business spends part of his capital in a stock of coal, which very soon is destroyed and vanishes in smoke; but it comes back to him in the form of goods made by his machinery.

Trade
capital.

Again, capital employed in business, which is usually called production capital or trade capital, may be divided into (1) fixed capital, such as machinery, buildings, etc., which exists in a durable shape, and the return to which is spread over a period of corresponding duration; and (2) circulating capital, which fulfils the whole of its office in the production in which it is engaged by a single use, such as the payment of wages or purchase of coals or raw materials, but is quickly recovered by the sale of the goods produced, and is available for employment over and over again even in the course of a year.

Fixed and
circulating.

MARSHALL, *Economics of Industry*, Book IV. chap. vii., and Book VI. chap. vi.
MARSHALL, *Principles of Economics*, Book IV. chap. vii., Book VI. chap. vi.,
and Appendix E.

CHAPTER IX

ORGANISATION

What does it mean?—Its share in production—Association in production and division of labour—The economies of large production, external and internal—The sources of supply of organisation—Has it a supply price?—The nature of profits—The law of increasing return, or decreasing cost.

ORGANISATION, Marshall's new fourth factor of production, is in one sense hardly a separate factor of production at all. It is rather the aggregation and co-ordination of the other three factors into the modern system of large-scale production, which is generally called the factory system, though that label is rather misleading, because it includes other industries entirely outside of factories, especially agriculture. Again, organisation is really only capital in the hands of a very specialised type of brain worker; but this particular type of labour has come to form so large a class by itself, and its functions are so different from those of any other class and so essential to the very existence of the whole system (indeed they are just what makes it a system), and finally the method of payment of this class is so entirely peculiar to itself, that there is really no practicable alternative to treating it by itself, as Marshall did. It is admittedly very difficult to keep constantly in mind the distinction between the organiser as capitalist, whether the capital is his own or borrowed, and the same man as employer of labour and manager of the business; but the older economists fell into just as great difficulties through not making the distinction between profits, which are the remuneration of the organiser, and interest which is the reward of capital.

Meaning of
organisation.

Once more the method of attack is to find out what organisation is, the nature of its functions and the service it renders to production, and the sources of supply of its component parts. The next step is to consider the nature of its remuneration, and how it is fixed ; and, finally, whether in view of the character and sources of the supply it is likely to be affected by the reward obtainable, that is to say, whether organisation also has its supply price.

The
entrepreneur.

It is unfortunate that there is no English equivalent for the French word *entrepreneur* (cf. enterprise), which expresses exactly the idea of the man who brings together the other three factors of production. Undertaker, middleman, contractor are all barred by their acquired special meanings, while employer (of labour) represents only one side of his multifarious duties. It seems, therefore, that one must make shift with the unsatisfactory word "organiser", though that also has its narrower meaning.

Logical
develop-
ment of
division of
labour.

Marshall's idea of organisation is really just an extension of the classical economists' idea of division of labour. The new name emphasises the fact that the modern organisation of production means much more than the mere subdivision of manual labour into separate tasks. It means the organisation of the whole system of production, including not only every kind of labour, from manual labour of the least skilled kind to the highest professional services, or the special skilled labour of the employer or organiser himself, but also nature's share in production, which is called comprehensively land, and the services of capital in production. The organiser is the employer of land and capital as well as of labour. The object of organisation is to set every kind of productive worker to the work for which he is best fitted by natural faculties or training, and to give him the best possible materials and tools for his work. If every man is put to the work which he can do best, and kept always at that work, he will become exceedingly proficient at it ; and the result will be the greatest possible production, and the lowest cost per unit.

Specialisa-
tion.

Machinery is only the logical development of division of labour. It takes over those classes of work which have become so mechanical that a machine can do them better and more quickly than even a man who has been at that job all his life. But machinery, besides taking over the most mechanical kind of work, also enables men to do a great many things which human labour, from the nature of the work, could never do at all, such as the handling of huge masses of molten metal; or the reproduction of a large number of exactly similar parts of machines, where absolute accuracy is so necessary that it is hardly possible for human labour to do the work.

It is only in large scale production, as it is called, that such complete organisation is possible. It will not pay to put a man to one particular piece of work and make him devote all his time to becoming expert at that, unless it is possible to keep him working constantly at it. It will not pay to put down a machine for a certain kind of work, unless there is sufficient work of that kind to keep the machine constantly employed; for a machine standing idle is like a man receiving wages without working. The running cost of a machine consists largely of interest on the capital invested in it, and that goes on all the time, whether the machine is working or not.

Machinery
and organ-
isation.

It is interesting to trace the development of the idea of association in production, in other words, the history of division of labour, which has reached its highest development in the modern factory system.

In the earliest forms of social organisation, when the family or the tribe was the unit of society, there was very little room for division of labour, because the whole tribe was engaged in one occupation, such as sheep or cattle rearing. But as men became less nomadic in their habits, and more settled in their occupations, division of labour became necessary. When agriculture became an important part of the occupations of the people, it was impossible for those who cultivated the crops to go hunting also. As the size and population of the settlements increased,

Historical
develop-
ment.

the separation of different trades became more marked, until the next stage of historical development was reached, the town system, when men lived together in villages or towns, each the centre of an agricultural district, and the tradesmen of the town supplied not only each other's wants, but also those of the farmers round about them, who in turn supplied the food and most of the raw materials required by the town tradesmen.

Home work.

In course of time these town tradesmen increased the size of their businesses, until they found it necessary to employ other men to work under them. At first these employees worked in their own homes, each finding his own materials and possessing his own tools ; but instead of having to seek their own customers, they sold their product to the common employer, who took the risk of finding a market for it. This points to another striking feature of the development ; the risk of finding a market had greatly increased. In the old days the craftsman made to order ; he had his purchaser in view before he began to make the article. But with the widening of the market due to the increased size of the town, it became increasingly difficult for the craftsman and the consumer to keep in direct touch with each other. The tradesmen, therefore, had to make goods for stock, as a modern manufacturer would call it, and the consumers had to seek a tradesman who had in his stock the thing that they required. As the isolation of the towns became less marked, and the market widened to include the whole nation, instead of merely the town and the adjoining district, this home-work system, as it might be called, developed rapidly, and the size of the individual business controlled by one employer greatly increased. The next step was very natural. Instead of having the workers scattered over the district in their own homes, it was clearly more convenient and more economical to have them all collected in one place under common supervision. This involves another change in the relations between employer and employed ; the workmen no longer own their own tools, nor provide their own materials ; the master or employer finds all, and takes the whole product. It is a " wage economy " ; the workers are now mere wage-

Early
factories and
the " wage
economy ".

earners, paid their wages (before the goods are sold) by the employer, who becomes the sole owner of the product, and takes all risks in connection with it. This is the workshop or manufactory system, because a manufactory originally meant a place where things were made by hand ; but the original meaning was very soon forgotten. The gathering of many workmen into one building naturally led to the adoption of mechanical appliances, of which all could get the use when required. The application of power, at first water followed by the steam-engine, and the invention of machines in every trade to which power could be applied, rapidly transformed the little workshop into the huge factory, with its enormous capital sunk in machinery, and its vast number of wage-earners, all working under the marvellous organisation of the factory system. The whole system is now centred in the employer, or *entrepreneur*, who organises the whole business from beginning to end. Under the guidance or compulsion of competition, he determines the commodity to be produced, he finds the capital, builds, buys, or rents the buildings, invents or buys the machinery, selects the raw materials, employs the labour, and regulates and controls the whole production. Then he also organises the system of sale, scatters the goods broadcast over the country or the world, seeking purchasers by every possible means, and, finally, he collects the price, repays his advances, and keeps the balance, if any, as his profit. The organiser is the middleman who brings together the three factors of production, land, labour, and capital, and places their joint product at the disposal of the consumer.

Power and
machinery

It is at this stage of the system that the need arises of a whole class of special workers who, while they themselves produce nothing in the sense of manual labour, are the brain of the whole business of production. The duties of the organiser are so multifarious that he requires a whole army of deputies to carry them out, and he himself becomes the organiser of the organisers. Their business is to make all the necessary arrangements to secure the desired co-ordination and the maximum efficiency of every unit in the whole scheme of production. Inside the

The organ-
ising class.

Factory
organisa-
tion.

factory the objects of their administration are (1) to synchronise the progress of each part of a job through all the different departments, so that, for example, in the construction of a locomotive, every part of the engine will reach the assembly shop just when it is required to be fitted into its place, and there will be no delay in completion, for time is money; and (2) so to arrange the number of machines and men in every shop, that none will ever stand idle for lack of work to do, yet no job will ever be held up for lack of them. The "layout" or "routeing of the shop" must be carefully planned to secure the most convenient passing of every job from one stage to another, with the minimum of labour and time. Materials and tools must be available at the moment when required, the latter kept in constant repair to secure the highest efficiency, and the former checked to prevent waste or loss by pilfering, etc. Finally, a whole system is required to check and pay the wages due to each man according to his grade or output, and at the same time the detailed cost of every job, separating every item in that cost, must be carefully recorded, so that the profit or loss on each job may be ascertained for future guidance. This question of factory costing alone has become a huge department in modern factories.

Functions
of the
organiser.

Outside of the factory the work of the "office" includes the purchase of all raw materials and supplies of every sort, involving intimate knowledge of market fluctuations, including speculative possibilities, which may make or mar the whole business. Finally, it is their business to sell and distribute all the products of the factory, which involves not only the selling of what has been made, but also knowing what kind of goods will sell, including questions of design, style, and materials as in dress goods, and the relation between the prices at which goods will sell, and the prices for which they can be made. In some cases, owing to cost of advertising, commissions to agents and the maintenance of a staff of travellers, the cost of selling the goods is actually more than the cost of making them.

It is not surprising, therefore, that a huge staff of so-called unproductive workers is required to carry on a big manufacturing

business, and the next question is how it pays. How is it that this system of production on a large scale can so reduce the unit cost of production that an article which if made singly by hand would cost 5s. can be turned out in thousands to sell at 6d. ? Economies of large scale production. People are so accustomed nowadays to the idea of the economies of large production that they never stop to think how it is done, or exactly where the saving of cost comes in. It is because things are made by machinery, they say, but does that alone account for all the difference ?

The advantages of large-scale production may be divided into two classes—(1) external economies, the advantages due to the fact of having a large number of employers in the same industry collected in one district, which is called a localised industry, like cutlery in Sheffield, or lace in Nottingham ; and (2) internal economies, the advantages of a large factory devoted to one industry.

The advantages of a localised industry may be stated as follows : Localised industries. (a) Where the bulk of the population of a district is devoted to one industry, there is always a good market for the kind of skill required, whether it be regarded from the point of view of the workers, who have always plenty of masters to choose from, or of the masters, who have always a plentiful supply of workmen to draw from. (b) Subsidiary trades, that is, trades connected with the staple industry, spring up readily round a large industry to supply their tools and accessories, or perhaps put their raw materials through the initial stages of manufacture. (c) In such a district the interests of all are so much alike that the atmosphere of the place is full of the technicalities of the trade. Trade topics are freely and intelligently discussed. Workers and masters alike can compare notes and get the benefit of each other's experience. Inventions are more likely to be made in such districts, and, when made, are more likely to be taken up, because their value is quickly recognised. Again, this trade atmosphere has its effect on the supply of labour. The children grow up hearing trade topics discussed, they naturally go into the same trade as every one else, and they pick up the

work much more quickly than a youth brought from other parts.

Their
drawback

Localised industries, however, have one great disadvantage. There is only one kind of labour required in the district. If, for example, the work is so hard as to be fit for men only, there is no employment in the place for women or young persons; and if by chance something should go wrong with that principal industry, the whole community is affected. There is no other work to fall back on, and the whole district is faced with starvation. The remedy for this is to encourage supplementary trades in such a district—that is, other industries which can take up the supply of labour which is not wanted for the staple industry. This is a natural development, because the mere fact that such labour is available tempts those who could utilise it to plant their industries there, for the very purpose of getting cheap labour.

and the
remedy.

Internal
economies.

The internal economies of a large factory bear more directly upon our question. They may be regarded from three points of view as follows: (a) The cheapness of factory production by machinery, as compared with hand production, as in the case of a printed book against a handwritten missal; (b) the advantages of a large factory as against a small one; and (c) the effect on cost of production of the factory running full time, as against the same factory on half-time. In all these cases similar considerations arise, and these may be classified as follows: (i.) Economies of labour are practically the same as the advantages of division of labour already noticed. They consist in setting each man to the work he is best fitted for, and keeping him at it till he can do it in the best possible way. This applies to every grade of employment, to employers and foremen, as well as the lowest labourers. It would be waste to set a man who had a good head for business to work with his hands. If he has the capacity for superintending and organising others, it pays to put him to that kind of work, for a good foreman is always worth his wages in saving waste of time and materials by those under him. And the larger the factory, the smaller in proportion is the number

Labour.

of overseers or foremen required. The overseer of all is the employer himself ; and the ideal of organisation is to arrange the details of management so that, delegating the minor work to competent men, the employer is free to attend to such matters as watching the markets, buying and selling, and general supervision of everything inside and outside of the factory.

(ii.) Economies of power and machinery are only possible in large factories, because, in the first place, small producers have not the capital to buy new machinery, and second, even if they had, they have not the means of utilising it fully. Nothing marks so distinctly the superior organisation of a large business as the readiness to adopt the best machinery, to "scrap" an old machine without hesitation when some improvement has been discovered, to recognise that spending money wisely and freely is the truest economy. But it is only big men with plenty of capital who can afford to adopt these heroic measures.

Power and machinery.

(iii.) The economies of material are mainly due to the utilisation of by-products, as it is called. The discovery of means of utilising and making money out of what was formerly regarded as waste is one of the most striking things in modern industry. Many industries are now kept alive only by the profits realised from these by-products. Waste in a modern factory is almost unknown ; there is some use for everything, if it can only be discovered.

Waste and by-products.

Again, a large factory can afford to make special arrangements for handling waste which would not be worth while in a small shop with a small output. In a big engineering shop, where brass and copper turning are done in separate shops, the scrap metal from each shop is sold separately for its full value ; and it is worth while to have special centrifugal machines which recover the oil from the turnings, and even from the engineer's cotton waste, which can then be used again.

(iv.) Again, the fact of being a large producer and consumer enables the manufacturer to effect economies in many small ways. Being an important customer, he always gets the best terms from all those with whom he deals. A man who buys in

Marketing.

large quantities can buy cheaply ; and he can afford to make special arrangements for handling both his raw materials and his finished products, securing cheap freights and prompt handling of his goods.

Oncost v.
prime cost.

(v.) The principal gain of the large producer, however, which in a sense embodies all these other classes of saving, is the reduction of what is called " oncost " as against " prime " cost. The latter includes such items of the total cost of production as raw materials and labour, which increase in direct proportion to the output. Oncost charges, or, as they are variously called, standing charges, running costs, establishment or overhead charges, are those which must be met whether the factory produces much or little, such as interest on the cost of buildings and machinery, power, lighting, supervision, office expenses, advertising, etc. Some of these, especially interest charges, are not affected at all by an increased output ; others, such as supervision and office charges, very little ; while even on power the increased cost may be much less than in proportion to the rise in output, especially when it is a case of machines standing idle that can now be put in commission—the power to run them was there in the main engine and shafting, but was not being utilised. If the resources of the factory are fully utilised and the output raised to the maximum, it is obvious that the percentage of these oncost charges, which must be included in the cost of each article produced, will be much less than if the factory is running only half-time, or if the output is restricted owing to want of orders. It pays, therefore, to keep the factory working at its highest limit ; the greater the output, the lower is the cost of production of each article. In this respect the large factory always has a great advantage over the small business. The owner of a large factory can afford to spend far more on organisation of the business, on advertising or pushing trade, and still have a lower percentage of oncost owing to his enormous turn-over.

Effect on
Price.

While, however, the advantages of large production are great, so great, indeed, that the present tendency seems to be for them

to replace entirely the small producer of the old days, yet there are signs that the maximum profitable size of a single factory is being reached, and even that the day of smaller industrial units is returning. There are no doubt many points in which the small employer has the advantage over his big competitor. In a small factory the master's eye is everywhere ; there is less opportunity for slacking, less need for complicated systems of checking and of book-keeping, and less likelihood of mistakes. There are signs of a reaction which may bring back the day of small factories, especially through the development of cheap electrical power. The utilisation of water power for the production of electricity in large central stations, from which it can be distributed over fairly long distances, and the development of local traffic by motor waggons, may revolutionise industry again and bring back something more like the old days, when population and industry were spread over the whole country, instead of being herded into great towns, to the detriment of all concerned.

Advantages
of small
industries.

Throughout all this discussion of the system of large-scale production it is well to remember that the functions of a large employer are twofold. In the first place, he is a purveyor of production ; his business is to organise industry and capital in order to produce what the consumers require. As such he is paid by the consumers a price sufficient to cover his cost of production and leave him a reasonable remuneration for himself. But he is also a leader of men, a captain of industry, the provider of work and wages for the immense army of his employees. The object of all his organisation is to keep them employed, and to provide a living for their wives and families. From their point of view he is only an employee like themselves, employed by the organisation, and paid a share out of the total product for that purpose.

Dual
function
of the
employer.

Consider next the supply of organisation. It involves two elements : (1) the possession of those faculties of superintendence which are necessary for the conduct of a large business under-

Supply of
organisa-
tion.

taking, and which may be called business ability; and (2) the possession or control of capital.

Business
ability.

What is this mysterious quality of business ability, which is the supposed hall-mark of the business man? Is it some natural or inborn power or predisposition, so that a business man, like a poet, is born not made, or is it merely the result of training? What is the peculiar mentality of a good organiser; or can it be acquired by any one who has the opportunity and will take the trouble to learn? Probably the truth lies between these two opinions, but the writer leans to the latter. There may be to some extent a natural predisposition to business, but that would never develop without the proper training. Business ability may be genius in Carlyle's sense of an infinite capacity for taking pains, but its chief component is a capacity for hard work combined with initiative, self-reliance, and the capacity to take risks wisely. Perhaps the fundamental thing is the ability to "think ahead", the faculty of visualising future needs, of foreseeing possible developments and laying plans to provide for them. It involves a thirst for knowledge of all kinds, because one never knows when it may be useful. It is not a subject taught in universities, but it is certainly not opposed to the professional spirit. Above all things it does not involve, as many people still seem to think, any elasticity of conscience, any disposition to overreach or take advantage of the other fellow if possible, for in modern times men have realised that honesty is the best policy in business as elsewhere.

The supply.

Whence, then, comes the supply of such super-men? Of the best it can hardly be large, yet the sources of supply are very wide. There is no academic or professional "eye of the needle" through which men must pass into the trade. The qualities above described are not beyond the reach of any man of intelligence and ability who is not afraid of hard work. These qualities are only developed by good training in early life, and by experience; and they are most likely to be found in industrial countries among the great body of the middle classes. It might be thought that the sons of business men would have an advantage, but it is a

striking fact that a good business seldom remains in one family for three generations. Many of the best business men have worked their way up from the ranks. Now, as the classes from which the supply of business ability is drawn are so large, it is clear that the potential supply will be abundant. All that is needed to bring forward a supply of men ready to take up a new trade is the prospect of making a reasonable profit in that trade ; in other words, business ability has its supply price.

Can the same be said of the capital ; will the good man with a good idea always be able to find the capital required to work it ? Certainly the tendencies in modern industrial countries are all in favour of his doing so. The enormous development of joint-stock companies and of modern banking facilities, by which business men can borrow capital on easy terms, the facility with which capital moves abroad wherever it can find a good field, and the general improvement in public confidence in industry, have revolutionised the financial position of industry, and have made it comparatively easy nowadays to obtain capital for any good scheme. Again, the development of government and municipal undertakings, the growth of large industrial units and combines, and the extension of co-operation, have provided many opportunities for good men without capital of their own to find positions of trust and large salaries in such employment. Thus we may safely say that, with the facilities which are now to be found in all industrial countries, the supply of capital will always be forthcoming when the opening for it and the capacity to make it profitable are proved to exist. The result is that if a man has business capacity, and a business showing good prospects or a good idea for some new line of business, he will be able to find the capital—in short, organisation has its supply price.

Finding the capital.

It remains now to discuss the most difficult question of all, namely, the nature of profits, which are the remuneration of the organiser, and how that remuneration is determined. In dealing with interest in Chapter VIII. we analysed the gross surplus of a manufacturing business in order to ascertain exactly what is

The nature of profits.

Further
analysis
of gross
profits.

interest. That analysis must now be carried a step further by considering in greater detail the division of the gross surplus between the employer or *entrepreneur* and the capitalist.

Assume that the capitalist and the employer are not the same person, that the shareholders supply all the capital, including the money to pay for the buildings, machinery, and stock, and the working capital to finance the business, and that they take the whole risk attaching to the capital, while the organiser contributes nothing to the venture but his brains, his ideas, and his hands. In such a case, what would be the division of the gross surplus of £2000 between these two?

The first item of £500 for replacement and renewal of capital clearly belongs to the owners of the capital. The item of £400 for interest is also theirs without question. The item of £600, being the salary of the *entrepreneur*, the remuneration of his business ability, goes to the organiser as a matter of course.

The difficulty lies in the item of £500 which was set aside as a reserve fund. The risks which this is intended to cover may be separated into two classes—(1) The first year, it was said, may have been a particularly good one; future years are not likely to be so good. In other words, the fact must be kept in view that a manufacturer's profits vary, and that in a good year he ought to get something extra in order to cover the risk of getting less than his supply price in bad years. (2) There is also the risk that in some years there may be a heavy loss of capital by bad debts or bad stock, destruction of machinery, accidents to workers, and the like. In other words, capital invested in business runs a greater risk than when invested in what are called gilt-edged securities, and it must be paid for accordingly. A man who can get 4 per cent for his capital in a safe investment is not likely to risk it in a business, even a fairly safe one, for less than 6 per cent. The reserve fund may therefore be divided between the organiser and the shareholders, in the proportion of £200 to the capitalist and £300 to the employer. This means that the shareholders have received in all 6 per cent interest on their money (not counting the 5 per cent set aside for depreciation

Risks and
their
reward.

and renewal), while the organiser has received £900 as his share of the profits for the year—that is, £300 more than he had counted on as the supply price of his business ability.

This extra payment to the shareholders for risk points to the fact that under actual conditions the whole risk does not fall on the organiser. The owner of the capital must take a share of it, more or less, as the case may be, and should receive a higher rate of interest accordingly. The exact apportionment of this risk-payment and the share of it that goes to the owner of capital as such is of course a matter of arrangement. If the organiser undertakes to relieve the capital-owner of all loss, as he may do with a sleeping partner, or if he simply borrows *all* the capital (which is hardly conceivable), then the capitalist's share of the risk-payment should be the absolute minimum; but the chance of loss can never be entirely eliminated, and if the organiser had no capital of his own his obligation to relieve the owner of the capital from loss would be worth very little.

In the case of a limited company the different classes of lenders or shareholders are paid according to the degree of risk taken. Thus debenture-holders are simply creditors, and if a sufficient security is specially "ear-marked" to cover their debt, the risk is very small, and they therefore receive a very low rate of interest. The holders of unsecured debentures, however, which are covered only by a general charge on the assets of the company, are no better than ordinary creditors for goods supplied; but they come before any shareholders in the event of liquidation. The latter are usually classified into Preference and Ordinary, the former being entitled to first payment both of dividend and (as a rule) of capital; and they have therefore to be content with a moderate rate of dividend. The balance remaining (if any) then goes to the holders of the ordinary shares, and if it is large they may receive far more than the preference shareholders. There may, however, be a still further class of capital, sometimes called Deferred shares, or in other cases Vendors' or Founders' shares, which receive nothing till all the others have received their quota, but may then come in for a

The share due to capital.

Shareholders' risks.

Various classes of shares.

Reward
of the
organiser.

share (usually with the ordinary shareholders) of the residual profits. This is a very common arrangement when a going business is converted into a limited company and the services of the original owner of the business are retained as managing director ; and it points to the fact that, where the success of the business is largely dependent on the efforts and ability of one man, it is advisable that he should have a right to a share in any surplus profits, or there will be none. Sometimes a similar result is secured by the payment of a bonus to the managing director. This, therefore, brings us back to the crucial question of the remuneration, not of the capitalist who gets his share of the profits for bearing risk, but of the organiser, who in the true sense takes the risks because he alone determines what risks are to be taken.

Returning, then, to our illustration, the extra £300 which goes to the organiser must be examined more fully. What does it represent, and what is its nature ? It is obviously not the supply price or remuneration of business ability, because that was already covered by the £600 first set aside for the employer.

Nett profit.

The explanation lies in the fact that employers' profits vary very much. Manufacturing involves a large element of speculation, because the manufacturer must forecast the needs of the consumers, sometimes a long way ahead, and do his best to supply them in advance. The risks of such a method of business are great, and the profits ought to be correspondingly high. The secret of the nature of the employer's profits lies in the element of luck, or speculation ; he may discover something which will give him big profits for a time, some patent invention or secret process, some special idea for turning out his goods more cheaply than his neighbours ; he may strike a good idea in advertising which will catch the eye of the consumers and bring him good trade, or he may be the first to think of some new opening for trade, some new use to which a well-known commodity may be put. Whatever be the exact cause, the result is something of the nature of a lucky hit, some special ability shown by the employer himself, or else pure luck. It is therefore

of an entirely different nature from the remuneration of business ability, or the interest on capital, each of which is a supply price. This is not a supply price ; it is a surplus, a rent, analogous to the rent of land. Marshall therefore called it the quasi-rent of business ability.

But why quasi-rent ; why not simply rent ? The answer A quasi-rent. is that there is a difference between the two, which is both theoretically and practically of great importance. Quasi-rent profits are not, in most cases, due to any natural causes or inherent qualities in the things which the employer uses. They are rather due to some special ability on his part, or some special chance which is of human agency ; and this involves an important result. The inherent qualities of the soil, which are the cause of real rent, are permanent ; they may be modified by human agency, but cannot be obliterated ; and so long as they remain, rent will remain, for rent is a surplus due to the possession of a superior instrument ; and as long as any superiority remains, rent will continue. But the quasi-rent of the employer is different. His superiority is partly the result of chance, and is not a monopoly. It is likely to be more or less temporary, because his secret will soon be discovered, if, indeed, it be any secret at all, and competitors will come forward to get the benefit. The result is that his superiority vanishes, because every Its imper-
manence. one else has taken up the same idea, and his quasi-rent vanishes with it. The competition of the new supply soon forces him to cut his price and sacrifice the extra profits which he was making at first. Thus the quasi-rent profits are like rent of land, because they are of the nature of a surplus, but they are unlike land rent, first, because they are not due to any natural or inherent superiority, but mainly to chance, and second, because, from their very nature, they are only temporary.

This difference between quasi-rent and real rent results in a peculiar position ; these quasi-rent profits may actually become a negative quantity. It has been shown how difficult it sometimes is for the employer to shift his capital from one trade to another, and this has a direct effect on profits. If a trade is depressed,

Negative
profits.

so that the rate of profits is steadily falling off, the result will be, in the first place, that the quasi-rent profits disappear; then if things continue dull, the employer finds his profits shrinking still further, till, after paying interest on capital, etc., he has not his own £600, his supply price, left clear. That is unfortunate, but he cannot help it, and half a loaf is better than no bread. It is better to keep the place running at cut prices which cannot bear their due share of oncost, than to close the place down even temporarily, when the whole of the oncost charges would become dead loss. Short of accepting prices actually below prime cost, he is better to carry on if he can, and hope that the depression will pass before his reserves and his credit are completely exhausted. To close down permanently would be the final confession of failure, involving complete ruin. He has made himself responsible for £10,000 worth of capital, all of which is sunk in the business; and most of it is irrecoverable, because to clear out the machinery would involve selling it for scrap iron and getting practically nothing for it.

The
employer's
loss.

What is he to do, then? He must choose the lesser of two evils—go on and let his profits go. The capitalist may have to bear his share of the loss by accepting a lower rate of interest or going without altogether for a time; but the employer's profits are the first to fall. Instead of making a surplus or quasi-rent over and above his supply price, he is now actually making less than his supply price, less than he used to earn as an employee elsewhere. His quasi-rent has become a negative quantity; his surplus has become a deficit.

Of course, this state of affairs cannot be normal. If a trade sinks into that condition permanently, capital will be withdrawn from it, whenever possible; at least no new capital will go into it, and the trade will gradually die out. But it has been the experience of many trades in past years, and it always will be the experience of the worst manufacturers in any trade, when their rivals are adopting new methods; the owners of the older mills who cannot or will not adopt the new labour-saving

and economising ideas must go to the wall. They may struggle on for a time at a loss, but unless they change their methods the end is certain.

It is just this speculative character of business, the "hit or miss" aspect of it, that appeals to a certain type of men, like a game of chance. There is the feeling of staking one's wits and skill, and knowledge of the trade and of the world, against all comers, and coming out on top. It is the sheer desire to excel, which is one of the strongest motives in human nature, as well as the resulting profit, that appeals to these enterprising spirits, to whom a safe job with a good salary and even a pension would not appeal at all. They would rather take a big risk, with the chance of making a big success out of it, than keep on the dead level of safety with nothing to be gained by doing one's best, or better than the man next door. If this adventurous spirit can be combined with the professional spirit in business and industry, by cultivating the feeling that the highest reward a business man can seek is a reputation for the character of his goods as well as for generous dealing with his employees, and that this may be attained along with a competence for himself and a fair return to his shareholders, then there will be hope for business as the greatest and most fascinating of all professions.

The element of luck.

The professional ideal in business.

This finishes the last of the four factors of production, and looking back over them, a striking difference calls for notice. In dealing with land it was shown that the yield of nature to man's labour is ruled by the law of diminishing return, or as the writer prefers to call it, the law of increasing cost. But now, looking back over the human factors of production, labour, capital, and organisation, there is apparent an entirely different tendency, which is called the Law of Increasing Return—*the greater the amount of labour and capital applied to manufactures the greater in proportion is the return received.* This is the result of the economies of large production, the advantages of the factory system of production on a large scale, and by analogy it would be better described as the Law of Decreasing Cost.

Law of increasing return or decreasing cost.

Effect on
cost of
production.

This law, then, acts contrary to the law of diminishing return or increasing cost, and these two laws exercise an important effect on cost of production. If the selling value of an article, such as a woollen shirt, consists largely of the price of the raw materials, then an increased demand will raise that price and consequently the total cost of production. But if the proportion of raw material is comparatively small, as in most mechanical goods such as a typewriter, and the bulk of the cost is in the manufacturing, then the greater the output the lower will be the unit cost of the article. In other words, the more of these goods the public can be persuaded to use, the more cheaply the manufacturer will be able to turn them out. The outstanding case to-day is the Ford motor car. Because they are sold so cheaply, the public buys so many of them that the output of the works is incredibly large, with the result that costs are cut down to such an extent that it pays to sell them at the price; there is the beneficent circle of large-scale production.

Laws of
supply.

These, then, are the Laws of Supply: (1) The quantity of any commodity produced depends on the price obtainable for it, but (2) the effect of increased production on price depends on whether the cost of the article is mainly the value of raw material, or mainly the cost of manufacture. If the former, then according to the Law of Increasing Cost, the greater the quantity required, the higher the cost of production will go; but if the latter, then the greater the output, the lower will be the unit cost of production.

MARSHALL, *Economics of Industry*, Book IV. chaps. viii.-xiii., Book VI. chaps. vii. and viii., and Appendix C.

MARSHALL, *Principles of Economics*, Book IV. chaps. viii.-xiii., and Book VI. chaps. vii. and viii.

CHAPTER X

DEMAND

The nature of human wants—Law of diminishing utility—Marginal and total utility—Demand price—Law of demand—Marginal utility of different commodities—Marginal utility of money—Elasticity of demand—Consumer's surplus or rent.

IN dealing with supply, especially of the products of land, the idea of the margin has been explained, with the rather elaborate terminology with which Marshall invested it. The next step is to see how he developed the application of similar ideas to the other side of the equation, demand or consumption, using analogous terminology. Just as, in the case of land, the whole theory was based on a natural law called the Law of Diminishing Return, which regulates nature's part in production, so on the side of demand the whole theory is based on a law of human nature, called the Law of Diminishing Utility, which regulates man's desires in regard to commodities of all kinds. Demand is based on human desires; it is the expression of human wants, and might be described as effective desire. It means something more than the mere hopeless wish for things which one knows one can never afford. It is rather that one means to have the thing, if the price is at all reasonable.

The inquiry into the nature of human wants brings out two main characteristics—(1) Human wants as a whole are absolutely unlimited; there is no end to human desire for commodities of all kinds. The development or growth of human wants is a process of evolution, because every want leads to efforts to

Analogy of supply.

Nature of human wants.

Wants and
activities.

satisfy it, and these efforts develop new powers in man. These again give rise to new wants, suggested by the new powers of production, and these again lead to new activities and new powers, and so on in a never-ending progression. It is like an expanding spiral; as man rises in the social scale and his powers over nature increase, his wants increase continuously in number and intensity. Take the simplest example of primitive man's requirements in food. At first he is content with the fruits which nature offers with the minimum of effort, such as nuts and berries growing on low bushes or cocoanuts found on the ground. As the supply of these becomes exhausted, he finds a method of climbing the tree to get more cocoanuts, and then he finds that there are other trees to climb, and that climbing is useful for other purposes than the search for food. He sees fish in the shallow waters, and invents a hook and line with which to catch them; then led by the desire to follow the fish into deeper water, he invents a raft, which he finds useful for other purposes in moving about over the water. The application of fire to food opens up new possibilities, and so on. In our own day men have been doing the same kind of thing when they developed the possibilities of cheap marine transport, and extended our food supplies enormously both in quantity and variety, especially when refrigeration enabled them to carry perishable commodities from the ends of the earth. The same is true of every other want. Our notions of housing, clothing, decoration, recreation, travel, literature, and everything that makes civilisation, are the result of centuries of development; every new discovery suggests new uses to which it can be put, of which perhaps electricity (especially wireless) and petrol are the most striking in modern times.

Evolution
of new
wants.

(2) On the other hand, each separate human want is strictly limited. The amount of any commodity which a man can consume or enjoy within any period of time is limited. He cannot eat or drink more than a certain quantity at any one time. One can always have too much of a good thing. No matter how desirable a thing may be at first, there is a certain

quantity of it which is enough ; more than that would be useless, or even positively distasteful. This fact of human nature Marshall dignified by the name of the Law of Satiabie Wants, but it is doubtful whether it is really worth it. It is not a law in the proper sense of the word ; but it does lead up to a very important statement or law. This limit of capacity to enjoy, or point of satiety, is not reached all at once after a period of uniform enjoyment ; on the contrary, the point of complete cessation of desire approaches gradually ; the more a man has of any commodity the less anxious he is to get more of it ; the more he has already consumed, the less keen is his appetite. In technical terms the amount of utility derived from each new increment or addition to one's stock becomes less as the stock increases, or, in other words, the more one has already consumed of a particular commodity the smaller is the satisfaction to be derived from the consumption of a further quantity. Here, then, is the first step in the development of the theory of demand, which is called the Law of Diminishing Utility : *every addition to one's stock of any commodity gives less additional pleasure or utility.*

Each want satiable.

Law of diminishing utility.

It will be remembered that the corresponding statement of the law of diminishing return from land was qualified by the preliminary words "beyond a certain point", and some economists have thought fit to apply the same idea here, by pointing out that there is a similar period of increasing utility before the downward movement begins. Thus they say when a man is very thirsty, an exceedingly small quantity of water is of little value to him ; it is simply tantalising his thirst ; not till he can command a considerable number of these small doses, sufficient to make one good drink, does he get any real satisfaction out of it. This is theoretically true, but it is rather an unnecessary refinement of the idea, and may be merely noted in passing.

Marshall then proceeded to clothe this idea of diminishing utility in a uniform of terminology following the analogy of land. The last addition to one's stock which is just worth having he called the *marginal increment*, and the utility derived from it,

Terminology.

The margin
again.

the *marginal utility*. Jevons, Marshall's predecessor in the introduction of this idea to English Economics, called it the final utility. It is obvious that this marginal utility will be extremely small; it is the last of a series of descending units of utility; and the aggregate of these diminishing utilities will be much greater than the amount which would be arrived at by multiplying the marginal utility by the number of units. In order to represent this last idea Marshall coined the name *Total Utility*, which is *the sum total of the decreasing utilities of all the increments from the first down to the last or marginal increment*. This idea may seem of little practical use in the meantime, because it is impossible to measure each of these decreasing units of utility, and therefore their total; but the idea is made use of later on in a practical way, and must therefore be remembered.

Total utility.

Turning to the practical application of this idea of marginal utility to the determination of price, it is obvious in the first place that if a commodity were to be had for nothing, every man would go on adding to his stock of it, until at last he had so much that he would not wish to have any more of it, even for nothing. It might be a long time before he reached that point (what is the limit of a boy's capacity for strawberries or ices?), but sooner or later there would come a time when he already had as much as he could possibly consume, so that more would be absolutely useless, and to be compelled to consume more would be positively distasteful or even hurtful. The marginal utility in this case would be the smallest possible; the utility of the last increment, which was barely worth having, would be just above zero.

Marginal
utility and
price.

In real life, however, men have to pay for most things that are worth having, and the law of diminishing utility must be applied to actual conditions. As before, every new increment to his stock of any commodity gives the purchaser less additional pleasure. The more he has already, the less anxious he is to increase his stock, and the lower will be the price he is willing to pay for a further supply. As the utility of each new increment decreases, the point gradually approaches at which the utility derived from another increment will be *less than the price it costs*.

Clearly the wise man will stop just before he reaches that point. It would be foolish to buy more, when the utility he might derive from it is less than the price he has to pay for it, or in common language when it is not worth the money. The price paid for the last increment is his *marginal demand price*.

Marginal
demand
price.

It is clear that if the price of an article is small, the marginal purchase will not be reached for a long time, whereas if the price is high, the limit will be reached much sooner. If it were usual to buy things one by one, bargaining with the seller afresh every time, and only being tempted to buy one more by his offering to reduce the price, it would be easier to realise the working of this process of adjustment of the quantity purchased to diminishing utility and price. As a matter of fact there are cases in which one buys on such a system, viz. in buying by Dutch auction, where the auctioneer begins with a high price and works downwards till he finds a bidder. If a large stock were put up in this way *one at a time*, the result might easily be that one buyer would pay a series of diminishing prices for his various purchases; but even there he would ultimately reach a point at which he would not want any more at any price.

Dutch
auction.

That, however, is not the usual method of doing business. Prices are fixed and advertised; and men buy more or less according to their needs or desires, and the price. But the theory above described is at the back of their mental process all the time. If the price is high they will buy none at all, or only a very little; if the price comes down they will buy more. The idea of "demand price" is that at each price there is a certain quantity the consumer will buy, and that quantity increases as the price falls. This may be represented by what is called a *demand schedule*, showing how at different prices a man would be willing to buy different quantities of any commodity; the higher the price the smaller will be his demand. On applying this idea to the whole community, by aggregating the various demand schedules of all the individuals who constitute the market, it is possible to construct a composite demand schedule of the whole market. From this a general *Law of Demand*

Market
demand
schedule.

Law of demand.

emerges. *The greater the quantity of any commodity offered for sale, the lower will be the price it will fetch*; or to put it more definitely from the point of view of the buyer, the greater the quantity the seller wants to dispose of, the lower will be the price at which he must offer it, in order to tempt sufficient buyers; or briefly, *the lower the price, the more will people buy*.

Marginal consumption fixes price.

The effect of this law on price is obvious. The price which merchants can get for a commodity depends on the supply. If they have a large quantity to dispose of, they must make the price small, so as to tempt plenty of buyers. If they have only a small quantity to dispose of, they will be able to get a high price for it. Or, to put this into economic language again, it is marginal utility, the demand price of the marginal consumer, that fixes price, from the side of demand. It is the marginal consumption that the merchant must consider. Every time the price is lowered, it brings in other buyers who were unable to buy at the high price, while at the same time it tempts those who were already buying a little to buy more. The lower the price, the wider is the area of demand, because the margin is pushed further out. The shopkeeper, therefore, must so adjust his price that the demand will equal the supply. To do this he must know the demand schedules of all his customers, so that he can estimate the demand schedule of the whole market; for the demand schedule of the market is the aggregate of the demand schedules of all the individuals composing it.

Marginal utility of different uses

Another practical application of the idea of marginal utility will be found in considering the comparative utility of the different uses to which a commodity can be put, or the comparative utility of different commodities to one individual. It has been shown that a person, considering how much of a certain commodity he ought to buy, will carry his purchases just so far that the utility of the last increment purchased will be at least worth the price he pays for it. As a matter of fact he generally stops much sooner than that. Often he has to be content with only a small quantity of a particular commodity of which he would like to have more, and which is very well worth

the price (that is to say, the marginal utility is greater than the price) because he "can't spare the money". The explanation is that there are other things which he also wishes to buy, but which he would have to do without if he bought too much of the first commodity, and a little of these others is *better* worth the money than a further supply of the first. In other words, he considers the marginal utilities of the different commodities upon which he might spend his money, and buys just so much of each as to get the greatest possible total utility out of his expenditure. He does this by so arranging his purchases that he gets the same marginal utility, or the same excess of marginal utility over price, for his last increment of each commodity. If he buys too much of one thing, then according to the law of diminishing utility, the utility of the last purchase of that commodity will be small. It would have paid him better to spend the price of that last increment on something else, of which the utility would have been greater because he had not so much of it.

or different
com-
modities.

A particularly difficult application of the idea of marginal utility is that in the case of money. How can it be said that the value of money is subject to the law of diminishing utility? Can any one possibly have too much money? The difficulty is due to the fact that money is not one commodity; it is a concrete representation of every commodity that money can buy. If money were merely pieces of gold which could only be used for hanging round our necks or on our watch-chains, the limit of its usefulness would very soon be reached. But when it is remembered that money means power over goods, that these coins can be exchanged for almost every kind of enjoyment or satisfaction, then it is apparent that it is almost impossible to reach the point of satiety. The idea of marginal utility, however, does apply even to money, in this way, that the value of money is obviously greater to a man who has little than to one who has a great deal. A wealthy man will think nothing of spending a pound, while to a poor man it is a large sum, not to be laid out without careful consideration of the different uses to which it

Marginal
utility of
money.

might be put. Thus the marginal utility of money does vary according to the amount of it one possesses, just as is the case with other commodities.

Bringing
it home.

It is very difficult to make the young student or the layman see the practical value of this theory of marginal utility; it may seem simple enough as an academic theory, but as an actual explanation of how the ordinary man's mind really works it is by no means easy to realise. It is very desirable, however, that they should understand it in this way, because it is the best example of what Economics mainly sets out to do, namely, to make a science out of everyday life. This theory is not merely a piece of fanciful argument, but the actual truth of what unconsciously happens in our minds; it is a statement in scientific terms of the mental process which lies behind every purchase. It is therefore desirable to try every possible method of bringing the thing home to the mind of the student, and there are two ways of doing so which are worth attempting, namely, the arithmetical and the diagrammatic methods, which may be briefly described as follows:

Arithmetical
illustrations.

For the arithmetical method it is first of all necessary to get some way of expressing the idea of diminishing utility in simple arithmetical form. Thus, suppose that the maximum number of apples which a boy can consume at one sitting is ten, then the diminishing utilities of the ten¹ may be represented by the numerals 10, 9, 8, 7, 6, 5, 4, 3, 2, and 1. It is obvious that the marginal utility of the last of the ten apples, which is just worth having, is represented by the smallest number above zero, namely, 1; but the aggregate of the utilities of the ten apples, or the total utility of apples to the boy at the time, is represented by the aggregate of the ten descending units, and that is 55.

At the beginning of the season apples will be scarce and the

¹ It is not necessarily true that the rate of diminution would actually be as regular as that; perhaps the first two would come very close together, while the subsequent fall of utility would be more rapid, say 20, 19, 17, 15, 12, 9, 7, 5, 3, and 1, but that complication may be ignored in the meantime

price high, and only those boys who have plenty of pocket money will buy any at all. But as the season advances, prices will fall, and more and more boys will be able to buy, while those who bought a few at the high prices will buy still more. There is an arithmetical method of expressing this and correlating it to the idea of diminishing utility. Suppose that the scale of diminishing utilities is in farthings, which means that the first apple would be worth $2\frac{1}{2}$ d., the next $2\frac{1}{4}$ d., and so on, till the last one was worth only $\frac{1}{4}$ d. On this assumption one can build up a demand schedule for an imaginary boy who, being well supplied with pocket money, declines to think in farthings. His notions of the value of apples may be put in this way :—

At $2\frac{1}{2}$ d. each	he would buy only one.
At 2d.	” ” two.
At $1\frac{1}{2}$ d.	” ” four.
At 1d.	” ” eight.
At $\frac{1}{2}$ d.	” ” ten.

Individual demand schedule.

But he is only one of many boys ; others who have less money to spend will have different ideas of the value of it (though they are just as fond of apples), and so one may select five boys typical of different grades of affluence, and build up a composite demand schedule of these five as follows :—

TABLE A

	Total.
At $2\frac{1}{2}$ d. A will buy 1, B none, C none, D none, and E none	= 1.
At 2d. A ” 2, B 1, C none, D none, and E none	= 3.
At $1\frac{1}{2}$ d. A ” 4, B 2, C 1, D none, and E none	= 7.
At 1d. A ” 8, B 4, C 2, D 1, and E none	= 15.
At $\frac{1}{2}$ d. A ” 10, B 8, C 4, D 2, and E 1	= 25.

By adding this list horizontally it appears that the shopkeeper will sell to these five boys the numbers of apples shown in the total column, namely, 1 at $2\frac{1}{2}$ d., 3 at 2d., 7 at $1\frac{1}{2}$ d., 15 at 1d., and 25 at $\frac{1}{2}$ d. each.

The next step is to create out of these five boys and their supposed demand a “market demand schedule” showing what the shopkeeper will be able to sell to all his customers at these different prices. This is done by assuming that the five

Market demand schedule.

boys represent five different classes of buyers, but the numbers of each class will vary ; there will be very few like A, but a good many like C and D, and still more like E. The number of each class may be represented by a scale as follows. Of A there may be 5, of B 10, of C 15, of D 25, and of E 40. Out of these figures one can now construct the market demand schedule as follows :—

TABLE B

Price.	A (5).	B (10).	C (15).	D (25).	E (40).	Total (95).
2½d.	5	..	..	..	..	5
2d.	10	10	..	..	..	20
1½d.	20	20	15	..	..	55
1d.	40	40	30	25.	..	135
½d.	50	80	60	50	40	280

Here, then, is a definite guide to the shopkeeper. If he wants to sell 280 apples he must make the price ½d. each ; if he has only 55 to sell, he may make the price 1½d. each and clear his whole stock at that price.

An actual case.

Another illustration, namely, strawberries, may bring the matter home more clearly to the other sex. At the beginning of the season when only hothouse-grown berries are available the price may be 5s. for a small basket, which puts them quite beyond the reach of the ordinary housewife with a family to feed ; she is not interested until the price comes down to about a shilling a pound, at which price she may buy a couple of pounds as a treat. But when the price falls to eightpence, they appear on the table frequently, and at sixpence everybody can have about as many as they want. At fourpence she begins to buy them by the large basket for preserving, and if owing to a favourable season they fell still lower to, say, 3d. per lb. she would (if she had time, and sugar were at pre-War prices) make a good supply of jam for the winter. All through this process she is applying the theory of diminishing utility at every step.

Next comes the more difficult (and more interesting) application of the idea to the marginal utility of different commodities. Suppose that there are four commodities of which the maximum demand, at a price of, say, a shilling per lb. each, would be respectively 10, 8, 6, and 5 lbs. Then the diminishing utilities of these four commodities may be represented thus :—

Marginal utility of different commodities.

TABLE C

	1st.	2nd.	3rd.	4th.	5th.	6th.	7th.	8th.	9th.	10th.	Units of each Commodity.
A	10	9	8	7	6	5	4	3	2	1	} Diminishing utilities of each commodity expressed in shillings.
B	8	7	6	5	4	3	2	1	..	..
C	6	5	4	3	2	1	..	..	..	..
D	5	4	3	2	1	..	..	..	..	..

Now if the housewife has only, say, 17s. to spend, and wants to get the best value for her money, she must divide her expenditure over the four commodities in such a way that she gets the best total value for her money ; and to find out how she does that one must bring in again the idea of Total Utility. By a simple process of trial and error it will be found that the best application of the money is as follows :—

Household budget.

7s. spent on A	gives a total utility represented by	49s.
5s. " B	" "	30s.
3s. " C	" "	15s.
2s. " D	" "	9s.
<u>17s.</u>		<u>103s.</u>

It will be found that no other combination of the figures will give so high a result in total utility. But how is this result arrived at ; is it merely a lucky guess, or is there a method in it ? The reason will be found on examining the number of units bought of each commodity, and the position which that number reaches in the descending scale of utility—the marginal utility

in each case is the same, viz. 4s. Here, therefore, is the rule with regard to the marginal utility of different uses: in order to get the maximum utility out of her total expenditure, she must carry her purchases of each commodity to such a point that the utility derived from the last pound purchased, in other words, the marginal utility, is the same in each case. If she had bought a pound more of A, the additional satisfaction derived would be only 3s., but by doing so she would have to do with a pound less of B or C or D, each of which would have been worth 4s.

At different prices.

The problem becomes still more complicated if different prices are taken for the four commodities, which of course brings the illustration more into accordance with real conditions. The result, however, is similar. The following Table represents such a case:—

TABLE D

No. Bought.	Unit Price.	Total Price.	Marginal Utility.		Total Utility.
			As shown in Table C.		
4 A . . .	5s.	20s.	7s.		34s.
3 B . . .	4s.	12s.	6s.		21s.
2 C . . .	3s.	6s.	5s.		11s.
2 D . . .	2s.	4s.	4s.		9s.
Totals .	14s.	42s.	22s.		75s.

In this case, as it happens, it is not possible to pick out a single combination which gives a better result than any other; it will be found by trial that there are several combinations which would give an equally good result, but none which will give better; and here again the result is not accidental. It is obtained by following a similar principle to that adopted in the first case; the marginal utility in each case is the same amount above the price, that is to say, the utility of the last pound purchased is in each case two shillings above the price paid for it.

The final test of this arithmetical method is whether it will bring out the idea of the varying marginal utility of money to

those who have much or little of it, and it does so exactly, for on examination of Table C it will be seen that if the housewife had more money to spend, the result would be that for each additional shilling she would get a smaller addition to her total utility than before; the marginal utility of the additional shilling is reduced because the additional expenditure carries her purchase in each case lower down the scale of diminishing utility. An additional shilling would only bring 3s. of additional utility as against the 4s. which she got out of each of the last 4 of her 17 shillings. Or taking Table D it will be seen that for an expenditure of 42s. she received commodities with a total utility represented by 75s., but if she had altogether 56s. to spend, the total utility of her purchases would only be 93s.; the additional total utility represents only 18s. for 14s. of additional expenditure. If, on the other hand, she had only 28s. to spend, or 14s. less than the original figure, the resulting diminution of the total utility would have been 22s. In other words, for the 14s. between 28s. and 42s. she received additional utility of 22s., while for the same addition of 14s. after 42s. she received only 18s. of additional value. Or to put it in another way, the last 14s. of her 42s. gave her a utility of 2s. more than the price she paid for each article, while the additional 14s. gave additional utility of only 1s. more than the price in each case. Still another 14s. would only bring her 14s. of additional utility, which is exactly the cost of the four commodities.

Turning now to the diagrammatic method, it is easy to construct curves representing (a) the individual demand schedules of the five boys—see Fig. 1, where the vertical line X Y represents the falling price, and the horizontal line X Z the increasing quantities purchased, the curved lines showing the purchases of each boy; and (b) the demand schedule of the market—see Fig. 2, drawn on the same principle.

It is difficult to apply the same form of diagram by curves to the problem of the marginal utility of different uses of the same commodity, but the idea may easily be illustrated by other forms of diagrams (columns of squares or blocks) which,

however, the reader may be left to work out for himself. The problem of the marginal utility of money may easily be worked out for a single commodity such as A in Table C, in a

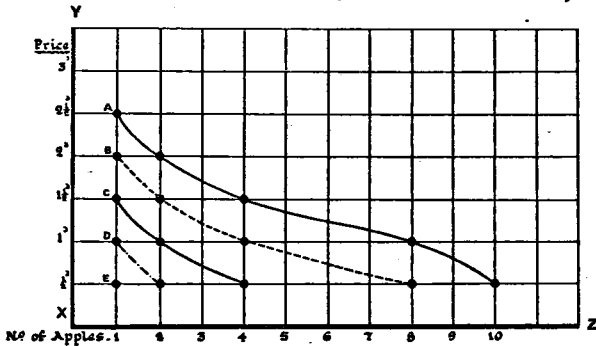


FIG. 1.—Illustrating the Demand Schedules of 5 Boys as shown in Table A, p. 117.



FIG. 2.—Illustrating the Demand Schedule of the Market as shown in Table B, p. 118.

diagram in which one line represents total utility and the other total price. The former rises rapidly at first, but soon tails off into a very flat curve, while the latter follows a straight line which finally cuts the total utility curve.

In considering how demand varies according to the price at which a commodity is offered for sale it is necessary to keep in view what is called the elasticity of demand. The effect of a change of price on the sales of a commodity may vary greatly. There are some things for which the demand would not vary much although the price rose or fell a good deal, while in the case of others a slight rise or fall in price would make a great difference in the amount sold. The demand for a commodity is said to be elastic when an alteration of the price makes a great change in the consumption. On the other hand, it is said to be inelastic when, although the price rises or falls considerably, it makes comparatively little difference in the turn-over. It is noticeable that demand is generally very inelastic in the case of the opposite extremes of absolute necessities or pure luxuries, or when the price of the commodity is either very high or very low, while elasticity is greatest when the price is moderate, or when other things are obtainable which serve the same purpose, that is to say, when substitutes are available.

This idea of elasticity of demand has been frequently illustrated by the effect of changes of taxation on different commodities; a big increase of the duty may cause such a fall in consumption as to produce actually less revenue even at the higher rate. This was the case with the high duties on cigars in 1921. In modern times the Chancellor of the Exchequer has found it necessary to maintain a fixed proportion between the duties on tea, coffee, and cocoa, because any relief to one would result in a transference of demand to it from the others.

The total utility of a commodity, as already explained, is the sum total of the diminishing utilities derived from each additional increment to one's stock of a commodity, from the maximum down to the marginal utility. It may seem, however, that this idea is not of much practical use, because no one can measure the total utility of a commodity, nor indeed anything but the marginal utility. It is impossible even to guess how much we would give for one glass of cold water on a hot day in the desert;

its utility would be inestimable. It is equally impossible to estimate exactly the money value of the second glass, and the third, and so on. At the same time, there is one way in which a practical use can be made of the idea of total utility. When goods are bought in the market, the price paid for each commodity is not fixed by the total utility derived from it. One does not pay so much for the first increment, a little less for the next, and so on. The price is the same for every article. Now if, as a matter of fact, men can get for a very small price something for which, if necessary, they would pay a very high price (though they would then buy less of it) it is apparent that it is an advantage to get it at the lower price. This advantage may be indicated by estimating in some way the total utility derived from the actual purchases of the commodity, and comparing this with the price paid for them. There is sometimes a great difference between these two values, and this difference Marshall called consumer's rent or surplus. It is the difference between the price which one would be willing to pay for a commodity rather than do without it, and the price which one actually requires to pay; that is to say, it is the difference between the total utility and the price, which is fixed by marginal utility. The practical importance of this idea is best seen when comparing prices in different countries, or the general conditions existing in the same country at different historical periods, as, for example, the price of salt in England as compared with the price in India. The War brought this home to people in every country, when the enormous rise of prices and the sheer impossibility of getting what they wanted of everyday necessities, such as sugar and matches, made them realise how well off they were in pre-War days.

Consumer's
surplus or
rent.

MARSHALL, *Economics of Industry*, Book III. and Appendix B.

MARSHALL, *Principles of Economics*, Book III.

CHAPTER XI

THE EQUILIBRIUM OF SUPPLY AND DEMAND

Market price—The meaning of a market—Law of markets—Short-period price—Normal price—How it is fixed—The mutual margins.

THE preceding chapters have been preparing the ground for the discussion of the problem originally stated in Chapter III., which is the crux of the whole matter, namely, How are prices fixed, by supply or by demand? It was stated there in anticipation that the answer was, by neither alone but by both acting upon each other, and that the comparative influence exerted by one or the other varied greatly in different cases, according to circumstances or the nature of the commodity. It is now possible to test and amplify that answer in view of all that has been said with regard to supply and demand separately.

Our examination of supply and the factors of production has shown that there is a law of supply which in effect states that the supply depends on the price; if a sufficient price is offered, the supply will be forthcoming; if the price is too low, the supply will be reduced. On the other hand, the law of demand is that the demand also depends on the price; if the price is high the demand will be small, while a low price will induce a big demand. It is obvious that these two laws are mutually opposed; supply works one way, and demand the other. How, then, are they brought to balance each other, or how is the point settled at which the two opposing forces will be equal? For market price is the price at which supply and demand are equal; it

How prices are fixed.

Opposing laws of supply and demand

must be
balanced.

must be such that the demand at that price will be just sufficient to take off the supply at that price. In technical terms it is the price which "equates" supply and demand. How is this price arrived at which produces the equilibrium of supply and demand? It is like a man carrying two baskets on opposite ends of a pole slung over his shoulder; the only way to carry them comfortably is to balance them by the principle of leverage. If the weights are unequal he will adjust the difference by resting the pole on his shoulder a little to one side of the centre, nearer the heavier of the baskets. If anything happens to vary the relative weights of the baskets, he will instinctively readjust the equilibrium by moving the pole on his shoulder a little one way or the other. Or to change the illustration: take a child's see-saw swing with a number of children jumping on or off at each end. The boy in the middle will throw his weight one way or the other according as the weight of those at each end varies. He represents the effect of market price on supply and demand; while the boys at each end represent the mutual reaction of supply and demand on market price. If an extra boy jumps on at one end the boy in the middle must throw his weight more to the other end. Thus in the market the effects of price on supply and demand, and of supply and demand on price, are mutual and counteracting. How, then, in actual practice does this system work to maintain the equilibrium?

Meaning of
"market".

The answer is apparently simple; market price is arrived at by the haggling of the market; but that only raises the further question of what a market means and how it works. A market is a place where buyers and sellers come together, so that the forces of supply and demand are allowed to play upon each other until they come to equilibrium. Thus a market has been defined by Marshall as *any area in which buyers and sellers are in such free communication that prices tend to equate easily*. That explains more fully what Jevons implied in his Law of Markets, that *in the same market there cannot be two (different) prices for the same commodity*.

This idea of a market, however, requires further examination,

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because in ordinary language the word is used in various senses. Every one in England at least is familiar with the public retail markets of most large towns, large buildings or open spaces in which certain commodities, especially perishable goods, are offered for sale on market days, where many sellers have stalls, and all the would-be buyers come to buy. Sometimes, however, the market is confined to wholesale merchants, and only one commodity is dealt in ; it is then generally called an exchange, such as the Coal Exchange, the Corn Exchange, the Cotton Exchange, etc. But the word market is also used in Two ideas. another sense, when speaking, for example, of the market for cotton, or the world's market for wheat. There the word is used in a wider sense to indicate the whole area over which the consumers and producers of a community are spread, and that area in the case of staple commodities is the whole world.

This distinction indicates a real difference of meaning. By a market in the one sense is meant the place in which the buyers and sellers meet ; the other use of the word means the buyers and sellers themselves, the aggregate of the world's demand for the commodity, and the total world's supply. But the same idea lies behind both definitions ; in each case the fundamental thing is that buyers and sellers meet or are in free communication. This is the real object of a public market ; all the buyers and sellers want to meet each other, and *all together*. Each buyer wants to see many sellers, because he wants to compare the prices charged by all of them, and find out the cheapest. On the other Common source. hand, all the sellers want to see each other's stalls, because each one wants to know what prices the others are charging, so that he may avoid the opposite dangers of selling his goods at lower prices than is necessary, or on the other hand charging too much and finding himself undercut by his rivals and thus losing business. That is what free communication means here ; it is mutual knowledge by all the buyers and all the sellers, of the prices that are being charged on every stall in the market. The same holds good of a world's

market. Every buyer wants to know all the sources of supply and the prices charged, so that he may buy in the cheapest market. Every seller wants to know the best market for his goods, that is to say, the market where the demand is greatest and the price highest.

Free communication.

In a world's market, however, free communication means something more than mutual knowledge; it requires also mobility, both of supply and demand. It means that every seller can choose the best market when he knows it, and can send his goods there; and that every buyer can go to the cheapest place to supply his requirements. Then the whole area is really one market; because the effect of this free communication in the double sense must be that there will be one uniform price throughout the whole area (allowing only for the cost of transport), because if prices are higher in one market than another, the buyers will tend to leave that district, while the sellers will pour their supplies into it as quickly as possible. Thus the whole question of the character of a market turns on this point of free communication in the double sense.

Considerations of space and time.

Next, it must be pointed out that the extent of a market may be regarded from two points of view, viz. the area covered by it, and the period of time involved; or in technical terms, the extent of a market varies both in point of space and time. The former has already been explained; a market may be confined to the area of the town in which it is situated, including more or less of the surrounding district, or it may be world wide. In point of time a market may last only a day, as in the case of perishable goods which must be sold and consumed at once or they will go bad; or it may be continuous, as in the case of staple crops, of which the supply goes on from one season to another; or it may last practically for ever, in the case of such goods as famous works of art, which should last centuries if properly cared for, and will always command a market unless some change of taste destroys the demand for them.

The considerations which affect the extent of a market

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in these two senses may be briefly summarised here as follows :—¹

(1) *Space*.—To command a wide market a commodity must be—

(a) An object of general demand, like rubber or steel.

(b) Easily described, sampled, or graded, so that a man proposing to buy a certain lot of the commodity may have it described to him exactly, and in a way which he can understand readily and without any doubt as to what the seller is offering. This makes it possible to buy and sell without actually seeing the goods in bulk, as, for example, corn by seeing only a sample, or cotton by description or "type", but one could hardly buy a horse by description.

(c) Portable. Its value must be fairly high in proportion to its bulk or weight, so that the cost of transport is not excessive.

(d) Durable, that is to say, neither fragile nor perishable, so that transport over long distances, which involves considerable time and perhaps rough handling, may be possible.

(2) *Time*.—The considerations of time also depend to some extent on the nature of the commodity, but are more complex. The duration of the market for a commodity depends on :—

(a) Whether it is perishable or not, e.g. fish *v.* tea.

(b) The probable duration of the demand for the commodity. Is it a thing which is always likely to be required, such as wheat, or something for which the public have merely a temporary need, or for which they have taken a passing fancy?

(c) Is the supply limited to an existing stock, or is it a regular thing, capable of being estimated in advance and relied on as a regular periodic supply, like the world's crop of wheat or cotton; or, again, is it a case of manufactured goods of which the supply can be increased to any extent required?

The next step is to apply the idea of market price under the different conditions of the various kinds of markets above indicated. Take, in the first place, the simplest possible case,

¹ They have been more fully described in the *Mechanism of Exchange*, chap. iii.

A simple market.

that of a market confined to one small district and one short period of time, thus ruling out for the present all the considerations of space and time which affect markets in actual practice. Imagine a market for wheat in a small country town in which there is only one dealer, who buys from all the farmers round about, and sells to all the consumers in the town. To simplify the case still further, assume that the merchant buys and sells at the same price, thus leaving the question of his remuneration or profit entirely out of account in the meantime. This dealer knows all his customers; he knows how much each farmer has to sell, and how much each consumer needs to buy; he also knows what price each farmer expects to get and how much each consumer will be willing to give, and what quantities each will be willing to sell or buy, according to the price offered or demanded; that is to say, he knows their supply and demand schedules. Suppose, then, that, having all this information in his mind, he goes into the market on the morning of the weekly market day. He must find out the price which will equate supply and demand, and after looking round the market he estimates that

At 25s. he could sell 1500 quarters of wheat,

At 30s. he could sell 1000 " "

At 35s. he could sell 500 " "

while on the other hand he finds that

At 25s. he could buy 800 quarters of wheat.

At 30s. he could buy 1000 " "

At 35s. he could buy 1200 " "

How price is fixed.

Now the dealer's object is to buy just as much as he can sell. If he fixes too high a price, he will have more wheat offered to him than he can sell at that price, and will have some left on his hands. On the other hand, if he offers the farmers too little, he will not be able to supply all the consumers who would be willing to buy at that price. The higher his price, the more he will get from the farmers, and the less he will be able to sell. The lower his price, the greater will be the demand, but the less he will be able to get from the farmers. He must then fix his price at 30s. per quarter, because at that figure he will be able to

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buy just as much as he can sell. That is the price which equates supply and demand, the market price for the day, and it depends on the relation between the *present* supply and demand in that district. Assuming the conditions of the market to remain the same, and that nothing comes in from outside to disturb it, this market value will remain stable ; because, if the dealer raises his price, the effect will be to bring forward an increased supply and cut down the demand, so that he will be left with wheat on his hands ; if he lowers the price, the result will be an increased demand which he cannot meet, because the offer is too low to tempt the supply.

The next step is to bring in the actual conditions which affect market values in real life. For example, it was assumed that the market was confined to the buyers and sellers of one district, and that one dealer had the whole trade of the market in his hand. As a matter of fact, there are always many dealers bidding against each other, and the area of the market is never confined within such small limits. If the price of wheat in one district rose, owing to a short supply, sellers from adjoining markets would come in to get the benefit. Or, if in one country the cost of wheat was excessive, foreign wheat would soon come in, and competition would cut down the price.

The element of time raises still more difficult questions as to market price. Every market is ruled by considerations not merely of the present supply and demand, but also of future supply and demand. Our dealer, for instance, has to keep in view that, if he does not offer the farmers a good enough price, they will keep their wheat till next week or next month. In large markets, for staple commodities, especially manufactured goods, the considerations of future supply and demand are the main factors in the market. The price depends not only on prospective supplies of the raw material, but also on the probable future cost of manufacturing on a larger or smaller scale. The effect of all this on market price must be carefully worked out.

The question whether price is fixed by supply, that is by cost of production, or by demand depends mainly on the length of

Short-
period
price.

time involved in the market. In a short-period market the price depends almost entirely on demand, but long-period or normal price depends mainly on cost of production. Thus—

(1) Take first the case of an article which is absolutely unique, which cannot be reproduced at all, such as a picture by a famous artist now dead, or the first edition of a book which has become very rare. In this extreme case there is clearly no question of the cost of production; the price will depend solely on demand. Here is only one picture; the price it will fetch depends entirely on how many people want it, and how much they are willing to pay for it.

(2) Take the case of the local market for some perishable commodity, like the fish market in a small town. The fish are perishable; they must be sold at once. The price will depend on the supply of fish each day, and the number of buyers. If the supply is short, and there is the usual number of customers, the price will run high; but if there is a big supply, or if there are few customers, the price will fall. Clearly, price depends in this case on the temporary relations between supply and demand, that is, on the relation between the present demand and the available supply for the day. This is a short-period market. Notice, however, that even here the general level of prices from day to day must be sufficient on the whole to give the fishers a fair remuneration, their supply price, or they will have to seek other employment.

Longer
periods.

(3) Take now an example of a longer market. Suppose a sudden demand arises for some commodity of which the existing means of supply are comparatively limited. Those who are already making that commodity will do their best to increase the supply; but if they know that the demand is not likely to be permanent, they will not run the risk of building new factories or laying down new machinery for the purpose. Before they could do so, the demand would be falling off again, and the money would be lost. They will therefore continue to produce with their existing plant; the supply will not be very great, and while the demand lasts the price will remain high. In this case,

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then, price is ruled by the cost of production with the existing factors of production ; but if these are not sufficient to meet the demand the price may for a time rise considerably above the cost of production.

(4) The last case is where the commodity is one of common use, where the demand is permanent, and manufacturers can safely go in for supply on a large scale. Suppose that it is a new industry altogether. At first, the supply being small, the price will be high, and those who first went in for the trade will make large profits ; but, as time goes on, others will come into the trade ; new factories will be built, new and improved machinery laid down, and the supply rapidly increased. Every new factory means improved means of production and lower cost ; but as long as the total supply of all the factories is insufficient to meet the demand, that will not affect the price, which will depend only on how much the public are willing to pay. High prices, however, will tempt a still further increase of the supply, until at last the supply overtakes the demand, and competition sets in, with cutting of prices. Now is the time when the newest and best fitted factories have their advantage. Their cost of production, owing to their superior methods, is lower than that of any one else, and they can afford to undersell their old-fashioned opponents. As the competition becomes keen and the price falls, those who cannot produce at that price must drop out of the running ; they have fallen below the margin. If the supply is still in excess of the demand, the competition goes on steadily, till at last only enough producers are left to meet the demand, and the price is cut down to their actual cost of production.

In such a case clearly the ultimate or normal price is fixed by cost of production ; but it is the marginal cost of production. As long as the demand of the market is sufficient to require more than one producer, there are sure to be among the survivors varying grades of efficiency, and therefore differential costs of production. If the demand is such that all of these factories are required to meet it, then even the worst of them, the man whose

Normal
price

fixed by
marginal
cost of pro-
duction.

cost is highest, must get a sufficient price to cover his cost of production, while the others, whose cost of production is less, will be earning a surplus which may be either a real rent or a quasi-rent, according to the circumstances which gave rise to it. Thus, normal or long-period price is fixed by the marginal cost of production, that is to say, by the cost of production of the marginal producer for the time being, the man who, though not so good as his neighbours, is still needed to make up the total supply required by the market, the man who can just make ends meet.

Long- and short-period price.

It remains to consider how this normal price, when finally reached, will compare with the original or short-period price. That depends on the nature of the article produced, whether its production involves a large proportion of raw materials, or whether its cost is mainly cost of manufacture. Because, if its cost is mainly the price of raw materials, then the increased supply will mean an increased demand for these raw materials, and that, according to the law of diminishing return (or increasing cost), can only be got at an increased price. If, on the other hand, the cost of the article consists mainly of the expenses of manufacture, then it will be subject to the law of increasing return (or decreasing cost), and the greater the quantity manufactured, the lower will be the unit-cost of production, owing to the economies of large production. In such a case the normal or ultimate price will actually be lower than the original or short-period price.

The pair of scissors.

The question of how price is fixed, by supply or by demand, is therefore like the question, Which blade of a pair of scissors does the cutting? The answer is, Neither, but both together; but the share of each depends mainly on the period of time involved in the market for the commodity; in other words, the question is whether time is allowed for reproduction or increased future supply. If the commodity is one of which reproduction is impossible, then the price will depend solely on demand. If, to take the other extreme, the demand for the article is per-

EQUILIBRIUM OF SUPPLY AND DEMAND 135

manent and practically unlimited, and the supply is allowed time to adjust itself to the demand ; if there is ample time for reproduction, and for rearrangement and readjustment of all the factors of production, then the ultimate price will depend mainly on cost of production. Normal price, therefore, is fixed by cost of production, or, as some prefer to put it, by the cost of reproduction. Whether that cost will rise or fall as the supply of the commodity increases will depend on whether the production of the article is mainly subject to the law of increasing or of decreasing cost.

It is necessary, however, in view of subsequent developments of the argument, to emphasise the importance of the qualification, that it is the *marginal* cost of production that determines normal price. Just as on the side of demand it is the marginal consumer or the marginal consumption that fixes the price the public as a whole will be prepared to pay, so on the side of supply it is the marginal producer or the marginal cost of production that fixes the price which the public will have to pay. This idea of the mutuality of the margins is to the writer's mind one of the greatest contributions that modern economists have made to the development of economic science. These margins are acting and reacting on each other all the time, and it is that mutual and alternating pressure of the one on the other that swings prices up and down ; or, to put it in another way, the two are chasing each other round a circle the whole time. Suppose, for example, that for some reason the demand for a staple commodity increases substantially, the price rises and the result is increased production. At the same time the rise of price, if serious, checks the demand ; and the increase of supply produces competition among the sellers in a glutted market, stocks accumulate, and the price falls again. Immediately the demand, which was only checked by the high prices, begins to recover, while the fall of price has discouraged the growers. Now consumption exceeds supply ; stocks are drawn upon till they fall to normal again, and prices begin to recover.

Mutual
margins.

An endless
circle.

Cotton,

There could hardly be a better illustration of all this than the recent experience of the cotton trade. Owing to the depredations of the boll-weevil, the yield per acre of the American crop has been on the whole falling steadily and very seriously since 1914. After the Armistice in 1918 prices receded sharply, with the result that in 1919 the acreage was reduced, because cotton growing would not pay at these prices, with the high cost of production due to the reduced yield per acre. The small crop in 1919 was quite insufficient to meet the enormously increased demand during the post-War boom, and prices rose to unprecedented heights. The result was an increased acreage in 1920, and as the weather that season happened to be very favourable, the crop was the largest since 1914. This unfortunately coincided with the complete collapse of demand owing to deflation, with the result that the carry-over at the end of that season was the largest on record, and prices fell faster and further than they had risen. Once more the growers reduced the acreage in 1921, and that year the boll-weevil and the weather did their very worst, with the result that the crop was a calamitous failure. In 1922 and 1923 America had two more crop failures owing to weevil and weather combined, with the result that the demand, in spite of high prices on the whole, was enough to reduce the stocks once more below normal. But the high prices led to record acreages, and in 1924 a favourable season again produced a much better crop, though not quite large enough to allow demand to recover to normal pre-War dimensions.

Swing of the
pendulum.

Here, then, may be seen the constant mutual action of the two margins; the buyers are willing to buy largely if the price is reasonable, but are prepared to postpone demand or to restrict it permanently if prices go beyond their reach. On the other hand, the growers are willing to plant the biggest acreage they can possibly handle, if the price is sufficient to cover their enhanced cost of production; if not, they will reduce the acreage. And so it goes on, and prices fluctuate from one side to the other, sometimes driven to excess in one direction or the other by the

hopes and fears of the crop, or the anticipations of the speculators on either side of the market, but always responding in the long run to the fundamental facts of the situation, that if the price goes up demand will be restricted and the supply will increase ; if the price goes down the supply will be reduced and the demand will increase again.

This finishes our examination of the theory of prices or values. The exchange value of any commodity is what it will fetch in the market; but under modern conditions the price of most commodities, of which the supply is capable of increase, is fixed by the cost of production of the worst producer whose product is required to meet the total demand. In other words, price is fixed by the marginal consumer and the marginal producer, with a tendency, as long as supplies are unrestricted, for the normal price to settle around the marginal cost of production.

Price fixed
by the two
margins.

MARSHALL, *Economics of Industry*, Book V.

MARSHALL, *Principles of Economics*, Book V.

CHAPTER XII

THE THEORY IN PRACTICE

Costing difficulties—Oncost—Temporary scarcity and profits—Errors in anticipation—Trade cycles—Rent of land and others—Negative rents.

THE preceding chapters have outlined the modern theory of value, which is in effect that normally the prices of most things, especially manufactured articles, are fixed by the marginal cost of production. The next thing is to see how the theory works out in practice. There are of course, as has been indicated in the course of the statement, many exceptions to this theory; the question is whether the exceptions merely prove the rule, or whether they are so numerous that the rule is of little value. To put it in another way, is this supposed normal price ever stable for long enough to deserve the name normal at all?

Some exceptions.

In the first place, some of the exceptions to the rule may be noted as follows:—

(1) Even in these days when costing has become almost an exact science, and is much more general than before the War, how many manufacturers really know the correct cost of *each item* of their varied production? It used to be said that most manufacturers knew so little of their costs in detail that it would often be found that while they were making money on the whole, some of the articles they produced were actually being sold at a nett loss. That is much less likely to-day; yet there may still be cases where, owing to the difficulty of exact costing, and the amount of trouble it involves in the

Unit cost not easily known.

factory, there is really a good deal of guess-work in fixing the cost of each unit produced. The old-fashioned manufacturers were more concerned with the price they could get for the article than what it cost them to produce. Their job, they said, was to make the best of a bad bargain by getting the highest price they could out of the buyer, and then making the thing as cheaply as possible. Thus in the cotton trade it has repeatedly been alleged since 1921 that so many weak sellers were cutting prices actually below cost, that margins were reduced to vanishing point, and the trade as a whole was running at a loss. That, of course, cannot last for ever, even if it were true; but it seems to show that for quite long periods a whole trade may be forced to sell at prices which certainly do not cover the whole of the oncost.

Selling below
cost.

(2) On the other hand, when trade is good and prices are very much in the hands of the sellers, or where one manufacturer has made a lucky hit, either through good luck or good guidance in buying his raw materials, or through some lucky strike in a new design or style of fabric, so that he can sell all he is fit to produce at a profit which increases more rapidly than his sales; or again, where owing to a temporary scarcity of supply, such as housing, the fortunate owners of the limited supply can practically dictate terms to the buyers, in all these cases obviously cost of production has very little to do with the price for the time being. Whether that time will be long or short depends on circumstances, but while it lasts the theory seems to be in abeyance; and if, as in the case of housing, the new supply is very slow in coming forward, the consumers may be forgiven for thinking that the exception matters more than the rule. England had very bitter experience of that during the War and the post-War boom, when cost of production was apparently ignored, and manufacturers seemed to be able to charge any price they liked.

Scarcity.

(3) It has been shown that the characteristic of modern conditions is that manufacturers have to make goods for a market distant in time as well as space; they have to anticipate the probable wants of the consumers, and to create a supply to

meet the demand they expect, and that is not easy, especially if they are dependent on future supplies of raw material, which also they must estimate in advance. Such a system necessarily involves great possibilities of error in anticipation, and not only on the side of supply. Thus the speculators (in the best sense of the word), whose business is the intelligent anticipation of future supplies of staple commodities, such as cotton and wheat, may do their utmost to inform themselves as to the chances of the coming crop ; but the vagaries of the weather are often too much for them, and they may find that they have sold a crop larger than is ever gathered, with the result of a heavy loss. On the other hand, the merchants, whose business is to provide for the demand for finished goods a long way ahead, may find all their calculations upset by some great change in the conditions of demand. The huge demand of India, for example, depends on the general prosperity of the people, which hangs mainly on one thread, the development of the monsoon ; and if that fails, great quantities of goods which have been ordered in advance may be unsaleable except at heavy losses. Again the consumers as a whole may be misled by the prospects of supply ; they may either hold off too long in the hope of lower prices coming, and refuse to buy when things are comparatively cheap, only to find later on that they have missed their market and must buy after all at higher prices ; or they may err on the other side and be scared by threats of coming scarcity into buying at high levels, and then find that the supply is not going to be so bad as they had feared, and that if they had waited a little they could have bought much more cheaply. Through these vicissitudes, which are characteristic of the markets for all staple commodities that depend on a yearly crop, prices are kept fluctuating, fortunes are made and lost, and what becomes of the theory that prices depend on cost of production ?

Longer
movements.

(4) In addition to these, which may be called temporary fluctuations of prices from the normal, there are other causes which produce more lasting movements of prices, and these may lead to corresponding variations from cost of production. Such

movements are sometimes on the side of supply, through the slow response of the producers to the inducement of increased price. That may be due to a series of bad harvests, as in the case of cotton referred to in the preceding chapter, or to the inevitable difficulty of making up arrears in the supply, as in the case of housing referred to above, or it may be due to the complete failure or lasting reduction of the supply through some change of agricultural or industrial conditions, or some great upheaval such as war, as in the case of Russian wheat and flax or German beet sugar. Again, on the side of demand, there may be great changes in the purchasing power, and therefore in the capacity to consume, of some important section of the world's markets such as have swept over so many of our continental customers as the result of the War. These may be comparatively temporary, like the effect of a bad monsoon in India already mentioned which only lasts for the season, unless fate is so unkind as to follow it with another failure. A great natural disaster like the Japanese earthquake may seriously cripple the powers of a whole people for a few years; though, on the other hand, such an event may involve an extra demand for structural and other materials for reconstruction, as did the War, for example, in the devastated areas of France.

Slow adjustment.

More lasting, however, than any of these is what has now come to be claimed as a natural tendency for prices in general to move in great swings from one extreme to the other, as the result of causes which are still the subject of much controversy, but which may be generically described as monetary. Thus since the War there has been a recrudescence of the theory of cyclical movements of trade. There was, for example, the great downward movement of prices from 1873 to 1896, followed by the steady rise till about the end of 1913, when, as it now appears, a new reaction had set in, for prices fell in England during the first half of 1914, and would probably have continued to do so had not the War intervened. Since the War there has been the record-breaking rise of 1919-20, followed by the terrible fall, in England and America especially, of 1920-21; and that has been

Monetary causes.

Trade cycles.

Effects of
credit.

hailed by many as another trade cycle. There may be some doubt as to the proximate causes of this last movement, but there can be no doubt that, like the longer and slower swings of the previous century, these causes had their roots in our system of money and credit; and such movements are likely to recur in future until some means can be devised of checking or controlling the influences which produce them. Such sweeping and universal changes in price levels must inevitably cause dislocation in markets, and throw out completely the calculations of every manufacturer and merchant. It will be long before business men forget the experiences of 1919 to 1921, the colossal fortunes that were made and lost (not always by the same people) during that unparalleled tidal wave of prices; and it is obvious that during such a movement prices must lose all relation to cost of production. Business in such times as these becomes nothing but a gamble; and the luck of the game goes to those who, either by superior foresight or by good luck, happen to come out on the right side of the market.

The
tendency
remains
true.

Here, then, surely is a sufficient catalogue of exceptions to the rule that prices depend on cost of production to make it seem almost worthless; but on second thoughts it may still be maintained that that is exaggerating the difficulties of the theory. All these exceptions may be true, yet the fact remains that through all the changing conditions prices are always *tending* to cost of production. Growers, manufacturers, merchants, and consumers may make mistakes, or find their calculations upset by changes of conditions, but all the time new calculations are being made, new contracts entered into, all of which are as nearly as possible based on the new cost of production, as far as that can be ascertained or guessed. Even in the case of a seasonal crop, the anticipated fluctuations of prices, due to the varying fortunes of the crop, are reflected in the "futures" prices on the exchanges, which to a certain extent enable the manufacturer to go on accepting contracts for the delivery of next season's goods, and covering his requirements in raw materials by the purchase of distant futures, which ensure him delivery of the raw materials

he will then require at a price fixed to-day. Thus cotton futures Futures. can always be bought twelve months ahead ; and within limits the spinner can therefore estimate his cost of production ahead, regardless of what may happen to the crop in the meantime. If only they could as easily ensure against the movements of wages (and through long agreements with the Trade Unions they very often can do so) and against the fluctuations of the bank rate with all its consequences to trade and industry, their lot would be a great deal easier than it sometimes is to-day.

It seems, therefore, that the idea of normal price is still true on the whole, but it is necessary here to state one fundamental condition which writers of a previous generation were perhaps inclined to forget owing to the times they lived in. The whole theory was built up on the assumption that the goods concerned were capable of indefinitely increased production, given time ; but that involved certain implications which were not fully realised. It implied, for example, a practically unlimited supply of the raw materials, though it provided for a rise of prices if the commodity were subject to the law of diminishing return. It also involved an unlimited supply of capital, and above all it postulated an ample supply of labour. Thus the great assumption of nineteenth-century Economics was that there would always be plenty of supply if the price was high enough ; and it took nothing less than the experience of the War to make us realise that this was not an inevitable state of affairs, and that if the opposite state of affairs ruled, the results of a competitive system would be very different. Assumption of ample supply. The pre-War theory that competition always tends to bring prices down to the cost of production was entirely one-sided, because it implied that the competition was always among the sellers. But during the War, and for a time afterwards, the competition was among the consumers, who knew that the supply was not sufficient to go round. No longer did the man with money in his hand command the respectful attention of every shopkeeper. Manufacturers were refusing orders because they already had more on their books than they could possibly fill for months ahead. It was a mad

Effect of
the War

world and a very unhappy one for every one except the profiteers, but it showed that the whole superstructure of economic theory was based on a state of affairs which had never been fully appreciated, a condition of bounteous plenty where nature gave of her best, and all that men had to do was to supply the labour, the capital, and the intelligence, to take advantage of it. It made men realise that the world is one country in matters of industry and trade, that no nation can be economically independent, and that communications and transport are the nervous system and the muscles of the whole industrial body upon which abundance depends. It was the final demonstration of the truth, that the only source of consumption is production, and that production of goods and services which are destined not for human consumption but for mutual destruction is the negation of well-being. It was only such a madness of destruction which created the abnormal state of affairs above described. Given peace, the world should quickly return to something like the pre-War normal state of ample supply; and once more the economic theory of prices will be seen working in its normal way, and competition will be the life of trade. In the hungry eighties of last century it was often the death of the trader; the War showed the other side of the picture, that under the conditions then prevailing it might be the death of the consumer.

on the
consumer.

There is another great class of apparent divergences between theory and practice which must be dealt with, namely, rents. Here, however, the difference is more apparent than real, for economic theory provides for rents. The statement is not that price depends upon cost of production, but upon the marginal cost of production. To the man in the street or the careless reader that is only an academic refinement; but it is very far from that. Nevertheless this question of rents requires further examination.

Rents,
other than
land.

In Chapter V. the case of the rent of agricultural land was fully discussed, and it was also stated that there were other kinds of economic surplus which were analogous to the pure case of land rent. The case of scarcity rents was specially

mentioned, which is perhaps best seen in the example of the high rents of houses, when there is a housing shortage that cannot be quickly remedied, but it was pointed out that there may be similar scarcity rents in other commodities where analogous conditions exist. Then in dealing with employers' profits it was shown that the pure nett profit of the employer, after allowing for the supply price of business ability and the necessary compensation for risks, was really of the nature of a rent or surplus due to the possession of a superior instrument; that is to say, to differential advantages of one sort or another, or to some lucky hit which enabled one manufacturer for the time being to produce at a lower cost than his rivals. Here too it was seen that the superiority might be very much of the nature of a scarcity rent, due to the fact that for the time being he alone was able to supply the goods, and was unable to meet the demand. This idea of rent must now be carried still further by analogy. Further cases. Take the case of the professional man, say a barrister who, owing to some combination of ability with notoriety, has acquired a reputation that brings him more work than he can possibly do, and is compelled to charge very high fees, which indeed are thrust upon him. That is just a peculiar case of rent, and it is conceivable that particular individuals in other walks of life, or even a particular class of skilled men, may by some chance combination of circumstances find themselves in a similar position. Think of the position of the skilled engineers during Labour. the War who, in the early days of the munition industry, found themselves sought after by every employer who wanted to get into this suddenly profitable business, and tempted on every hand by offers of higher wages, until the government had to pass an act forbidding any such man to leave his employment. That act was really directed against the rival employers rather than against the men, and but for it these men would have commanded almost any wages they liked to ask.

Again, is there no rent in the case of capital? When the Capital. general rate of interest, as shown by the yield of gilt-edged securities, rises as it was doing before the War, and has done

still more since, it may be due, not to any increased cost of capital, or of money in the widest sense of the word, but simply to the fact that the demand for capital is increasing faster than the supply can accumulate; in other words, it may be just another case of scarcity rent.

Negative
rents

Turning to the other side of the question, it has been shown that in the case of the employer's profits the surplus or true nett profits may not only disappear, but may actually be converted into a deficit, when competition cuts prices to such an extent that he cannot earn his full cost of production, and must suffer a reduction of oncost, which means that he is not earning the normal supply price of his services. Thus quasi-rent becomes a minus quantity. Are there not similar possibilities in other cases? Take, for example, the case of a man who has built houses upon land with a view to letting them, but owing to some change in the character or amenity of the district he finds that it is no longer as fashionable or as popular as it was when he built the houses, with the result that rents fall till they are actually less than the interest on the capital he spent in constructing the houses. What is that but a negative rent, closely analogous to that of the manufacturer who, having sunk his capital in a factory and machinery, finds that he cannot earn enough out of it to pay interest on his capital?

not confined
to em-
ployers.

Returning to the illustration of the super-successful barrister, there is the opposite case of the briefless barrister who, after spending years of time and much money on his education, finds that through lack of connection or opportunity he never makes more than a bare living. A barrister *may* turn his training to some other account, but the unsuccessful doctor in the like case seems to be an equally clear case of negative rent. Or taking the illustration of the special class of skilled tradesmen, it would be much easier in normal times to find illustrations of the opposite case, where men who have spent their best years learning and practising their trade, find themselves in adult life suddenly turned adrift through the failure of the industry. Cases could be quoted of whole classes of more or less skilled or

professional men who have for years found themselves in the apparently hopeless position which was, for example, the case of the elementary school teachers in this country before the Burnham scale, or of the members of the mercantile marine in the early years of this century. It takes a long time for the over-supply of trained men, which is generally the cause of such a state of affairs, to be drained away by death or old age; and until the readjustment of the balance of supply and demand is attained their case is one of negative rent.

Over-supply
of trained
men.

It seems, therefore, that rent, instead of being a single species peculiar to land, is really a genus of many species; it is due to a state of affairs which is likely to arise in any form of production or any class of services. The effect on the theory of the relation between prices and cost of production seems to be that while price does *tend* to approximate to the marginal cost of production, there will always be in every factor of production cases where the price received is either more or less than the true supply price, and that in fact in this case the exceptions are quite likely to be more numerous than the rule.

Rent a
genus.

What then is the effect of this question of rents upon our view with regard to the theory of value? The economic ideal is that every factor of production should receive its fair supply price, no more and *no less*. So far the only remedy proposed has been that where the rent is positive the surplus should be regarded as unearned increment, and should in some way be annexed by the community, but there is another side to this question. It has already been pointed out that economic surplus is inevitable, that rent cannot be prevented from emerging wherever there are differential costs of production. Are negative rents also the inevitable result of differential disadvantages and are these equally unchangeable? If so, is not the right of these unfortunate individuals to compensation as good as the community's claim to the unearned increment?

Its effect
on value.

CHAPTER XIII

DISTRIBUTION, OR THE VALUES OF THE FACTORS OF PRODUCTION

The meaning of distribution—The law of substitution works *on* and *through* the employer—The national dividend theory—How competitive distribution really works—The assumptions of a perfect distribution.

Prices of the factors of production.

Distribution misunderstood.

So far the theory of value has been discussed in the form of the question, How are prices fixed? We have seen how the market price of any commodity is fixed as between buyer and seller, but there is another side to this question which must also be considered. The inquiry cannot be confined to the fixing of the price of finished commodities; it must also explain how the prices are fixed of the factors of production themselves, which go to produce every commodity, or how the price of the finished commodity is divided or distributed among the factors of production—land, labour, capital, and organisation. Each of these must receive payment out of the price of the product for its share in the joint production. How is the share of each determined? This is the problem of distribution, which every economist from the time of Mill has treated as a separate branch of the subject. There are two objections, however, to this method of treatment. In the first place, the name itself is misleading. To the ordinary man in the street distribution means the process of distributing the finished goods among the consumers, which is entirely different from the sense in which the economist uses the words. Such an opposition between the

technical meaning of a word in Economics and its everyday meaning is to be avoided.

In the second place, distribution in the economic sense is not really a different branch of the subject at all ; it is only another application of the ordinary theory of value. The problem of distribution is simply to determine the values of the factors of production. Take, for example, a pair of boots made in a modern factory. If its sale price is, say, 25s., how much of this goes for raw materials, how much to the employer or owner of the factory for the use of his buildings and machinery and for his own peculiar services, and how much to labour ?

The solution of this problem lies in the same great principle as that which rules the fixing of the price of the finished commodity as between the producer and the consumer, namely, the principle that men always try to buy in the cheapest market, which is the foundation of competition, or, as Marshall called it, the law of substitution. It has been shown that in the fixing of the price of the commodity it is the force of competition that keeps market price always swinging round about the equilibrium price, which balances supply and demand. It is competition that cuts normal price down to the cost of production of the marginal producer. The centre or pivot of this great system of competition is the employer or *entrepreneur*, who organises the whole system of production. Competition among all the different employers or manufacturers enables the consumers to obtain the goods they require at the lowest possible prices. Thus, competition works *on* the employers, compelling each of them to sell his commodity at the lowest attainable price in order to tempt customers to buy as much as possible, and to buy it *from him*.

The manufacturer of textiles, for example, is always on the outlook for new styles or patterns of cloth, which are first brought out in expensive materials for the dearest markets. These he copies in cheaper materials, bringing the price of the fabric within the reach of a middle class, and therefore a much larger market. Thus the beautiful fabrics first made in expensive

Competition,

or the
Law of
Substitution.

Its effect
on the
employer.

materials by hand-loom weavers or the luxury trades, such as silk or the fine woollen industry, are imitated by the Lancashire factories, which turn out for one-third of the price an article which serves almost the same purpose, thus bringing the goods within the reach of a class to whom at the former high price they were quite inaccessible. The actual process of comparison and selection may be more clearly seen in the case of competitive offers on specification for a public contract, such as the erection of a large building or the construction of a new battleship; but the competition of the shop window, or, behind the scenes, of the traveller with his sample case calling on the buyer of a big wholesale drapery house, or again on the floor of the Exchange, is exactly the same thing; it is the desire of the sellers to tempt buyers, and the inducement is a low price.

He passes
it on

The principle of competition also works *through* the employer on every factor of production which he employs. Just as every employer has to meet the competition of all his fellow-producers in order to get a market for his goods, so he finds it necessary to apply the same process of comparison and selection to every link in his own chain of production. His object is to sell his goods as cheaply as possible. He must, therefore, do everything possible to reduce their cost by cutting down, if possible, the expenditure on every item in his factors of production. From this point of view he is the consumer, and the factors of production are producers who wish to sell their product to him. He must apply the same treatment to them as his consumers do to him. If they find that they can buy the same goods cheaper from another manufacturer they will do so; if they can get something cheaper to supply their wants as well, they will take it. In the same way, if the employer finds that he can get the product of any one of his factors of production cheaper elsewhere, he will do so. He applies this process not only to every factor of production as compared with others, but also to every item in each factor of production. If he finds that he can get his raw materials cheaper somewhere else, he will stop the present supply, or if he can substitute some other and cheaper materials with

to every
factor of
production.

equally good results he will do so. If some other kind of labour can be had cheaper than what he is at present employing, such as women in place of men, he will have to adopt it. If machinery will do his work more cheaply than hand labour, he will introduce the machine and dispense with the labour, thus substituting capital for labour. If he finds that a new machine will do the work better than another, or give more product for the same cost, he will substitute the new machine and throw out the old. If by bringing in more foremen or managers of a superior class he can get better results out of his factory, he will do so. If by reorganising his business in a more efficient way, or extending it on a larger scale, he can reduce his oncost or increase his turn-over, it will pay him to do so ; and competition compels him to do it.

Thus, competition works through the employer on every The effect. factor of production, involving the constant comparison of each factor of production with every other, and of each man or unit in every factor of production with others, and the selection or substitution of that which is cheapest and best. The result is (1) that the total cost of production is reduced to the lowest possible figure, and (2) that each factor of production, and every separate unit of each factor of production, receives its proper share of the product. Every man earns just about what he is worth ; and that is decided by comparing him with every other factor of the same kind, and selecting the cheapest, that is to say, the one which gives the best value for the money. Thus perfect competition, by ensuring that no man gets *more* than he is worth, would necessarily secure that every man gets *all* that he is worth. The ideal of a just system of distribution is that every factor of production should receive its fair normal supply price.

From this point of view we see the whole mass of producers The struggle for survival. in eager competition with each other for the opportunity of production. It is a universal struggle for existence, and the result is the survival of the fittest. But there is another side to the question. The object of all this struggle is to cut down the cost of production and to supply commodities at the lowest

possible price. But who benefits most by this struggle? Obviously it is the consumers, who get their wants satisfied at the lowest possible price. Thus the great competitive system of production is really, from this point of view, a system of co-operation to supply the consumers with the commodities which they require at the lowest possible price.

National
dividend
theory.

Marshall brought out this idea very clearly in what he called the national dividend theory. Imagine all the producers in the world sitting in a huge circle, each working at his own trade and throwing his product into a great heap or pool in the centre. The accumulating heap of goods and services of every description is the national dividend, the sum total of every kind of wealth, available for distribution among the consumers. But the consumers are all the world, and that means simply the producers themselves, who have already made these goods. Thus the producers have worked for the benefit of the consumers, hardly realising that they themselves are the consumers, and that it was for themselves they were producing.

Its division.

How, then, is the national dividend to be divided, and on what principle is each man's share to be allotted? Clearly, the most reasonable rule, and apparently the simplest, is that every man should receive the equivalent of what he has produced, that each man should be entitled to consume exactly in proportion to the amount he has contributed. This brings out in a striking way the double relationship between the producer and consumer. The producers labour in order that others may consume; but their labour for others entitles them to receive in turn the product of the labour of others. Their production for the consumption of others entitles them to consume the products of others. The sole object of production is consumption, while production is the sole right to consume. Every man's product is his title to consume; and its amount is the measure of his right to consume.

To quote from Marshall: "The nett aggregate of all the commodities produced is itself the true source from which flow the demand prices for all these commodities, and therefore for

the agents of production used in making them. Or, to put the same thing in another way, this national dividend is at once the aggregate nett product of, and the sole source of payment for, all the agents of production within the country. It is divided up into earnings of labour, interest of capital, and lastly, the producer's surplus or rent of land. It constitutes the whole of them, and the whole of it is distributed among them, and the larger it is, the larger, other things being equal, will be the share of each of them."

This theory of the national dividend is of great value in dealing with many economic problems ; its application at once exposes many popular fallacies. Take, for example, the common belief that industrial crises are due to over-production. The national dividend theory gives a ready answer on this point. General over-production, that is to say, excessive production by every one, is impossible, because if all the producers in the world were simultaneously to increase their production, say, by one-half, the result would be that every consumer would now be entitled to consume half as much more as formerly, and the goods would be there for him to consume. When it is recalled that production means things to consume and the right to consume them, it is clear that an all-round proportionate ~~increase~~ of production cannot result in over-production. The trouble is, however, that increased production never is thus equally proportioned ; one trade may be increasing its output while others remain as before, and the result is unfortunate for the active trades, because they are dependent for their demand on the production of other trades. If that has not increased in proportion to their own increased production, they will not be able to find purchasers for their extra product. The so-called general over-production is only over-production by certain trades, resulting in disproportionate production and dislocation of industry. The remedy is not to be found in stopping the extra production in one trade and throwing a number of their producers idle. The fault is want of proportion between the

Some applications.

Over-production.

different trades. The cure, therefore, is to transfer some of the extra producers to another trade ; in other words, to encourage the mobility of labour and capital from one trade to another, so that the supply may always adjust itself to the demand as readily as possible.

Making
money
circulate.

Again, there is what has been called the fallacy of the broken window ; the old idea that spending money, no matter how or on what, was a good thing, because it made the money go round. Thus foolish expenditure on luxuries, or even the absolutely unproductive expenditure on unnecessary wars, was said to be good for trade. Nothing shows the fallacy of this so quickly as the national dividend theory. Production is the sole title to consumption. Nothing can be good for trade which only leads to the destruction of goods, nor can the position of any one be improved by lessening the national dividend, which is the sole source of payment for all the producers. If men spend their time making boots, the boots are there as an addition to the heap of wealth to be divided among them all ; but if their labour is diverted to making warships, guns, and gunpowder, and these ships are sent out to blow each other into pieces, where is the gain to any one ? The price of these ships must come out of some one's pocket ; the value of them came out of the national dividend just as effectually as if part of the national heap of goods had been directly destroyed by fire.

The theory
in practice.

Such is the theory of Competitive Distribution, but in these days when economic theory is attacked on every hand, and especially when the whole system of competition is on its defence, we cannot be content with the mere statement of a theory, however perfect ; for our own satisfaction we must consider how it really works out in practice, and whether the results are such as we can face with a clear conscience. The complacency of the Victorian economists, of whom Mill may be taken as the outstanding example, received a rude shock when men like Carlyle pointed out the terrible social evils which accompanied the early development of the factory system, and

demanded to know whether this was the result of the much-lauded system of economic freedom. In the face of such conditions, which still exist, though fortunately not to such a terrible degree or extent, we cannot say that all is for the best in this best of all possible worlds. Can we even say that the system is working out for the greatest good of the greatest number, and salve our consciences with the assurance that "rough justice" is being done on the whole? Or can we go further and say that these social evils are not really inherent in the system, that as men come to understand it better these things will gradually disappear?

Is the result satisfactory?

Perhaps the best form in which to take the problem is the question of wages. How are wages fixed? *Does* every man earn just about what he is worth? That question at once raises the fundamental difficulty of the whole business. How do we know what any man is worth? The theory of competitive distribution is that every man should be paid according to his product; but it is impossible to apply that test under modern conditions, when no man produces anything. For under the factory system it is literally true that no man makes even the smallest article complete, and all by himself. In the first place, it is machinery that produces almost everything, and the man's share in most cases is merely to watch and feed the machine. Even the factory itself does not really produce anything, because production means the creation of utility, and the article made in the factory has not really achieved utility until some one is found who can use it, and that involves the assistance of others outside of the factory. In all this huge system of production, how is any one man to identify his particular share in the finished article as sold to the actual consumer? It is impossible for any man to say—as in the case of the pair of boots above quoted—out of the price of 25s. my share is one-fiftieth, or one-hundredth, or any particular fraction. Even the employer himself could not answer that question. All he can say, even if his costing system is perfect, is how much he *paid* to each individual unit of every factor of production, and that is not

Fair wages.

Divorce from product.

the same thing at all. The fundamental difficulty of the whole question is the impossibility of identifying any man's product so that its value may be estimated and his due reward fixed.

The
problem

How does the theory of competitive distribution profess to meet this difficulty? It is a problem of the relative value of two things which cannot be compared with each other. On the one side is a piece of work; on the other a sum of money; but the produce of the labour is not saleable in the form in which it leaves the workman's hands, and it is therefore impossible to find out how much money it is worth. The fact is that it is impossible to prove in this way what any man is worth. All that can be said is that there are certain rough lines of division which are recognised by custom, that the wages of skilled artisans are higher than those of unskilled labourers, the salaries of professional men still higher, and the earnings of successful business men highest of all. The problem, therefore, is to prove that a whole series of different rates of wages is economically justified, in spite of the fact that there is no means of testing any single one of them by the direct method of putting its product on the market and finding out the value of that particular piece of labour. Here are two lines which cannot be made to meet: on the one side a series of different grades and classes of labour, on the other a scale of wages, salaries and earnings of all sorts, each belonging to one kind of work in the opposite row; and it is impossible to test any of these wage-relations by the direct method. What other method, then, is available? How does competition really work in fixing wages in general, or the wages of any particular class or group of workers, or of any individual in such a group?

and the
answer.

Perhaps the answer will be found through an illustration. Imagine a large squad of recruits to be fitted with their new uniforms. There is a uniform there for every man, but the men vary in size and so do the uniforms, and the sergeant does not know the sizes of the men nor of the uniforms, and he does not possess an inch-tape or a yard-stick even if there was time to use them. The apparently simple method of letting each man

hunt among the uniforms till he finds one that fits him is really not simple at all ; it would only result in wild confusion and the most incongruous results, besides wasting time. There is another method, however. Size all the recruits in a line, tallest on the right, shortest on the left. Arrange the uniforms also in order of size by measuring them *against each other*, and lay them in a row accordingly opposite the line of recruits. Then let every man take the uniform that happens to be lying opposite him in the row, and the result will be the nearest approximation possible to a good fit all round. Yet not a single man has tried on a uniform, nor has a man nor a uniform been measured.

Behind this illustration lies the truth of the matter. It is impossible to compare the two parallel lines of men and wages crosswise, but it is comparatively easy to compare each line sideways. Every man in each class of labour can be compared with his neighbours, and each class of labour with every other class above and below it, and by so doing one can determine the relative value of each man compared with his neighbours. No one can say what any man in the whole row is worth, but one can say whether the man below him is worth as much or less, and whether the man above him is worth more or not, and therein lies the secret of the method. Competition works up and down the ranks, and secures the nearest approach to correct sizing that is possible ; and if the sizing in each line is correct, that is to say, if the grading of labour is according to some proper standard, then the apportionment of wages to worth will not be far out. It should work out in this way. If every man is at least as well worth his pay as the man below him, that is to say, if you cannot get another man to do the job for less money, then it is pretty certain that he is not being paid too much. Now, if no one is being paid too much, and if the whole national dividend is being divided on that principle, so that the employers themselves and every grade and class of workers are subject to this ruthless comparison, so that no one is getting *more* than he is worth, then the result must be that no one is being paid *less* than he is worth. That is simple

Comparison
sideways.

Wages and
worth.

and obvious logic. If the whole amount earned by everybody is divided out in such a way that no one gets more than his share, then it is absolutely impossible that any one should get less than his share.

Economic friction.

Such, then, is the ideal of competitive distribution, but does it work out in practice with anything like perfect accuracy? There are several ways in which it may not work properly, several sources of economic friction which may make the result very far from the perfect adjustment of wages to worth that is desired. The next step in the argument, therefore, is to consider these difficulties, which may be called the assumptions of a perfect distribution, or the conditions required for the perfect working of such a system. Then it will be necessary to consider how far these ideal conditions actually exist; and if they are not perfect, how much nearer they can be brought to a feasible working state which would make the system tolerable.

Perhaps it may help to clear our ideas with regard to the nature of these assumptions if we take up again the illustration of the uniforms. It is obvious that the proper solution of that problem assumes two conditions: (1) that there are enough uniforms to go round, and that they are of the right sizes. If, for example, there is an undue preponderance of uniforms about the middle of the scale, with very few small ones and no out-sizes, then the result will be that the men in the middle of the line will be well enough fitted, but those near the ends will be badly served; (2) that the sizing, both of the uniforms and of the men, is accurate; that the sergeant carefully corrects the position of the men by transposing a pair here and there, for it is very difficult when standing in a rank to measure one's own height accurately against the man on either side.

Is the dividend sufficient

These imaginary conditions can be translated with quite good parallelism into similar conditions affecting the problem of distribution. The main assumptions there can also be divided under two main heads, viz.: (1) Is the national dividend big enough to go round and give every individual a sufficient share? and (2) is the process of grading the ranks of labour

of all kinds done on any sound principle ; is it fairly and accurately done, and is there any means of checking it and enabling errors to be corrected ?

The answer to the first question is a fairly confident affirmative. Whatever may be said against the factory system no one can deny its enormous productivity. The world is producing to-day, or could easily be made to produce, an ample supply of every human requirement to provide sufficient for every one of its workers. Before the War the national income of this country was estimated at something over £2000 millions. With a population of about 45 millions and an average family of about five persons, that meant a possible average family income of about £225 a year. It is not so certain that the world as at present controlled is producing just the things that are most desirable, and in the right proportions. Many things are being produced which could well be done without, while the right proportions of different classes of product are very difficult to maintain, because these proportions depend to a very large extent on the individual tastes or idiosyncrasies of the world's population, which are very difficult to gauge in advance (and that is how the whole system is carried on), and which vary greatly from time to time.

The second question, whether the sizing is fairly and accurately done, really turns on the point already discussed of the mobility not only of labour but of every other factor of production, and on their capacity and opportunity to place themselves in their proper order in the grading of the producers. That question is perhaps the most difficult of all to answer, because it involves so much. For the sake of clearness it may be dealt with under three heads as follows :—

(a) The ideal working of competitive distribution implies, first, perfect knowledge on the part of every factor of production of its true value, and of the best market for its product.

(b) It also implies complete mobility of every factor of production so that each may be able to command its true supply price. If a man knows that he is not receiving in his present

and the
division fair?

Assump-
tions.

place a wage really commensurate with his work, if he feels that he could do better work, or ought to be paid more for the work he is doing, is he able to get out and go after a better job ?

Equal bargaining power.

(c) It implies equal bargaining power on the part of every individual unit in the whole scheme of production.

Finally, all that has been said so far would only carry the argument to the point of proving that every man is earning what he *is* worth, but there is a further question behind that : How do some men come to be worth so little, or so much ? If a man is only an unskilled labourer, it may be because he is physically or mentally fit for nothing else *now* ; but was he always like that, or would things have turned out differently if he had had a better chance ? If it is lack of education or of the training of a skilled artisan that is the cause of the difficulty, how did he come to miss that education or training ? The fact is, that in spite of the system of free and compulsory elementary education, there is an appalling percentage of the population of England who within a very few years of leaving school have forgotten all they ever learned, and while not technically illiterate, are hardly able to do more than sign their own names. Such people have little chance to become anything but unskilled labourers. The question of equal opportunities, therefore, goes to the root of the matter. Until every child has at least a possible chance of getting the best education that his brains are fit to assimilate, there can be no certainty of equal opportunity in the entrance to the higher ranks of industry or the professions. Education takes time, which costs money for the boy's maintenance, even if the actual schooling were free up to the highest grade of university education. As long, therefore, as the inequality of wealth forms a barrier to the opportunities of the best education, no one can say that what a man has become is the best that he might have been.

Equality of opportunity.

It needs very little knowledge of the world to enable any honest man to say that on all these points the actual conditions of to-day are very far from justifying the assumptions which have been indicated. It cannot, therefore, be said that our

competitive system works perfectly, and this leads up to a new set of problems which lie behind the problem of distribution. In the first place there is the one thing which underlies the question of equal opportunity, namely, the existence of a system of private property in land and other things, which enables the owners of such property to draw therefrom a revenue sufficient to maintain them without actually rendering any direct or personal service in production. This system must be examined and its implications made clear, so that its justification or otherwise from the economic point of view may be established. Next it is necessary to consider a whole series of movements which have been the outstanding feature of the past century, all inspired by the same motive, namely, the desire to secure better conditions for those who in the past have been the losers in the economic struggle for survival. These movements have been along two main lines: (1) Legislative action to render impossible the worst evils of the factory and industrial system, and to remove the worst hardships from the life of the poor, as by health and unemployment insurance and old age pensions; and communal action to secure to them in some measure the possibility of certain amenities of life, such as free education, public libraries, museums, picture-galleries, parks, baths, etc.; and (2) Combination among the members of various grades or classes (not all on the side of labour and not even all producers) to secure for themselves by joint action better terms or better conditions of work or life than they could individually enforce working as separate units. Such movements are Trade Unions, Employers' Organisations, Co-operation, and Monopolies. It will be necessary to see how these different tendencies have worked out, what they have achieved, and what not even attempted; and taking the result as a whole, whether they have succeeded in making the conditions of everyday life, including industrial life, fairly tolerable for the great majority of the people who have to live it.

Finally, if the answer to that question is not reassuring, it will be necessary to consider the possible alternatives of those

who, condemning the whole system of competition and free enterprise as inherently wrong and hopelessly unsatisfactory in its results, have set up in its place as their ideal the various forms of socialism, which is its complete antithesis.

MARSHALL, *Economics of Industry*, Book VI. chaps. i., ii., and xi.

MARSHALL, *Principles of Economics*, Book VI. chaps. i., ii., and xi.

SMART, *Distribution of Income ; Second Thoughts of an Economist*.

TAWNEY, *The Acquisitive Society*.

CHAPTER XIV

PRIVATE PROPERTY—THE BASIS OF DISTRIBUTION

Private property—Its meaning—Historical development—Arguments for and against—Land nationalisation—Taxation of land values—State and municipal industries, their advantages and difficulties.

IN dealing with distribution so far, only the actual state of affairs under modern conditions in industrial countries has been considered. An attempt has been made to explain how, as a matter of fact, the various shares of the product are allotted to land, labour, capital, and organisation by competition. But we have not stopped to consider how the persons who receive these shares have come to be entitled to the product of the various factors of production, of which they are called the owners. It has been shown, for example, that land earns a share of the product, which is called rent, and how the amount of that share is fixed. In the same way it has been shown that capital earns its share, which is called interest; but we have not considered the economic effects of the system under which the persons whom we call the landlord and the capitalist are legally entitled to receive the shares of the national dividend admittedly due to these essential factors of production, land and capital. In short, only incidental reference has been made to one thing which underlies the whole question of distribution, namely, the meaning and nature of the legal right of ownership, in other words, private property.

The underlying question.

Note in passing that every one takes for granted the right of the labourer to "own" his labour, the right to work or not as

Ownership
of labour.

he pleases, which includes the "right to strike" and to work where or for whom he chooses; but these rights are not a matter of course. In the old days slavery was the complete negation of all of them; and even in comparatively modern times there were in this country restrictions on the free movement of labour, such as the law of settlement and the prohibition of the emigration of artisans. The War reminded us painfully that the dominant right of the Crown over all kinds of property extended even to labour in the form of military conscription, and many people think now (being wise after the event) that we ought to have had civil conscription too.

Private
property in
land not
"natural"

John Stuart Mill maintained¹ that the law of private property rests on an entirely different principle from that which rules the laws of production. These laws, he pointed out, are natural laws; they are fixed principles of nature, which are beyond the power of man to control, and which he must simply obey. The law of supply and demand is a law not made by man, and which man cannot alter; but it is not so with the law of private property. It is not a natural law that one man should own a certain piece of land to the exclusion of all his fellow-men, and should demand from them for the use of that piece of land a share of the product to which it contributes. The laws of property, in other words, are made by man, and may be altered by man. The present question is therefore on a different plane from those formerly discussed. Why should one man be called owner of this piece of land, and is it for the good of the community that he should continue to be so regarded? The question must be considered from the purely economic point of view, that is to say, we must find out the economic basis of the institution of private property.

and com-
paratively
modern.

It is necessary first to emphasise the fact that the institution of private property in the full sense is not of very ancient date. Men are so accustomed nowadays to the idea of ownership of land, houses, capital, etc., that this is apt to be forgotten. This question may be considered from three points of view: (1) the

¹ *Principles*, II. i. 1.

development of the right of property in different things ; (2) the development of the meaning of private property, that is to say, the growth of the various rights or privileges implied in the right of ownership and the extent to which these rights are still restricted ; and (3) the economic arguments in defence or justification of the right of property.

(1) It is to be remarked that those things which were probably the first to be owned are no longer regarded as fit subjects for ownership at all, namely, slaves, and women and children. These and certain tools, implements, and objects of personal adornment were probably the only forms of wealth in savage communities. There was no question of the ownership of land, for the simple reason that no one wanted to own land. The only use the primitive savage could make of land was to hunt the wild beasts that roamed over it, and any one could do that at will without requiring to exclude his neighbours from the privilege. Even the early shepherd tribes required only a very limited and temporary right of exclusion. The ownership of land is a later development, due to the commencement of tillage, which made all the difference. If one man is to spend his labour tilling and preparing the soil and sowing his seed in it, obviously he must be granted the exclusive privilege of reaping the crop. In the same way, as his home became a thing produced by labour, a built hut, instead of merely a natural hole in the ground, the right of exclusive possession became a necessary corollary of the labour of production.

Exclusive possession, however, took an intermediate form before reaching the modern stage of private individual ownership, namely, common property. Under this system the land was the property of the family, the tribe, or the clan. Only in comparatively recent times has the idea developed that the land of the country belongs to the nation, as represented by the king or head of the state, and that under him it should belong to private individuals. That was essentially the idea of the feudal system and was its own peculiar mark.

Note that this idea of the dominant ownership of land by the

Sovereignty. Crown implies an important restriction of the rights of the private owner. The Crown may at any time resume the ownership of any land required for public purposes, and may by Act of Parliament delegate this right, as for example, to a railway company in the power of compulsory purchase of the land required for its undertaking. The right of sovereignty of course extends to other forms of property, as the War very unpleasantly reminded us. It is also the basis of the right of the state to impose taxation.

**Subjects
of property.**

Many things have been the principal subject of private property in different ages and among different peoples. In the old days, among pastoral peoples, cattle were the principal form of wealth; later, under the feudal system in England, for example, land was the form of property that mattered most; while nowadays one might say that the ownership of mines and raw materials is the best form of wealth, though land has never in England lost the peculiar importance which attached to it. Nowadays the idea of ownership has been extended to ideas, in the form of patents, trade-marks, copyrights, etc., and to intangible rights in the form of shares, stocks, etc. These would seem to be the extreme forms of development of the idea of property in the meantime; but it is impossible to forecast what changes may take place as the result of future developments in aviation. Already this has resulted in a tacit restriction of the full rights of ownership, which were formerly supposed to be *coelo ad centrum*. This theoretically excluded the right of any one to pass over private ground at any height, or even to stretch a wire over it. An interesting question was raised in England during the War as to the rights of the surface owner in regard to oil found under his property, because if one proprietor sinks a well it may draw off the oil from adjoining areas.

**Rights
implied.**

(2) The right of property implies two main characteristics—(a) perpetuity, and (b) free disposal. Of the former, land is the best illustration. Perpetual ownership means not only the complete right of possession and usufruct during one's own lifetime, but also the right of bequest, that is, the right of the owner

to leave it to whom he chooses after his death, and, failing his so providing, the right of inheritance, that is, the right of the children to inherit the land as successors of their father. (b) The right of free disposal means the right to sell, let, or otherwise dispose of the thing in whatever way the owner thinks fit. But that right is restricted by the common law rule, that no one must use his property in such a way as to annoy or be offensive to his neighbours, which reappears in public health and other legislation, restricting the carrying on of offensive or dangerous trades in populous areas. Their growth.

It must be remembered that these various rights are not inherent in the original idea of property; they are only the result of a gradual development of that right. They have all been developed out of the simple right of use or occupancy, which probably was the beginning of the right of ownership, and which in its turn was merely due to the fact of appropriation. A man took possession of a certain piece of land, and announced his intention of keeping it to the exclusion of all others. If he were strong enough to defend his right by might, he was allowed to keep it, but this by no means implied that he was entitled to give it away, even to his own family, nor to sell it to a stranger, nor to let it to some one else and draw the proceeds of it. Least of all did it imply that when he died his children were entitled to continue his possession of the land.

Note again that the rights of bequest and inheritance are mutually exclusive. If, as in England (almost alone among civilised countries), a man has the right to dispose of *all* his property after his death, then clearly his widow and children can have no legal rights in his estate, except in the case of intestacy. Finally, in the case of intestacy and the absence of legal heirs, the right of the Crown to succeed as *ultimus haeres* is another reminder of the dominant right of the Crown. Bequest & inheritance.

All these attributes of property have become attached to the right of property in the course of the historical development of each country. The exact course of history varies in every case. In England the development of these rights can be traced quite

clearly from the first introduction of feudalism into the country by the Normans.

Arguments
for property.

(3) The various arguments put forward as the economic bases or justifications of private property, either in land or other forms of wealth, may be stated as follows :—

Labour
basis.

(a) The labour basis—"The foundation of the whole institution of property is the right of producers to what they themselves have produced". Mill claims this as a natural right of mankind, and certainly its expediency may very well be justified on economic grounds. If men are not sure of being left in undisturbed possession of the fruits of their labour they will certainly not be so willing to labour. In a new country no man will face the labour of breaking in new land, unless he is sure of at least an equitable long lease to enable him to reap the benefits of his labour.

Capital
basis.

(b) The capital basis. In the same way people have a natural right to the fruits of their capital, that is, of the sacrifice which they have undergone in order to accumulate wealth for some future purpose, for capital is simply the accumulated or stored-up products of labour. This also is clearly a right which it is expedient to preserve, for if a man is not to be secured in the enjoyment of the money which he has saved, what is the good of saving?

Contract
basis.

(c) The contract basis—that men have a right to expect fulfilment of the contracts made with them—is in a way only the modern development of the labour theory. As industry becomes complex and division of labour becomes the common system, the labour test cannot be directly applied. It is impossible to say how much of the product is due to the labour of each individual person who has assisted in the production of the commodity. The wage system is therefore introduced, under which men contract with each other for a certain payment in exchange for a certain amount of work. Contract then becomes the basis of distribution, and acquires the same sanctity as was given by labour to the right of property in the result.

(d) The right of prescription or undisturbed possession. This Prescription. argument is founded mainly on expediency. Whether the system of private property be good for the community or not, it is the established system, and it will not do to lay hands on it hastily or rudely. The sense of public security is essential to good government, and any rude shock to security, such as an abrupt change in the laws of property, would do far more harm than good. But this does not mean that no change can ever be made in the existing rights of property. There is no prescription of institutions. Mere antiquity does not bar reform.

It remains now to consider the arguments of those who, Arguments against. though in no sense socialists, yet believe that private property is the source of many of our social evils. These arguments may be summarised as follows :—

(1) In the first place it is claimed that the accumulation of Perpetuates inequality. great wealth in individual hands, and especially the aggregation of such accumulations in subsequent generations through the right of bequest, inevitably produces that unequal distribution of wealth which is the antithesis of equal opportunity. There is unquestionably some force in this argument, but there are two answers to it. The first is that a great deal has already been done to remedy the inequality complained of, by heavier taxation on the wealthy, in the form of graduated rates of Income Tax with Super Tax on the highest incomes, and also in the form of Death Duties, which in the case of large estates are very heavy. At the same time the disadvantages of lack of means have been reduced by making education cheaper and more accessible to all classes, though in England especially there is still a long way to go in that respect with regard to the two older universities.

The second answer is that one can hardly imagine any remedy for such a state of affairs on the lines of redistribution of wealth which would not be destructive of the whole system of private enterprise. It would obviously serve no purpose merely to expropriate all wealth from its present holders of all classes, and redistribute it afresh to every one on the present system of private property; in a very short time inequalities would once

more show themselves. That of course is quite frankly the argument of the socialists, who would not be content with mere redistribution ; their object is permanent expropriation and the transfer of all private property to the socialist state. That argument, however, must be left to be dealt with in its proper place under socialism.

(2) The second argument is more fundamental. It is that land and all other instruments of production, which are indispensable to labour if any kind of production is to be carried on, should be in the hands of the state, not of private individuals, and that for two reasons. The first is that private ownership of land and capital puts labour at the mercy of these owners who may take advantage of their position to exact usurious terms from those who must have these means of production. The outstanding case of this is the alleged holding up by private owners of land in the neighbourhood of large cities, especially those that are growing rapidly, which compels the public to pay extortionate prices for land required for dwelling-houses, factories, or public improvements. It has already been seen in Chapter V. that there is perhaps some apparent justification for this complaint. It is difficult, however, to see any remedy short of nationalisation of the land which would meet the case. The taxation (or rating) of land values, if it proved feasible, would probably do something to meet the worst evils ; but the inequity of the state taxing "betterment" only and leaving the owners to bear the burden of "worsement" would probably compel the reformers to the full logical development of state ownership of all land, and there are very strong objections to that course. In the first place if the state is to secure the advantage of the increase of urban land values due to the movement of population, it must also bear the loss in those country districts from which the population has been drawn away to make the pressure of urban population ; and it is very difficult to say whether if the state took over all the land there would really be much nett gain. It is of course assumed, because here we are discussing land nationalisation not as socialism but as a measure of social

Holding up
land.

"Better-
ment."

reform, that the state would pay compensation to the existing owners on the basis of the present value of the land.

Further, the matter could not stop with national ownership of the land alone. The next question would be what to do with the land once it had become state property. Would it continue to be let (it could not of course be sold again) to private persons for building purposes and otherwise, and on what terms and by what methods? At present the state does own certain large blocks of town property, especially in London, and the action of the state as landowner is in no sense different from that of any other proprietor. But if that became the general policy of the state as owner of all the land in the country, the position of the person who wants land for industrial or other purposes would be hardly any better than before. The state land office in the interests of the Exchequer would be compelled to secure the best terms possible from intending lessees, whose position would thus be subject to the same pressure as before. Their only consolation would be that the accruing gains would go into the funds of the state instead of into private hands; but that would make little difference to those who wanted the land. Possibly, however, the state would decide to go further and to manage and exploit the land instead of merely owning and letting it; in other words the state would put up buildings and let them to tenants of all sorts. That, however, is further than most people would be prepared to go. The public have a marked distrust of state conduct of ordinary industrial enterprises. They have already had ample experience of government methods, especially during the War; and most people who are not whole-hearted socialists would shrink from extending the scope of government action to the owning of houses, shops, factories, and farms.

(3) The really scientific argument for the nationalisation of land has already been referred to in Chapter V., viz. that any form of property which is inevitably subject to the theory of economic surplus or rent should be in private ownership is *theoretically* unfair to the community whose necessities create

The state as landlord.

Rents.

Land values
and the
single tax.

that surplus. It has been shown that where an essential factor of production involves differential costs of production, economic rent must emerge, because the public must pay for all they require a price sufficient to cover the highest cost of production, that of the worst producer whose product is required to meet the demand of the market, which necessarily means that all the more favourably placed producers will receive something in addition to their fair supply price. This was the argument which led to Henry George's theory of the Single Tax; he proposed that the value of land should be assessed separately from the rent of the buildings or other improvements on the land (an operation in itself sufficiently difficult), and that this land value should be subject to special taxation. This he claimed would yield so large a revenue that no other taxation would be necessary, hence the name Single Tax. If this proposal be considered as a tax, then it is only necessary to point out that it is a flagrant breach of the first principle of taxation, which is that all forms of property must bear equal taxation; anything else is not taxation at all, but expropriation or confiscation of that particular form of property. If it had been proposed that the special taxation should only apply to *future* increases of land value, then it was merely an ingenious method of evading the difficulty of "worsement" already referred to; but Henry George never pretended that it was anything of the sort. Quite frankly his object was the gradual expropriation of *all* land values; in other words it meant confiscation of land values without compensation, while leaving the so-called owners of the land subject to all the responsibilities and risks of the management and development of their land. That is obviously a proposal which could not come within the limits of social reform. It is socialism of the worst kind; an attempt to set up a new order of things at the expense of one section of the community.

Henry
George.

Again as already pointed out, the whole development of the economic theory of rent in modern times has been in the direction of showing that the idea of rent is not confined to land. Other

forms of property, which in their nature are capable of showing differential advantages, produce an economic surplus which is open to all the arguments against the rent of land. The "unearned" profits of speculators in stocks or commodities such as cotton futures, the ill-gotten gains of profiteers, the big profits of the owners of highly successful industrial undertakings, and even the swollen incomes of the most successful professional men, may all partake of the nature of rent, whether it be a true economic rent due to inherent advantages, a quasi-rent due to peculiar good fortune, or sometimes to particularly good management (and it is seldom possible to draw the line between these two) or merely a scarcity rent, whether temporary or more or less enduring. All of these should theoretically be as Mill argued the subject of special taxation; but no one has yet succeeded in devising any practical method of distinguishing such unearned profits from those which are really only the supply price of business ability. On the ground of feasibility, therefore, such special taxation would almost inevitably fail; but it seems unfair that merely because the profits in the case of land rent are so obvious, they alone should be singled out for special punishment.

All this does not mean, however, that any attempt to secure for the state some part of these special rent profits must be given up as hopeless, nor that the question of nationalisation of land or anything else is to be written off as entirely impracticable. There may be certain cases in which the disadvantages of private ownership are so great that the difficulties of the alternative ought to be faced. The Report of the Coal Industry Commission in 1919 made out a strong case for the ownership of at least the coal itself by the nation, though there was much less unanimity on the next point, whether the state should confine itself to owning the coal and controlling the exploitation of the mines by private owners, to whom the coal-fields would be let by the government, much as they are now let by their present owners on payment of royalties, or whether the state should take over the actual working of the coal and become

Other rent:

Nationalisation

of mines.

Existing
state
industries.

the managers of the industry as well. That, therefore, comes back to the problem of the state ownership and management of industries ; and during the War public opinion seemed to be moving towards a considerable extension of that principle, especially to the state ownership of the railways. That is a question which must be considered on the merits of each case ; but it is necessary to emphasise the fact that already the state in its various forms of central and local governments does carry on many important industries, and some of them with marked success. The post office is a huge state industry, which has on the whole been profitable, though certain sections of it, especially the telegraphs and telephones, have not yet succeeded in reaching a paying basis. No one, however, would now suggest that the post office should be handed back to private ownership. Again, many municipal industries, such as tramways, have been in some cases an acknowledged success ; while there are other industries of a special character, such as gas and water supplies, which are now almost universally regarded as the duty of the public authorities, almost as much as drainage or scavenging. The point to be made clear is that the scope of government action in the matter of public services, and even of industries, is not a closed book. It has been a matter of slow development, and it is impossible to say that we have reached the limit of such development. On the contrary, it is almost certain that, just as this generation has come to accept as a matter of course certain state activities which its predecessors would have regarded as socialism, so the next generation will be prepared to go still further in the same direction. Railways have already been nationalised in many countries, sometimes with unquestionable success, and there is at present a strong feeling that the whole business of passenger transport in London demands centralised control, which might lead to its being taken over as a public service, in the sense of public ownership.

Possible
develop-
ments.

It seems therefore that the present generation has gone a considerable way towards the public ownership of many

important services, but that we are still a very long way from accepting the socialist idea that all the instruments of production should be owned by the state. It may therefore be convenient to state briefly here what are now generally recognised as the principles which determine the desirability of government participation in industry.

In the first place attention must be drawn to the popular fallacy that the state may safely take over any industry which can be made to pay. The mere fact that the state can carry on a certain industry without loss, or can show a profit, is not sufficient to justify the state in taking it up. Even if the state, owing perhaps to its good credit and cheap borrowing power, can make an industry pay better than it has hitherto done under private management, that of itself is still not sufficient justification for state interference, especially if it is proposed that the state should actually enter into competition with private enterprise.

Arguments
for state
industries.

The real justification of state industries is either (*a*) that in the particular service concerned the state alone can efficiently undertake the work, because from the nature of the service the state has special facilities for supplying the public needs, or (*b*) that the service in question is so important that the interests of the public cannot be left to the mercy of private persons, who, of course, are inspired in the first place solely by the desire to make profit. These ideas are borne out by the following classification of industries usually and properly undertaken by the state :—

(1) State industries in the narrowest sense of the term, where the state is directly engaged in the manufacture of certain commodities for sale to the public, such as the Gobelin tapestries and the Sèvres porcelain factories of the French government. Here the justification of state management is that it is necessary to maintain the high quality of the goods produced as an example to others. Incidentally the goods produced are frequently used by the state itself. This idea has never taken hold in England except in the case of—

Various
forms.

State needs.

(2) Industries which supply certain needs of the state, especially for purposes of defence, such as government dockyards and arsenals. Here again, the question of the quality of the goods produced is of the first importance, though in view of the great efficiency and the very high standard of modern private concerns, this feature is nowadays of much less importance. The healthy competition, however, which is maintained between the government and private contractors is all for good.

Taxed goods.

(3) In certain cases, where the goods produced are subject to heavy taxation, it may be desirable from the purely administrative point of view that the government should take over the manufacture of the goods, thus avoiding the difficulties of a system of fiscal control over private factories. The tobacco and match monopolies in France may be taken as unfortunate examples, where the results are notoriously unsatisfactory to the consumers.

Public services.

(4) There are certain public services which, from their nature, are more likely to be efficiently managed under a public monopoly, such as water-supply, lighting, or sanitation. The features of these industries which render them peculiarly suitable for government undertakings are that they provide the community with things which are regarded in modern times as absolutely necessary, and it is felt that the public should not be at the mercy of private profit-making concerns for these necessities. Further, they are from their nature specially suitable for management on a large scale; and owing to the large capital required there would be no prospect of securing competition among the private sources of supply, while on the other hand they would be peculiarly susceptible to the dangers of a private monopoly. Failing direct government management of such services, the best substitute is private monopoly under government control, with a time limit to the concession, so that in the event of the private service proving unsatisfactory the government may take it over at the expiry of the concession.

(5) Lastly, there are certain services, mainly connected with transport and the means of communication, which are so

eminently necessary in the public interest, and where the efficiency of the service so clearly points to the advantages of a complete monopoly, that they have been universally reserved as state monopolies. The principal of these is the post office, where the magnitude and widespread ramifications of the service and the routine character of the duties make it specially suitable for government management, while at the same time the importance of an absolutely reliable service requires a degree of public confidence which the government alone enjoys.

It remains now to note the objections to state management of industries in general, apart from the special cases where public advantage is clearly in its favour. (1) It is argued from the examination of the modern system of competition under the factory system that the pressure exercised upon the private employer by the hope of gain and the fear of loss is all in favour of securing a higher level of efficiency than can be expected from government servants with fixed salaries and permanent appointments, no matter how conscientious they may be in the discharge of their duties. (2) At the same time the system of control and checking, which is essential in all government departments, is not favourable to the free and rapid adaptation of means to ends which goes so far to secure good results. (3) Again, it is sometimes difficult under state management to ensure the proper allocation of capital and revenue charges. The annual budget of a state industry is apt to be confined to revenue, without making due allowance for the capital expenditure of previous years. A state industry which seems to be earning a handsome surplus may in reality be giving a very poor return upon the capital invested in it, and the fact be concealed by the system of state debt accounts, which does not show the particular branches of state expenditure to which the moneys were applied when originally borrowed. (4) The main practical difficulty with regard to state industries is the question of the scale of rates, charges, or prices which the public are called upon to pay for the various commodities or services supplied by the state. As already stated, it is no justification of a state industry

Ratepayers'
interests.

that it can be made to pay under state management ; on the contrary, it is almost of itself a condemnation of any state industry that it shows a large surplus. That it does so only proves that those of the ratepayers who make use of these services of the state are being charged a higher price than is necessary to cover the real cost of supplying them. It is therefore a tax upon that section of the ratepayers for the benefit of the rest of the community. The same argument applies to the reverse case ; a state industry which shows a deficit on its accounts is really a bounty or subsidy paid by the state to a certain section of the ratepayers at the expense of the rest of the community. There are of course cases in which such a policy may be justified by the reflex benefit to the whole community from the expenditure in question, but it must be clearly proved that that is the case.

A similar difficulty is sometimes found in adjusting the charges made by a government department for services rendered to other branches of the state administration. High rates based on the idea of one department making a profit at the expense of another are a mistake. It is hardly even enough that the one is charging the other no more than it would cost to get the same work done by private enterprise ; that should be the maximum, not the minimum price, as between departments. The ideal, though for practical reasons it is not always possible to carry it out, is that one department should charge another only the nett cost price. To do more is only inflating both sides of the state budget by cross entries which are partly fictitious.

MILL, *Principles of Political Economy*, Book II. chaps. i. and ii.

NICHOLSON, *Principles of Political Economy*, vol. i. pp. 235 *et seq.*

CHAPTER XV

SOCIAL REFORM BY LEGISLATION

Factory legislation, dangerous trades, hours and wages—Employer's liability, workmen's compensation, health and unemployment insurance—Labour exchanges—Old age pensions—General social legislation and communal action—Education, public health, pure water, air, and food, weights and measures, etc., housing, recreation, etc.

It is obviously impossible in a single chapter to give any detailed history of the social and industrial legislation which has been an outstanding feature of the past century. All that can be attempted is to give a bird's-eye view of the main tendencies and methods of such legislation, and the results achieved.

The first struggle of the early economists from Adam Smith onwards was to get rid of legislation and state interference of every kind, which in their time had tied industry up in such a mass of control and prohibitions that the infant was nearly smothered in its swaddling-clothes. Their attitude to the state was "Hands off industry"; and the effect of that attitude was seen long afterwards in the earnest protests made by the most liberal-minded men, such as John Bright, against the danger of the state interfering with economic freedom, when the mildest factory acts were proposed. The advocates of factory reform had to work gradually back to the position that while freedom of industry in essentials was a good thing, freedom of individuals to do as they liked, and as the conditions of supply and demand sometimes allowed them to do in regard to the treatment of their labour, led in certain cases to results which were intolerable.

The fight
for liberty.

They had to evolve the idea of an entirely new kind of regulation of industry, not in the supposed interests of the industry itself or of the state, but for the protection of the weakest members of society against the black sheep among the employers.

A new
kind of
regulation.

All through the history of factory legislation, therefore, one is struck by the apparent willingness of the reformers to limit their proposals to the merest fringes of the question. The most that they dared attempt was to remedy here and there some abuse so glaring that it is now almost incredible that such things ever existed in England. The main feature of the whole movement is that until our own time no attempt was made to touch by legislation the wages or hours of employment of adult male workers. All that they did was to work round the subject, stopping the employment of women or children during unsuitable hours, as at night, or in unhealthy or dangerous trades, as in the case of boys sweeping chimneys, or under conditions so horrible as those under which women and children were employed underground in coal mines before the Act of 1843.

Modest
beginnings.

It may be well to consider here why the early reformers were so timorous. The first reason has already been mentioned, viz. the dread of state interference in industry, which was the legacy of Adam Smith's fight for freedom; but another very powerful reason was the complete ignorance of the general public in those days of the conditions under which industry was being carried on in the new districts of the North. In those days Manchester was as difficult of access from London as Khartoum is to-day, and the people of Southern England had no more knowledge of the conditions of life of the workers in the North than they have to-day of the conditions of life among the cotton growers of the southern states of America. The result was that there was no public conscience in the matter, and it took a long period of propaganda and education of the public to what was actually going on in the new industrial areas before parliament could be forced to take action. Finally, there was another practical reason for the slowness of reform. The conditions of industrial life were not merely new in themselves; they were new in their

No public
conscience.

surroundings. The conditions in the small factories driven by water-power in remote country districts were tolerable just because they were in the country. If hours were long at times, they were irregular, because the water-power was irregular, and at other times the workers had plenty of time to work their small crofts and to live in the open air. If the factory conditions were dusty and dirty, there was at least clean fresh air outside ; and finally, if sanitary provisions were non-existent, that did not matter much in the country. But when the application of steam-power to industry led to concentration of many factories in one neighbourhood, which soon became a large town, the evils of the factory system were intensified ; the conditions which were bad enough in the country became utterly intolerable in town, and there was no public authority whose business it was to interfere. It is hard for the younger generation of to-day to realise that a hundred years ago there were no Town Councils, County Councils, Urban and Rural District Councils, no Sanitary Inspectors, Factory Inspectors, or any other kind of Inspectors, no police even, because there was no local authority to enforce regulations, if any such had existed. There was nothing but the old county and parish organisation of the Justices of the Peace, whose powers were confined to the barest functions, mainly of civil and criminal justice. Thus the problem of the early reformers was not merely to rouse the public to the need of reform and to get acts passed by parliament ; they had then to create an authority to apply these acts, and a system of inspection to see that they were applied, and a very ineffective system it was for a long time.

No wonder, therefore, that the early reforms seem now almost ludicrously modest. The first Factory Act of 1802 dealt only with the conditions under which Poor Law orphans were "apprenticed" to the cotton factory employers. Even when the 1819 Act introduced the first restriction of the hours of employment of children under sixteen it was only to twelve hours daily and it only applied to the cotton trade. Gradually the hours were reduced, the protection extended to women and young

Ignorance
of new
conditions.

No
authorities.

Early cotton
Acts.

persons up to eighteen, and other textile trades included. In course of time the idea was extended to other trades such as the coal mines, where the conditions of employment of women and children were such as would not be tolerated now for pit ponies. Indeed, nothing but a perusal of some of the reports of the early commissions on these subjects will convince the present generation that these things ever were true in England. What is most difficult to understand is that most of the employers believed that there was really very little wrong with the conditions, that sixteen hours' work a day was good for young children because it taught them habits of industry and kept them from getting into mischief; and in this they were frequently supported by the parents themselves!

Dangerous
trades.

Gradually, however, the idea prevailed that a minimum provision of safety and decency must be secured in every trade. The idea that certain trades were particularly dangerous to the operatives was extended in various directions. Quarries and explosive factories, fur pulling which developed consumption, the making of phosphorus matches which produced "phossy jaw", white lead poisoning in the pottery trades, etc.—in course of time all these have been regulated so that the worst evils of the old days have practically disappeared. Merchant shipping received attention as the result of the exposures of "coffin ships" by Samuel Plimsoll, whose name has ever since been associated with the mark below which a ship may not be submerged, for the safety of the crew. A modest standard of precautions for the prevention of accidents in general by the fencing of machinery, etc., was enforced in all trades, and a certain minimum provision of sanitation, ventilation, etc.

Hours of
labour.

As already stated the provisions of the early Factory Acts with regard to hours of labour only applied to children and then to women, but by 1847 a stage was reached when, though the fight was still nominally to reduce the hours of women and children to ten per day (excluding meal hours), this had come to involve the hours of the factory as a whole, because the women and children formed so large a part of the total labour force that

work could not be carried on without them. In this indirect way, therefore, the ten hours' day was enforced in most trades to which the Factory Acts applied ; but the real fight over hours has been the work not of legislation but of the trade unions. The first step towards general regulation of hours was the introduction of the Factory Holidays in 1867. It was not till the Miners Act of 1908 that the principle of an eight hours' day in that trade alone received parliamentary authority, and the precedent was regarded by many with great alarm as the introduction of the thin end of the wedge of parliamentary fixing of hours of labour, which it was thought would inevitably lead to the fixing of wages also by legislation, and the end of free bargaining in industry. Eight hours day.

Up till then the only interference by parliament in regard to the fixing of wages had been certain attempts to prevent the worst forms of exploitation of the workers in regard to their wages, such as the compulsory publication of piecework rates, so that the workers might be able to check the amount actually paid to them, and the appointment of checkweighers in mines, nominated by the men themselves, to check the weighing of the coal brought to the surface by which the men's wages were determined. Another great abuse which had to be reformed out of existence by legislation was the "truck" system, under which unscrupulous employers succeeded in forcing on their workers various forms of payment in kind, such as the purchase of goods at stores run by some one connected with the factory and in which unfair prices were charged. Wages.

The first Act which dealt directly with wages was the Trade Boards Act of 1909, and it only provided for the fixing of minimum wages in certain trades which were more or less sweated industries, or in which a great deal of "home work" was still done. The next was the Miner's Minimum Wage Act of 1912, which provided a minimum wage for those who, owing to unfavourable circumstances such as a bad "working place", could not secure a living wage at the standard piecework rates. It is to be noted, however, in these two enactments how careful the promoters Trade Boas.

were to explain that they were not touching the question of standard rates of wages ; all they aimed at was to prevent the lowest grades of labour or the lowest rates of wages from being depressed below the limit of a living wage.

War
legislation.

The enormous and complicated body of legislation which was enacted during and immediately after the War dealing with wages of particular trades, especially the mines and agriculture, is too large a subject to be dealt with even in outline here. Most of it was emergency legislation, and not much of it has survived the period of post-War depression ; whether that is to be deplored or not is a matter of controversy which cannot be discussed here.

Protection
against
industrial
risks.

Turning now to the general protection of the workers from the risks of their occupation, especially accidents, sickness, and unemployment, the first development was in regard to the employer's liability for accidents in the course of their employment. The old common law on the subject is of course the same as for any other class of persons ; a man cannot be made liable in damages for injury done to his neighbour unless fault on his part can be proved. In the case of employers this common law rule had been extended by the courts into what was known as the doctrine of fellow-servant, that if the cause of the injury was not actually the individual fault of the master himself, but of some fellow-employee, the master was not liable. This principle was carried so far that it had come to be almost a complete barrier to any claim against an employer in a large factory and it therefore had to be legislated practically out of existence. This was done by the Employers' Liability Act of 1880, which did not affect the principle that the employer's liability rested on fault, either his own or that of some person for whom he was responsible. This act, however, proved unsatisfactory, especially in regard to the amount of litigation it produced over disputed cases, and in 1897 there was passed the first Workmen's Compensation Act which completely revolutionised the law on the subject and drastically altered the fundamental relations between employer and employee. In future

the liability of the employer became that of an insurer of his men against accidents arising out of their employment whether due to the fault of the employer or not; in fact the onus was thrown entirely on the employer, who could only escape liability by proving contributory negligence on the part of the injured man, and that has since been interpreted by the courts very strictly against the employer.

Workmen's
compensa-
tion.

This new development is of special interest because it marks the first emergence of a new idea, that the workers and the poorer classes generally must be protected against the major risks of their life. There were of course many who prophesied disaster as the result of thus throwing a new burden on the employers, which in effect amounted to an insurance of the men without any contribution by them to the cost of the insurance. As a matter of fact things worked out much more easily than had been expected. Insurance companies sprang up to undertake the risk at a premium, and after the necessary period of adjustment things settled down without serious injury to any one.

Insurance.

When the next step came to be taken, however, in this protection by insurance, a different principle was adopted. Under the Health Insurance Act of 1912 the burden of the insurance was shared between the employer, the employee, and the state. The provisions in the first Act with regard to insurance against unemployment were really experimental and only applied to certain selected trades, but they have since been extended to cover most trades, and they are now based on the same principle as health insurance, viz. that the good trades help to cover the deficit in those where unemployment is chronically heavy.

Health
and un-
employment

In the meantime the same principle of insurance had been extended to other classes than the workers in the form of old age pensions for all above seventy whose means fell below a very small figure. The main feature of this Act was that the whole burden was assumed by the state. That was perhaps inevitable; but again it was regarded as a dangerous experiment, though these fears have not been realised. To-day the great outcry is against the "dole", as it is called, or unemployment insurance

Old age
pensions.

Employ-
ment
Bureaus.

payment, which in conjunction with poor relief does certainly recall the dangers of the bad old days before the Poor Law Reform of 1834. The extension of the Unemployment Insurance scheme was carried through after the War under the stress of gratitude to the ex-soldier and others who had taken their part so readily in the War; and it was very unfortunate that it should so soon have to pass through the searching trial of the great post-War depression; but it is too soon to judge the merits of the system until it has passed through the normal cycle of good times as well as bad. Like the unemployment insurance scheme, the government Employment Bureaus, established as Labour Exchanges in 1909, have had to run the gauntlet of a great deal of criticism; but they also must not be judged by the experience of the worst spell of unemployment that has been known for nearly half a century.

General
social
legislation.

With regard to general social legislation, it is only necessary to mention what has been done in regard to education, which is now free and compulsory up to the elementary stage and the age of fourteen, with a limited provision for secondary education and still less for technical and commercial education. Closely allied with this is the provision made for free libraries, public picture-galleries, museums, and even music, indoor and outdoor. In matters of physical well-being the very name public health, like the idea which it conveys, is entirely modern. A century ago it had never been realised that the private health of the individual was any business of the public authorities; in fact, it was only the discovery of methods of preventing the spread of infectious disease, such as fevers and smallpox, by segregation as well as vaccination, that suggested the idea that for self-protection it was worth while to take care of our neighbour's health by prevention as well as cure. On the same lines, the supply of pure water, the purification of the air by smoke prevention and of the rivers by regulation of industrial and sewage pollution, are all entirely modern, as indeed is the need for them, which only arose with the development of large industries in towns. Another

Education
and public
health.

great series of measures for the protection of the public from exploitation or fraud was the Food and Drugs Acts, the Weights and Measures Acts, the Merchandise Marks Acts, and so on. The protection of person and property through the new police system, and the enforcement of the thousand and one duties which have been imposed upon the police in recent years, is only another illustration of the wider view now taken as to the functions of the public authorities. Finally, even before the extreme necessity caused by the War had arisen, powers had been given to municipalities to deal with housing, and these had in some cases been very fully taken advantage of. The provision of parks and open spaces, and the new idea of town-planning, may also be mentioned in the same connection.

Protecting
the
consumer.

In conclusion, only the briefest reference is possible to the work of the Poor Law authorities, who though not new have been entirely reconstituted and reformed since 1834. The report of the Poor Law Commission of 1909 is a monumental work of reference on the whole question; it contained many valuable suggestions for reform, very few of which have since been put into effect.

Poor Law.

Such in brief is the record of a hundred years of social legislation; it was sadly needed, but the progress achieved gives some ground for satisfaction. Those who think things are still very bad should compare notes with some one who can remember how much worse they were in the last great period of depression, the hungry 'eighties. Even that was an immense improvement on the state of affairs after the Napoleonic Wars. If the next century marks as much progress as the last, it will do well.

HUTCHINS AND HARRISON, *History of Factory Legislation.*

BLAND AND TAWNEY, *Economic Documents of the Nineteenth Century.*

CHAPTER XVI

TRADE UNIONS

Historical development—Aims of a modern trade union : (1) Benefit society,
(2) Militant policy—Arguments for and against the unions—The future
of unionism—Legal position of trade unions—Whitley Councils.

Change of
attitude.

No attempt will be made in this chapter to deal with the history of Trade Unions during the hundred years which have passed since the repeal of the Combination Acts in 1824 removed them from the category of criminal associations ; nor is it possible, even if it were not out of place in a general text-book, to deal with the wonderful development of recent years, especially during the War. For all these reference must be made to the works of Mr. and Mrs. Sidney Webb and others. Here it is only possible to sketch in outline the theory and principles of collective bargaining with the barest reference to the controversial aspects of the question, especially with regard to the methods employed by or attributed to trade unions. One thing, however, must be emphasised, namely, the extraordinary change that has come over public opinion in general on the whole question. Thirty years ago an economist who dared to speak of trade unions as even a necessary evil was regarded in England as rather a dangerous fellow (as indeed he would be to-day in America), and suspected of socialistic tendencies. To-day it is not going too far to say that if a census were taken of employers, especially in the well-organised trades, on a proposal to abolish trade unions altogether, a majority would vote for their con-

tinuance. Trade unions are now an accepted part of our industrial organisation, and the question of their "recognition" by the employers is a dead issue.

The modern trade union is the descendant of a long race of associations of labour, all of which, however, presented many features different from each other and from their modern successor. The history of ancient Egypt shows the existence of a complete system of trade guilds, which were hereditary grades or classes in society, probably more akin to the Hindu caste system than anything else. The Roman trade unions were at first monopolies granted by the state to the members of the trade, under condition of giving a certain amount of cheap labour for the poor, but latterly they became compulsory unions, to which every tradesman was compelled to belong, because the burden of supplying the necessary cheap labour had become so heavy that many refused to go into the unions. The trade or craft guilds of mediæval Europe were at first intended for the benefit of the consumer. They served as a guarantee of good workmanship and honest materials, but latterly they became powerful, and as usual selfish and exclusive, and their latter policy led to their fall.

Predecessor
of the
modern
union.

The modern English trade union does not greatly resemble any of these, though it possesses some features in common with most of them. The policy of the modern union falls under two heads: (1) As a benefit or friendly society it assists its members in times of difficulty; (2) as a militant society it defends the interests of its members against the employers, and of labour generally against capital, by striving for higher wages, shorter hours, and better conditions of labour in every way.

Of the benefit work of the unions little but good can be said. They give their members allowances in cases of disablement by accident or sickness, and if a workman loses his tools, say by fire, they help him to replace them. They provide him with a minimum income when he is out of work, and at the same time act as a labour bureau to find him employment elsewhere. They give him a superannuation allowance when he is too old to work,

Benefit
policy.

and help to provide the expenses of his funeral when he dies. And if one union is in difficulties owing to bad trade, others will come forward to help it by a grant from their own funds. All this is good work, but it is admittedly not this part of the work that maintains the interest in trade unionism or keeps up the membership; the industrial policy is the real backbone of unionism. It is necessary, therefore, to consider the main lines of the militant policy.

Need of
combination.

The theory of trade unionism is based on the facts already noticed, that labour is perishable, and that the average workman has no adequate reserve, so that he is not in a fair position to bargain with the employer. The idea of unions, therefore, is, by combining a large number of workmen in the union, to present a solid body of opposition equal in strength and fighting power to that which the employer enjoys through his position and his capital. In short, the argument of the trade unionists is that it requires such combination to make competition between masters and men really fair, especially now that the employers are also combined.

The inquiry into this policy may be divided under three heads: (i.) Can trade unions raise wages, and how? (ii.) Are their methods injurious to trade? (iii.) Is the harm greater than the good?

Theory of
collective
bargaining.

It is hardly necessary to discuss the question whether, theoretically, the policy of collective bargaining is likely to secure results more strictly in accordance with economic theory than would be secured by individual bargaining under free competition, for on that point there can be doubt. The greater the competition, the greater the number of individual bargains, the nearer the resulting price approaches to the economic ideal; but the whole argument of the trade unions is that such competition is not free at all, because the individual workman needs the support of the union behind him to enable him to compete on equal terms with the employer of hundreds.

First, then, can trade unions raise wages, and how? This question involves another. If trade unions are to raise wages,

they can only do so in two ways : either (a) by obtaining for themselves a larger share of the present product, or (b) by increasing the total product. The former of these alternatives, again, leads to another question. If labour is to get a larger share of the national dividend, at whose expense will it be ? There are two possible alternatives : (i.) at the expense of the consumer ; (ii.) at the expense of the employers.

How wages
can be
raised.

The wages of a trade may be increased by raising prices, that is, at the expense of the consumers ; but if this were applied to every trade, it would soon defeat itself, because by raising prices all round the real value of the wages in each trade would be reduced to the old level. The only case, therefore, in which this expedient may be justified is where one trade through some cause, probably the want of a union, has fallen behind in the struggle for higher wages, and is really suffering from too low wages.

At the
expense of
prices

The other alternative is that wages in general or in a particular trade may be raised at the expense of the employers' profits. This was for many years the favourite aim of the unionists, and it can hardly be denied that in the early days of trade unions it was largely justified. There is no doubt that, in the first century of the factory system, there was much "sweating" of labour, and in many cases bad masters took full advantage of their favoured position to cut the wages of labour down to the lowest point of subsistence, and almost to the very limit of starvation. Indeed, it may fairly be argued that had that not been the case to a considerable extent, trade unions would never have risen to the position of enormous strength which they now enjoy. Their success is the best justification of their policy, and the best proof of the need for them ; but things are different now. The masters have learned that they cannot afford to sweat their labour, not only because public opinion is against it, not even simply because the unions are too strong now to allow it, but because it really does not pay. The best of them realise that, from their own point of view, it is not the best policy, that ill-paid labour is poor economy,

or of profits.

because cheapness spells inefficiency, and highly paid labour really pays best in the end if it means increased product.

Piecework.

The piecework system was regarded by the trade unions as specially liable to abuse in this way through employers cutting down the piece rates when good men began to earn high wages. It is beyond question that this kind of thing was done by many employers in the old days, and that is partly responsible for the objection still entertained in many trades to the whole system of payment by results. It is admittedly almost impossible to make piecework universal in certain trades, such as engineering, where "repeat" work is the exception rather than the rule, but the experience of the munition factories during the War showed how much could be done in that direction even in engineering, when the conditions of "mass-production" existed. Incidentally the experience of these factories also provided a very striking object-lesson in the pitfalls of piece-rate fixing. At the outset, when women were introduced, the government gave an undertaking not to cut piece rates, with the result that, owing to the unexpected productivity of the machines, many of the women were able to earn higher wages than the highly skilled engineers, who alone could look after the machines. Thus the whole question of skilled *versus* unskilled and semi-skilled labour entered on a new phase, which has still to be threshed out; but there can be no question now of the employers trying to make this an excuse for depressing wages; the majority of the employers, who are now also well organised, would not be party to such a policy.

The "Wages Fund".

This change of policy on the part of the masters marks a very striking change of economic opinion in general. Of all the arguments that were put forward against the alleged power of trade unions to raise wages, none was more generally accepted in the early days than that known as the "fixed wages fund" theory, which is still worth considering, if for nothing else than to show how far the world has moved towards the humanising of economic theory. The argument was that wages are paid out of capital, and that the amount available for the purpose,

called the wages fund, was fixed by the amount of capital which employers were willing to devote to it. The arguments which inevitably followed from such a theory were naturally very much resented by the working classes. "There is no use in trying to raise your wages," said the economists. "There is just so much to be divided among you all; if some of you manage to get more than at present, it only means that others will have to take less. If the number of men employed in a trade increases, it simply means that each one will get less." It is not surprising that with such theories as this of the wages fund and the Malthusian theory of population in the air, political economy earned the name of the dismal science. Its effects.

The national dividend theory, however, promptly exposes the fallacy of the wages fund theory. It is not true that wages are *paid* out of capital; they are paid out of product, and are only *advanced* or lent by capital, and the amount which may be so advanced is not fixed. The wages fund is not a separate part of the employer's capital ear-marked for the special purpose; such an idea is diametrically opposed to the truth. As a matter of fact, owing to the special legal privilege attached to unpaid wages in the bankruptcy of an employer, it is possible for him to raise credit for that purpose when he could not do it for anything else. The amount of wages depends, therefore, only on the amount and value of the product, that is, on the efficiency of the labourer and, of course, the machine. The source of higher earnings is increased product, and to that there is practically no limit as long as efficiency is capable of increase.¹ That, however, varies greatly in different trades. In the cotton trade, for example, the efficiency of both men and machines has already practically reached its maximum under existing conditions, with the result that any reduction of hours of labour means an almost exactly proportionate decrease of output. Refutation.

This brings the argument back to the second way in which trade unions can raise wages, viz. by increasing the efficiency of Increased efficiency.

¹ Subject of course to the capacity of the market to absorb the increased product.

their members. If, for example, the trade unions can prove that by increasing the earnings of labour the men will be enabled to live a better life under healthier conditions, leading to greater physical efficiency, or that by shortening the hours of labour the workers will have more spare time to devote to the improvement of their position and skill as workers, then they would be justified in pressing for better wages or shorter hours. But the opponents of trade unions maintained that there was not much ground for hope that the higher earnings or shorter hours would be employed in such a way. In the early days it may have been so, but by the end of the nineteenth century, in most trades at least, the conditions of labour were already so much improved that any workman who really wished to raise himself could do so without difficulty. Unfortunately, not many of them seemed to be inspired by any such desire. They forgot that increased efficiency was the real way to higher wages. They had got the idea into their minds that the quickest way was through the employer's pocket, and they could not realise that the day of that policy was past. For employers have their supply price as well as the workmen, and if the unions, by continually raising wages, reduced the profits below that supply price, the masters would leave the trade as soon as possible, or at least no new capital would go into the trade, and the workmen would find that they had killed the trade by their own greed.

Position
before 1900.

Thus the position of the trade unions at the end of the nineteenth century was very different from what it had been in the earlier years. Then their policy was necessarily a fighting policy, a policy of aggression; but by 1900 they had in most cases obtained about as much as they could reasonably expect, and the long fall in general prices from 1873 had resulted in a very substantial improvement in real wages. They had, therefore, to alter their policy accordingly to one of a more defensive character. There were still certain trades which needed to have their wages raised, but in most trades all that the unions could do was to prevent wages being lowered. There were still bad masters who required to be watched, and the unions were right,

knowing that their efficiency depended on maintaining the comparatively high standard of living to which they had attained, to defend that standard from attack whenever possible, but they had realised that it would not do for them to refuse to accept a fall of wages when clearly the whole economic forces of the state of trade were compelling it.

With the opening of the twentieth century, however, things A new turn. took an entirely new turn. The fall of prices was checked in 1896, and after a short reaction during the Boer War, prices began to move steadily, though slowly, upwards. It was a long time before any one realised what was happening. Prices had been falling for so long that the world in general, and economists in particular, had almost begun to think that falling prices were natural and inevitable. The younger generation had become so accustomed to falling prices that they had no idea of what rising prices might mean. But the effect on the position of the wage-earning classes was electrical. Not only had the steady though concealed appreciation of real wages come to an end ; purchasing power was now actually diminishing. What the workers had to fight for was not to improve their standard of living, but to maintain the standard which had been won for them by the previous generation. The result was a period of considerable Industrial unrest. industrial unrest, which caused grave uneasiness among ordinary people, in the first place because they had latterly become accustomed to comparative industrial peace, and now the unions seemed once more to have broken out into open warfare, with continual demands from every trade for higher wages. In the second place, what made the situation more alarming was the serious character which individual strikes assumed, owing to the better organisation which enabled the federated trade unions of a whole industry to act together, while the policy of sympathetic strikes not only extended the area but seriously aggravated the dislocation caused by a big strike. Thus the strikes in the coal and railway industries were now national instead of district affairs ; and this made them seem all the more alarming and indeed revolutionary. Gradually, however, the true cause of

the unrest became generally recognised ; and from this time dates the new feeling of sympathy on the part of the public with the trade unionists. They felt that if the unions were only fighting to prevent real wages being reduced, there was a good deal of justice on their side, especially as the improvement in the state of trade as a whole which always follows upon rising prices made it easier for the employers to pay the increased wages demanded. From this time, therefore, the public, and especially the press, began to adopt a different attitude to strikes. It seemed to be felt that their business was to hold the ring ; that the strike was an appeal for arbitration on a question which the union had failed to settle peacefully with the masters. Public opinion, therefore, began to play a much greater part in the settlement of trade disputes, and it was not always on the side of the employers.

Public
attitude.

The War. It was in accordance with this new attitude that when war broke out the position of the trade unions proved so strong. The unions had shown themselves capable of good organisation and of a statesmanlike policy, and when difficult questions arose regarding labour, the government found it possible to call them not merely into consultation but into co-operation in carrying out the required measures. The agreement between the government and the unions in 1915, under which the latter agreed to abrogate all their rules and restrictions in the interests of the War, on an undertaking by the government that these would be restored after the War, obligations which were loyally carried out in every way, marks a new epoch in the history of trade unionism.

Post-War. Thus the period from, say, 1900 to 1920 marked the highest point of trade union achievement and success, but naturally, perhaps, this did not last. It is a notable fact that in the past the unions have always been at their best in periods of rising prices and good trade, while they have always suffered comparative eclipse during times of industrial depression. Thus when the period of feverish post-War activity was succeeded in 1920 by the most severe depression that has been known for many years, the resulting wave of unemployment and short time had its

inevitable effect on the trade unions. Their membership fell off, and in one industry after another they had to accept heavy reductions of wages, while even the eight hours' day which had been secured in almost every trade in 1920 was threatened with organised attacks by some of the employers' organisations. Fortunately that has not yet had to come, and it may be hoped that it will not come, for the opinion is gaining ground that an eight hours' day is long enough and that longer hours really do not pay. That is all to the good, and it is to be hoped that England will pull through this period of bad trade, which by 1924 showed signs of taking a turn for the better, without detracting too seriously from the improved standard of living which had been achieved by the workers during recent years. For it is now generally recognised that the raising of the standard of living of the wage-earning classes is a good thing not only for them but for the community at large, if for no other reason than that their well-being is reflected in many ways to the advantage of the general public, such as less crime, less expenditure on poor relief, and better purchasing power for all the various goods they consume, which after all constitute the bulk of the demand of the home market for our principal industries.

Against all this we have to consider the disadvantages of trade unions as alleged by their opponents. Of these probably the chief is that the insistence upon a standard wage as a minimum for all members of the union, and their objection to grading, have led to the minimum wage becoming a maximum, and have prevented the masters on the one hand from paying higher wages to better men, and on the other from employing any one who, though not worth the standard wage, might have been kept on at a reduced wage, such as old servants now past their best years. There is a good deal of truth in this argument, but it is difficult to see how it is to be avoided. The standard wage is the backbone of the system of collective bargaining, and it is not easy to see how the unions could avoid a return to something little better than the old system of "sweating the shop", etc., if they gave up the principle of the standard wage. This

Depression.

Objections
to trade
union
methods.Standard
wage.

objection, however, is not so often heard nowadays, because most of the masters have come to realise the advantage of the standard wage *to them*; it ensures them against secret cutting of wages by their rivals.

"Ca'
canny."

A more weighty objection in such times as these is the policy alleged against many unionists, though officially discountenanced by almost every respectable union, of what is known as the "Ca' canny" policy, the idea of restricting output so that the job will not be finished too soon, of preventing good men from increasing their output above a certain agreed figure, because it might lead to cutting the rate, or generally the idea that the less work each man does the more men will be required. This is of course a thoroughly indefensible line of action;¹ but in fairness to the men it must be pointed out that it is the lineal descendant of the fixed wages fund theory which was the argument of the masters in former years. The same is true of many things in regard to the relations of capital and labour; the relations of to-day are embittered by the atmosphere of distrust and suspicion which was bred by the bitter experience of the men in the old days. That is a difficulty which only time and experience of better methods will cure; but it is being greatly mitigated by the fact that disputes, when they arise nowadays, are not fought out between individual masters and men, but are quickly carried to the wider and cooler atmosphere of a big organisation. At a round-table conference of the representatives of the masters and men of the whole trade there is less likelihood of a settlement being prevented by individual ill-temper or dislike. This has resulted in a great improvement in another direction. In the early days when factories were smaller and the unions less strongly organised, the masters frequently complained of the interference of union officials in the conduct of the employer's business. Such incidents are less likely nowadays, in the first place because the employers know the requirements of the union and are quite able and as a rule

Interference
with
masters.

¹ Restriction of output may sometimes be justified as a *temporary* measure to meet reduced demand, but that is usually the masters' policy.

willing to observe them ; and second, because, if a question does arise, it is not discussed with individual masters, but is referred to the central organisation.

Another weakness of the trade unions is the disputes which frequently arise as to the delimitation of the relative area of each organisation. In some trades there are two or three unions dividing the loyalty of the men in the trade, and a similar difficulty frequently arises when two unions very closely allied cannot agree as to whether certain work belongs to one or other of them. In any case the small scale of the various unions in the old days, and the narrow limits of their work, frequently caused great annoyance to the employers because one tradesman was not allowed to touch another piece of work almost identical with his own, because that belonged to another trade, as in the case of a shipwright and a ship carpenter. That difficulty, however, is less frequently felt nowadays, owing to the amalgamation of groups of allied trades into one union.

One question which aroused much feeling was the refusal of members of a union to work with non-unionists, but one can easily see the necessity of that policy from the union's point of view. It is essential that the unions should include as large a proportion as possible of the total labour force of the trade, and the members of the union who have suffered the hardships of a strike in order to gain a point naturally resent other men who have been at work all the time getting the benefit of the improvement without having shared the sacrifice. There are of course some men who may decline to join a union on principle, though these are very few nowadays, but it is only human nature that unionists should use every form of pressure available to make others join with them in an organisation which they believe to be for the good of all. The question of black-legging in a strike is bound to cause ill-feeling ; and picketing seems to be the inevitable answer.

Finally, there is the much-disputed question of the right to strike. It is difficult to see how that right can be denied, for after all it only means the inalienable right of every man to

Inter-union
disputes.

Attitude to
non-
unionists.

Right to
strike.

choose whether or not he will work under given conditions. That is part of the liberty of the subject, and without attacking this how can strikes be effectively forbidden? This, of course, is a very different matter from the desire to prevent strikes by finding other means of settling disputes. Conciliation boards, compulsory arbitration, and the like are extremely desirable; but as long as human nature remains they will not always be successful in preventing strikes. But the strongest argument against strikes is that they are very seldom necessary when the trade is well organised. The cotton trade, which is perhaps the best organised in the country, both among masters and men, is an excellent case in point. Since the present organisation was established at the time of the Brooklands agreement in 1893 there has been only one serious strike in the cotton trade.

Legal
position of
trade unions.

A word must be said as to the legal position of trade unions. From the time when they were first made illegal by the passing of the Combination Acts of 1799 and 1800, it has been fought out again and again in the courts and in parliament, but it is doubtful whether a final settlement of the question is in sight even yet. When the Combination Acts were repealed in 1824, parliament only removed the criminal disability, but did not legalise trade unions nor create any form of constitution under which they could be incorporated. The legal difficulty is that the unions are not corporate bodies; and the first attempt to get over this difficulty was when the earlier unions registered themselves under the Friendly Societies Acts as benefit societies. This it was thought would give them the right to protect their funds, to sue defaulters, etc.; but in a case which came into the courts in 1867 the judges denied this right, and the unions found themselves cut adrift again. As the result of the Commission on the subject then appointed, two Acts were passed in 1871, one being the Trade Unions Act, which provided a form of constitution under which trade unions could register, but still without accepting the legal consequences of incorporation, namely, the liability to be sued; the other, the Conspiracy and

1871 Acts.

Protection of Property Act, provided a very elaborate code of offences in connection with trade disputes especially directed against "picketing". This second Act aroused bitter opposition from the unionists, and was finally amended in 1875.

During the 'nineties a series of decisions had been given on the question of the liability of trade union funds for losses caused to employers by the action of their members, but it was thought that no such corporate liability could attach to the union funds, until in 1901 the famous Taff Vale case again upset all the accepted notions on the subject and reopened the whole question. The result was the passing of the Trade Disputes Act of 1906, 1906 Act. which contained a sweeping clause to the effect that no civil action should be entertained against a trade union in respect of any wrongful act committed by or on behalf of the union. Then in 1908 the Osborne judgment raised the question whether trade union funds could be used for any other purpose than those very narrowly defined in the Acts of parliament, the particular point involved being the use of the funds for the promotion of the candidature of trade union officials for parliament. As that decision involved a great deal more than it actually stated with regard to the limitation of the powers of the unions, it had again to be fought out in parliament, which in 1913 passed an amending Act. The position of the unions, however, is still fundamentally unsound, because they have so far declined to accept the ordinary methods of complete incorporation, which would involve the liability of the funds of the union to claims for damages due to the action of individual members. The reason why the unions cannot face that responsibility is that it would be impossible for them to secure that no action would be taken by any of their members except such as were authorised by the officials of the union. Unless some way can be found out of this apparent *impasse* it is hard to see what the final outcome of the controversy will be. Osborne case.

What, then, is the final judgment on the question of trade unions? It seems to be generally agreed that they have justified their existence, and while one must regret many of

their methods, and especially the deplorable loss caused by strikes, not only to the parties to the dispute but also to the community, it is difficult to point to any particular reform that could be forced upon them which would avoid these losses and yet leave the unions effective for the purposes for which they exist. Probably the only answer to the problem is that as both masters and men learn by experience and the organisation on both sides improves, the occurrence of the most objectionable forms of industrial warfare will become less frequent; but as long as the wage relation exists there are bound to be differences of opinion which will at times break out into open disputes.

Whitley
Committees.

It only remains to refer to a new form of industrial organisation which was started during the War, in the form of the Whitley Committees with their district organisation and workshop committees. The idea was to have a separate organisation within each trade, concerned solely with the interests of that trade; and that, by securing direct contact in the first place between the employer and his own employees through their fellow-employees or the workshop committees, small disputes would be prevented from occurring, and would be more easily settled when they did arise. The main difficulty is that this organisation cuts across that of the trade unions, which is mainly by trades, all engineers, for example, belonging to one union whether they are employed in a locomotive shop, a shipbuilding yard, or a cotton mill. Thus in one factory there may be men belonging to a dozen different unions. It is difficult to say, therefore, whether these two different forms of organisation can live alongside of each other; but it is too soon yet to form any opinion as to the future of the Whitley Committees.

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CHAPTER XVII

CO-OPERATION AND PROFIT-SHARING

Theory of co-operation—Co-operative production and co-operative consumption—Co-operative marketing—Co-operation in agriculture—Co-operative credit—Profit-sharing—Labour co-partnership.

Just as trade unions are based on the idea of obtaining for labour a better share of the national dividend in the form of increased wages, shorter hours, etc., so the object of co-operation is to obtain a larger share of the product for the labourer by dispensing with the services and absorbing the profits of the employer, and to secure better prices alike for the producer and the consumer by doing away with the middleman. The literal meaning of the word is simply "working together", and in general terms it includes all voluntary combinations among the units of any factor of production with a view to obtaining for themselves by collective bargaining better terms than can be obtained by the ordinary methods of individual competition. Thus co-operation in agriculture has usually consisted in combined buying and transport of seed, manures, and materials, combined ownership and common use of machinery or buildings involving heavy capital outlay, and arrangements for joint sale or transport of the crops of all the members. Co-operative credit associations accumulate funds by the contributions of the members themselves, to be lent out again to those members who find it necessary to borrow for capital expenditure, such as cattle or implements, or for working capital.

Various forms.

- In England.** In England, however, the word has generally been applied to combinations (a) of industrial wage-earners to discharge the functions and secure for themselves the profits of the employer, and (b) of consumers to save the profits of the middleman or retail shopkeeper by doing his work themselves. Thus the principles of co-operation have been stated by a leading English authority as follows: "They desire to promote justice and economy (1) by conciliating the conflicting interests of the capitalists, the worker, and the purchaser through an equitable division among them of the fund commonly known as profit; (2) by preventing the waste of labour now caused by unregulated competition". In these two points are indicated at once the truth and the fallacy of co-operation in general. The fallacy lies in the idea that co-operation can in some way eliminate profits. The real strength of co-operation lies in the other idea; if there are too many middlemen, and by co-operation some of them can be done without, then it is an undoubted advantage.
- Holyoake.**
- The theory.** The proposed division of "the fund commonly known as profit" among the capitalist, the worker, and the purchaser, suggests two kinds of profit: (i.) manufacturer's profit, and (ii.) the profit of the merchant or middleman, and of the retailer or shopkeeper. Corresponding to this division there are two kinds of co-operation: (i.) Co-operative production professes to eliminate the employer's profit by dividing it among the workers. The method proposed is that the capital necessary should be subscribed by the workers themselves and should receive a fixed rate of interest, that the workers should receive the trade union rate of wages and the manager a fair salary, and that the balance at the end of the year should be divided among all the employees in proportion to their wages. (ii.) Co-operative consumption aims at eliminating the profits of the retail dealer by dividing them among the consumers. The co-operative store is run by a committee and a manager, who receives a fair salary. Goods are sold at ordinary prices, and the profits are divided at the end of the year among the members
- Eliminating profits.**

according to the amount of their purchases. Allied to this is the system of co-operation in marketing by the producers, which is also directed to saving the profits of the middleman.

Co-operative consumption has admittedly been the more successful of the two in England. There can be little doubt that there were too many middlemen in the country ; the shop-keeping trades were overcrowded, and the turn-over of each shop was so small that the oncost was quite out of proportion. By combining many small shops into one large store the co-operative societies were, or ought to have been, able to effect considerable savings. But the mistake which many co-operators made in the early days was in not realising that the qualities which make a good business manager are special, and must be specially paid. The profits of the employer, as already pointed out, consist largely of the supply price of his business ability ; and if a sufficient salary is not paid to get the services of a good man, the profits which would have gone to pay his salary will not be earned, because the ability which was required to earn them is wanting. This is specially true in trades where the supply of employers is large and the entrance to the trade easy, and nowhere are these conditions more completely fulfilled than in the retail shopkeeping trades. Very little capital and, comparatively speaking, very little training are required. The competition being therefore so keen, there is little room for any quasi-rent profits, and the profits of the retail trader are cut down to the barest possible supply price. It requires a very keen business man to make a living as a retail shopkeeper in the great industrial towns.

Again, it is a commonplace that committee management is very bad for a business undertaking ; it hampers a good man, and co-operative committees were at first inclined to be suspicious and to interfere more with the management than was good for the business. On the whole, there is little room for doubt that the management of the co-operative stores in the early days was not so good as that of their private rivals. It is natural that it should be so ; there is nothing like self-interest to get

Retail co-operation.

Committee management.

the very best work out of a man. A man who is working for himself and getting all the profits is bound to work better than a man who is merely a paid employee. The result is that the goods sold by the co-operative stores were in many cases not quite so good nor quite so cheap as could be bought in the best retail shops. In other words, the co-operators paid a little more for their goods, and only got back part of the difference in the form of dividend; the rest was lost by inferior management. Against all this, however, it must be remembered that the dividend system is a great blessing to many poor and improvident people, who but for the help of this compulsory saving would never save at all. Further, the habit of saving is only one of many things which the co-operatives have taught their members. They have done excellent work in providing educational facilities beyond the ordinary school age, not only in general subjects, but also in Economics and in citizenship. While insisting on the payment of fair wages to the producers of all the goods they buy, as well as of course to those employed in the factories of the wholesale co-operative societies, they have done much in training their members to appreciate honest quality in their goods rather than cheapness alone.

Good work done.

One more point must be noted in favour of the co-operative societies. They have certainly done much, by force of competition, to secure for the public at large, as well as for their own members, the best possible prices in every class of goods. Their competition compelled the retail dealers to cut their prices to the lowest point, till by the end of the nineteenth century the retail trades were reduced to the lowest possible limits of profitable industry—indeed in many cases below it. But if the co-operators had been successful in clearing out the retailers altogether, it is doubtful whether this would have continued. Without the spur of competition with the retailers, it is to be feared that the drawbacks of co-operative management might become more serious, and the consumer would, in the end, be no better served than he was by the retailers. That question, however, is not likely to arise now, as the development of the huge department

Safety in competition.

CO-OPERATION AND PROFIT-SHARING - 207

stores and of the multiple shop system has enabled the retailers to secure most of the benefits of large turn-over, and to hold their own against the co-operatives.

Returning to co-operative production, it has so far been practically a failure in England, as far as manufacturing is concerned. The only form in which it has been successful on a large scale is that of the wholesale co-operative societies, which manufacture many different commodities in huge quantities for sale through the co-operative stores. These, however, are only capitalist concerns owned by the co-operative stores ; the only difference between them and any other private factories is that in some cases the workmen receive a bonus on their wages out of the profits. Of the other really co-operative schemes which are fairly numerous but mostly small, practically the only ones that have been successful are those which have the advantage of a secured market, such as the London gas companies, and some who are closely associated with the retail co-operative societies to whom most of their goods are sold. There are very few cases where in a really competitive industry, that is to say, where the goods must be made to tempt demand and in open competition with ordinary producers, such schemes have been a permanent success on a large scale. The reasons for this failure seem to be that in a factory the manager's services are still more important than in retail dealing, and that in the conduct of a large manufacturing business committee management, with all its attendant clumsiness and inconvenience, is simply impossible. In other words, it means that in manufacturing, as in retailing, the employers' profits are mainly a supply price which must be paid or they will not be earned, and that in the factory system there is not the same waste of labour owing to over-competition and the multiplication of producers as there was in the retail trades.

In agriculture, however, the idea of co-operation seems to have found greater scope and better prospects of success. Germany led the way with a characteristically thorough organisation of two forms, one specially adapted to agriculture

Co-operative
production.

In agri-
culture.

(Raiffeisen) and the other to small industries (Schultze-Delitzsch), which have been to a large extent the model for all other countries. In Denmark the co-operative societies for handling dairy produce of all kinds have practically created the industry. All over the Continent, and even in the United Kingdom (though the greatest development so far has been in Ireland), the extension of co-operative methods to every department of agriculture in recent years has been hopeful. Probably nothing has contributed more to the spread of the movement than the successful work of the German co-operative credit societies, which, by inculcating the ideas of mutual assistance and common responsibility, have encouraged the recognition of common interests, which is the essence of co-operation. These banks are of various kinds, but the main ideas are as follows : They consist of small societies affiliated to a central organisation, but each working on a small scale in its own district. The funds of the society may be either subscribed by the members themselves or borrowed in the name of the society, and on the joint responsibility of all the members, from some outside source. This principle of unlimited liability is really one of the greatest advantages of the scheme, because it makes the society very careful in selecting those to whom it lends, and thus at the same time enforces and facilitates strict supervision, not only of the purpose to which the loan is put, but of the general conduct of the borrower. The work of these people's banks has not been confined to agriculture. Many of them are found in small towns and even large cities throughout the Continent, working on similar lines among the smaller tradesmen and workpeople.

The German models.

PROFIT-SHARING AND LABOUR CO-PARTNERSHIP

This seems to be the most convenient place to refer to another very interesting development which has been much discussed in recent years, namely, profit-sharing, though, strictly speaking, it does not fall within the group of special movements at present under discussion. The principle which runs through all of

these movements is to secure, by combination among the units of a group of people, better terms than they could secure by individual action, and there is nothing of that element in profit-sharing. There the idea is that in order to secure the co-operation of the workers through self-interest the employer should voluntarily give the workers a share of the profits earned by the industry. Great hopes have been entertained of the possibilities of this movement, and it has been hailed by many as an entirely new system, which will revolutionise industrial relations and cure all the ills of industrialism. That, however, seems to be more than future developments are likely to justify.

In the first place, it is necessary to define carefully what is meant by profit-sharing. Many schemes so called consist of nothing more than the paying of a bonus to the workers on their wages, but that does not really come within the definition. The name profit-sharing should be confined to those schemes in which the payment is dependent on there being profits, and is in some way proportionate to the profits.

The government publishes at intervals a report on all such schemes in this country,¹ and also at times on those in other countries; and from these reports it appears that the movement has not yet reached great dimensions in any country. The first difficulty is that if the sharing of profits is to be real, it ought also to include sharing of losses; but that is obviously impossible, because even if the trade unions would allow what would necessarily mean a reduction of the standard wage in bad years, it is certain that very few workmen could afford to take such a risk, and very doubtful whether their loyalty to the scheme would stand the strain of a succession of bad years. If, then, the whole risks of the industry are to remain on the shoulders of the employers as at present, it is obvious that the fund of divisible profits must be subject to deduction of a fair allowance for such risks. The workmen cannot expect to share in all the profits of the good years without some deduction being made towards the losses of the bad years. In effect this

Limits of
profit-
sharing.

Losses not
shared.

¹ See Table X.

means that provision must be made for a reserve fund before calculating the divisible profits ; and in most businesses, taking one year with another, that would not leave very much for division, especially as the percentage of the total nett profit which would be divisible among the workers cannot be large, the shareholders are to receive a fair dividend.

Attitude of
the unions.

Again, the conditions attached to the right to receive their share of profits are usually rather stringent, including a certain period of length of service. Further, in some cases it is stipulated that part at least of the profits earned should remain in the hands of the employer at the credit of the worker, or should be invested in the shares of the company, though as a rule the latter is left to the option of the workers. In passing, it should be noted that where workers own shares of the company, which they have purchased in the ordinary way, that does not come within the definition of profit-sharing as here discussed. This point of the acquisition by the workers of a permanent interest in the company has naturally caused some hostility to such schemes by the trade unions, for it is obvious that if a man has such an interest he is less likely to be prepared to sacrifice it by joining in a strike, which, as is generally stipulated, would involve the loss of his shares or accumulated profits.

Labour
co-partnership.

It seems, therefore, that there are considerable difficulties in the way of any really large development of such profit-sharing schemes, and it is not surprising that this has led to the formulation of other schemes which possess some of the advantages of profit-sharing, along with others which may be regarded as still more attractive in a different way. One of these is known as labour co-partnership, a term rather loosely used to indicate schemes which provide for some form of participation by the workers in the actual control or management of the industry, especially as it affects their own interests, as, for example, in regard to the conditions of labour in the factory, the fixing of piece-work rates, etc. Some firms have gone the length of appointing workmen to the board of directors, and that is a

development which it would seem ought to do a great deal of good and might be carried further. There are, however, obvious difficulties in the way. If the director is really to represent the workers he must be selected by and responsible to them, which involves that the information he receives as director must be open to them, or else he must run the risk of losing their confidence. Either alternative is difficult, for there must be a great deal of confidential information communicated to the directors which could not be passed on to the workers through their representative, for that would be equivalent to its publication. Short of this, however, it has been proved by some of the more advanced firms that a substantial amount of real control can be given to the workers' representatives in matters which most directly affect them; and the advantage gained through the fostering of the feeling of mutual interest in the success of the firm is very real. There is no doubt that if the workers in any industry could be made to feel that the interests of the firm were also their interests it would make a great deal of difference in many ways, such as avoiding loss of time and materials, bad work, etc. The real difficulty of such schemes, however, is that the questions upon which the success of the business turns depend largely upon conditions which lie outside the factory, such as markets, both for the purchase of their raw materials and for the sale of their products, and the decisions which must be taken on such questions involve risks which the average worker is neither qualified nor as a rule willing to take. Risk taking is the mainspring of modern industry, and the ordinary working man has neither the knowledge and experience required, nor in most cases the peculiar kind of character which is involved in the taking of such risks. That is no discredit to the workman, but is partly the result of his training and his position; he cannot afford to take risks.

While, therefore, both profit-sharing and labour co-partnership are very desirable things in themselves and deserve every encouragement, it seems optimistic to expect that they are

Workers'
directors.

Risk taking

likely to replace the present system to any material extent. They may, however, do much to smooth out some of the difficulties of the present system, and to produce a better atmosphere of mutual confidence and respect which would be of the greatest value.

MARSHALL, *Economics of Industry*, Book IV. chap. xii. § 6.

FAY, *Co-operation at Home and Abroad*.

G. J. HOLYOAKE, *The Co-operative Movement To-day*.

S. and B. WEBB, *The Consumers' Co-operative Movement*.

Reports on Profit-sharing and Labour Co-partnership (official): (1) *In the United Kingdom*; (2) *Abroad*.

CHAPTER XVIII

MONOPOLIES, COMBINES, AND TRUSTS

Government monopolies—Private combines, various forms and stages—
Permanent *v.* terminable—Horizontal *v.* vertical—Shipping rings—
Monopoly price—The danger of monopolies—Monopolies and protection
—Dumping.

A **MONOPOLY**, in the strict sense of the word, is an exclusive right granted by the state to a company or an individual to carry on a certain business or undertaking, or to manufacture or sell a certain commodity. It is often forgotten that though the old monopolies of evil repute, such as that of the sale of salt, have all been abolished since the time of the Stuarts, there are still in this country many important monopolies either held by the state or by local authorities, or granted by parliament to public utility companies. Thus the Post Office is a huge state monopoly; many public services, such as gas, water, and electricity or tramways, are either in the hands of the local authorities or granted to private companies with exclusive privileges, while the railways, especially since the new grouping arrangements came into force, are virtual monopolies in their own areas. A grant of letters patent for an invention is of course an exclusive right for a limited period.

Nowadays, however, the word is generally used in a wider sense as meaning any combination of employers, or even a single large firm which holds so important a position in a certain trade that it practically controls the whole trade and can rule the price of the commodity. Such a combination is usually called a trust in America, which is, indeed, the home of such adventures.

There, largely on account of protection, they have attained to such enormous dimensions and become the centres of abuses so great as to make them a real danger to the interests of the public. In Germany similar organisations are known as Kartels.

It is with these combines that our interest at present chiefly lies. They are just another application of the same principle which runs through the two previous chapters, the combination of the individuals in a particular class—this time the manufacturers—to secure more favourable results by joint action than they had found possible when acting separately. Reference has already been made incidentally to the modern combinations of masters for mutual support in dealing with labour questions, and many industries now possess organisations for the furtherance of the common interest in other matters such as education, professional examinations, scientific research, etc. Again, reference has been made in the previous chapter to the special form of combination for joint purchase of necessaries, such as the agricultural co-operative associations. In this chapter, however, interest is centred in what might be classified as selling combines, the main object of which is the control of prices of the goods produced.

The trust. Such combines may be either *permanent* or *terminable*. In the former the various firms or companies forming the combine generally cease to exist as separate organisations and are merged in the new company, which takes over their whole assets. The original form under which such combines were first established in America was known as a trust, because the whole shares of the constituent companies were transferred to trustees, who thus held the whole assets of the combine and became in effect the directors of the new organisation. This form of organisation was originally invented by Rockefeller for the Standard Oil Trust; and when it was declared illegal in 1892 it was succeeded by the new form of incorporation, which simply meant a new company taking over the whole assets of the combine formerly held by the trustees indirectly. This latter form was the one generally adopted by the English combines.

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Modern combines are, again, frequently classified as *vertical* or *horizontal*. The former indicates the complete integration of the various parts or processes of one industry from the raw material up to the finished product. Thus one huge company may own coal-pits, iron-mines, blast furnaces, steel works, ship-building yards and engineering works, so that they can turn out a complete finished article such as a steamer in their own works from beginning to end. A horizontal combine, on the other hand, means an amalgamation of the majority of the factories in one section of an industry, such as the calico printers. Many of the combines of to-day are both vertical and horizontal, holding a number of factories in each of several stages of one industry.

Classification of combines.

Terminable combines (or arrangements of the nature of a combine, for many of them are so loose as hardly to deserve the full name) take many different forms which may be classified according to the degree of control exercised by the central organisation. This may extend to (a) conditions of sale only, (b) the prices charged, and (c) the output of the constituent companies.

(a) "Conditions agreements" enforce upon the parties uniform trading terms only; they are intended to eliminate various practices which involve disguised cutting of prices in such forms as special discounts, favourable credit terms, or other privileges accorded more or less secretly by one trader to secure business at the expense of his rivals. The original idea of most of these agreements was to enforce uniformity of contracts and to prevent disputes by providing standard rules for settling them, such as the York-Antwerp rules in marine insurance. They also included compulsory agreements to accept the decision of certain bodies in case of dispute, such as the Bradford Testing House or the Appeals Committee of the Liverpool Cotton Association.

Conditions of sale.

(b) Price-fixing associations went a step further by providing uniform price lists to which all the members of the Association agreed to conform. Sometimes it was hardly more than a

Prices.

vague agreement, as in the case of domestic coal prices or the price of the 4-lb. loaf under which prices were fixed (sometimes with local variations) by certain trade bodies, and most of the trade followed suit. In some cases such associations were only a "gentleman's agreement", but in others the obligation was definitely imposed upon every member of the association, with severe penalties for breach of the list prices. There was of course great variety in the methods of control and in the machinery adopted for fixing the prices and for their enforcement. Generally they included only one class or stage of the industry, such as the manufacturers, the wholesale dealers, or the retailers; but sometimes, as in the case of the Imperial Tobacco Company, the one class imposed their prices on the next, as, for example, the manufacturers upon the wholesale and retail dealers.

Lack of
sanction.

These price agreements, however, revealed two elements of weakness. In the first place, the attempt to fix prices only without control of output proved almost useless, because each manufacturer, being anxious to increase his turn-over in order to reduce costs, was tempted to adopt all sorts of indirect devices to attract customers while nominally observing the price agreement. This led to disputes as to whether a particular member was undercutting by some such method, and if a member were convicted of breach of agreement there was no sanction behind the penalties, because, being an agreement "in restraint of trade", the courts would not enforce it. Thus these agreements in many cases either broke down or led to the formation of—

Output.

(c) Agreements for the regulation of output. The simplest form of these is the general agreement to run short time, as in the cotton trade, but the more complicated organisations known as syndicates or pools have taken various forms. Thus they may operate by controlling *production*, so that each member is limited to a certain amount to be manufactured every month or year, known as the quota. In other cases the quota applies to the amount each member is allowed to *sell* within a specified area, the members being allowed to "dump" their surplus

The quota.

production wherever they can find a market and at what price they like. This was the form of the classic prototype of these arrangements, the "Newcastle Vend", under which every mine-owner was limited to a fixed amount of "sea coal" exported by sea, but there was no limit on "land sales". It was also the characteristic form of the German "Kartels".

Another form of combine, short of amalgamation, was to leave each member free to produce and sell as much as he liked and at any price, but the profits were pooled and divided among all the members according to a prearranged quota or proportion. But the great bone of contention in all these schemes was the fixing of the quota, and the result very often was either that the agreement broke down or else it led to the adoption of still closer co-operation, which in effect became a combine or merger.

Even that, however, could be done in different ways. Sometimes, instead of a new company taking over the whole assets of the old firms, one of these would assume the leadership by acquiring a controlling interest in the ordinary shares of all the others. This had the advantage of making less outward change (which may cause loss of goodwill) and also of requiring less new capital, because the debentures and preference shares of the constituent companies need not be disturbed at all. Again, the combine sometimes took the form of a "holding company" acquiring a majority of the shares of the old companies, and the power of voting upon these shares gave the holding company in effect the control of all the companies.

The main advantage of the more complete form of amalgamation is that it gives the central organisation power to deal with the plant of all the factories, etc., as a whole. Thus it is possible to arrange the work among them so as to secure the greatest possible specialisation—one mill, one product; and if it is found possible by that means to concentrate the whole output in a smaller number of mills a few of the least efficient may be closed down altogether. The difficulty is that the purchase of these "lame ducks", as they were sometimes called, involved additional capital; and if they formed an excessive proportion of the total

Pooling
profits.

Various
forms of
combine.

Specialis-
tion.

this might result in over-capitalisation of the whole concern. On the other hand, if left out of the combine they might cause far greater loss by desperate competition.

Shipping
rings.

Finally, reference may be made to another form of combine in the shipping trade, namely, the shipping conferences or rings: the parties to which, in order to secure all the traffic for the regular liners, agree to give a rebate on the usual rates to any trader who undertakes to make all his shipments by their steamers, including not only odd parcels but also full bulk cargoes which a tramp steamer might be willing to take at lower rates.

Combines
due to
excessive
competition.

There is no doubt that in England at least the formation of combines was really in many cases the result of sheer necessity. The increasing keenness of competition and the cost of advertising and pushing business in every way had made it difficult for most manufacturers to make ends meet. The smaller and more old-fashioned producers were being rapidly killed off, but the fewer manufacturers there were left the keener the competition seemed to become, until at last the survivors were forced to come to some agreement. The main lines of these arrangements were generally the fixing of prices, with consequent reduction of the costs of competitive advertising and, in many cases, the centralisation of office management, which led to a great saving owing to the reduction of office staffs. Many of them also resulted in the closing down of old-fashioned or expensive mills, as above described, and in some cases the combine adopted a policy of restriction of production.

Theory of
monopoly
price.

In discussing monopolies generally it must, in the first place, be pointed out that the principles which guide a monopolist in fixing his price are very much the same, whether the power to control the industry be the result of a state grant or of the formation of a combine. The common opinion is that the combines always fix their prices very high and make enormous profits at the expense of the consumer, but this is not necessarily the case, for while a monopolist has less need to consider the supply side of the equation of supply and demand, because he

has no competition from other producers to fear, he has still to reckon with the forces of demand. He has to consider the law of demand and the elasticity of demand, and also the question of the economies of large production as applied to his own factory. Thus if he raises the price the demand is bound to fall off to some extent, because, even in the case of those commodities which are essential to life, there is still a certain amount of elasticity of demand. If, on the other hand, he sells at cheap prices, his sales will increase. Even a monopolist, therefore, must consider carefully what price will pay him best. It is possible that by reducing the price to tempt an increased demand and increase his turn-over he may actually find that his profits are greater, because the cost of production has fallen even further than the price owing to the saving of oncost. Thus a monopolist is ruled by very much the same principles as an ordinary trader, except that in deciding the price he has only himself to consider ; there is no fear of competition to force him always in the direction of lowering his price.

Effect of demand.

Again, except in the case of the state monopoly, which altogether excludes competition, the monopolist in this country has to include another important consideration, namely, foreign competition. In a free trade country such as Great Britain this acts as a healthy check on any tendency of the combines to exploit the consumer unduly. In a protected country, however, there is no such check, and the result is that it is in these countries that the evils of monopolies have been greatest, because there the monopolist can adopt a policy which is impossible in a free trade country. Thanks to protection, which keeps foreign goods out of his own country, he can raise his price there up to the limit of the tariff. That will of course reduce his home sales, but he can export the remainder of his product. Thus he can maintain his huge turn-over, so as to get the benefit of the reduced cost of production, and still keep his price up at home, while he gets rid of the surplus by sending it abroad. He can afford to do so at a very low price, because he has already made sufficient profit out of the goods sold at home, and can afford to throw away

Foreign competition

Dumping.

the rest at, or even under, cost price. This is what is called dumping.

Dangerous
under
protection.

It may therefore be claimed that it is only in protected countries that monopolies are likely to be greatly abused. But while the combines have not, so far, led to any great abuses in England because of free trade, that is about the best that can be said of them ; it cannot be claimed that they do the consumer much good. They may indirectly cause a reduction of the price because the combination of two or more large firms may lead to great economies, of which the public get some of the benefit in the shape of reduced prices, but that will only be because the monopolists consider that it pays them best to do so. In other words, the position of monopolies is that they may not do the consumer any harm, but at the best they cannot be expected to do him much good, and they can never serve him so well as would, say, two large firms, each big enough to secure all the advantages of large production, and each kept in check by a spirit of healthy, though not necessarily unfriendly, competition. Competition is still the life of trade.

NICHOLSON, *Principles of Political Economy*, vol. ii. pp. 59 *et seq.*

MARSHALL, *Economics of Industry*, Book V. chap. viii. § 2.

MARSHALL, *Principles of Economics*, Book V. chap. xiv.

MACROSTY, *The Trust Problem in British Industry*.

HILTON, *Memorandum on Combines and Trade Organisations*.

CHAPTER XIX

SOCIALISM

Its essential meaning—The antithesis of the competitive or individualist system—Classification of socialistic schemes—The practical difficulties of state socialism—Syndicalism and guild socialism.

THE present economic system is based on competition ; it is a system of individual liberty and free enterprise ; the system of individualism. The alternative system is socialism, the essential meaning of which is the direct opposite of individualism and competition. It is not easy to define it exactly, but the following is probably the best available definition : Socialism, in the generic sense of the term, includes all such schemes as are intended to further the claims of society for social purposes as against the present system of individualism, or to promote the interests of the whole as against those of particular classes and individuals, the object of all such schemes being directly or indirectly revolutionary, as distinct from mere reform of the present system. Thus socialism seeks (1) positively to promote the good of society as a whole, rather than of individuals, and (2) negatively to destroy individualism. It is thus the direct antithesis of the present economic system.

Nicholson's
definition.

The first point to be kept in view is the broad distinction between socialism and social reform. Many people call themselves socialists although in reality what they want is merely social reform, and they would be the first to object to the revolutionary proposals which are the essence of genuine socialism. In this way socialism gains much support from people who

Not merely
social
reform.

sympathise with some of the reforms proposed by socialists, but would not for a moment support their fundamental policy.

Keeping this in view, the various schemes which are really socialistic may be classified according to the degree of state interference involved in their proposals. Thus there are :—

Anarchism.

(1) Schemes which involve the abolition of state control, such as anarchism. This word has, like many other names in common use, acquired a special meaning quite different from its original sense. Anarchism was originally a form of socialism, of which the main idea was to do away with all state control and leave every man free to do whatever he liked, but the connection between the original idea and the modern meaning of anarchism has been so entirely forgotten that it hardly deserves to be regarded as socialism at all.

**Intra-state
com-
munism.**

(2) Schemes to establish within the existing state self-contained socialistic or communistic communities, such as Robert Owen's in Scotland, and many similar institutions in America. Experience has shown that, while these have been successful to a certain extent in small communities, the idea is generally a failure when any attempt is made to work it on a large scale ; indeed, its success, even on a small scale, is due to the fact that in these small communities the whole direction of the affairs of the community rapidly comes to be centred in one strong man, who takes the lead ; in short, it becomes an absolute autocracy. What began with the idea of communism ends by paradox in something which is really only a benevolent despotism.

**State
socialism.**

(3) Schemes involving more state control, either by legislation or state administration. The extreme form, which usually passes in modern times under the name of socialism, is collectivism, or state socialism. Some of its advocates would seek to obtain it by force immediately ; others prefer to work gradually towards their ideal by more peaceful and gradual methods. It is this form of socialism that must be considered at some length.

Collectivism or state socialism means the substitution of collective or state ownership and management of all the factors of production, and the substitution of state organisation of industry for competition. As a logical conclusion, this would also imply state control of distribution. Obedience to authority would take the place of free enterprise or contract. Demand would be estimated and supply regulated by authority and trade and exchange abolished, for all products would be the property of the state, and would require to be distributed by the state. Money would, therefore, be unnecessary ; indeed, many socialists regard this as one of the most essential and desirable of the reforms which would follow from socialism. They maintain that money is the cause of most of the abuses of the modern system of individualism, because, for example, it conceals the exploitation of labour by the capitalist. Again, inheritance and bequest would be abolished, because the socialists say that these tend to perpetuate the inequalities of wealth which are at the root of the evils of the present system. The whole system of capitalistic production is condemned for the same reason, because it tends to the separation of society into two great classes, the very rich and the very poor.

Implication
of collec-
tivism.

This sweeping denunciation of the present individualist system contains much exaggeration. The examination of the competitive system has shown that it results in a system of distribution which, on the whole, produces an approximation to justice. The admitted social evils of the present day are not so much the result of the system itself as of its defective working ; they are due to economic friction. While these evils are to be regretted, and their cure is by no means easy, the difficulties of reform are probably less than the practical difficulties which beset the attempt to substitute an entirely new system based on the principles of socialism. For when one comes to examine the details of the working of such a system, many difficulties appear which in the present state of human nature seem insuperable. For example, to take demand first : under a socialist régime, who would regulate the possession of those things which

Practical
difficulties.

What will
replace com-
petition?

are greatly desired, and of which the supply is insufficient to meet the demand, and on what principles? Who is to get the best house to live in? Under the present system it goes to the man who offers the highest price. Once cut adrift from the simple test, it is difficult to imagine what would take its place. Would men be driven back to the primitive method of drawing lots?

Again, as to production. Who is to do the hard and unpleasant work, and who is to get the best job? What stimulus is to take the place of competition and payment by results to induce men to work hard and produce good results?

How are wages to be fixed? There seem to be only two alternatives: either equality all round, which would result in the levelling down rather than the levelling up of the different capacities of men, or else settling it by lot. The socialist idea of an all-wise and all-powerful authority is hardly realisable under the present conditions of human nature, for it would require not only infinite wisdom on the part of the official class, but also infinite confidence in and obedience to them on the part of the others, conditions which are not likely to be realised.

The socialist answer is that the principles of socialism would only be applied gradually, and the education of the public in socialist principles would proceed as fast as the need for it developed. This, however, means not socialism at all in the first place, but simply a large measure of social reform. Could that not be obtained without the revolutionary changes which socialism implies? The real difference between the socialist and the social reformer lies in this, that the socialists want government control for its own sake, while the social reformer only wants it as a means to an end.

Syndicalism.

It remains only to notice the most recent forms of socialism, namely, Syndicalism and Guild Socialism. The former may be described as a French form of socialism through trade unions; the idea being that each industry should belong to and be controlled by its own labour force through their organisations.

Their chief characteristic is the advocacy of direct action and the general strike. Guild socialism has in a sense risen out of collectivism and syndicalism. The former looked at the ideal state mainly through the eyes of the consumer for whose benefit the whole organisation of production was to be changed. Syndicalism, on the other hand, aimed at reorganising production for the benefit of the producers themselves in the first place, the rights of the community as consumers being placed in a secondary position, though not without attempts to safeguard them. Guild socialism claims to meet both these ideals by "reasonable democratic organisation on a functional basis"; it claims that the difference between them is solved by a clear distinction of function and sphere of activity¹—the producers are to control production and the consumers to look after distribution and consumption. It is an interesting idea if it would work, but as in the case of its predecessors that has still to be proved.

It may be as the result of these new developments, or because the so-called socialists of a generation ago are settling down into the labour ministers of to-day and realising how much can be done by social reform, that so little is heard nowadays of collectivism or state socialism. The fact is that their fire has been stolen by the communists, now the extreme section of the movement, who under the name of Bolsheviks have become the nightmare of the western world, but as with their predecessors these extreme views make little progress in England.

While, however, the extreme forms of socialism must be regarded as impracticable or impossible, it is well to recognise the good work which the propagation of social ideals has done in recent years. The socialists have done much to call attention to the evils which had resulted from the suppression of the human factor in economic theory, and this has led to much being done to reduce, if not entirely to remedy, these blots on the modern industrial system. They have made people realise that the doctrine of *laissez faire* may be carried too far; and they

¹ *Guild Socialism Restated*, G. D. H. Cole, 1920.

have awakened the public conscience to the fact that there still much work for government to do, even under a system of true liberty and free enterprise. Above all, they have done good work by emphasising the doctrine of social service, and the idea of equal opportunity for all.

NICHOLSON, *Elements of Political Economy*, Book II. chap. iv.
COLE, *Guild Socialism Restated*.

CHAPTER XX

OUTLINE OF HISTORY

Growth of free industry and enterprise—Development of economic science—
The principal economic schools.

IN ordinary course this chapter should have appeared at a much earlier stage in the book, but in order to avoid breaking the thread of the argument at that point it has been thought better to leave it to the end.

Economics is quite a modern science, because the conditions which have given rise to it are essentially modern. The outstanding feature of modern industrial conditions is freedom; full scope is given to individual enterprise. Every employer is theoretically free to select whatever branch of business he chooses in which to invest his capital or employ his talents, and within limits to adopt whatever methods he thinks fit; every workman is more or less free to take up any trade he likes, or to carry his labour to any market he chooses. Modern economic freedom

The spirit of the ancient world was very different. It was the age of custom or of authority—the authority of the throne, the feudal lord, or the slave-owner. Industry was looked upon more or less as the work of slaves, and the fruits of their industry were entirely the property of their master. It is evident that under such conditions there was no room for the development of a science of Economics in the modern sense. The science of the motives which actuate men in the acquisition and use of wealth could find little scope for its investigations when the great versus the ancient world.

majority of those who were actually engaged in production had no motives at all except to avoid the whip, when no part of their product was their own, and they had no wage to vary according to the amount of their product or the efficiency or energy of their labour. It is interesting, however, to trace the growth of modern conditions out of those which prevailed in ancient times.

Earliest civilisations.

The earliest forms of human civilisation had their origin in those countries where nature is so lavish in her fruits that even the slightest efforts of man yield a surplus over his wants. Such a surplus is necessary to progress, because if, as in a cold climate it takes men all their time and energy to wrest a bare living from the soil, they have nothing to spare for the development of any higher desires, nor have they the means of gratifying them. Thus the earliest known civilisations—those of Egypt and Babylonia—are found in the valleys of great rivers in fertile lands under a warm climate, where life is easily sustained with the least expenditure of labour.

Rulers and ruled.

In such early civilisations there is one striking common feature, that in almost every case the inhabitants consisted of two classes, a governing class and a governed, the latter forming the bulk of the inhabitants. In almost all cases the governing class were incomers from some other country, generally a hardier race from a colder climate, who had come down upon the richer land and made it their own by conquest. History however, does not stop with one conquest. The conquering races became softened and weakened by their easier life, and in their turn they fell a prey to some other strong race.

The attempt to trace the history of these early civilisations is fascinating. Exact chronology will probably never be possible, but it is clear that more than six thousand years ago both in the valleys of the Tigris and Euphrates and in that of the Nile, there lived races who had achieved a remarkable degree of civilisation. Probably the oldest fixed date in the history of the world is the introduction of the calendar in Egypt in 4241 B.C. Both in Babylonia and in Egypt the first glimpse

of the political condition of the country bear out the general principle above stated. The earliest dynastic kings of Egypt were the descendants of a race who are said to have come originally from the land of Punt, a mountainous country to the south-east of Egypt, into Upper Egypt, from which after a period of unknown duration they invaded and conquered Lower Egypt. The dynastic rulers of Babylonia, who descended on the fertile river valleys of Mesopotamia, were a people of Semitic origin from the mountains of Syria, as contrasted with the Mongolian peoples of Shumer and Akkad whom they conquered. The history of Egypt from these earliest dynastic times is one long succession of such conquests, Hittites, Persians, Greeks, Romans, Arabs, Mamelukes, and Turks having swept over the country in successive waves of alien rulers.

The main industrial features of the early civilisation of ancient Egypt also bear out the statement. Industry of all kinds, even agriculture, the main industry of the country, was the work of the conquered people, while those of the dynastic race reserved for themselves the more honourable occupations of government, the priesthood, and the army. But the most interesting feature of the industrial organisation of Egypt was that there existed a complete system of classes or grades of industry, which are in some respects analogous to the mediæval trade guilds of Europe. These classes were, roughly, five in number, of which the first two, the army and the priests, were entirely apart, mixing only with each other, and to one or other of these even the young princes of the royal house belonged, unless they held some office in the king's household or the administration of the country. The third class included all those employed in agriculture, which naturally ranked as the first of the lower orders. The fourth contained the artisans, tradesmen, and shopkeepers of all classes; while the last and lowest was made up of the shepherds, fowlers, fishermen, labourers, brickmakers, and common people, corresponding to the modern class of casual or unskilled labour. The line of distinction between these different grades of labour was clearly

Egypt and
Babylonia.

Industrial
features.

Egyptian
guilds.

marked and well maintained. Each trade had its own quart in the town; sons usually followed the same trade as the father, and the rank of every man depended on his occupation. These trade divisions were, therefore, in some respects like the caste system in India; there was nothing in them of the nature of free industry in the modern sense. Public works were mainly carried out by the *corvée* or forced labour when purely slave labour was not available. Even the agricultural and artistic classes, who were nominally free men, could not generally escape the *corvée*. The whole revenues of the country, in goods and services, went to satisfy the needs or to minister to the glory of the pharaoh, as in the case of the pyramids, which were royal tombs.

Greek
industries.

Through the long succession of conquests in Babylonia and Egypt, and passing over the little known Minoan civilisation in Crete, we come down to the time of the Greeks, who were in some respects the pioneers of modern conditions, though they undoubtedly learned much from their contact with Egypt. With the possible exception of the Phœnicians, they were the greatest traders the world had yet seen, and they introduced the use of metallic coinage, but their own industries were of great importance, and were looked upon as beneath the dignity of the best citizens.

Rome still
despised
industry.

From Greece to Rome marks a great step in advance. The Roman Empire was unlike any of its predecessors in many respects. Its industries were of great importance, its foreign trade enormous, its coinage system widespread as the empire itself, and, considering the times, a marvel of consistency and simplicity. Their system of jurisprudence is to this day the foundation and the model of the legal systems of all Western Europe, while its direct effect on economic conditions was almost incalculable. But the one great difference, that industry was still largely the work of slaves, marks even Roman economy as a thing apart from modern conditions.

Rome in its turn fell before the invasion of the northern tribes, and what remained of its wonderful civilisation found

refuge on the eastern shores of the Mediterranean, whence it returned later on to flourish again in Venice and the free cities of Italy. In the interval Europe lay under the cloud of the Dark Ages, all the culture and civilisation of Rome apparently lost, and her systems of trade and manufactures sunk in the warlike constitutions of the feudal states. Through these dark days, however, another force was working towards economic freedom ; the Christian idea of the dignity of labour was slowly gaining ground. The Church, with its little colonies scattered over the face of the western world, formed the connecting link between different countries, and at the same time preserved within the monasteries much of the skill of the craftsman, the beauty of art, and the wisdom of science which might otherwise have been entirely lost to the world.

Christian
and the
dignity of
labour.

The next step in economic progress is the development of the free cities in mediæval Europe, with their trade guilds, the first germ of modern economic associations ; but they also fell a prey to a stronger hand—the growing power of the nation as against the city.

Free city
and guild

The next great epoch is the Renaissance in the fifteenth century, when, with the discovery of the new world, the revival of learning, the Protestant reformation, and the discovery of printing, the progress of the world seemed for a time to be by leaps and bounds. In the great scramble for the wealth laid open to the old world by the discovery of the new, Spain and Portugal had at first the lion's share, but their prosperity again proved their ruin, and soon they had to give place to hardier nations, Holland, France, and England. The story of Holland in this chapter of the world's history is one of great courage and marvellous achievements ; but her small area and unprotected position from landward attacks compelled her ultimately to leave the battle to be fought out between France and England. The struggle was long and costly, but at last, about 1760, the simultaneous victories of England on the Continent, in India, and in Canada compelled France to make peace, and gave the supremacy of the sea to England.

Renaissance

England's
lead in
modern
industry.

She was not slow to take advantage of it. Already her industries had begun to show signs of development and expansion. The natural enterprise and energy of the inhabitants found equally ready scope in home industry and in foreign adventure. At the same time, the influx, under religious persecution, of many trained artisans from continental countries had provided her with skilled masters, and she was quick to learn. The year 1760, therefore, marks the commencement of a new period in the world's history, a period of peace, when the world had time to breathe a little after the exhausting struggle of continual warfare, and to turn her attention for a little to the arts of peace. In the period of industrial activity which then began England was the acknowledged leader. The quarter of a century that followed that date was one of absolutely unprecedented activity in the world of industry. The steam engine and the new machinery for spinning and weaving may be quoted as instances of inventions that contained the germ of enormous modern industries, while within that period new processes were discovered in every trade, new methods of cheapening and increasing production. The outstanding result of all this activity was the rise of the factory system, which, for good or for evil, has become a permanent feature of the modern industrial system. It has undoubtedly led to great misery, never more so than in its earliest years, but at that time it was peculiarly unfortunate, for its rise coincided with one of the worst periods that the country has ever passed through. An unprecedented series of bad harvests made bread dear; the loss of England's American colonies, and the terrible drain of men and money to carry on the wars with Napoleon, were a tremendous strain on the national resources, while a bad system of Poor Law administration was undermining the character and independence of the people. All these tended greatly to exaggerate the evils that necessarily accompanied the new era of free competition, so that it is hard to say how far these evils were really due to the factory system. On the other hand, it may fairly be argued that, had it not been for the apparently unlimited staying power which Great Britain

Factory
system.

derived from her industries, she could never have successfully opposed the armies of Napoleon, and the course of history might have been changed.

Once rid of that danger, however, the attention of every one was turned to the remedying of these evils. The causes seemed to lie on the very surface—restrictions of every kind on the liberty of enterprise and industry, the movements of trade, and the means of supplying the daily wants of the working classes. The foreign trade of the world was still under the influence of what was known as the mercantile system, a policy developed at the time when the trade of the new world was first thrown open to Europe. The idea of the mercantilists was that the object of foreign trade, and indeed the proper aim of every nation, was to get money, to encourage exports which would bring back bullion, and to discourage the import of anything which had to be paid for in gold. The growth of this policy was in a way the result of the previous financial history of the world. It grew out of a period when the world's stock of the precious metals was rapidly decreasing, because there was no new supply, when every nation was struggling to attract to itself as much gold and silver as possible, and when that could only be done by drawing them out of other countries. The result of this policy was the adoption of a system of restrictions on trade, which in its effect was the same as the system now known as protection, although it sprang from an entirely different idea.

Mercan-
tilism.

At the same time industry at home was hedged in by restrictions of every kind and on every hand. Food was dear because of the duties on imports. The apprenticeship system interfered with the liberty of choosing a trade. The Poor Laws prevented the migration of labour from one district to another, and the combination laws prevented any attempt by the working classes to better their position by uniting against the employers. The whole force of the agitation for reform was therefore directed against these restrictions and in favour of liberty. The struggle may be said to have ended, in England, with the abolition of the laws against combination and the repeal of the Corn Laws.

Fight for
freedom.

The new
regulation.

But even before the final triumph of liberty had been secured a reaction set in. Men began to realise that, with no check on bad masters, the workmen were ill-treated and poorly paid, and that in the interests of the public it was necessary to introduce some measure of protection for the weaker members of the community. Thus there has been since the beginning of the nineteenth century an increasing tendency to revert to limited legislative control, the idea being to protect the weak as far as possible from the evils of unrestrained competition, while at the same time placing as little restriction as possible on free individual enterprise.

Modern
Economics.

Turning now to the history of modern economists, it is often said that the great Scottish economist Adam Smith was the father of political economy, the founder of the science, but this requires some qualification. Adam Smith was certainly the first to give the science a definite and complete form, but the credit of the first inception of the idea of freedom as the basis of economic advance lies probably with a school of French economists called the Physiocrats, because their teaching was to follow the rule of nature. The leaders of this school were Quesnay and Turgot, and their great doctrine was expressed in the famous phrase, *Laissez faire, laissez passer*. Their argument was that freedom is the mainspring of all human progress, that the less government interference or restriction in matters of trade and industry the better, that if men are left alone to do what they think best for themselves the result will be the best for all, because there is a natural order or system in matters economic which works itself out best when left alone, and which always produces the best results. Economic progress, they said, is regulated by natural laws, which always work for the best, and all the troubles and difficulties of those times were due to interference with this natural order of things. There is no doubt that Adam Smith was in close communication with the Physiocrats, and his book and that of Turgot were published in the same year, 1776. But, whichever may have been the

Physiocrats
and Adam
Smith.

originator of the idea of *laissez faire*—if, indeed, it was not simply adapted from some older writer—there is no doubt that Adam Smith's *Wealth of Nations* is the more complete expression and application of the new doctrine of economic liberty.

Wealth of Nations.

Adam Smith occupies a unique position ; no writer of almost any age has exercised a greater influence over the minds of men. The *Wealth of Nations*, when it appeared, was heterodox to the last degree ; it went against every commonly accepted idea on the subject. Yet he achieved the unique feat of wholly converting public opinion, so that before his death his views were universally accepted, and had become part of the common sense of the world. So far was he in advance of his times that there is hardly any economic truth now known of which he had not at least a glimpse, hardly any economic problem of the present day on which he does not throw some light. But, above all this, he realised more than any of those who followed him for fully a century the importance of the human or personal element in Economics. "He was the first to make a careful and scientific inquiry into the manner in which value measures human motive, on the one side measuring the desire of purchasers to obtain wealth and on the other the efforts and sacrifices undergone by its producers." It was when his followers fell away from that idea that political economy fell into the evil repute from which to some extent it still suffers.

Marshall Princip. Appendl. § 3.

Of the immediate followers of Adam Smith in England, two may be specially mentioned, Thomas Robert Malthus (1766–1834), whose theory of population raised a storm of opposition and helped largely to gain for Economics the name of "the dismal science", and David Ricardo (1772–1823), the great feature of whose work is the theory of rent, which still bears his name.

Malthus

Ricardo

The next notable writer is John Stuart Mill (1806–1873), the last of the great economists of the classical school, which began with Adam Smith and the Physiocrats. His work marks a curious epoch in the history of political economy, when men thought that it had attained the unique position of a complete

MILL

science. The success achieved by the doctrines of free trade in England, and the undoubted accession of prosperity that followed it, had prepared the way for such a masterful exposition of the subject as that of Mill ; but the reaction against this self-complacent attitude came so swiftly that Mill himself lived to see and share in it.

Socialists.

Of the modern schools of Economics, as opposed to the classical or liberal school, none has attracted more attention than that of the socialists, to which France has contributed the names of Fourier, St. Simon, Proudhon, and Louis Blanc, while Germany has added that of Karl Marx. The economists of the Austrian school, of whom the best known are Boehm-Bawerk and Carl Menger, have done good service by developing specially that part of economic theory which deals with demand or consumption.

Austrian school.

Marshall.

Last comes the name of the greatest English economist of modern times, Alfred Marshall, who, like Adam Smith, gathered together all that was best in the work of his predecessors and contemporaries, and added to it much of his own of great value. A special feature of his work is the manner in which he returned to Adam Smith's idea of Economics as not the science of wealth for its own sake, but the science of the motives which actuate men in the acquisition and use of wealth, and therefore essentially a human science.

Industrial v.
agricultural
Economics.

It is natural that in England, where industry is so important, the development of economic science should have been all in the direction of a system specially applicable to industrial conditions, and that in the hands of English economists the science should have become practically the science of the factory system of industry. But this tendency is something more than the merely accidental result of English environment. It may fairly be claimed that it is the natural tendency of the economist to devote his attention primarily to industrial conditions, because under no other conditions can the great competitive system of production, exchange, and consumption be so easily seen working. The birth of a real science of Economics was, in a sense,

only possible in an industrial country. In an agricultural country, where competition is not so obvious and ever-ruling, where prices and methods of production alike are largely regulated by custom or even law, it is sometimes difficult to trace the working of the competitive system, or, indeed, to realise that there is any system in it at all. Nevertheless the principles of economic science, if they are true, must be applicable to any conditions, agricultural as well as industrial, for the laws which are the foundation of the economics of industry are equally true when applied to the economic conditions of an agricultural country. In the same way they must be applied not only to the conditions of the factory system, but also to those of other great industries which are not carried on in factories, such as transport. The economic problems of railway transport and road transport are very different, but both are still more different from those of transport by sea and in the air, for the latter make very little use of land, but a great deal of natural powers, so that the application of the law of diminishing return and the theory of rent are very peculiar. As an applied science, therefore, Economics possesses infinite variety, and can never be complete. Indeed, one of its fascinations is that the economist never knows what will be the problem of the day to-morrow.

MARSHALL, *Economics of Industry*, Book I. chap i. secs. 3 & 4, & chap. ii.

MARSHALL, *Principles of Economics*, Appendices A & B.

INGRAM, *History of Political Economy*.

STATISTICAL APPENDIX

NOTE

Considerable difficulty has been experienced in completing many of the Tables (1) because of the War and (2) because of the lack of statistics for the Irish Free-State. In some cases the later figures have been obtained from a different source and are not strictly comparable, but wherever the difference is material it is specially noted.

TABLE I.—PRODUCTION IN THE UNITED KINGDOM

(From the "Abstract of Labour Statistics" and "Statistical Abstract")

Year.	Coal.		Iron and Steel.				Shipbuilding.		Agri- culture.
	Total Out- put.	Per Person em- ployed.	Iron Ore.	Pig Iron.	Steel Ingots.	Puddled Iron Bars, etc.	Royal Navy. Tons Displace- ment.	Merchant Vessels and Foreign Warships. Tons net.	Princi- pal Corn Crops.
	million tons.	tons.	million tons.				ooo's omitted.		million bushels.
1898	202.0	297	14.2	8.6	4.6	1.1	141	871	334
1899	220.1	314	14.5	9.4	4.9	1.2	123	949	320
1900	225.2	300	14.0	9.0	4.9	1.2	38	944	300
1901	219.0	281	12.3	7.9	4.9	1.0	211	983	293
1902	227.1	285	13.4	8.7	4.9	1.0	94	950	330
1903	230.3	283	13.7	8.9	5.0	1.0	150	758	299
1904	232.4	284	13.8	8.7	5.0	0.9	126	884	287
1905	236.1	285	14.6	9.6	5.8	0.9	95	1,048	304
1906	251.1	294	15.5	10.2	6.5	1.0	85	1,157	318
1907	267.8	294	15.7	10.1	6.5	1.0	138	1,037	323
1908	261.5	273	15.0	9.1	5.3	1.2	52	602	305
1909	263.8	268	14.8	9.5	5.9	1.1	101	632	324
1910	264.4	260	15.2	10.0	6.4	1.1	136	699	308
1911	271.9	262	15.5	9.5	6.5	1.2	228	1,112	296
1912	260.4	246	13.8	8.8	6.8	1.3	173	1,106	292
1913	287.4	262	16.0	10.3	7.7	1.2	194	1,232	299
1914	265.7	253	14.9	9.1	7.8	..	..	1,035*	304
1915	253.2	271	14.2	8.7	8.6	0.9	..	410	309
1916	256.4	261	13.5	8.9	9.0	1.0	..	424	293
1917	248.5	248	14.8	9.3	9.7	0.8	..	772	336
1918	227.7	230	14.6	9.1	9.5	0.6	..	826	421 †
1919	229.8	196	12.3	7.4	7.9	0.9	..	1,019	336
1920	229.5	187	12.7	8.0	9.1	1.0	..	1,278	308
1921	163.3	144	3.5	2.6	3.7	0.4	..	954	297
1922	251.8	217	6.9	4.9	5.9	0.4	..	631	286
1923	278.5	229	10.9	7.4	8.5	0.6	..	..	..
1924	269.1	..	..	7.3	8.2	0.6	..	..	..

* Excluding foreign warships.

† Excluding Irish Free State.

TABLE II.—ACREAGE OF CROPS AND NUMBERS
OF LIVE STOCK IN GREAT BRITAIN *

(Total area, 56,802,524 acres.)

(Compiled from the Agricultural Statistics. First week of June in each year.)

	Corn Crops.	Green Crops.	Other Crops, Grass, etc.	Per- manent Pasture.	Total Culti- vated Area.	Horses.	Cattle.	Sheep.	Pigs.
	Acres (millions).					(000's.)			
1907	7.0	3.1	4.8	17.3	32.2	1,556	6,912	26,115	2,637
1908	6.9	3.0	4.9	17.4	32.2	1,546	6,905	27,120	2,823
1909	7.0	3.1	4.6	17.5	32.2	1,553	7,021	27,618	2,381
1910	7.0	3.0	4.6	17.5	32.1	1,545	7,037	27,103	2,350
1911	7.0	3.0	4.7	17.4	32.1	1,481	7,114	26,495	2,822
1912	7.2	3.1	4.4	17.3	32.0	1,441	7,026	25,058	2,656
1913	6.9	3.0	4.4	17.6	31.9	1,324	6,964	23,931	2,234
1914	6.9	3.0	4.4	17.6	31.9	1,296	7,093	24,286	2,634
1915	7.2	2.8	4.2	17.6	31.8	1,213	7,288	24,598	2,579
1916	7.0	2.8	4.5	17.5	31.8	1,293	7,442	25,007	2,314
1917	7.3	2.9	4.4	17.3	31.9	1,324	7,437	24,043	2,051
1918	9.0	2.9	3.9	15.9	31.7	1,337	7,410	23,353	1,825
1919	8.4	2.9	4.4	15.8	31.5	1,338	7,424	21,534	1,936
1920	7.8	3.1	4.5	15.8	31.2	1,312	6,713	19,744	2,122
1921	7.4	2.9	4.7	15.9	30.9	1,340	6,660	20,490	2,651
1922	7.4	2.9	4.4	16.1	30.8	1,308	6,869	20,122	2,450
1923	6.8	2.8	4.9	16.2	30.7	1,253	7,017	20,621	2,798
1924	6.7	2.8	4.7	16.4	30.6	1,190	7,059	21,729	3,427

* As the statistics for Ireland are incomplete since 1919 they have been omitted throughout.

TABLE III.—POPULATION OF THE UNITED KINGDOM AND MIGRATION

(From the "Abstract of Labour Statistics" and the Statistical Abstract)

Year.	Population.				Migration.
	Estimated Total at middle of each Year.	Births.	Marriages.	Deaths.	Balance outward of Passenger Movement to Countries out of Europe. British Subjects only.
	(Millions.)	Per 1000 of Population.			(Thousands.)
1898	40·4	28·7	15·4	17·7	49·4
1899	40·8	28·5	15·6	18·2	46·1
1900	41·2	28·2	15·1	18·4	71·2
1901	41·5	28·0	15·1	17·1	72·0
1902	41·9	28·0	15·1	16·5	101·5
1903	42·2	28·0	15·0	15·8	147·0
1904	42·6	27·7	14·7	16·6	126·9
1905	43·0	27·1	14·7	15·6	139·4
1906	43·4	27·0	15·0	15·7	194·7
1907	43·7	26·3	15·2	15·5	235·1
1908	44·1	26·5	14·4	15·3	91·2
1909	44·5	25·7	14·1	15·0	139·7
1910	44·9	25·0	14·3	14·0	233·7
1911	45·3	24·4	14·6	14·8	261·8
1912	45·5	24·0	14·9	13·8	268·5
1913	45·7	24·1	15·0	14·3	242·0
1914	46·1	23·9	15·3	14·4	63·3
1915*	43·7	22·1	18·2	16·0	24·7 (inward)
1916*	43·1	21·1	14·2	14·6	8·2 "
1917*	42·3	18·2	13·3	14·7	0·4 "
1918*	42·0	18·1	14·7	17·4	1·9
1919	46·1	19·0	18·9	14·3	27·0
1920	46·9	25·4	19·3	12·8	172·7
1921	47·3	22·5	16·2	12·5	118·9
1922	47·5	20·7	15·0	13·1	99·9
1923	47·7	..	..	..	190·4†
1924	..	..	..	..	..

* During the War period the figures are complicated by the inclusion or exclusion of the services, on which the practice was apparently not uniform in the various divisions of the kingdom. Some of the figures given are therefore estimates by the Registrar-General.
 † Excluding Irish Free State after March.

TABLE IV.—LABOUR STATISTICS FOR THE UNITED KINGDOM

(From the "Abstract of Labour Statistics")

Year.	Un-employed per cent of Membership of certain Trade Unions.	Hours of Labour.		Industrial Accidents. No. of Reported Deaths.	Trade Disputes.		Trade Unions.	
		Net decrease in Weekly Hours.	No. of Individuals affected.		Aggregate No. of Working Days.	No. of Persons involved.	No. of Members.	Funds of 100 Principal Unions.
		ooo's.		ooo's.		ooo's.	£ooo's.	
1898	2.8	81.9	39.0	3,810	15,289	254	1,702	2,645
1899	2.0	127.1	35.9	4,619	2,516	180	1,861	3,226
1900	2.5	238.0	57.7	4,753	3,153	189	1,972	3,733
1901	3.3	58.7	29.3	4,622	4,142	180	1,979	4,139.
1902	4.0	1,024.9	1,057.5	4,516	3,479	257	1,966	4,426
1903	4.7	15.4	7.4	4,154	2,339	117	1,942	4,612
1904	6.0	24.6	16.8	3,985	1,484	87	1,911	4,680
1905	5.0	65.3	96.0	4,268	2,470	94	1,934	4,830
1906	3.6	98.9	55.0	4,369	3,029	218	2,129	5,222
1907	3.7	79.9	36.2	4,453	2,162	147	2,425	5,668
1908	7.8	38.4	26.5	4,154	10,834	296	2,389	5,201
1909	7.7	2,392.3	562.9	4,133	2,774	301	2,369	5,079
1910	4.7	47.6	27.4	4,704	9,895	515	2,446	5,153
1911	3.0	715.5	155.4	4,307	10,320	962	3,019	5,595
1912	3.2	210.6	105.3	5,252	40,915	1,463	3,288	5,002
1913	2.1	378.0	154.6	4,863	11,631	689	3,987	6,513*
1914	3.3	262.2	79.1	..	9,878†	447†	4,146†	7,013
1915	1.1	34.2	13.7	..	2,953	448	4,359	8,596
1916	0.4	100.3	23.3	..	2,446	276	4,644	10,518
1917	0.7	120.1	34.4	..	5,647	872	5,499	12,753
1918	0.8	451.0	120.0	..	5,875	1,116	6,535	15,013
1919	2.4	4,175.5	646.1	..	34,909	2,591	7,928	16,045
1920	2.4	2,085.0	560.0	..	26,567	1,932	8,336	15,989
1921	15.3	12.0†	44.0	..	85,872	1,801	6,625	10,815
1922	15.4	92.9	318.7	..	19,850	552	5,610	9,861
1923	11.5	97.0†	343.5	..	10,672	405	5,405	..
1924	8.1	..	..	..	8,312	610	..	..

* Since 1912 all registered Unions are included.

† Excluding Irish Free State.

‡ Increase.

TABLE V.—NUMBER AND PAID-UP CAPITAL OF JOINT-STOCK COMPANIES IN GREAT BRITAIN *

(From the "Statistical Abstract")

Year.	England.		Scotland.		Total.		
	Number.	Total Capital.	Number.	Total Capital.	Number.	Capital.	
		£ millions.		£ millions.		Total.	Average.
April 30		£ millions.		£ millions.		£ millions.	£000's.
1907	38,213	1,844	3,438	173	41,651	2,017	48·4
1908	40,291	1,901	3,543	178	43,834	2,079	47·5
1909	41,257	1,937	3,659	181	44,916	2,118	47·2
1910	46,301	1,950	3,836	183	50,137	2,133	42·6
1911	47,996	1,986	3,993	190	51,989	2,176	41·8
1912	50,425	2,093	4,134	195	54,559	2,288	41·9
1913	54,535	2,178	4,347	199	58,882	2,377	40·4
1914	58,164	2,277	4,598	205	62,762	2,482	39·5
1915	59,287	2,396	4,682	210	63,969	2,606	40·7
1916	59,322	2,449	4,716	216	64,038	2,665	41·6
1917	59,254	2,469	4,756	216	64,010	2,685	42·0
Dec. 31							
1918	59,805	2,532	4,835	221	64,640	2,753	42·6
1919	65,638	2,787	5,326	238	70,964	3,026	42·6
1920	71,278	3,166	5,743	272	77,021	3,438	44·7
1921	74,060	3,791	5,934	309	79,994	4,100	51·2
1922	77,969	3,863	6,135	318	84,104	4,181	49·7
1923	81,620	3,942	6,310	324	87,930	4,265	48·5
1924	..	..	..	..	..	..	..

* As the figures for Ireland are not available after 1920, they have been omitted throughout.

TABLE VI.—HOME CONSUMPTION OF STAPLE
COMMODITIES IN THE UNITED KINGDOM

(From the "Abstract of Labour Statistics" and the Statistical Abstract)

	Coal.	Pig Iron.	Cotton.	Wool.	Wheat and Flour.*	Cocoa.	Coffee.	Tea.	Sugar.	Tobacco.	Beer.	Spirits
	million tons.		million cuts.			lbs. per head.					gallons per head.	
1898	154	7.7	15.5	5.1	93.4	1.0	0.7	5.8	83	1.8	32	1.0
1899	164	8.2	15.7	4.7	97.1	1.0	0.7	6.0	82	1.9	33	1.1
1900	167	7.7	14.5	4.5	97.8	1.1	0.7	6.1	86	2.0	32	1.1
1901	161	7.3	14.7	4.8	100.3	1.2	0.8	6.2	91	1.9	31	1.1
1902	167	7.8	14.6	4.4	107.7	1.3	0.7	6.1	82	1.9	30	1.1
1903	167	8.0	13.9	4.0	116.5	1.2	0.7	6.0	80	1.9	30	1.0
1904	167	8.0	14.0	3.9	117.9	1.3	0.7	6.0	83	2.0	29	1.0
1905	169	8.7	16.6	4.2	113.8	1.3	0.7	6.0	74	2.0	28	0.9
1906	174	8.6	17.0	4.6	112.1	1.3	0.7	6.2	83	2.0	28	0.9
1907	183	8.3	17.6	5.3	115.1	1.3	0.7	6.3	87	2.1	28	0.9
1908	176	7.8	15.4	4.7	108.2	1.3	0.7	6.2	83	2.0	27	0.9
1909	178	8.5	17.0	4.8	112.9	1.5	0.7	6.4	87	2.0	26	0.7
1910	180	9.0	14.5	5.5	118.6	1.5	0.7	6.4	84	2.0	26	0.7
1911	185	8.5	17.5	5.7	111.5	1.6	0.6	6.5	92	2.1	27	0.7
1912	175	7.7	22.1†	..	122.9	1.7	0.6	6.5	82	2.1	27	0.7
1913	189	9.4	17.1	..	121.7	1.7.	0.6	6.7	95	2.1	28	0.7
1914	185	8.4	14.7	..	116.9	1.7	0.6	6.9	96	2.2	27	0.7
1915	193	8.4	20.5	..	102.5							
1916	201	8.3	17.2	..	113.6							
1917	200	8.7	13.5	..	110.7							
1918	184	8.7	13.3	..	94.3							
1919	179	7.2	16.3	..	95.9	3.2	0.7	8.4	71	3.2	17	0.5
1920	186	7.7	15.1	6.5	125.7	2.7	0.7	8.4	52	3.0	21	0.5
1921	129	3.2	9.0	4.5	99.2	2.4	0.7	8.7	65	3.0	19	0.4
1922	162	4.3	12.5	6.0	114.6	2.5	0.7	8.7	75	2.8	16	0.4
1923	169†	6.7	10.6	6.8	..	..	..	..	..	..	..	..
1924	..	7.0	12.8	..	..	..	..	..	..	..	..	..

* Imported only.

† Excluding Ireland.

‡ From 1912 the figures given for cotton are the Board of Trade nett imports.

TABLE VII.—INDEX NUMBERS OF PRICES AND WAGES IN THE UNITED KINGDOM

(From the "Abstract of Labour Statistics" and the Board of Trade Journal)

Year.	Whole-sale Prices.	Retail Food Prices in London.	General Course of Wages.					Textiles.
			Mean of 5 Groups.	Agri-culture.	Build-ing.	Coal-mining.	Engineer-ing.	
			(Board of Trade)	1900 = 100.0.			(Ministry of Labour)	
1898	93.2	99.5	93.4	96.2	97.8	78.6	99.2	95.0
1899	92.2	95.4	95.6	97.8	98.9	83.5	99.6	98.2
1900	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1901	96.7	100.4	99.0	100.7	100.0	94.0	100.3	100.0
1902	96.4	101.0	97.8	101.3	100.0	87.5	100.3	100.0
1903	96.9	102.8	97.3	101.8	100.0	84.9	99.9	100.0
1904	98.2	102.4	96.8	102.0	100.0	82.3	99.9	100.0
1905	97.6	102.8	97.3	102.6	100.0	81.0	100.0	102.7
1906	100.8	102.0	98.7	102.9	100.0	83.4	100.8	106.2
1907	106.0	105.0	102.1	103.2	100.0	96.3	102.0	108.9
1908	103.0	107.5	101.5	103.6	100.0	93.3	101.7	108.9
1909	104.1	107.6	100.3	104.0	100.0	89.2	101.3	107.1
1910	108.8	109.4	100.7	104.7	100.0	89.6	102.0	107.1
1911	109.4	109.4	100.9	105.5	100.0	88.8	103.3	107.1
1912	114.9	114.5	103.4	107.4	101.1	93.8	104.2	110.7
1913	116.5	114.8	106.5	111.2	104.4	100.1	105.0	111.6
1914	117.2	118 *	107.4	114.6	106.7	98.7	105.3	111.8 (July)
1915	143.9	145	The wages statistics cannot be continued on the same basis since 1914, but the following gives the estimated average percentage increase of weekly full-time wages based on August 1914 as 100 at the end of each quarter.					
1916	186.5	189						
1917	243.0	206						
1918	267.4	230						
1919	296.5	236						
1920	365.7	278	..	1920	130-135	150-155	160-165	170-180
1921	229.7	185	..	1921	160-170	145-155	130-135	110-115
1922	185.0	175	..	1922	100-105	85-90	75-80	70-75
1923	185.1	175	..	1923	70	65-70	70	65-70
1924	193.6	178	..	1924	70	70	70-75	70-75

* Since 1914 the retail food prices are those of the Ministry of Labour at 31st December in each year, based on July 1914 as 100. See *Labour Gazette*.

TABLE VIII.—ACTUAL INCOME OF TAX-PAYERS IN THE UNITED KINGDOM FOR THE PURPOSES OF INCOME TAX

Statistical estimates of the *total* income of the United Kingdom have been compiled by various authorities in the past, but they involve so great an amount of calculation and estimation that they cannot be made frequently. The following table, however, gives some indication of the growth of the *money* incomes above the exemption limit. Note that the limit was reduced from £160 to £130 in 1915-16 and that from 1916-17 onwards the figures under Schedule D include wages of weekly wage-earners above the limit.

(Compiled from the Annual Report of the Inland Revenue Department)

Schedules	A.	B.	C.	D.	E.	Total.	Yield of each Penny of the normal rate.	Normal Rate of Tax.
Fiscal Years.	Ownership of Lands, Houses, etc.	Occupation of Lands.	Government Securities.	Businesses, Professions, Employments, etc.	Government, Corporation, and Company Officials.			
In millions of £s.								
1907-08	170.4	5.5	45.4	479.0	99.0	799.3	2.7	1/-
1908-09	170.9	5.5	44.4	498.9	104.4	824.1	2.8	1/-
1909-10	171.4	5.4	45.7	491.4	108.3	822.2	2.7	1/2
1910-11	173.3	5.5	46.1	499.9	113.5	838.3	2.7	1/2
1911-12	173.3	5.4	46.2	520.9	120.6	866.5	2.8	1/2
1912-13	174.4	5.4	47.0	551.9	128.5	907.2	3.0	1/2
1913-14	175.7	5.4	47.8	584.3	137.9	951.0	3.1	1/2
1914-15	177.0	5.2	49.9	605.6	147.5	985.2	3.2	1/8
1915-16	178.2	28.9*	62.4	608.6	171.8	1,049.9	3.3	3/-
1916-17	184.6	28.6	79.3	861.0	219.9	1,373.5	3.4	5/-
1917-18	184.1	29.0	68.1	1,094.7	254.9	1,630.7	3.7	5/-
1918-19	188.2	63.5	72.6	1,415.5	331.9	2,071.6	4.2	6/-
1919-20	188.8	64.1	82.1	1,806.2	406.0	2,547.2	4.7	6/-
1920-21	182.3	66.4	91.1	1,765.2	556.2	2,661.2	4.9	6/-
1921-22	183.2	56.0	96.2	1,569.3	557.8	2,462.5	4.8	6/-
1922-23†	188.0	28.0	96.0	1,388.0	600.0	2,300.0	4.8	5/-
1923-24	..	..	..	..	..	..	..	4/6

* Basis of assessment changed from one-third annual value to full annual value, and in 1918-19 to twice the annual value (see 65th Report of the Commissioners of Inland Revenue).

† Estimates.

TABLE IX.—CO-OPERATIVE, FRIENDLY, AND BUILDING SOCIETIES IN THE UNITED KINGDOM

(From the "Abstract of Labour Statistics" and the Statistical Abstract)

Year.	Co-operative Societies.		Friendly Societies.		Building Societies (incorporated).	
	Member- ship.	Sales.	Member- ship.	Funds.	Number.	Liabilities.
	ooo's.	£ millions.	ooo's.	£ millions.		£ millions.
1898	1,597	65.3	11,425	37.9	2,425	45.0
1899	1,685	70.1	11,750	39.5	2,325	45.8
1900	1,778	77.5	..	..	2,239	46.8
1901	1,866	82.0	12,807	43.2	2,167	47.8
1902	1,984	85.9	13,344	44.8	2,125	49.2
1903	2,092	89.6	13,414	47.7	2,062	51.3
1904	2,195	92.8	13,979	50.5	2,014	52.9
1905	2,276	96.0	14,607	52.6	1,939	54.3
1906	2,352	100.3	..	..	1,904	55.9
1907	2,461	109.0	15,983	57.1	1,852	57.3
1908	2,536	110.6	13,790	57.4	1,808	58.8
1909	2,613	112.4	13,977	60.0	1,749	60.3
1910	2,692	115.3	14,508	62.9	1,695	61.6
1911	2,785	120.0	14,940	65.3	1,622	62.0
1912	2,914	128.0	15,681	67.1	1,588	62.4
1913	3,055	135.9	15,399	68.4	1,562	63.7
1914	3,225	144.6	15,190	70.1	1,514	64.6
1915	3,476	175.0	15,853	72.8	1,468	64.1
1916	3,736	208.4	16,306	74.1	1,422	63.6
1917	4,038	239.4	16,827	77.4	1,373	62.7
1918	4,156	267.0	17,366	80.3	1,334	66.6
1919	4,398	351.5	18,980	83.6	1,316	75.1
1920	4,811	428.9	21,599*	89.5*	1,279*	84.5*
1921	4,738*	347.8*	21,997	94.5	1,180	91.6
1922	4,672	272.9	22,265	102.5	1,136	103.3
1923	..	..	..	..	1,101	121.8
1924	..	..	..	..	..	..

* Excluding Ireland.

TABLE X.—PROFIT-SHARING IN THE UNITED KINGDOM

*(From Reports of the Ministry of Labour on Profit-sharing and Labour Co-partnership)**(a) Number of Schemes started in Various Periods and still in Operation at the end of 1923*

<i>Period in which started.</i>	<i>Total Schemes started.</i>	<i>Abandoned or suspended.</i>	<i>Still in Operation at end of 1922.</i>	<i>Per cent of Total started.</i>
Up to 1880	35	29	6	17·1
1881 to 1890	79	68	11	13·9
1891 to 1900	76	63	13	17·1
1901 to 1905	26	19	7	27·0
1906 to 1910	54	22	32	59·1
1911 to 1915	63	22	41	65·0
1916 to 1918	22	5	17	77·1
1919 to 1920	101	17	84	83·5
1921 to 1922	20	1	19	95·0
1923	8	..	8	100
Totals	484	246	238	49·3

*(b) Schemes in Existence at the end of each Year and Bonuses paid **

<i>Year.</i>	<i>Number of Schemes.</i>	<i>Bonuses Paid.</i>	
		<i>Amount per Head.</i>	<i>Percentage Addition to Earnings.</i>
1913	142	£ s. d.	
1914	155	5 6 0	5·9
1915	154	5 4 9	6·7
1916	147	3 18 0	5·3
1917	147	3 4 3	4·6
1917	151	3 15 2	5·3
1918	154	3 13 9	5·1
1919	193	5 0 8	4·9
1920	234	9 18 9	6·4
1921	235	6 14 3	3·6
1922	233	6 5 3	3·9
1923	238	7 6 0	5·1

* The information as to bonuses paid is not complete. The figures here given are calculated on the basis of the number entitled to participate, including those cases where no bonus was paid (see *Ministry of Labour Gazette*, September 1924).

TABLE XI.—SAVINGS BANKS AND POOR RELIEF
IN THE UNITED KINGDOM

(From the "Abstract of Labour Statistics" and the Statistical Abstract)

Year.	Savings Banks Deposits.						Poor Relief.	
	Amounts Due.			Accounts.			Winter, One Day.	Summer, One Day.
	Post Office.	Trustee.	Total.	Post Office.	Trustee.	Total.		
	£ millions.			ooo's.				
1898	123·1	50·0	173·1	7,631	1,564	9,195	1,024	1,059
1899	130·1	51·4	181·5	8,047	1,601	9,648	1,011	965
1900	135·6	51·5	187·0	8,440	1,625	10,065	1,001	948
1901	140·4	52·0	192·4	8,788	1,647	10,435	991	966
1902	144·6	52·5	197·1	9,133	1,670	10,803	1,016	986
1903	146·1	52·5	198·6	9,404	1,690	11,094	1,040	998
1904	148·3	52·3	200·6	9,674	1,705	11,379	1,061	1,027
1905	152·1	52·7	204·8	9,963	1,732	11,695	1,128	1,075
1906	156·0	53·0	209·0	10,333	1,761	12,094	1,124	1,058
1907	157·5	52·2	209·7	10,693	1,782	12,475	1,120	1,061
1908	160·6	51·7	212·3	11,018	1,788	12,806	1,126	1,094
1909	164·6	52·2	216·8	11,405	1,805	13,210	1,161	1,096
1910	168·9	52·3	221·2	11,832	1,827	13,659	1,140	1,078
1911	176·5	53·0	229·5	12,371	1,849	14,220	1,069	931
1912	182·1	53·8	235·9	12,751	1,871	14,622	980	945
1913	187·2	54·3	241·5	13,199	1,913	15,112	971	904
1914	190·5	53·9	244·4	13,515	1,918	15,433	933	912
1915	186·3	51·4	237·7	14,180	1,967	16,147	936	871
1916	196·7	53·8	250·5	14,747	2,016	16,762	848	801
1917	203·3	52·4	255·7	15,216	2,047	17,263	794	754
1918	234·6	61·0	295·6	15,998	2,129	18,127	736	698
1919	266·3	71·9	338·2	17,362	2,221	19,583	698	689
1920	266·5	75·1	341·6	17,535	2,248	19,783	721	676*
1921	264·2	73·1	337·3	17,718	2,212	19,930	754*	1,575
1922	268·1	75·8	343·9	18,032	2,212	20,243	1,702	2,134
1923	..	..	..	..	..	..	1,802	..
1924	..	..	..	..	..	..	..	..

* Excluding Ireland.

TABLE XII.—POPULATION BY INDUSTRIES
IN ENGLAND AND WALES

(From the Census of 1921)

Industry Group.	Total Numbers occupied. Aged 12 Years and over.		
	Males.	Females.	Total.
		000's.	
Fishing	38.6	1.6	40.2
Agriculture	1,038.5	85.5	1,124.0
Mining and quarrying	1,272.5	11.2	1,283.7
Bricks, pottery, glass	127.8	48.8	176.5
Chemicals, dyes, explosives, paints, etc. Metals, machines, implements, convey- ances, jewellery, watches	147.7	50.0	197.7
	1,951.4	244.6	2,196.0
Textiles and textile goods	491.4	662.4	1,153.8
Leather goods	58.1	22.4	80.5
Clothing	310.7	494.9	805.7
Food, drink, tobacco	341.0	199.7	540.7
Wood working, etc.	237.6	24.3	261.9
Paper-making, stationery, printing, etc. Building, decorating, and contracting	230.5	126.3	356.8
	717.3	9.1	726.4
Other manufacturing industries	113.9	71.1	185.0
Gas, water, electricity	158.2	4.6	162.8
Transport and communication	1,164.5	39.1	1,203.6
Commerce and finance	1,553.4	741.7	2,275.1
Public administration and defence	981.1	354.7	1,335.9
Professions	272.3	242.5	514.8
Entertainments and sport	81.1	40.9	122.0
Personal service	523.9	1,522.9	2,046.8
Other industries	321.1	67.0	388.2
Totals	12,112.7	5,065.3	17,178.0

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