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ELEMENTS OF ECONOMICS

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OF
ECONOMICS

BY

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PREFACE TO THE FIFTH EDITION

THE object of this book is to present the elementary principles of Economic Science in as clear and interesting a manner as possible. Every attempt has been made to meet the needs of students working for the various professional examinations for which a knowledge of Economics is required, but the purely abstruse intricacies of the subject and its many controversial issues have been avoided as much as possible or but lightly touched upon.

The author makes no pretence of attempting the difficult task of adding to the sum total of the science of Economics at the present stage of its development. He nevertheless recognises that the charge of abstraction made against its usual treatment is by no means dead, and hopes that new ground has been broken in an endeavour to apply orthodox Economic theory to practical affairs, and to link up that theory with its outward phenomena as seen in daily life.

Special attention has therefore been given to the many problems of modern industrial organisation which to-day claim so large a share of public thought, and to those intricate questions of international currency and trade which are the cause of much mystification to the general reader. In a volume of this kind it is necessarily impossible to give to such matters that degree of attention which is commensurate with their great importance at the present time, but it is hoped that the consideration given to these problems and the many up-to-date examples which are included will make the volume of service and of interest, not only to the student, but also to the layman and the man of affairs.

In the preparation of the Fifth Edition the author has been afforded a further opportunity to bring the text up to date and to revise it in the light of recent examination requirements. His thanks are due and are here accorded to the many teachers, students and friends who have sent him suggestions for the improvement of the volume.

S. E. T.

November, 1930

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CHAPTER 1

WHAT IS ECONOMICS?

POSSIBLY one of the most difficult tasks which have to be faced by anyone who essays to write a treatise on Economics for the use of the student is that of clearly defining his subject.

The difficulty is the more remarkable, inasmuch as the subject is one which is fundamental in the lives of each one of us, relating as it does to the manner in which we endeavour to obtain what we regard as our share of the world's goods, and the way in which our desires or "wants" arise and are satisfied.

Everywhere we hear and read of "economic" motives, "economic" ideas, "economic" tendencies, and so on. The word forms part of our everyday discourse, but it is probably true to say that only a very small percentage of us could accurately, or even approximately, define its meaning. Professor Cannan [1] points out that the word "economic" is difficult to explain, for the same reason that we find it difficult to indicate precisely what we mean by the terms "blue" and "red". "Confronted by the word 'economic', one man may think first of coins, another of figures in bank-books, another of crops growing in the field and cattle browsing in the meadow, and another of the morning crowd going to its work in some crowded city".

On the other hand, most people would agree at once to the suggestion that "economics", and its correlative adjective "economic", have reference to those material things around us which concern our well-being, to such objects and possessions as are desirable and cannot be obtained in unlimited quantities, and which therefore require some effort for their acquisition. For present purposes, these objects and possessions which are under the control of an individual, the material things which he has around him in his home, in his garden, on his farm or on board his ship, may be regarded as his *wealth*, and *Economics is that body of knowledge, or that science, which considers the actions of man in relation to wealth.*

Later on we shall find it necessary to consider a more precise definition of this term "wealth", upon which is erected the superstructure of economic science, but the foregoing conception enables us to define our subject-matter and to survey its scope. Economics, therefore, is a body of scientifically arranged knowledge, based on the work and investigations of students

[1] *Wealth*, page 16.

and thinkers of many periods and of many climes. It seeks to consider the actions of men in *consuming* such wealth as they possess or obtain as the results of the efforts of themselves and of others; in *producing* further wealth for themselves or for their fellows by utilising and developing the resources of Nature; in *exchanging*, one with the other, a part of the wealth which they possess for other wealth which they desire; and, finally, it considers and investigates how and in what proportions the total wealth of a community is *distributed* amongst its many classes and individuals.

The various branches of Economics which correspond to the foregoing divisions of its investigations are known respectively as Consumption, Production, Exchange and Distribution, and in this order they will be dealt with in the following pages. Before proceeding further, we cannot do better than survey the scope of each of these sections, so as to form a clear idea of the work which lies before us.

In doing this we must not lose sight of the fact that our subject, Economics, is split up into different branches or departments merely to facilitate study and analysis. As will gradually become apparent, its various divisions are actually closely related to one another, and all are essentially interdependent.

Consumption.

Under the heading *Consumption* it will be necessary to consider the remarkable variety and degree of man's wants or desires for material and non-material things, for articles which are necessary to maintain life, and for others which are of the nature of luxuries. We shall analyse the wants of ourselves and of our fellows, and consider on the one hand how a man's abilities and earning power depend on an adequate supply of the necessaries of life; and, on the other hand, how an excess even of necessaries brings him so little good or satisfaction as to remove his desire for them, and even possibly to make them an inconvenience. Here, too, we must investigate how man's effective desire or demand for certain goods affects the "price" demanded of him for those goods; and, conversely, how the keenness of his desire for an article increases the price or effort he is willing to pay for its possession. As we consider this fundamental section of our subject we shall realise that the term "Consumption" in Economics means rather more than it usually implies. As a scientific term it embraces far more than the consumption of wealth in the form of food; it implies that consumption or usage which takes place when we wear our clothes, or use our furniture and our houses, or utilise the services of a doctor or of a lawyer. The carpenter is just as much a consumer when he hammers nails into the floor-boarding, as is the gourmet who enjoys an expensive repast, the prepara-

tion of which has involved the services and labour of countless workers in many parts of the world.

Production.

That section of Economics described as *Production* is devoted to a consideration of the efforts of man to satisfy the wants of himself and of his fellows by utilising to the best advantage the natural resources and products which are to be found around him, rendering them of service and of use by altering and improving their form, combining them with other materials and transporting them to places where they are needed. Sometimes the processes of production are simple in the extreme, as, for example, the plucking of an apple, grown naturally, and the handing of the fruit to a consumer ; but far more frequently the processes are long, involved and of remarkable complexity, whereby an article is rendered fit for human use and developed into a state of perfection from the raw material provided by nature. To-day, the production of a single small object may involve an army of producers, each fulfilling his own special function, possibly small enough in itself but nevertheless contributing essentially to the final product, the usefulness of which depends on the precision and workmanship of its smallest part.

Surely, it may be objected, is not Production the first stage, and should it not be treated before Consumption ? Under modern conditions, are there not but very few consumable things which are ready to hand, capable of consumption without effort on anyone's part ? Is not almost every article of our consumption the result of effort or service on the part of some producer or other ?

In defence of our arrangement, we say that consumption is the *raison d'être* of all production : the essential necessity of living exists first, and the tireless effort of the industrial communities of to-day continues its course only because man, somewhere or sometime, will demand the products of their efforts and be prepared to find them in return articles (or the rights to possess articles) which will bring them satisfaction. Man as producer exists and develops because of the insatiable need of man as consumer. Fundamentally each human being produces to satisfy his own wants, and this fact is obscured under modern conditions merely because every one exchanges the product of his own labour for the products of the labour of others. Consumption—man's desire, his wants, his continual crying-out for the satisfaction of his needs,—therein is the mainspring of all economic activity, and therefore the basis of all economic investigation.

Exchange.

If we could visualise an economist living in primeval times, we should not be wrong in assuming that he would have little

idea of the scope of our third section, or any reason to consider at all the question of *Exchange*. He and his fellows would exist on the results of their own labours, growing food for their individual requirements, and caring little whether their neighbours lived in plenty or died from starvation. Soon, however, we may imagine that our primitive economist, wiser as may be expected than his fellows, finds it to his advantage to offer to " exchange " part of his surplus store of apples for a part of his neighbour's surplus store of fish or nuts. It would be unfair to attribute to our ancestors any less degree of bargaining instinct than is possessed by their progeny of to-day, and our imaginations can well picture a long drawn-out feud and a possibility of broken heads before the exchange was finally made to the satisfaction of both sides. Nevertheless, the elements of our study are here—the relative satisfaction which must be obtained by two persons before they agree to exchange one possession for another.

From so primitive an example it is a far cry to our present-day methods, under which an article may pass through a multitude of hands, and may involve an army of intermediaries, before it finally reaches the ultimate consumer ; to our modern system of exchange and interchange, which has made necessary the use of money as a medium for facilitating transactions and making less difficult the attainment of satisfaction.

The scope of our investigation is clear however. In Exchange we are concerned with the reasons for which, the methods by which and the rate at which one man or one community exchanges his or its goods for those of another man or community. We shall consider the functions and characteristics of money, the medium of exchange, and the nature of the service of credit instruments and banking organisations in making possible the development of exchange to the remarkable intricacy and yet wonderful efficiency of to-day. Our researches will extend not only to the individual, and to the exchanges within the borders of the State, but also to the wider field of international exchange, whereby the people of the world vie one with the other in " bartering the comparatively superfluous for the comparatively necessary " (Jevons), and apparently aim at making the arrangements as complicated as possible by the adoption as " money " of coins, notes and instruments of every kind and variety, and of every degree of worth and worthlessness.

Distribution.

Finally, we come to the section of our subject which, particularly at present, involves the members of nations in prolonged antagonism and strife, more disastrous indeed than war itself, inasmuch as the results in hampering the smooth working of the economic machine are far more widespread and of a far more lasting nature.

Distribution concerns the sharing of the total wealth produced, and its division among the various agents who co-operate in the processes of production. Probably in this section more than in any other does the economist need to tread warily, for here he is confronted at every stage of his investigations by the opinion of each agent of production as to its own worth and as to its right to an increased proportion of the product; here he must discuss the problems as to how many hours man should work per day, and how much he should get for that work; he must consider how far the owner of land is entitled to the produce grown thereon, and to what extent the capitalist, who provides the sinews of industry as well as those of war, should partake of the product of the joint co-operation of his capital with the labour, organisation and natural resources provided by others.

The foregoing summary indicates that Economics covers the wide field of human activities. It investigates all kinds of business transactions and the motives which affect man's conduct in commerce, trade and industry. For this reason, Dr Marshall described Economics as "the study of man's actions in the ordinary business of life; it inquires how he gets his income and how he uses it. 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".[1]

Science or Art?

The question is frequently debated as to whether Economics is more correctly described as a science or as an art. It will be seen from the foregoing paragraphs that we unhesitatingly describe it as a science, but it is necessary to note that "Political Economy"[2] was originally an art, the art which concerned the prudent management of the household, and, later, of the community. In his *Wealth of Nations* Adam Smith referred to Political Economy as enabling a people to provide themselves and the State with a revenue sufficient for themselves and for the public services, and thus emphasised its claim to be an art. Nevertheless, his remarkable work, which co-ordinated and analysed the existing knowledge of the subject, marked the birth of Economics as a department of science, which seeks to show statesmen and politicians, not *how* national production and distribution of wealth should be regulated, but what scientific laws *actually control* that production and distribution.

The validity of the claim of modern Economics to be regarded as a science necessarily depends on what we regard as the test of a true science. Does a science involve merely *systematic*

[1] *Economics of Industry*, Bk. I. I. i.

[2] The term "Political Economy" is derived from the Greek *polis*=a city-state or organised community; *oikos*=a house or home, and *nomos*=a law or rule; the joint term signifying the application to the state of the principles of household management.

reasoning, or must the reasoning be *exact* and the conclusions clearly defined, unchallengeable and subject to no exceptions? Furthermore, does the claim of Economics to be a science, if it is to mean anything at all, involve the power to predict the economic future?

If, as seems wise, we accept as our test of a science that it should embody a systematic study of a group of interrelated problems, then the claim of Economics is valid; the economist endeavours to deal in a scientific manner with the problems with which man is confronted in his pursuit and use of wealth. He endeavours, on the one hand, to systematise his data, to analyse clearly cause and effect, and, on the other hand, to unfold principles and detect general tendencies. He deals scientifically with facts which can be obtained and with quantities which can be measured and recorded. He teaches truth respecting phenomena connected with wealth by explaining and classifying such phenomena and by investigating their causes and results. He seeks to discover the universal out of what to the ordinary observer suggests only chance and often chaos. In the words of the late Dr Marshall, the economist seeks to discover "the many in the one, the one in the many". He is scientific in his *method*.

If, however, we take as our test of economic science its power to predict, we shall be obliged to admit that, judged from this narrow point of view, Economics is still in its infancy. Although the science of business forecasting based on statistical data is making progress, especially in the United States, it is still in an experimental stage, and it is doubtful indeed whether it will ever achieve any high degree of perfection. Economic forces are so uncertain, their interaction and reaction are so complex, that the economic future must always remain largely inscrutable.

Economic Laws.

Economics, then, can justly claim to be a science—an organised body of knowledge—the facts of which have been scientifically and systematically observed, collected and classified. From these facts are formulated and proved a series of propositions or laws which form the basis of the science and which are used as a groundwork for further investigation.

An *Economic Law* may be defined as the statement of a principle underlying the conduct or actions of man when engaged in the ordinary business of life. Economic laws deal essentially with those human activities and motives which are capable of measurement in terms of a money price. They form a special department of the great body of *social laws*, which enunciate the principles underlying the conduct of man in society.

Most economic laws are *hypothetical* laws, because they state that given certain conditions certain results will follow, and

because their truth and operation depend on so many factors which are variable and imperfectly determinable. An example of such a law is the Law of Diminishing Utility, which states that increasing available supplies of an object of desire or consumption become less attractive to a consumer. " Enough is as good as a feast " is an old saying which is especially applicable with regard, for example, to the amount of bread a man may consume. When his appetite is satisfied extra supplies of bread are of rapidly diminishing value, and finally become a nuisance. This law is, however, only the statement of a tendency. It has no rigidity, no fixed limitations, no mathematical boundaries. There is no precise stage at which each person's appetite is satisfied, no definite quantity of bread which will satisfy the need of any particular hungry man.

Other economic laws partake of the nature of *physical* laws in that they are based on natural forces and are therefore as immutable and permanent as the laws of nature themselves. To this class belongs what is probably the most important of all economic laws—the Law of Diminishing Returns, which lays down that after a certain point man tends to obtain from the same area of land a smaller return from each application of labour and capital. We can readily appreciate that there is a limit to the amount of energy and patent fertiliser which an allotment holder can profitably apply to his carefully tended plot. As we shall see later, however, even this vital law is only the statement of a tendency ; its ultimate operation depends on the fulfilment of certain conditions and may be considerably modified by human agency.

At the same time it must not be thought that such economic laws are untrue or without practical value. Although they are inexact, they are the most exact of the laws of the social sciences (since so many economic forces, e.g., those of demand and supply, can be estimated in terms of money), and are useful statements of general tendencies which might escape the notice of the casual or superficial observer. They are also of first importance to the student of Economics in that they provide a basis for further investigation. Moreover, some economic laws are *axiomatic*, and must always be true of any stage of development. Such laws are usually generalisations or propositions deduced from the study and investigation of observed facts. For example, the generalisation that saving must come out of a surplus of production over consumption, or that the general standard of living depends upon the efficiency of a community in the production of wealth, must remain true for all time, and under any economic system, capitalist or socialist.

Economic laws are in an entirely different category from *statutory* laws, i.e., those made by human government. Statutory laws, being conceived and put into operation by man, can of course be altered or repealed with comparative ease, and to this

extent they have not that permanence which characterises economic principles. On the other hand, statutory laws, while they are in force, operate at all times in the same way, and consequently are inevitable to a far greater degree than most economic laws, the operation of which can so frequently be modified if " other things are not equal ".

The qualification here implied epitomises the limitations to which all economic laws are subject. Only too frequently the functioning of such laws is restricted or modified by the interaction of what are known as economic forces. Economic forces may belong to one of several classes. They may be persistent and inevitable *natural forces*, such as the coming of the seasons and the passing of night into day. Or they may be *human, social forces*, which, in spite of the inconsistency of man, are of remarkable uniformity when averaged over human kind, as, for example, the force of demand and the force of competition. Or, again, they may belong to the class of *legal forces*, those boundaries erected by the State within which the individual may live, work and enjoy his measure of economic freedom.

It has been stated with considerable truth that " one of the most persistent and regular of all economic forces is the force of economic friction ". In other words, economic forces do not work with absolute freedom. Certain forces may be isolated for purposes of scientific study, and laws may be deduced from their interaction ; but in practice the force of friction almost always operates, though rarely twice in the same direction or with the same intensity, and may prevent the other forces from working out in their " normal " way.

Economic friction may take many forms. It may exist as a restriction on the force of competition : as custom, sentiment or ignorance, or as one of a hundred similar influences. Any of these may destroy the validity of those assumptions of competition and the pursuit of rational self-interest on which the economist's generalisations are so frequently based. Thus, the force of demand interacts with the force of supply in the determination of price, and from this interaction the economist deduces the laws of supply and demand. But in laying down this general tendency the economist is compelled to ignore temporarily the possible existence of counteracting forces.

It follows, therefore, that economic laws do not always work out in the same way, and that they cannot determine in detail the nature of the economic system. Yet this is frequently implied. Proposals for reorganisation of the system are condemned on the ground that they are contrary to " inevitable " economic law : the objection is usually unsound because people confuse the fundamental principles which are the laws themselves with their manner of operation. The principles cannot be changed, but the conditions upon which their operation depends can be, and often are, modified by human agency. " There are

times when the stern laws of political economy must bow to considerations of humanity". In other words, the *results* of the working of the principles frequently can be altered. Society's institutions, its laws of property and inheritance, state regulation in its innumerable forms, all affect the working of economic laws and modify their results in practice. For instance, although it is true to state generally that price is determined by the law of demand and supply, the actual price of a commodity will depend on whether it is produced and sold under conditions of free competition or of combination, or on whether the State sees fit to step in and fix a price by authoritative legislation.

We conclude, therefore, that while economic laws can never be ignored, they are not inevitable, for their results can be considerably modified by human action. Because of this uncertainty of the human element, and because of the constant presence of economic friction, economic activity must always remain to some extent speculative in character. But the fundamental economic principles are so deep-rooted that they will operate in any economic system, and, if need be, in spite of attempts to overthrow them.

The Assumptions of Economics.

As so many of its laws contain or imply conditions, and as so many of its conclusions are based on assumptions, Economics is sometimes described as a *hypothetical* science. Examples of such assumptions are that land exists which yields no rent to its owners, that man will act intelligently and in his own interests in the pursuit of wealth, and that free competition exists in business and in industry.

These assumptions are only approximately true, and may be subject to many exceptions and limitations; but in certain circumstances they correspond closely with actual facts. We know there is practically no land which is let rent free; there are, however, farmed areas which command an almost negligible rent and which scarcely cover the cost of their cultivation. We know also that man does not always act in his own interest in pursuit of wealth; frequently from sheer laziness, ignorance or anxiety to be free from change, he neglects to act in his own interest. Then, again, we can rarely, if ever, find a market in which free competition exists, although in some markets, e.g., the Stock Exchange, conditions approximate closely to the ideal. The assumptions are, therefore, only approximate, but no other assumptions can be made which are more generally correct and applicable.

Probably the best known of the assumptions of Economics is that which concerns "the economic man", an imaginary being whom the older economists assumed to be actuated only by the desire for wealth, and by the disinclination to labour, and in his

greed for gain, to be uninfluenced by sentiment and human passion. This conception resulted in Economics being long regarded as an *abstract* science. Modern economists have, however, brought the science into closer touch with reality by displacing this unreal, almost sordid being, and by applying themselves to the study of the normal or average man, whose motives and actions may be influenced by sentiment, patriotism, pride and generosity.

The Relation of Economics to other Branches of Science.

In formulating their doctrines, economists have drawn extensively upon the knowledge and discoveries of investigators in other branches of science—in physiology, biology, and chemistry. In modern times, particularly, economists have made considerable use of statistics and of statistical methods in proving their reasoning and in pursuing their investigations. The mathematical sciences also have been called upon to assist the economist, and many of his conclusions have been found capable of clear illustration with the aid of mathematical formulæ and mathematical methods. Indeed, so largely has this been done that some investigators have adopted an entirely mathematical form of explaining their conclusions and of proving their statements.

We have stated that Economics is essentially a study of man's actions in the ordinary business of life, and it is therefore natural that it should be closely related to the various sciences which are concerned with human activity in spheres other than those concerned with the pursuit of wealth. Economics is, in fact, but one branch of the comprehensive science of *Sociology*, which treats of man as a social being, and of the origin, organisation and development of human society and of human institutions. Other divisions of this parent science, which are intimately associated with Economics, are *Ethics*, the science of human morality, conduct and character; *Law*, the science which concerns itself with what man *may* or *may not* do, and which controls the relation between man and fellow-man within the State; and finally the controversial science of *Politics*, which treats of the methods, functions and organisation of government, and of man's relations to the sovereign power in the State.

It becomes clear on a little consideration that it is increasingly difficult, as civilisation progresses, to consider Economics as a science apart from the three moral sciences referred to—Politics, Law and Ethics. Economic motives are constantly involved with political considerations. The development of Society and of its laws go hand in hand. Economic objects and aspirations must always be subject to the rules of conduct and procedure which have become so justified by long usage as to have been adopted as laws capable of enforcement by penalties of varying degree. The economic structure of Society is erected upon a legal frame-

work constructed by the State, which, in its ever-extending laws relating to contract, property, factories, trade disputes, etc., prescribes a minimum standard of conduct with which each individual must conform in pursuing his economic activities.

Over and above this minimum legal standard are the higher moral and ethical standards set up by public opinion, and by custom and conduct in business and the professions. No individual, however strong his desire for gain and personal advancement, can ignore such standards and continue to persist. The strength and effect of economic forces, whether they are set in motion by the individual or by a combination of individuals, are controlled and frequently modified by social forces—the customs and laws of society and those ethical and moral standards to which the self-respecting and respected citizen must conform. Our code of morality is based on our recognition of those rules of conduct and those qualities which are in the best interest of Society, and unless economic actions and motives conformed to ethical requirements, they would finally overthrow those institutions which are fundamental in social life.

The Object and Scope of Economic Science.

This close relationship between Economics and its kindred sciences necessarily means that the economist, in applying his theoretical knowledge to the solution and explanation of the problems of modern communities, must be influenced by, and must give due attention to political, legal and ethical considerations. Economic investigation is essentially national and international in scope and object, and it is therefore to be expected that political matters frequently obtrude on economic studies. For these reasons, Economics is not solely concerned with the study of wealth, but its investigations extend also to a consideration of matters which affect the *welfare* of man and of the community in which he lives. It is therefore well described as a moral and social science, concerned with the conduct of human beings in Society.

It must be emphasised, however, that the economist is concerned with man only as a unit in Society, as a member of a social organisation, and not as an individual. The actions, desires and objects of a particular individual are of little importance to economic science; it is the average of the actions, desires and objects of all members of Society that matters. We are little concerned with the quantity of bread which a certain person can conveniently consume before his wants are satisfied; but a knowledge of the aggregate need of all persons in a community permits us to draw certain definite and valuable conclusions as to the limitations of human demand for commodities generally.

The intimate concern of Economic Science with the motives and actions of human beings in Society necessarily results in its hypotheses and conclusions being less exact than those of the

more precise sciences of mathematics, physics and chemistry. The human element is always uncertain, but happily there is a constancy in large numbers which, to a considerable extent, obviates the difficulty of uncertainty in economic investigation. While the individual may be original and even eccentric, Society as a whole is bound by custom, tradition, and habit, so that in so far as it deals with groups and not with individuals, Economics has stability.

Other difficulties arise because of the absence of reliable standards of measurement and comparison. We may know that man's desire or motive is strong or weak, but it is difficult to express such desire or motive in concrete terms. We can, however, measure fairly accurately the strength of man's motives in the pursuit of wealth by considering the value of the reward which he hopes to gain, and we can similarly estimate the strength of man's desire for an object or service by the price which he is prepared to pay for it. Economics is, in fact, primarily concerned with those motives and desires of man the relative strengths of which are capable of measurement in terms of a money price.

While we are thus compelled to regard Economics as an approximate and partially descriptive science, its investigations are none the less valuable. The passing of years has proved that its conclusions are substantially correct, and that in throwing light on practical problems and in indicating the best forms of economic organisation, it is achieving its object and serving humanity to an unlimited degree. Its aim is to show why certain effects follow certain causes; how the discovery and appreciation of certain uniformities and relationships may be usefully applied to explain existing conditions and improve those of the future; how the national wealth is apportioned or distributed amongst a country's inhabitants, and how such proportions are determined. But although it takes cognisance of moral and ethical considerations, it does not pronounce moral judgments, or lay down moral or religious precepts; it is not concerned with the right and wrong of man's objects and achievements, or with the justness and unjustness of the structure of Society, and the distribution of its wealth. The business of the economist is to deal with facts and figures without fear or favour, to interpret their significance and point out their meaning for the guidance of others. The actual solution of practical problems is not within his sphere. His part is to supply the results of his observations in the form of carefully arranged facts and rigidly tested principles, for the benefit of his fellows.

The economist recognises that man's character and social value are vitally influenced by the amount of his income, by the manner in which it is earned and by the way in which it is spent. But the purely economic factors in these problems

afford sufficient scope for his investigations. He recognises the demoralising effect of the sweated wage, and the civilising, humanising influence of an adequate income. His investigations prove how vitally man's character is influenced by the nature and regularity of his work, by the extent of his hours, by the difficulty or ease of his daily tasks, by the nature of the materials handled, and by the conditions under which work is done. But it is not his province to attempt to secure a more equal distribution of wealth or to press for a reform of working conditions. He may probe the facts and analyse the statistics; it is the work of the statesman and reformer to apply the economist's data for the practical benefit of present and future generations.

Again, the economist recognises the effect on character of the manner in which income is spent. His experience tells him that the spending of money on mere personal gratification, on intemperance and self-indulgence, results in moral and physical degeneration, and that it does not tend to the creation of those qualities of self-respect, self-reliance, temperance and generosity which are developed by a well-balanced application of income in the culture of one's higher instincts, in assisting the unfortunate and in providing for the future. But while the economist recognises and records these facts, he does not directly attempt to modify or control them. Such control, as he knows and hopes to influence, is exercised by that silent, immeasurable moral or customary standard of conduct to which every self-respecting member of Society endeavours to conform.

The function of the economist is, therefore, to explore and to explain, not to uphold or to condemn. His task is to examine the working of the economic mechanism as it is now organised. He may point out where the mechanism is defective but—as an economist—from one point of view only, the point of view of productivity of wealth. Here we find the meaning of the phrase "looking at a question from an economic point of view". The economist's test for his investigations is *efficiency in wealth-production*.

The Practical Limitations of Economics.

The reader will have suspected that these limitations in the object and scope of Economic Science necessarily restrict its practical application. While the economist is concerned only with the economic aspect of practical problems, there are, as we have already indicated, usually other aspects, political and ethical, which need to be considered before practical policy can be decided upon. We may illustrate this point by reference to two important problems: first, that of Free Trade and Protection, and, second, that of Capitalism and Socialism.

Although in both these cases the economic aspects are of

dominating importance, they are not the only aspects: due regard must be had to political and ethical considerations. Thus, even the most ardent Protectionist might conceivably admit that on purely economic grounds (i.e., judged solely from the standpoint of the productivity of wealth) Free Trade should prove most beneficial. But in his advocacy of Protection he argues that the possible economic advantages of Free Trade are offset by the political gain which Protection (e.g., of agriculture and other vital industries) brings in the form of greater security in the event of war. Even the most highly industrialised countries produce some part of their food supplies, and do so frequently at a loss, if the matter is judged solely from an economic point of view. But they regard the political gain of security and the moral gain of the encouragement of a sturdy type of worker as worth the additional cost.

Similarly, in the controversy between Capitalism and Socialism, there are ethical as well as economic factors. A Socialist might admit (although most would not!) that the system advocated by him might result in a loss of economic efficiency; but he would doubtless still maintain that the price was worth paying in view of the finer moral character which Socialism might develop.

The economist then has an important word, but not the final word, to say in the settlement of practical problems and the determination of policy. While the fiscal and financial theory and practice of the modern State are all influenced by economic laws, and while commercial activities are, consciously or unconsciously, influenced by economic forces, the economist in his investigations must confine himself rigidly within the boundaries which we have described. To proceed further would be to lay aside the cloak of the economic investigator and to assume that of the moralist, lawyer or politician. It has been said with great truth that: "The Theory of Economics does not furnish a body of settled conclusions immediately applicable to policy. It is a method rather than a doctrine, an apparatus of the mind, a technique of thinking which helps its possessor to draw correct conclusions".[1] Policy is always based on a compromise between the economic, ethical and political issues which are involved. In a materialistic age, the economic issues are given great weight.

Economic Freedom.

The present age is frequently described as "the age of economic freedom", or *freedom of industry and enterprise*. This means, first, that in the modern, civilised community the existence of *private property*, i.e., the individual's exclusive right to control his own economic goods, is recognised and protected.

[1] J. M. Keynes, Introduction to the "Cambridge Economic Handbooks Series."

Secondly, that each individual may use his own energies and property as he thinks fit, and, thirdly, that he may work, live, and freely contract on a basis of equality with others and with the same opportunity as his fellows.

The system of private property is not based upon a "natural right". Originally property was appropriated by those who had *might* rather than right, but, in course of time, property which had been thus appropriated by private individuals was recognised by custom, and later by law, to belong to those in possession.

The antithesis of economic freedom is slavery or serfdom, where the worker's life and effort are subject to the will of a master. Such conditions existed in most countries until economic progress in the trading and industrial centres of the world led to the recognition that each individual should be master of his own destiny. Gradually the system of freedom of competition obtained unlimited sway, reaching its apex in the Industrial Revolution at the end of the eighteenth century. Conditions then became scarcely better than conditions of slavery. Unrestrained competition brought indescribable suffering to the workers in the abuses of the factory system and overcrowding in industrial neighbourhoods. Freedom of enterprise came to mean, not the welfare of the many, but the evils of class domination—an increase in the power and wealth of those already powerful and wealthy. Before the monster of competition, the poor and weak stood helpless and defenceless. They had neither the means nor the power to chain his forces. Their misery increased and went unrelieved until reforms were instituted by the more enlightened members of Society in the shape of factory legislation and amendments to the laws relating to public health and contract.

The result is the present-day system of comparative freedom. While the individual is now free to choose his own occupation, to compete with his fellows, and to buy and sell according to his desires, his freedom is not absolute. He must in all these things conform with the minimum standard of conduct laid down by the law of contract and with the higher ethical and moral standards which have been gradually set up by Society.

Such standards operate to prevent man, in the exercise of his freedom, from injuring his fellows and from interfering with their freedom. The individual may work as a builder or as an artist. He may devote his energies to the growing of crops or to the selling of foodstuffs, or he may qualify himself and set up in practice as a chartered accountant or a solicitor. But in all these cases the freedom which he enjoys depends on his observance of certain restrictions imposed by the State and Society. If he chooses to build a house, he must conform with the requirements of the local council as to sanitary and other arrangements; if he wishes to sell meat or dairy produce he

must adhere to certain state regulations intended to protect the health of the community, while, if he wishes to practise as a solicitor or chartered accountant, he must comply with the rules of the central bodies by which those professions are controlled. Such regulations and restrictions apply to all alike, without distinction of class or creed. They are imposed for the general good; their object is protection, and their result is equality.

In the absence of any such restrictions the individual may assume complete liberty of action, and the end and scope of his economic activity will be determined largely by the competition of other individuals similarly occupied.

The system of economic freedom permits such a degree of liberty to the individual, either alone or in combination with his fellows, that it is sometimes described as "*the system of private enterprise*", as opposed to a system of public or state enterprise, in which industry and commerce would remain largely in the hands of the State and of public authorities. Economic freedom does not, however, exclude enterprise which is in the hands of public authorities or the State. What it does imply is that undertakings conducted by the State or public bodies shall be governed by the same law of contract as applies to the individual, and that, while such undertakings may enjoy certain advantages by reason of their size or importance, they shall not enjoy privileges which would give them any unfair advantage over privately owned concerns.

It follows that, while the system of private enterprise depends essentially on the existence and recognition of private property, it must imply also the existence of *communal* property, i.e., property held in the common interest, such as town halls, parliament houses, art galleries, schools, bridges, roads, docks and harbours. Such things are appurtenant to the existence of any form of government; they are essential in any civilised community, and increase constantly with the progress of Society and with the extension of the functions of government.

Economic freedom is thus an essential characteristic of the modern economic State. The economist points the way to such freedom by enunciating the principles which underlie the consumption, production, exchange, and distribution of wealth. Statesmen make and administer the laws which permit those principles to operate with justice and equality for the individual. The individual respects such laws because they imply equality of opportunity to act in his own interests and seek his own private gain. Yet in so doing, whether he acts alone, in competition, or in combination with his fellows, he must contribute to Society some service or commodity which meets a social need; otherwise the demand for his services will cease. Thus economic freedom implies individual gain, and individual self-interest results ultimately in the general good because it satisfies a social need.

Methods of Economic Investigation.

Two distinct methods have been adopted by economists in conducting their investigations and in arriving at their conclusions. These are known respectively as the *deductive* and *inductive* methods. The former implies reasoning or developing particular conclusions or cases from a number of general principles or propositions, which are admitted or assumed to be true. In simple illustration of a matter which frequently leads to confusion, we may consider the two general statements: "All men are mortal" and "John is a man". From these we may safely deduce the particular conclusion that "John is mortal".

The "Classical" economists, of whom Ricardo [1] was the chief, applied this method in their investigations and attempted to base the whole of economic science on a few generalisations or laws, which they propounded for the guidance of humanity and for the solution of future problems. A characteristic example of Ricardo's adoption of the deductive method is his acceptance of the truth of the two propositions: (1) That, in the pursuit of wealth, human beings are actuated by motives of self-interest alone; (2) that every man is capable of determining the direction in which his best interests lie; and his deduction from these assumed truths that any increase in the rate of wages in one occupation would attract to that occupation such numbers of workmen as would tend to lower the rate of payment to the normal prevailing rate.

The positive assertions which have sometimes been made as a result of the application of the deductive method of reasoning have led to economic science being sometimes described as *dogmatic*, and particularly where false conclusions have been arrived at in consequence of the inaccuracy of the premises or the unsoundness of their deductive processes.

The second method was preferred by the economists of the latter half of the nineteenth century, known as the "historical" school, and involved the drawing of general conclusions in the form of a law from a number of particular instances, and the testing of such conclusions by reference to further facts as the latter are discovered and appreciated. The rapid advance in the science of statistics during recent years, the scientific inquiry which has been made into social and economic conditions, and the collection of data by government departments and private investigators have considerably enhanced the value of the inductive method of economic investigation, and have made possible the inference of "laws" and conclusions which are necessarily more scientific and complete than those which were possible under less favourable conditions. Modern economists are fortunate in being able to utilise in the solution of their problems a wealth of statistical information and many tables of figures compiled with much patience and accuracy. From these they are enabled

[1] See *post*, Chapter 35.

to develop certain theories or propositions, and therefrom, by methods of deductive analysis, to forecast the probable tendency in other similar or varied conditions of Society.

It is found, however, that the best results are obtained if both methods are combined. "Induction, aided by analysis and deduction, brings together appropriate classes of facts, arranges them, analyses them and infers from them general statements or laws. Then for a while deduction plays the chief *rôle*: it brings some of these generalisations into association with one another, works from them tentatively to new and broader generalisations or laws, and calls on induction again to do the main share of the work in collecting, sifting and arranging these facts so as to test and 'verify' the new law".[1]

Fallacies in Economics.

In every science the unwary investigator may easily be led into fallacious reasoning: in Economics the danger is a serious one, because the data from which conclusions are drawn are so frequently inadequate, while the interaction and reaction of economic forces are so subtle and complex. The following are the most common of the numerous types of fallacies into which the economic investigator may be drawn.

Generalising from Insufficient Data.—One of the prime duties of the economist is "to discover the universal",—to discover and enunciate those broad general truths which are known as economic laws. But this is by no means an easy task. The available data are frequently so scanty and unreliable that investigators are liable to make generalisations on an inadequate basis. In some cases, a few observed instances may be positively misleading and afford no ground for general conclusions. Thus, a subsidy granted to a particular trade may bring benefits to the trade, and it is thereupon argued that a general policy of subsidy would benefit all trades. Again, it may be argued that, because one industry has benefited from the imposition of a tax on competing imports, a general policy of protection should prove advantageous to industry as a whole. Such conclusions are by no means justified.

Confusing the Relationships of Cause and Effect.—At first sight it would appear difficult to mistake effect for cause or cause for effect, but the fallacy is a very common one. For example, it is frequently argued that a restriction of credit causes trade depression when actually it is the falling off in trade which has inevitably led to a contraction in the volume of credit.

Closely allied to this type of fallacy is that known as *Post hoc, ergo propter hoc*,—if one thing follows another, it is caused by the other. This is a method of reasoning frequently resorted to by politicians. If unemployment figures fall after a change of

[1] Marshall, *Principles*, Appendix D.

Government, the new Government takes the credit for the improved conditions, even though the decrease in unemployment may be due to seasonal or climatic factors, or may have resulted from measures introduced by their predecessors.

Frequently, one economic factor is regarded as the cause underlying another phenomenon, when in reality both phenomena are traceable to one dominating cause. Thus, the existence of high prices during a period of inflation is sometimes attributed to the prevalence of high money wages ; in reality, both phenomena are due in the main to one common factor, inflation, i.e., the increase in the available volume of money.

Attributing to one Cause a Result which is really due to a Combination of Causes.—This is perhaps the most common type of error, and one into which even the most careful economic investigators have fallen. In their analysis of the rhythmic movement of trade known as the trade cycle many economists have attempted to explain the phenomenon simply by reference to a single dominating cause, whereas we now know that it can be explained only by the interaction of a number of factors. Similar mistakes have been made in the treatment of value. Early economic writers attempted to explain value entirely by reference to cost of production influences ; their opponents fell into a similar type of error by putting forward utility as a complete explanation. It was left to Alfred Marshall to demonstrate that both cost of production and utility have their share in the determination of the value of all commodities. The truth is that economic phenomena can rarely be explained by reference to any single cause ; they are complex, and due in almost every case to a combination of causes.

The Utility of the Study of Economics.

How frequently do students and others question the utility and purpose of the study of Economics ! Again and again are teachers asked what advantage can result from a knowledge of the subject, and such queries tend always to increase because leading business men nowadays insist upon its importance, while almost all professional examining bodies include the subject in their syllabuses.

The subject is vital to all, but particularly to the business man. It seeks to show him what place he fills in the economic structure of the nation, how the firm by whom he is employed functions as a part of the business machine, and how the industry of which that firm is a member is related to other industries, and how it works in harmony with them for a common end. It seeks to show that business organisation is an intricate but none the less efficient combination of a myriad producers, who work not in haphazard fashion, but in an orderly though not a consciously controlled arrangement for a specific purpose.

"Man lives by co-operating with his fellow-men. In the modern world, that co-operation is of a boundless range and an indescribable complexity. Yet it is essentially undesigned and uncontrolled by man. The humblest inhabitant of Great Britain or the United States depends for the satisfaction of his simplest needs upon the activities of innumerable people, in every walk of life and in every corner of the globe. The ordinary commodities which appear upon his dinner-table represent the final product of the labours of a medley of merchants, farmers, seamen, engineers, workers of almost every craft. But there is no human authority presiding over this great complex of labour, organising the various units, and directing them to the common ends which they subserve. Wheel upon wheel, in a ceaseless succession of interdependent processes, the business world revolves: but no one has planned and no one guides the intricate mechanism whose smooth working is so vital to us all".[1]

The economist aims at analysing this industrial and commercial organism, and seeks to show the forces which set it in motion, maintain its equilibrium and permit it to achieve its results. He traces the relation between one producer and another, between industries and between nations.

Clearly, anyone who pursues such a subject must benefit immeasurably by a breadth of outlook and a wider conception of men and of matter. No longer need he labour from day to day without idea or comprehension of his place and function in the vast order of things: the science of Economics enables him to understand and to estimate his contribution to the economic structure, and thereby to deal more intelligently with the daily problems with which he is confronted, and also to appreciate more deeply the many difficulties which day by day arise within his own industry, within the boundaries of his own country, and in the world at large.

[1] H. D. Henderson, *Supply and Demand*, page 3.

CHAPTER 2

INDUSTRIAL EVOLUTION

IT is obviously impossible within the scope of one chapter to do more than rapidly survey the many stages in the economic history of mankind, but before entering more deeply into our subject, it seems desirable to give the reader at least a brief outline of the stages by which and the manner in which industrial organisation has been evolved. Again and again in the study of Economics is it necessary to consider the historical aspect of man's development, and even a slight acquaintance with the more important features of that development should make less difficult the appreciation of economic theory and the understanding of those problems which are peculiar to modern commercial and industrial organisation. Economic science is the study of man in his efforts to get a living: economic history traces the stages and development of those efforts. Consequently the understanding of the one does much to make clearer the comprehension of the other.

The efforts of man to obtain a living necessarily go back as far as man himself; back to the distant past, long before any period of which we have reliable knowledge. Of man's early stages economic history is therefore largely a matter of conjecture. We know, however, that the wants of primitive man must have been of a quite elemental kind, and capable of being satisfied, like the wants of animals, entirely from nature's bountiful store. Fruit, fish and animal flesh existed in abundance; man had only to reach out his hand to obtain all that was in such circumstances sufficient for his existence. By hunting and fishing he satisfied his need for food and clothing, and at the same time led what seemed to be an existence of considerable attractiveness.

But even nature's bounty is not inexhaustible. As a rule, fruit and crops reach maturity but once in every year, and in any given area the supplies of fish and of animals are not so great as to be unaffected by the constant attention of hunters and fishermen. Gradually the acquisition of sufficient supplies involves an increasing exertion: the hunter must go farther afield and the fisherman employ himself in patience for a longer period. Existence would have become increasingly difficult had not man discovered that he would benefit more by taming and breeding the animals which he had hitherto been accustomed to kill. The *pastoral* stage gave him a more peaceful, secure and

less roving existence; he was in a position to provide for both present and future needs, and became less dependent upon nature's uncertain store.

Yet another advance is made when the art of cultivating plants is added to that of breeding animals. Crops are now grown and harvested; the provision of food for both man and animals is regular and more certain, and man finds it to his advantage to cling to one plot of land wherein he sinks his labour and the labour of his family. When the *agricultural* stage is reached man passes from a nomadic to a settled existence, whilst the cultivation of crops and the careful tending of herds makes possible the support of a larger and better fed population.

Instead of merely taking what he finds ready for his use, man now begins to exercise control over nature and to make her produce what he requires to satisfy his wants. Thus we may trace his progress as he gradually learns to labour and to save, instead of living merely from hand to mouth. We see how, with the development of his economic activities, his need emerges for tools and for implements, for improved forms of clothing and of shelter, and for new varieties of food and of home comforts. He becomes attached to a particular place, and develops friendly relationships with his fellows. The benefits of social intercourse are not long in giving rise to the community form of existence, wherein numbers of men live in peaceful accord, benefiting from association and progressing with the interchange of goods and of services. Some men devote themselves solely to the provision of useful things for their fellows; *handicrafts* are developed in which the craftsman becomes more skilful than other men and is consequently able to command a fair return for his labour. At this stage, man's aim is not necessarily the production of things to satisfy his own wants. If the work of his hands and the product of his skill please others, he in turn can obtain that which will satisfy his own wants. One product exchanges for another product; one service or commodity for another service or commodity. Goods of one class are bartered for those of another, and soon such exchanges are facilitated by the intervention of an early form of *money*, whether consisting of stones, pieces of wood, or metallic objects of a variety of patterns.

The association of men in village communities was naturally followed in due course by their association into larger units. As the family association developed into the village, so did the village give way to the town. Eventually the community of interest between the inhabitants of various towns in the same area or country welds them into a united nation, just as the national units of to-day are forced by economic dependence to co-operate and to rely upon one another for the necessaries of existence. "With a denser population remaining permanently in fixed abodes, new relations spring up among men, new duties,

new arts, and new possibilities of civilisation. It is in these conditions that the political whole which we know as a nation finds its birth ".[1]

As we enter the realm of authentic knowledge we can trace the remaining stages in economic evolution with comparative clearness in the development of our own country. Moreover, it is with agricultural conditions which we must begin, for, although the Industrial Revolution commenced in this country, England was almost exclusively agricultural until about two centuries ago.

The Manorial System.

By the eleventh century agricultural England was divided into areas known as " manors," which varied considerably in size and constitution. Generally the manor belonged to a lord and consisted of a village with its surrounding lands which were cultivated by the villagers. " It had three remarkable characteristics . . . the division of the whole arable area into two portions—that part (perhaps a third or half of the whole) which was kept in the hands of the lord and cultivated under his direction, or that of a bailiff or reeve representing him, for his direct and exclusive benefit; and the rest of the land, which was in the hands of the tenants. The former part was universally known as the ' demesne '; . . . the labour necessary for the demesne was provided by the tenants of the rest of the manor. Besides extra services, commonly known as ' boondays ', at harvest time and other seasons of exceptional pressure, and also a good deal of compulsory carting, the main body of the tenants (' villeins ') were bound to work (or provide a substitute) on two or three days a week all the year round on the lord's demesne. The third characteristic was that the holdings of the villeins were made up, not of compact ' fields ', each several acres in extent such as we are accustomed to, but of a number of acre and half-acre strips, scattered over the whole of the tilled area ".[2]

This tilled area was divided into three large expanses or " Open Fields ", which were cultivated in accordance with what was known as the " three-field system ", each field being allowed to lie fallow every third year. The rotation of crops was usually (1) wheat or rye, (2) barley or oats, (3) fallow. It was not until towards the end of the eighteenth century that this wastage of good land was brought to an end in England, when agriculture was completely revolutionised by the introduction of the " Norfolk Four Course System ", by which root crops were alternated with cereals. This system still prevails in most parts of the country.

Besides the arable land each manor possessed large tracts of pasture and meadow. These were described as common land,

[1] Ely and Wicker, *Elementary Economics*, page 33.
[2] Ashley, *The Economic Organisation of England*, page 12.

inasmuch as the tenants shared certain rights over them according to the nature and size of their holdings of arable land. The holding of each tenant depended on his status. Hitherto we have mentioned only one class—the villeins—but there were several others. There existed, for example, a certain number of "free tenants" and "socmen", whose tenures were free and who possessed greater liberty than the villeins and "cottars", whose tenures were servile only. The cottars were inferior in status to the villeins, and formed the major part of the agricultural population. Besides these classes were a few actual slaves, though they disappeared soon after the Norman Conquest.

The villein and the cottar were *serfs*, bound in *serfdom* to the soil, but nevertheless enjoying an independent home life and possessing rights in any wealth which they might acquire by their labour. The serf occupied a position midway between slavery and freedom. He was bound to the soil and to the lord of the manor. In fact, the cultivation of the lord's demesne depended entirely on his right to exact labour services from his serfs, and serfdom was essential to preserve the labour force on the land.

The Decline of the Manorial System.

The manorial system declined towards the middle of the fourteenth century. By that time the chief feature of the system, the compulsory labour services on the demesne, had almost disappeared, and the obligations of the serfs to the lord of the manor were being discharged by money payments. This practice of commuting labour services into money payments originated with the Crusades, when the lords required money for their expeditions to the East. The change is of great importance in the evolution of industry and was strengthened as a result of the growing importance of the woollen industry and the great enclosures of land which were made for the purpose of sheep-farming. The plagues of 1349, 1361 and 1369 hastened the change, the resulting dearth of labour strengthening the position of the labourers in accordance with the laws of supply and demand. Efforts were made by legislation to prevent the natural working of the law, and the Peasants' Revolt against the old conditions followed in 1381. It brought no immediate change, but the commutation of services for money payments increased rapidly; the labourers were able to find work elsewhere if they received no satisfaction from the lord of their manor, for other lords were glad of their services, and the growing industries of the towns offered ample scope for their energies. Thus, though some of its characteristics remained until much later (e.g., the three-field system), the manorial system had received its death-blow by the middle of the fifteenth century. Its disappearance and the rise of commutation gave a vast impetus to industry, since

people became familiar with the idea of payment in money, and this in its turn made an adequate metallic currency essential. Also, tenants had to exert themselves to produce from their land a surplus over their own requirements for sale in the neighbouring towns, so that they could pay their rent. The disappearance of the manorial system is thus closely bound up with the growth of industry and the development of the towns.

The Family System.

The manorial system applied essentially to agriculture, but even before its advent the foundations of industry were being laid in what is known as the *Family System* of industry. The household or family devoted itself chiefly to the cultivation of the land, but, in addition to the provision of food, it satisfied its own needs in other ways, the various members making clothes, utensils, implements and furniture. There was little about the arrangements which could be described as a system ; each family catered only for its own wants, and there was hardly any specialisation of functions or any outside market for the products of the various workers. Gradually, however, the professional craftsman emerged ; probably a man of outstanding skill in a particular craft became known in the district, and instead of carrying on industry as a side-line he made it his chief business.

Production is still on a very small scale, and is carried on in the worker's own home or in an adjoining workshop or shed. The craftsman labours sometimes on materials provided by his customers ; at other times he produces articles from his own material, and sells them to a small circle of patrons in the neighbourhood.

The Gild System.

As town life replaced the manorial community, we find a constant increase in the number of craftsmen employed in the same district on the same trade. Not unnaturally craftsmen similarly employed tended to associate into groups, which became known as *craft gilds*. The object of the gilds was to protect the economic interests of their members and to supervise the organisation of their particular trade ; they took steps to prevent defective workmanship and dishonest dealing, and in many cases also they provided for the relief of sick and unfortunate members. As we should expect, these arrangements resulted in a feeling of craft solidarity, in uniformity of organisation and in improved workmanship.

By the end of the fourteenth century, just as the manorial system was characteristic of agriculture, so the gild system was characteristic of industry, which tended to become increasingly centred in the towns. Many crafts were controlled and protected by powerful gilds, the strength of which was accentuated

by the constantly expanding markets for industrial products and by the increased variety of goods required to satisfy man's wants. This resulted in an extension of the types of craft, and also in an improved organisation of those which already existed. The typical gildsman became a master craftsman, plying his trade with the aid of a number of apprentices and journeymen who could look forward to becoming masters themselves in due course.

The Domestic System.

The gild system finally disappeared in the eighteenth century, but long before that time its successor, the *Domestic System*, had made its appearance. This stage marks an important advance in industrial evolution—the advent of the middleman. Though production was still carried on in small domestic workshops, the market had widened considerably. An intermediary between producer and purchaser had become necessary, and with the coming of this intermediary the market grew yet wider.

In the past England's first great industry, that of woollen manufacture, has been responsible for many great changes, not the least of which was its lead in breaking away from the restrictions of the gild system. At first England had been content to produce wool for foreign makers of cloth, but the institution of weaving in this country was the beginning of a period of remarkable progress. In the early stages, the weaver produced only for the customer with whom he was in direct touch, but later his products were demanded for export abroad and the services of the middleman became essential to link up the worker and his market, and generally to supervise the productive organisation. The developing industry had at last to shake itself free of the fetters of the gild system and to forsake the towns for villages in suitable localities, in the neighbourhood of water power and supplies of raw wool. Although the craftsmen still worked in their own homes, they produced not for themselves but for a merchant-employer. The " clothier " made his appearance, and gradually came to control the whole process of manufacture. He usually provided the wool for carders, spinners and weavers, paying each for his work and selling the finished cloth on his own account. The domestic system which thus came into being is marked by the dominance of the middleman, who not only acted as intermediary between producer and consumer but also found material and employment for the workers in their own small domestic workshops. It marks a transitionary stage between the gild system with its small, independent craftsmen, and the *Factory System*, as we know it to-day.

The Industrial Revolution and the Factory System.

" The story is told that Boulton, James Watt's partner, remarked to George III : ' I sell, Sire, what all the world desires

—power', and the observation was true, for it was during the latter half of the eighteenth century and the beginning of the nineteenth century that England discovered and revealed to the world what could be done by machinery driven by power. England was first in the field and her natural resources have enabled her to remain first amongst nations ''.[1]

When Watt invented the steam engine in 1776 the domestic system was at its height; but it was not to last much longer. The Industrial Revolution, which had begun some years earlier with the development in the use of machinery, was precipitated by Watt's invention. But although the discovery of the power of steam was possibly the vital force of the Industrial Revolution, other changes of great importance were making themselves felt. Everywhere invention and discovery were changing the face of industry and carrying forward civilisation in an irresistible progress. The movement was chiefly in four directions:

1. *The Discovery and Development of New Resources.*—Chief among these were the application of coal to provide fuel and subsequently light for home and industry; the discovery of new areas for the production of essential grain foods—now more needed than ever as population increased enormously; and the discovery of new foods, e.g., sago, tapioca, and of new sources of materials, e.g., the great forests of Canada and Russia.

2. *The Invention of New Processes and of New Methods.*—In all the great industries steam power wrought great changes, but its influence was accentuated by the invention of new machinery which permitted the full use of the new power. Examples are the spinning frame and power loom, the steam engine, the rolling mill, and the steam hammer. In agriculture also great improvements followed the system of enclosing the land, and the introduction of new fertilisers, new machinery, new methods of tillage and new rotations of crops.

3. *The Invention of New Methods of Transport and Communication*, including the great improvement and extension of railways, roads, and canals; the introduction of the telephone, telegraph and submarine cable and the application of steam to the propulsion of ships.

4. *The Invention of New Productive and Distributive Methods.*—The growth of industry and trade made necessary the development also of banking and credit organisations, the perfection of the means of exchange and of distribution, and the establishment of the principle of joint-stock enterprise.

[1] Townsend Warner, *Landmarks of English Industrial History*, page 265.

Concurrently with this rapid growth in our productive capacity several far-reaching changes were taking place in the structure of our economic organisation.

First, there was a *movement from the home to the factory.* The craftsman no longer worked on his own : he became a unit in a large organisation, possibly performing only a tithe of his previous work on a given article. His hand labour on the product was subordinated to that of the machine, capable of working at a faster rate and with much more accuracy.

Secondly, there was a *movement from village to town and in some cases from town to village.* The individual craftsman found greater scope in the town than in the village. On the other hand, some industries moved from the town to the village in search of room for expansion, for water power and for fuel. But the new industries soon changed the villages into flourishing towns, so that in both cases the village declined as the town prospered.

Another general tendency was the *movement of population from south to north.* The North possessed the greater sources of supply of fuel and iron ore, and had other attractions in the way of climate and proximity to raw materials. Thus labour drifted from the South, where agriculture was the only important industry, and one which did not attract a dense population.

At this period, too, can be traced *a rapid growth of large scale enterprise,* following upon an increased scope for and a greater efficiency in the use of capital. The development of machinery was possible only if supplies of capital were available, and, generally speaking, the larger the enterprise the greater the need for capital. Furthermore, the extension of markets to cover the whole world necessitated large scale production, which was itself encouraged by the development and legalising of the joint-stock company.

Finally, as the inevitable result of the vast improvements in the methods of production and of the opening up of the great natural resources in this and other countries, there was an *enormous increase in the national wealth.*

Thus industrial organisation and methods were completely changed. The more enterprising producers who did not hesitate to apply the new machinery and the new power in their workshops soon outdistanced more conservative competitors. The advantages of a greatly increased output with less effort and less expense were too great to pass unheeded. In most spheres the small organisation was doomed. The vast forces of steam and the untiring efforts of the machine dragged to the factory both the unwilling worker and the conservative employer, who still endeavoured to oppose the relentless march of progress.

The vast increase in output tended only to extend the multiplicity of man's wants. Every new machine made possible the invention of a better one ; every new product opened up possi-

bilities of still greater variety. Population increased by leaps and bounds, and every increase meant an extended market. Production no longer aimed at a local or national demand; its market was as unlimited as its possibilities were boundless. The process is still unfinished; continually does specialisation become more marked and the organisation of industry more complex. The vast enterprise employing a multitude of men, with enormous resources of land and capital at its disposal, spreading its activities from one end of the earth to another, and dealing in an immense variety of products and by-products, is an ordinary feature of industrial organisation as we know it to-day.

The development of industry could not have proceeded far had not other organisations moved forward also. The early producer supplied his own raw materials and tools; he worked with his own hands in his own workshop. Even in the gild system, however, the tools and materials were usually supplied by the master, a state of affairs still further emphasised in the later stages of the domestic system, when the merchant employer planned everything, supplied the raw material and hired out the necessary machinery. But since its first advent, machinery has tended to become continually more complex and expensive; production has to be initiated long before the product can be marketed and a return obtained. The supply of *capital* has become a matter of first importance, and has led to the growth and development of the joint-stock company, whereby the funds for industrial purposes are gathered from a multitude of sources. The employer no longer supplies everything; he *plans* and *organises*, watches markets and demand, and in other ways builds up the industry; but he borrows most of his capital, and hires all his labour. To the capitalist he pays interest for the loan, and to the labourer wages for work done. With the growth of the modern wages system a great gulf widens between employer and employed. The former belongs to a distinct and comparatively small class; the latter multiplies constantly and his prospects of directly controlling production become ever more remote.

The provision of capital on a large scale has contributed materially to the growth of the great banking houses, to the development of the stock exchanges and produce markets, and to the remarkable rise of the present-day credit system. The modern system of exchange by the use of money has superseded the old method of barter; the complex mechanism of international trade and of the foreign exchanges is merely a branch of that large-scale organisation which is characteristic of modern conditions.

Competition, too, has become constantly more severe as producers have increased in numbers and markets have widened. At first one craftsman competed with another to supply a local

demand; to-day the nations engage in economic wars which are as vital in their result as warfare in its stricter sense. The modern policy of protection is based on considerations similar to those which led to the growth and application of the old *Mercantilist* ideas.[1] The Mercantilists aimed at regulating industry and commerce and at controlling the exchange and shipment of goods with the object of obtaining for the nation a favourable balance of trade. In many respects the old restraints have disappeared, but we find that in many cases they are still present in various guises. The mercantilist system gave place to the policy of *laissez faire*, or non-interference, of which the fundamental idea was that industry and trade should be allowed to go its own way unhampered by State regulation. The modern doctrine of *Free Trade* is based on this principle, but the fact that it is practised to-day only by very few nations in itself indicates a return to the older principle of State intervention in the matter of fiscal policy.

So far as production is concerned, the policy of non-interference brought immense increase, but it resulted in a most inequitable distribution of the created wealth amongst the classes which had contributed to its production. On all sides we find that the State has been compelled to interfere in many directions; to protect the weak against the strong and the callous, and to protect the worker against the exactions of the unscrupulous employer. England gave free competition a fair trial for many years; but competition, although free, was not equal, and her poorer and weaker classes suffered immeasurably, until at last she was compelled to resort to collective action in order to prevent the exploitation of those whose condition in life placed them at a disadvantage.

So, although in many respects competition is nowadays keener than ever, we find nevertheless that there are many rules and regulations which prevent perfect freedom of movement, and as we shall see later, competition itself has proved so intense and destructive that opposing elements have been compelled to associate and to combine in order to safeguard their interests and save themselves from eventual ruin.

The evolution of industry is still incomplete. We may wonder at the resources and ramifications of some of the organisations which exist around us; but it would seem that in a few years association and combination must reach unparalleled proportions. The nationalisation of productive enterprises is as yet only a subject of political controversy, but it is in fact merely an extension to the nation as a whole of that concentration of resources and power which has characterised industry for the past three decades.

[1] See *post*, Chapters 28 and 35.

CHAPTER 3

THE MEANING OF WEALTH AND VALUE

In seeking to define the subject-matter of our investigations in an earlier chapter, we found it necessary to adopt a provisional idea of the meaning of the term " wealth " as it is understood by the economist. We stated that the wealth of a man could be said to consist of all those possessions and objects with which he is surrounded in his daily life—his furniture, his clothes, his books and his gardening tools. But a general idea of this kind is not sufficient for our purpose. Economics, we have stated, is concerned with man's actions in the pursuit of wealth, and, obviously, we must obtain a very clear conception of the precise meaning of the term around which our studies and investigations are centred.

Utility or Value-in-Use.

Now all the possessions, all the articles to which we have referred, have one common attribute or characteristic—*they are useful* to the person who owns them ; they satisfy some want, either of himself or of his family ; their retention and possession give him a certain degree of *satisfaction.* This attribute the economist calls *utility.*

Utility is the power which an article possesses of satisfying some human want or desire. The desire may be for clothes or for food, for shelter or for mere pleasure ; if it is capable of being satisfied by some commodity, then that commodity is said to possess utility. The article may give pleasure or it may prevent pain ; it may satisfy hunger or thirst, or merely man's desire to have pleasing articles around him in his home ; it may make its possessor clean and neat or it may render him drunk and helpless. So long as it ministers to some desire of mind or body it possesses utility in the economic sense although the object of the desire may be pernicious in its effect on the possessor or on others, or detrimental to the community generally. The excessive use of certain drugs and alcohol will do a man much harm ; used in moderation, as for example, on the prescription of a doctor, they may be a source of considerable good. But the economist regards anything which satisfies man's wants as possessing utility. He is not so much concerned with the harmful or the beneficial use of drugs. In both cases they are wanted

by man; they contribute to the satisfaction of desire and therefore possess utility or *value-in-use*. Utility is thus a relative term expressing the relation which exists *between consumer and commodity*.

Value-in-Exchange.

There are, however, many things around a man in his home and garden which are of the greatest use to him, but which are not regarded by him as his own possessions. The light and heat of the sun, fresh air and rainwater are free to all. They are possessed by no one in particular, but they have the greatest utility. Without them human life would be impossible. Some further distinction is, therefore, necessary between these two classes of useful things, and the economist solves the difficulty by maintaining that although air and light, heat, water, and sunshine possess incalculable value-in-use or utility to man, they must nevertheless be distinguished from other objects and possessions, such as clothes and furniture, which have a *value-in-exchange*, as well as a value-in-use. The utility of air and sunlight is immense—but that utility cannot be measured because they cannot be exchanged.

Value-in-exchange means the power which an article possesses of commanding in exchange for itself the labour or the product of the labour of others. Under modern conditions value-in-exchange is measured by money and is then called *price*. But value is not necessarily measured by money; one commodity may be measured in terms of other commodities. In a condition of barter this is what actually happens. A certain quantity of fruit is bartered for a certain number of loaves of bread; the fruit is then valued in terms of bread and the bread in terms of the fruit. Value is thus ascribed to a thing on account of the actual or possible exchange of that thing for some other thing or things.

Value (like utility) is a relative term; it expresses the relation *between two commodities* at any particular place or time. But this relation is not fixed. The value of things may change considerably according to their situation or according to the time of the year. Ice, for example, is more valuable in warm than in cold countries; it has also more value in summer than in winter in all countries, except perhaps in those of perpetual snow. Since, however, value is a *relative* term, there cannot be a *general* rise in values.

Clothes, books and furniture then are all " worth something "; they are valuable or possess value. If a man wants them he must buy them or make them. If he buys them he must pay for them, usually with money which he has received in return for his labour. Clothes, books and furniture are not free to everybody; they are possessions which everyone wants and

which most people possess. But they can be obtained only by a giving of something in exchange. They cannot be obtained without some sacrifice, some effort of mind or of body, or without some payment of money which is already possessed as a result of some prior sacrifice or effort. It is the necessity for such sacrifice or effort which gives things their value, and such value may be created in this way because effort is required to increase the supply of the goods, or because, as in the case of rare china or of old masters, they cannot be increased by any present exertion.

The Attributes of Wealth.

On the other hand, no man will give anything of value-in-exchange for something which is unlimited in quantity and already freely obtainable without effort. No man will pay money or give labour in order to possess a certain quantity of light or of air. Neither will he pay anything to walk along a public street nor to enter a public shelter ; such things are free to all ; they are owned in common. For similar reasons value-in-exchange is not an attribute of sand at the seashore, although it may be if the sand is being used inland for building purposes ; or of timber in a Congo forest, although such timber may be valuable if it is transferred to a place where it can be utilised in the construction of a house or of a waggon.

There is yet another distinction between the two classes of objects we have mentioned. To possess value-in-exchange an article must not only be limited in quantity ; it must also be capable of having its ownership *transferred* from one person to another. No man will give anything in exchange for an object which he cannot own and possess himself. Transferability implies that the commodity can be possessed, and that it can be appropriated. In other words, the commodity must be *external to its owner*, although not necessarily portable. Land is transferable in this sense, but it certainly cannot be carried about and handed over to a new owner !

Air, as we have already stated, possesses incalculable value-in-use or utility, but it cannot be said to possess any value-in-exchange, not only because it is free to everybody, but also because it does not possess the quality of being transferable.

We have seen then that a commodity in order to possess value must be *useful*, *transferable*, and *limited in quantity*. It is sometimes stated that a fourth condition must be fulfilled, that an article to be considered as wealth must be *the result of labour or sacrifice*. This condition is unacceptable, however, in that it unnecessarily narrows the definition of wealth. The labour involved in producing a commodity is often negligible and not to be compared with the resultant value ; as, for example, the labour involved in picking up a nugget of gold or a diamond, both of which are undoubtedly wealth. Again, the free gifts of

nature, such as land, minerals, fishing rights and so on are rightly considered as wealth by their owners, although they have not involved any labour or sacrifice.

We are now in a position to define Wealth as understood by the economist. *Wealth consists of all those things which possess value-in-exchange;* in other words, wealth comprises all those articles, commodities or "goods" which are useful to man, which are limited in quantity, and which are transferable from one owner to another.

Various Forms of Wealth.

The term wealth as we have defined it thus embraces not only concrete *material* objects such as tables and chairs, books, land and houses, but includes also such intangible or immaterial goods as the goodwill of a business, patents and copyrights, and claims upon personal service, all of which satisfy the three attributes which we have specified.

Among the innumerable objects by which man is surrounded under modern conditions are many which it is difficult to classify. It is not always easy to be dogmatic and state definitely that a certain commodity must or must not be regarded as wealth, particularly as the same commodity may be unmistakably regarded as wealth under some conditions, and yet, in others, fail to satisfy all the essentials.

Let us consider, for example, documents of title, such as share certificates, bills of lading, and deeds relating to land and buildings. None of these can be said to possess *intrinsic* value, but they undoubtedly satisfy the requirements of being useful, transferable from one person to another and limited in quantity. At the same time, such things are really only evidence of the ownership of wealth; the deeds relating to a house are merely evidence of the ownership of the house; share certificates evidence part ownership in the assets of a limited company. It seems better, therefore, to regard documents of title, receipts for payments and instruments of transfer as *representative* wealth.

The same applies to such rights or claims to wealth as insurance policies, which entitle the owner to payment of either a lump sum or an annuity.

If we adopt this viewpoint, we are faced with difficulty in regard to money and the various media of exchange used by the modern community. Are we justified in regarding a gold sovereign, a bank note or a bill of exchange as wealth, or should we classify them with share certificates, etc., as representative wealth? Many writers adopt the latter view. Money, they contend, is not wanted for its own sake; it is wanted because it represents purchasing power; the gold in a sovereign is certainly wealth when it is considered as so much bullion, but the sovereign itself is merely a medium of exchange. According to this view-

point, the sovereign or bank note which we accept for a day's work is merely a claim or title to so much food, clothing or shelter, or to any other things which satisfy our need.

It seems more logical, however, to regard all forms of money and credit instruments as wealth. It is true that money is not ordinarily desired for its own sake, and that it is impossible to increase the wealth of the community or to force up the standard of living merely by increasing the quantity of money in circulation. But to deduce from this that money is not wealth leads to illogical positions. We should have to say that gold bullion is wealth but that a sovereign is not, and that diamonds, in which people may have invested their savings, would cease to be wealth if, during a period of uncertainty, they were used as a medium of exchange. Provided, therefore, that we do not lose sight of the peculiar characteristics and functions of money, it seems best to include it in the wealth category.

Let us now consider an unusual item such as the air in an underground railway station. This, unlike the air above ground, is limited in quantity, since it is artificially supplied and is transferred to the tube tunnels at considerable expense. It has a definite value in exchange, and is paid for by every traveller in the price which he pays for his ticket. The same is true of air in a diving-bell or in a submarine. Air, in any such circumstances, is economic wealth.

Difficulty again arises when we consider personal skill and ability. Is the skill of a surgeon wealth ? To some extent this skill (or physical predisposition to such skill) is innate in the possessor, but it may be improved by practice or by training. The first-class surgeon has to undergo long and expensive training to acquire the skill which makes him famous. But *the skill itself is not transferable*, although it makes possible the transference of services of high value ; hence we cannot regard the skill itself as economic wealth although by the surgeon it is so regarded, and he may in fact guard against its loss by insuring his hands or eyesight. Such skill is therefore best regarded and described as *personal wealth*. Similar reasoning may be applied to the skill of an engineer, the trained voice of a singer, the strength of a workman, and the nimble fingers of a lace-maker. Their loss would entail much hardship to their owners ; many people would give much wealth to be possessed of such qualities ; but in themselves these qualities are not economic wealth, although the services which they make possible are rightly regarded as wealth and may command appreciable values-in-exchange measured in terms of salaries, fees, commissions, or wages.

It should now be clear to the reader that economic wealth is largely a question of conception : the mental attitude of man to an object chiefly determines whether it is wealth or not. Civilisation itself makes wealth of a thing which otherwise would have no value. Every step in progress and education brings a

higher conception of beauty and of art. So we may say that a beautiful picture or Shakespeare's plays may be of little value as wealth to a savage tribe, but of almost illimitable value in an advanced community such as England or the United States.

Various Classes of Wealth.

We may distinguish several classes of wealth, some of which are distinct, while others are inclusive or overlapping. We sometimes speak of *national* wealth, and here the term wealth is often used rather vaguely to mean not only the wealth of the individual members of the nation but also such natural advantages of a country as climate, geographical position, natural resources, the characteristics of the inhabitants, and other immeasurable advantages which may comprehensively be described as the "national goodwill". Not all of these would come within the economic definition of wealth, because such things as good harbours, navigable rivers and climatic advantages are not usually transferable, but we must regard them as wealth in the broader sense. Sometimes the term *social* or *collective* wealth is used to indicate what we have just described as national wealth, but it is preferable to restrict the term social wealth to what may be described as *communal* wealth, as opposed to *individual* or *private* wealth. Communal wealth consists of such things as roads, art galleries, public buildings, docks and harbours, which are owned municipally or nationally, and which are maintained in the common interest. Private wealth consists of the possessions of individuals or of groups of individuals such as trading companies, sports associations and charitable institutions.

We must recognise also that much wealth is *negative* wealth, that is, it implies a corresponding obligation, and we must be careful to allow for this in computing the wealth of the community. For example, war loan stock is undoubtedly wealth to the individual owners, but there is at the same time a national debt which would offset this individual wealth in any estimation of the wealth of the nation as a whole.

Other negative forms of wealth are patent rights, copyrights, the rights to bridge and canal tolls, etc. In all these cases there exist the two aspects of wealth : a right on the side of the possessors, and an obligation on the part of those who are called upon to pay tribute. The lapse or destruction of such rights would not therefore affect the sum total of national or social wealth, although it would result in a diminution of private wealth.

Capital Wealth and Income Wealth.

The meaning of the term wealth has given rise to some confusion owing to the two possible conceptions of the subject-matter of the science of Economics. In early conceptions, the

term wealth was identified with material possessions. Wealth referred to the quantity of material things in existence at a given point of time. It was regarded as a stock equivalent to later conceptions of capital. Since the time of Adam Smith, however, methods of approach have changed and wealth may now be regarded from two aspects (*a*) a stock (capital wealth), and (*b*) a flow (income wealth).

The annual produce of a nation, that part of wealth regarded as income, is the amount of goods produced and distributed for consumption over a given period and represents the addition to the wealth of an individual or of the whole community. But this amount does not represent the *gross* product. From the latter allowance has to be made for the maintenance of goods required for further production, such as raw materials and new machinery. When this allowance has been made, the *net* product is income.

Thus capital has one characteristic—amount; income has two—time and amount. Capital may be regarded as wealth in its static aspect and income as wealth in its dynamic aspect.

The Terms Good and Goods.

Many economists use the terms "good" and "goods" in the same sense as the terms "utility" and "commodity" are used in the foregoing paragraphs. In many respects the term "goods" is a useful one. We understand at once that a man's goods are his material possessions; we also easily comprehend the implication of utility when we say that a game does one *good*, or that a walk is *good*. The adoption of the term in the sense of utility is, however, somewhat confusing; we have already shown that an article of utility may satisfy a harmful want—its use may cause "bad" or deleterious effects on the possessor or consumer.

No such objection arises in regard to the use of the term "goods" in the sense of commodity—in the sense of all things which satisfy human wants. We then have many classes of goods corresponding to the classes of wealth already defined. Thus the words *free goods* are applied to utilities which are free to all, e.g., air, sunshine and water. On the other hand, the term *economic goods* is applied to such utilities as have exchange value; i.e., economic goods are those which comprise wealth as we have defined it. Hence the term goods includes all things, material and non-material, which are classified as utilities, but not all goods are wealth.

Material goods are those which consist of material objects, e.g., food, clothes and shelter; or of the benefits which may accrue to man from such material goods, e.g., copyrights and rights to tolls or other levies. *Non-material* goods are subjective; they comprise a man's capabilities and attributes, and such intangible items as goodwill and business repute.

Wealth and Welfare.

Ruskin in his essay "Ad Valorem" (which all students of Economics should read) objects to the definition of wealth given by economists, and maintains: "There is no Wealth but Life. Life, including all its powers of love, of joy and of admiration. That country is the richest which nourishes the greatest number of noble and happy human beings".

None will disagree with this definition of wealth in its fullest and truest sense. Such things as love, joy, admiration and health are of untold utility to man: no one can say what their worth is in any particular case. But they are not recognised by the economist as wealth because they are not *measurable.* Economics, as a science, needs some standard of measurement, and the most convenient measure of the value of anything is what a person is prepared to give in exchange for it.

It is for this reason that the economist includes in the wealth category only "those things which possess exchange value"; the definition is adopted solely for clarity and precision in scientific study. When he says that an unlawfully used drug or a pernicious book is wealth and that air is not wealth, he must not be interpreted as saying that the drug or book is desirable and air undesirable; what he means is that people are prepared to give something in exchange for the drug or book, but that they are not prepared to pay for air, which is unlimited and common to all.

The economist does not ignore the fact that many things which he includes as wealth may not be conducive to man's *welfare* or well-being, nor that many things which he does not regard as wealth in a scientific sense are nevertheless of untold benefit and utility to man. He confines his study to wealth because conceptions of welfare vary so widely, according to each person's ethical, political and æsthetic outlook.

Such conceptions are concerned, not with the relative scarcity of a commodity nor with the fact that the ownership of an article can or cannot be transferred, but with the benefit of the commodity to the consumer and with its power to contribute to his physical well-being. Thus, in any consideration of welfare we must distinguish between different kinds of wants, and we cannot ignore the physical and moral effects of the way in which human needs are satisfied.

Although conceptions of wealth and welfare diverge so widely, we must remember that they are intimately related one to the other. While wealth is the immediate purpose of all economic activity, the ultimate object of such activity is welfare, though this end may be concealed in the complications of the present industrial system. In earlier times man produced for his own immediate benefit; now he produces, not for his own consumption, but to obtain such wealth in the form of money

as will enable him to command the goods he requires to satisfy his needs. The ultimate object of his efforts is the welfare of himself and his family. Wealth is but the means to that end. Wealth is the means of enjoyment and satisfaction of wants; welfare is actual enjoyment and the gratification of need.

We must remember, too, that the total wealth produced by a community is the fundamental source of the welfare of its people. Not only does that total determine the *general* standard of living in the community, but the manner in which it is distributed among the various classes of people determines their *relative* standards of living. If wealth is very unequally distributed some classes may live in poverty and wretchedness while others are wrapped in luxury and content.

The *way* in which wealth is produced and the type of the product are also important in their influence on welfare. Unhealthy conditions of employment, long hours, monotonous, burdensome tasks, and the production of shoddy articles—all these are instances of the sacrifice of well-being to wealth-getting, and the development of productive efficiency at the expense of welfare.

Happily, all modern governments recognise these vital influences of wealth on the well-being of the masses. Heavier taxation of the rich enables the State to increase the welfare of the poorer classes by caring for education and sanitation, and by providing parks, playing-fields, houses, libraries and museums, all of which add to the real income of the less fortunate members of Society. Moreover, by imposing certain minimum standards of wages and working conditions, by encouraging industries in which work is interesting and which tend to develop sturdy moral types (e.g., agriculture) and by fostering the growth of methods of control which give the workers scope for self-government (e.g., co-operative methods), the State attempts to relate wealth to welfare and thus to raise the general as well as the relative standards of living within the community.

Before leaving this important question, we may observe that the economic welfare of any community is vitally influenced by the perfection and stability of its monetary system—money being the instrument adopted by man to facilitate the exchange of wealth. In return for his labour, the worker receives money which gives him command over the goods and services of others. Money is the agent whereby the individual achieves that welfare which is the only real satisfaction derived from the possession of wealth. Much trouble, discontent, injustice and even suffering may thus result if the value of the monetary unit cannot be relied upon. As we shall see later, changes in the value of money always benefit some classes at the expense of others, and in so far as they affect the distribution and production of wealth, they vitally influence the welfare of Society.

Wealth a Measure of Motive.

The fact that wealth is the subject-matter of Economic Science gave rise at one time to the accusation that Economics was a "dismal science"[1]; that it was concerned purely with selfish motives; and that the economist did not study man as he is, but that he substituted in the place of the normal, complex-motived man an abstract conception of an impossible creature, who became known as the "economic man". But because wealth is the subject of study in Economics, it certainly does not follow that man strives for wealth purely for its own sake. Wealth is desired because of its power to purchase goods and to command services. Obviously, no reasonable person seeks wealth for its own sake but only for the power which the possession of wealth confers upon its owner. Even the miser, who appears to deserve the scorn in which he is held, hoards wealth beyond his needs because of some obscure satisfaction which he derives from its possession.

With regard to the charge that Economics concerns itself solely with one aspect of man, the reply is that for the purposes of scientific study we isolate one particular aspect of man from the remaining aspects. That is to say, we do not entirely disregard man as a creature of impulse, of fear, of love and hate; but we study more particularly man in his business of getting a living. The anatomist in dissecting a man's body is not concerned with the question whether the man when alive was a kind husband or whether he read Shakespeare or Mark Twain. Likewise the economist is not concerned very much with the fact that Mr. Jones seeks wealth in order to gratify his wife's expensive taste in gowns. But he is concerned with the fact that wealth is desired universally by men in order to obtain the satisfaction of their desires—to obtain food, to buy clothing, or to provide for old age. *Wealth then is the subject-matter of Economics because it is the most convenient means of measuring the strength of man's motives in his daily life.* Admittedly, the acquisition of wealth is not the only motive which prompts man's actions, but it is the *main* motive and the one most easily measurable. In the study of Economics we do not entirely disregard other motives, but what we do is to make a particular study of the motives directed to the attainment of wealth.

[1] See *post*, Chapter 35.

THE CONSUMPTION OF WEALTH

CHAPTER 4

MAN'S WANTS AND THEIR SATISFACTION

THE motor of all human activity is the infinite wants of man. These vary from the most elemental needs that must be satisfied to preserve life, to the desire for the most sumptuary satisfactions that men consider to be an addition to the fullness of living. *Consumption* is the consummation of all this infinite range of desires, and the activity of man everywhere is directed to that end. Production has already been described as comprising all efforts of men directed to the satisfaction of their wants, and thus Consumption—the satisfaction of those wants—is intimately connected with all productive effort. Consumption supplies the motive to all economic activity, while Production is the creation of the means of satisfying all man's needs.

It must not be thought that a clear line of demarcation exists between these two great divisions, nor is it very important that such a clear distinction should be made. Economists at one time differentiated between *final* consumption—the ultimate satisfaction aimed at, such as the eating of a meal,—and *productive* consumption or the consumption of one thing in the production of another, such as the utilisation of nails in making a chair. Such a distinction, however, is not of much importance, and Consumption can, therefore, be defined broadly as *the satisfaction of human wants* in whatever form they may arise.

Consumption is sometimes described as the destruction of utilities, but such a statement must only be accepted with some discrimination. In many cases Consumption does involve absolute destruction (so far as form and purpose are concerned), as in the case of the consumption of a cake of soap, but more often the extraction of satisfaction out of a thing is diffused over a much longer time, as in the satisfaction of the desire for shelter, when a house may supply satisfaction to successive generations of users. Consumption, therefore, connotes the yielding of satisfaction in the sense of meeting a human want, and the fact that satisfaction is yielded once and for all or over a long period of time is not of great importance. What is important is the fact that a desire has made itself felt and human effort has been directed to its satisfaction.

It is human wants therefore that provide the initial impulse of all production. Consumption controls the direction of productive effort. But wants alone, although indicative of a tendency, are not in themselves sufficient to initiate the production of a thing. A starving man needs bread, but if he cannot pay for it that particular want will go unsatisfied and bread will not be produced for such as he. On the other hand a rich man wants expensive cigars, and because he has the means to pay, cigars will be produced. In order to control the direction of productive effort, therefore, there must be *the presence of a want supported by ability and willingness to purchase*, and this we call *Demand*.

The Law of Diminishing Utility or Satiable Wants.

A curious thing about utility, which we all recognise but which it is necessary to emphasise, is that the more we have of anything the less is the satisfaction or utility that we get from additional amounts of it. For example, although bread is a necessary of life there is a limit to the amount desired. A man may consume three loaves a week and may not desire more. His wants are completely satisfied so far as bread is concerned. An additional loaf per week would give him little additional utility or satisfaction, although the one loaf per week would be of immense utility compared with having no loaves at all. The utility of each unit decreases as desire is satisfied ; the first loaf has much greater utility than the second, the second than the third and so on. Utility is measured directly by intensity of desire. In fact, if loaves were free and were superabundant, and a man had consumed all he required, then additional loaves might not only cease to have utility for him but might even have *disutility*. To the sum of all the utilities derived from the consumption of all the bread the man considers it worth while to purchase, the term *total utility* is applied.

In all departments of consumption this tendency is in operation. The greater the quantity of anything which a man possesses, the less does he value any increase in his stock of that thing. This principle is called the *Law of Diminishing Utility*, or the *Law of Satiable Wants*, which is worded by Marshall [1] as follows :—

> " The additional benefit which a person derives from a given increase of his stock of a thing diminishes with every increase in the stock that he already has ".

[1] *Principles of Economics*, Book III. III. i.

In illustration of the law we may tabulate some imaginary figures as follows :—

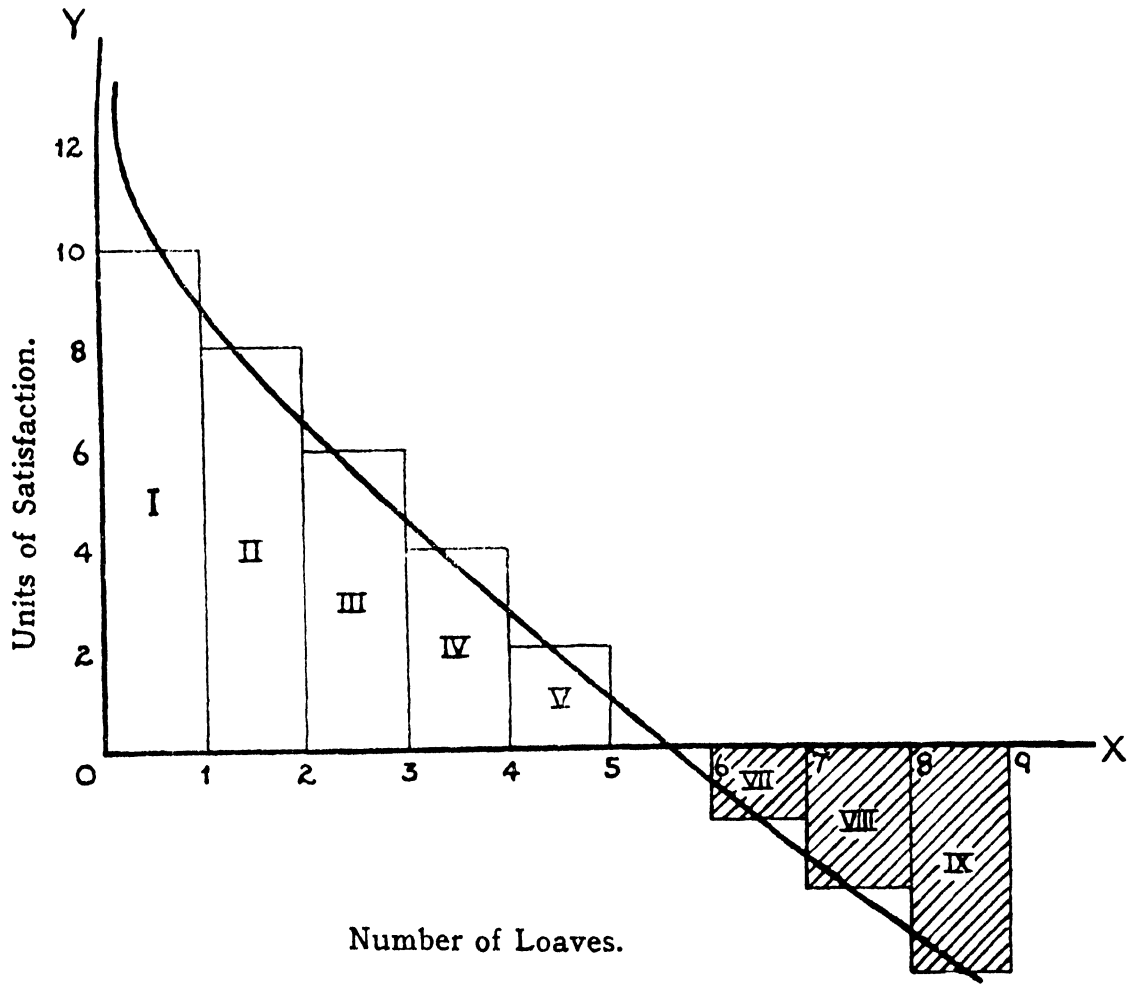
Number of Loaves Consumed per Week.	Units of Satisfaction from Successive Loaves.	Total Utility (Measured in Units of Satisfaction).
1	10	10
2	8	18
3	6	24
4	4	28
5	2	30
. .	. . .	.... . .
6	0	30

We may assume that one loaf per week gives a consumer 10 units of satisfaction. The addition to total utility obtained by purchasing a second loaf in one week is clearly less than the total utility of the first loaf ; we may assess this additional satisfaction from the second loaf at 8 units. The consumption of the two loaves is attended by a total utility of 18 units of satisfaction, but with each extra loaf not only does the *additional* utility fall with each increase in the consumer's stock, but the rate of increase to total utility falls also, until at the sixth loaf it ceases altogether. In other words, the consumer obtains no addition to utility if he buys a sixth loaf when he already has five : his wants are satisfied as far as bread is concerned when he buys five loaves. In technical words, *the utility of additional supplies of a commodity diminishes with every increase in the available stock of it* ; moreover, *total utility increases but at a diminishing rate,* until eventually any further increments of the commodity may even have *disutility,* i.e., they are unwanted and a nuisance. This state of disutility is rarely reached because no one will give anything of value for additional supplies of a commodity unless he expects to derive some additional satisfaction from these added supplies. Of course, no man consciously arranges his loaves or his sugar supplies in order of utility ; he only has an instinctive idea as to when his wants have been satisfied. But we can all recognise that there is a point at which our need for anything will be satisfied.

Diagrammatic Illustration of the Law of Diminishing Utility.

Many readers will more clearly appreciate the foregoing explanation by the aid of the diagram on the following page. Along O X are marked off equal divisions corresponding to each additional loaf per week consumed by our imaginary purchaser. Along O Y are marked units of satisfaction—the perpendicular

lines being assumed to indicate the degree of satisfaction derived from each additional loaf of bread. The parallelograms I, II, III, IV, V, etc. may be taken to represent the addition to total utility obtained from the consumption of each additional loaf per week. The first loaf results in 10 units of satisfaction, represented by parallelogram I; the second adds 8 units, represented by parallelogram II, and so on. When the man consumes five loaves per week his *total satisfaction* is measured as 30 units, i.e., the sum of the units of satisfaction derived from each increment of supply, of which only two are yielded by the fifth loaf, while the purchase of a sixth loaf brings no addition to total



satisfaction, The sixth loaf is really on the border line between satisfaction and disutility, but if it is purchased much of it will possibly be wasted. Any additional supplies after this have disutility, represented by the parallelograms below the line O X, and such disutility increases with each increment of supply.

There are certain further considerations which we must notice. First, we assume that the want is satisfied by the consumption of successive amounts instead of by one large amount. This assumption is made in order to illustrate the law more clearly. Secondly, we must notice that in the illustration given we assume a definite period of time within which the loaves are consumed, e.g., one hour, one day or one week. The reason is fairly clear, for if we take no account of the time

during which successive doses are consumed, the law might not be universally true. For example, if a man consumed the first loaf on one day, but did not consume the second loaf until a *week later*, it is highly probable that the second loaf would have as much utility as the first. It follows also that we must assume a period of time suitable to the example considered. No one consumes suits of clothes for instance at the same rate as loaves of bread or pounds of butter. In just the same way the increments must be of suitable amounts in the example chosen. In the case of loaves we must consider the effect of loaves or of slices of bread. It would be of little use to select crumbs of bread as the unit, for one or even ten crumbs would possess little utility to a human being. The curve which we have drawn on the diagram may, however, be regarded as indicative of the tendency of human wants in the case of bread or any other commodity, whether we are considering large or small increments.

Again, in exceptional cases, the additional utility of a second unit may be even greater than the first. A rich man may possess one of a pair of rare vases, and may know that the other is in existence. He would be prepared to pay more for the second vase than he paid for the first, in order to possess the pair. A further point must also be noticed. The law is not so much applicable to individuals as to an average individual. The additional utility of any commodity, e.g., beer, may diminish more rapidly in the case of one man than another. These considerations are mentioned, not because they are very important, but because the conception of Diminishing Utility is highly abstract and we must recognise the limitations of abstract laws in Economics.

Marginal Utility.

Since a man has to pay for loaves (and this payment involves a sacrifice of the utility which money has for him) he never actually reaches the stage of disutility, because he naturally ceases to buy loaves at the point when *the additional utility of the last loaf purchased just balances the utility of the money with which he purchases this loaf.* At this point he is indifferent as to whether he has a little more or a little less, and the utility of bread at that point where he finds it just worth his while to buy is termed its *marginal* or *final utility.* We may illustrate this by referring again to the diagram given above. The addition to total utility obtained by the consumer from the consumption of a second loaf per week is represented by 8 units of satisfaction, and that from the third loaf by 6 units. Suppose we translate these units into a price for the sake of clarity and assume that each unit of satisfaction represents one penny. Then if the price of bread were 10d. per loaf, our imaginary individual would buy only one loaf per week. He would not buy a second loaf because

it would cost him more than the value—eightpence—of the additional satisfaction he would derive therefrom. If, however, the price of bread were 8d. per loaf, he would buy two loaves, and for the outlay of 1s. 4d. he would receive a total satisfaction which we have valued at 1s. 6d. Similarly if the price were 6d. he would buy three loaves, and so on. He will not buy four loaves when the price is 6d. because the utility to him of the fourth loaf is represented by 4d. only. When, in fact, he does consume four loaves a week, each loaf has, of course, only the *same* satisfaction to him, but the *addition to total satisfaction* derived from consuming four loaves instead of three per week is only worth 4d. to him.

From the above consideration we draw the very important conclusion that the *value of any unit of a commodity coincides with its marginal utility.* The loaves are all identical and interchangeable: the last one bought is no better or worse than the first. So if the price of loaves is 4d. and the marginal utility of the fourth loaf is 4d., then four loaves will be bought at that price, i.e., all the loaves will be bought at the price of the marginal loaf. We may say then that *marginal utility is measured by price.* The total utility of water is almost inestimable, but its marginal utility is low because it is present in almost unlimited quantities and can usually be obtained with little effort. For this reason the prices of water and of similar things are almost negligible in spite of their great utility. Marginal utility thus depends upon available supply relative to demand: it is a *function of supply.*

Naturally the desire for bread varies with the consumer; one may be content with two loaves per week, while another may want five. Thus the marginal utility of bread may be different for different persons; it may be represented by six units of satisfaction in some cases, and by only five in others. In Economics, however, we are concerned with the demand of consumers *in general*, and the schedule and diagram we have given are intended to indicate a general tendency which is not, of course, necessarily true for any particular individual.

The purchaser of the loaves of bread is taken as a type and he represents individuals in the mass. But although in making our purchases, we may not weigh very carefully (in the case of a fall in price) the additional satisfaction to be derived from the purchase of another loaf or of an extra pair of boots, nevertheless in practice most people, except the very rich, do consider such matters, although it may be done unconsciously. This is particularly noticeable in the case of a good housewife or in the case of an astute business man. In deciding whether to engage another clerk or to purchase another typewriter, an employer carefully balances in his mind the utility of the extra clerk or typewriter against the utility of the money which he must spend on the hire or purchase; i.e., the utility he would derive from

spending this money on something else, such as another office desk or another telephone. Thus the marginal utility of any commodity must have reference to the marginal utility of all other commodities.

The Marginal Utility of Money.

Money is also subject to the above law of diminishing utility, but it is best to consider separately the law of the diminishing utility of income. Successive increments of money within a given time bring additional satisfaction but at a diminishing rate. To a rich man a £1 note forms only one of many notes which he possesses. He can hand it to a beggar without hesitation and with little feeling of loss. To him the note has comparatively small utility; to the beggar it may mean temporary immunity from starvation—its utility is inestimable. But additional notes would give the beggar a constantly diminishing rate of satisfaction, although each increment would have for him more utility than similar increments to a wealthy man. It will be seen later, in the chapter on taxation, that the theory and practice of modern taxation recognise that the marginal utility of money to the rich is less than the marginal utility of money to the poor. Thus to take £100 from a rich man would inflict less hardship than would the appropriation of £100 from a poor man.

The Law of Diminishing Demand.

The above consideration has prepared the way for the enunciation of what is termed the Law of Diminishing Demand, viz.:—*An increased quantity of supply reduces the price we are willing to pay*, since price measures marginal utility and marginal utility decreases with an increase of supply. Another way of stating this law is to say that the demand for anything, *as measured by the price paid* (and *not* by the *quantity* demanded) decreases with an increase of supply. The additional supply has less utility to a consumer than earlier supplies; therefore he is not willing to pay so much for this extra supply, and so the price of all the supply will fall.

The Elasticity of Demand.

In general, the marginal utility of anything diminishes with an increase in its stock, and consequently, the demand price, i.e., the price consumers will pay, falls as supply increases; and the demand falls with every increase in supply-price, i.e., the price at which goods are offered. As we have stated, however, the demand for some commodities falls more rapidly than the demand for others. It is obvious that an increase in the price of mouth organs would considerably diminish the number demanded; whereas the price of necessaries such as bread could

be considerably raised without seriously checking the demand. *Demand for any commodity is said to be "elastic", or sensitive, when a rise or fall in the price causes a marked fall or rise in the amount demanded.* On the other hand, *demand is said to be "inelastic", or unresponsive, when a rise or fall in price causes relatively little fall or rise in the amount demanded.*

There is no exact measure of elasticity, but some economists consider elasticity of demand to be unity when the amount demanded at a price multiplied by the price (that is the aggregate sum paid for what is sold) remains constant over a given range of prices. In other words, the elasticity of demand is unity when the total amount spent on a commodity does not vary with changes in price.

The elasticity of demand is said to be *greater* than unity if the total amount spent on a commodity within a given period increases when the price of the commodity falls, or if the total amount spent within the same period decreases when the price of the commodity is raised. Conversely, the elasticity of demand is said to be *less* than unity if the total amount spent on a commodity within a given period decreases when the price of the commodity falls, or increases when the price rises. For example, if 1000 hats are sold in a given period when the price is 16s. per hat (total amount spent = 16,000 shillings), and if 2000 are sold during an equal period of time when the price falls to 10s. (total amount spent = 20,000 shillings), then the elasticity of demand for hats in this example is greater than unity. If, however, the price falls to 5s. and only 3000 hats are sold (total amount spent = 15,000 shillings), then the elasticity is less than unity. Or we may say that for this last reduction in price the demand is *comparatively inelastic.* This example is an extreme one intentionally exaggerated to explain the conception of elasticity of demand more clearly, but such variations would not usually arise in regard to the same commodity.

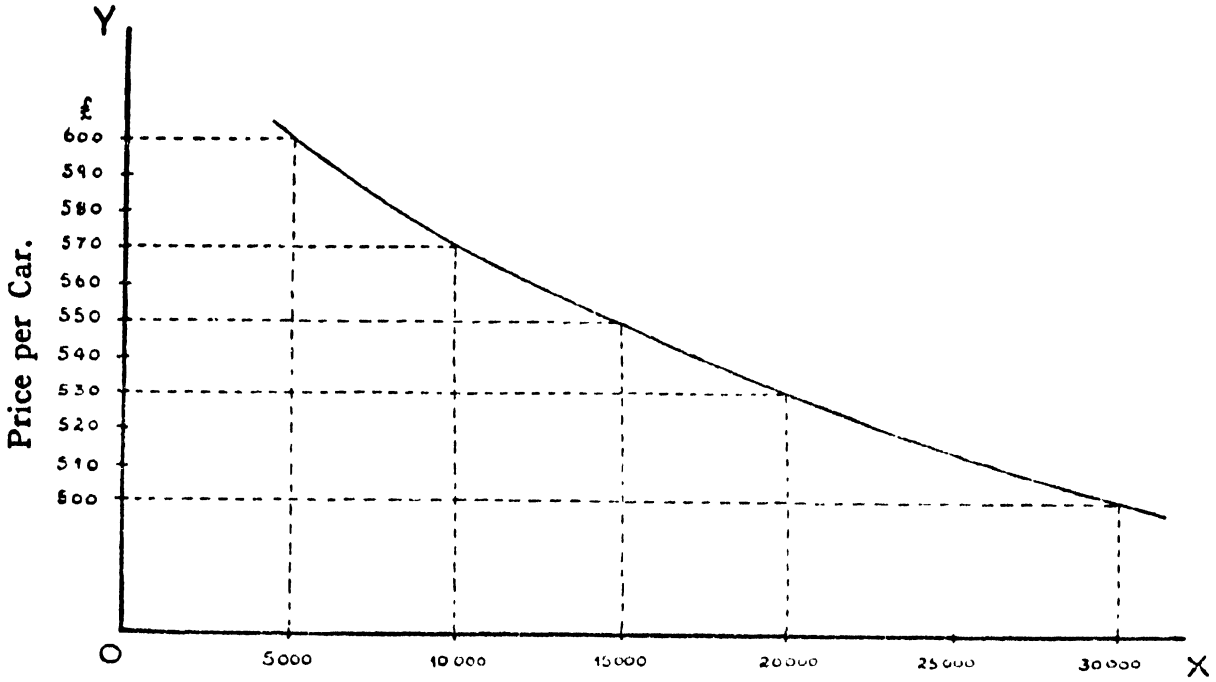
In the following diagrams the interaction of price and demand is shown. In the first diagram, illustrating the elastic demand for motor cars, as the price of motor cars falls, demand is seen to increase more than proportionately to the fall in price. In the second diagram, illustrating the inelastic demand for bread, the demand increases when price falls, but the increase is relatively small compared with the fall in price. Prices are measured along O Y and quantities demanded along O X.

The important thing to notice is that a small change in price in the case of motor cars has a marked effect on the demand, whereas in the case of loaves a fairly large change in the price has a relatively small effect on demand. In the case of motor cars the *aggregate* price paid increases as the price falls and decreases as the price rises. The aggregate price paid for loaves decreases, however, as their price falls.

MOTOR CARS—ELASTIC DEMAND.

Price.	*Number Demanded.*	*Aggregate Price.*
£600	5,000	£3,000,000
570	10,000	5,700,000
550	15,000	8,250,000
530	20,000	10,600,000
500	30,000	15,000,000

Demand Curve for Motor Cars.

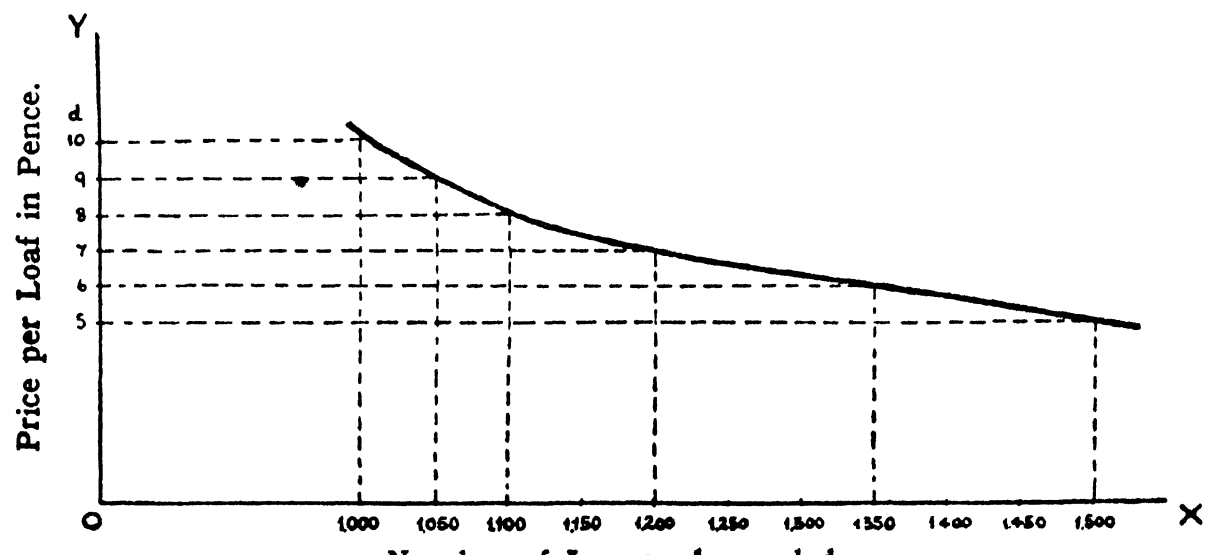


Number of Cars demanded.

BREAD—INELASTIC DEMAND.

Price in Pence.	*Number Demanded.*	*Aggregate Price.*
10	1000	10,000d.
9	1050	9,450d.
8	1100	8,800d.
7	1200	8,400d.
6	1350	8,100d.
5	1500	7,500d.

Demand Curve for Bread.



Number of Loaves demanded.

Conditions under which Demand Varies.

It is not easy to decide, in every case, whether the demand for an article is elastic or not. In fact, the same article may be elastic in demand for a certain range of price and inelastic for other ranges; e.g., the demand for coffee between the prices of 1s. 6d. and 3s. per lb. may be elastic, but inelastic between 5s. and 10s. per lb. In some cases, too, demand will increase for a short time when price falls but not for long, as may happen in the case of gramophones.

The conception of elasticity of demand is, in fact, one which needs to be applied very carefully in practice: it should be applied only to the effects of relatively small changes in price during short periods of time. Unless this is done, the effect on demand of changes in price may be obscured by the effect of changes in the habits and customs of consumers, or, in the case of sudden considerable changes in price, by the effect of the operations of dealers. Such dealers often buy on a rising market in anticipation of a further rise, while they frequently sell on a falling market in anticipation of a further fall. Such actions do not, however, indicate the fundamental conditions of demand, nor do they afford a true test of elasticity. Among the principal general conditions determining elasticity are those which follow.

1. *The demand for luxuries is usually elastic while the demand for necessaries is usually inelastic.*—This is so because certain things which are essential to life will be obtained at any price, whereas luxuries can more easily be dispensed with.

This general rule is, however, subject to certain exceptions. For instance, in certain walks of life many things such as pianos are considered to be necessaries: they may be termed *conventional necessaries.* Some people would still buy them even if the price rose considerably. Then, again, in the case of objects of great value, such as diamonds, the demand is comparatively inelastic because their value is determined chiefly by their scarcity and the fact that they are regarded as marks of distinction, as evidence of great wealth or of social eminence. If the price of diamonds fell considerably some people might buy diamonds who would not previously have done so; but, on the other hand, the people who had previously bought diamonds because of the social distinction which their possession conferred, would cease to buy them. When such articles become cheap and available to the many, they lose their former attractiveness to the more fortunate few, and the demand therefor tends to fall. The *motive* behind demand is thus of considerable importance in its effect on the elasticity or inelasticity of the demand.

Again, even in the case of necessaries, the degree of inelasticity may vary considerably, chiefly according to the importance of the item in the average plan of expenditure. Such a small proportion of the average income is spent on salt or matches

that an increase of fifteen per cent. in the price of such articles would make little difference to demand; but the same percentage rise in the cost of clothes or meat would be not inconsiderable and would doubtless tend to greater economy and a falling off in demand.

2. *The demand is more elastic if the commodity has a great variety of uses* than if it has only one use, for if the price falls there are more consumers; e.g., cloth remnants.

3. *The demand is more elastic if it can be postponed.*—For example, if the price of woollen clothes were doubled people would postpone their purchases and would continue, for a time at any rate, to wear their old clothes. This obviously could not be done in the case of commodities such as fresh vegetables. The demand for necessaries in constant use, e.g., bread, could not be postponed on account of a rise in price. In fact, a rise in the price of bread may even result in an *increase* in the demand therefor. So much of the income of the poor is spent on bread that an increase in its price leaves them less to spend on other simple foods, with the result that they tend to eat still more bread—always the relatively cheapest form of food.

4. *The demand is more elastic where there are substitutes.*—If the price of tea rose to 10s. per lb. and the price of coffee was unchanged, many people would buy coffee instead of making their usual purchases of tea. The increased demand for coffee would, of course, tend to raise its price,—indicating that the prices of two commodities regarded as satisfactory substitutes tend to move in sympathy. It should be observed, however, that although the demand for one of two substitutes may tend to be more elastic owing to the fact that the other is available, the *total* demand of the community for both may be fairly inelastic.

5. *When prices are very high or very low, elasticity is small.*—When the price is very high the article is bought by people who will buy at any price, so that a slight reduction hardly affects the number of consumers, e.g., pearls and diamonds. When prices are very low every one can buy who wishes to buy, and a further reduction in price makes hardly any difference in the amount demanded, e.g., soap and salt.

6. *Demand for a commodity may be elastic in respect of some uses of that commodity, but inelastic in respect of other uses.*—A good example is coal, which serves the modern community in many ways,—as a source of heat and warmth in house and office, as a source of power in the factory and on the railway, and as a raw material for the production of coke and gas for heating and lighting purposes. The total demand of a community for coal, i.e., the *social* demand for all purposes, would be comparatively inelastic at all prices; but if the price of coal rose considerably, the demand therefor for heating the drawing-rooms of middle-class houses would be far more elastic than the demand for coal for cooking purposes only.

The Law of Demand.

The law of demand is frequently expressed in the statement that *a rise in the price of a commodity or service is followed by a reduction in demand, and that a fall in price is followed by an increase in demand.* While this statement is generally true, it is not axiomatic; various factors may modify its absolute operation.

In the first place, as was shown in our consideration of the elasticity of demand, the demand for certain commodities, such as bread, varies but little with changes in price.

Secondly, changes in the demand for a service or commodity may take place quite independently of changes in price; as, for example, owing to changes in seasons, fashion, custom, habit or popularity. The development of the taxi has caused the demand for hansom cabs on the London streets to fall away almost entirely—a change totally unrelated to any change in the price of hiring hansom cabs. Woollen clothes are more in demand in winter than in summer, when cottons and silks are mainly worn. Again, a rise in the price of a commodity may only retard, and a fall in price merely expedite, an increase in the demand for that commodity which is taking place independently of price. Thus, the increasing demand for motor cars is to some extent independent of their fall in price: what was once a rich man's luxury is becoming a "conventional necessity" for ordinary middle-class people. Similarly, a fall in the price of an article may only retard a fall in demand which is already taking place by reason of the diminished popularity of the commodity with the consumer. Thus, a decrease in the price of a certain make of foreign car may for a time arrest the decline in the British demand resulting from the introduction of a British-made light car of better appearance and moderate price.

These examples illustrate the fact that demand may change, not because of a change in price, but because of a variation in the utility of the commodity to the consumer: demand in such cases may be greater or less at the *same* price because the commodity or service is more or less popular than formerly with the consumer.

Clearly, factors of this kind are of importance when we consider long-period changes in demand, and the statement of the law of demand which we have given above can be applied with comparative safety only to relatively small changes in price, during short periods of time, in the case of those commodities and services the consumption of which is more or less standardised and the demand for which is not inelastic. Hence it is more accurate to express the law of demand generally in the statement that, *at any given time, the demand for a commodity or service at the prevailing price is greater than it would be*

at a higher price and less than it would be at a lower price. Such a statement eliminates the time element, and is almost universally true.

Substitutes and Equi-Marginal Returns.

We have already stated that the presence of good substitutes for a commodity tends to make the demand for that commodity more elastic. The truth of this hardly requires explanation, for no one will pay a high price for anything when something else at a lower price will serve his purpose equally well. The importance of such an apparent truism lies, however, in the fact that we are able to draw therefrom further important conclusions.

We saw that when a housewife is buying bread she balances the additional utility she will derive from the last loaf purchased against the price she must pay for it; she compares the utility of the money-price and the utility of the extra loaf. The utility of the money she pays for it is determined by the satisfaction she could get from spending this money on other commodities. But there are many other demands to be satisfied besides the demand for bread, so when our housewife has bought, say, three loaves, she considers the desirability of buying butter, or eggs, or a pound of bacon, and in balancing the utility of another loaf against the utility of her money, she is really balancing the loaf against the other things she might buy—butter, eggs or bacon, a yard of ribbon or a doll for the baby. Of course, this is done only approximately. It has become so much a habit that it is done almost unconsciously, but nevertheless it is done; and it is done not merely by our imaginary housewife but by all consumers alike. This measurement of marginal utility in terms of money is of great importance, for it fixes the price at which all the loaves are sold. Only one price can be charged at the same time for the same commodity and that price must approximate to the *marginal demand price.* Thus, it is not the total utility but the utility of things *at the margin* that matters so far as price is concerned.

The Law of Substitution, or Equi-Marginal Returns.

We may now formulate the law that "*Expenditure is so distributed that the same price measures equal utilities at the margin of different purchases.*" Another way of saying the same thing is that we spend our money so as to obtain equi-marginal utility from each unit spent on different commodities; we seek to distribute and adjust our expenditure so that our outlay will yield us the maximum of satisfaction.

Consciously or unconsciously, each of us is constantly watching to see whether we can gain by spending less in one direction and more in another.

Sometimes a distinction is drawn between the substitution of

one thing for another which serves the same purpose, for example, margarine for butter, coffee for tea ; and the substitution of one thing for another which will not serve the same or exactly the same purpose, but which will give greater satisfaction for the price paid ; for example, the substitution of another yard of ribbon in the place of another loaf.

Sir S. J. Chapman regards both as examples of the generic principle of substitution, but other economists refer to the first as the law or principle of substitution and to the second as the law of equi-marginal returns or economy of expenditure. Strictly, both are in the same category, as is indicated in connection with business organisation, discussed in a later chapter. The employer is constantly on the watch for opportunity to substitute more profitable for less profitable items of expense. He endeavours to maximise efficiency by so distributing his expenditure as to obtain equi-marginal returns from each of the factors of production. If, therefore, he considers that the purchase of a new machine will enable him to dispense with ten employees and so save their wages, he will probably do so, unless he is influenced by non-economic motives. He balances the utility to him of the extra machine against the utility to him of the ten labourers, measuring the utility in both cases by the efficiency of the respective factor in proportion to its cost. Of course he may for similar reasons decide to scrap a machine and to employ more men, but the tendency, under modern conditions, is in the reverse direction. He may also substitute the factor capital for the factor land, by adding another storey to his buildings instead of using an additional plot of land. Or, again, he may substitute capital in the form of a motor-van for capital in the form of a horse and van. But whatever he does, he expects to obtain greater efficiency in proportion to expense than he could have obtained from any other combination of factors. The producer " buys " his factors of production just as the housewife buys food and clothing—both try to get the best value for their money.

Consumer's Surplus.

It is obvious that the prices many people pay for commodities do not wholly represent the satisfaction which they derive from the consumption of such commodities. Though the price a consumer pays for a commodity can never exceed the price he would be *willing to pay* rather than go without it, the price he actually does pay seldom reaches this point and he generally enjoys a surplus of satisfaction.

Assume that a man decides that he must have three pounds of meat per week, and would be willing to pay in all 12s. for the three pounds rather than go without it altogether. If the three pounds can all be purchased for 6s., i.e., at 2s. per lb., the consumer is left with 6s. which he may apply for his enjoy-

ment in other directions. This addition to a consumer's satisfaction which results from the comparatively low price of the commodities bought is regarded as *consumer's surplus*, sometimes incorrectly referred to as consumer's *rent*. We can define it briefly *as the excess of the price which the consumer would be willing to pay for a commodity rather than go without it, over that which he actually does pay.*

More accurately and theoretically the conception is explained in reference to the theory of marginal utility already enunciated. As we have shown, the price a consumer pays for an article is determined by the marginal utility of that article ; i.e., he pays for *all* units of the commodity the price he is willing to pay for the last addition to his stock, although he would be *willing* to pay a higher price for earlier units, such price decreasing successively as the utility to him of each successive increment diminishes.

Let us revert to the example of the consumer of bread, and assume that loaves are offered to him in succession and that each one is bought *without the knowledge of more to come.* We can then more clearly analyse his motives and actions.

If there is only one loaf available, the consumer will probably be prepared to pay 3s. rather than go breadless, i.e., the total utility of that loaf is measured to him by 3s. He might even be prepared to pay a little more if the price demanded was higher, so that we can safely say that the loaf was worth at least 3s. to him. It is unlikely, however, that his demand for bread is quite satisfied by one loaf, although the first urgent need is slightly blunted, so that if a second loaf is offered to him at the same price he will not buy. But if the second loaf is offered at, perhaps, 1s. 8d. he will probably think it is worth at least 1s. 8d. to him, although he does not feel disposed to pay another 3s. for an additional loaf. So also would the price have to be further diminished before the consumer would buy a third loaf, because his need of bread diminishes with each loaf bought ; i.e., the utility of bread to him diminishes with each successive increase of his stock. We can imagine a fourth loaf having to be priced as low as 10d. before he could be induced to buy, and, while a fifth would probably be bought for 5d., the consumer would be unlikely to buy any more even if the price was lowered below 5d., as we may assume that at this point his need for bread has been satisfied.

The position is illustrated by the following table :—

For the	first	loaf	the consumer	is willing to pay	36d.
,,	second	,,	,,	,,	20d.
,,	third	,,	,,	,,	14d.
,,	fourth	,,	,,	,,	10d.
,,	fifth	,,	,,	,,	5d.
			Total . . .		85d. (7s. 1d.)

As the price paid for each loaf measures the marginal utility of that loaf to the consumer, we can say that the total utility of these five loaves to him is at least 7s. 1d. It must be understood that the above example is strictly hypothetical, and would be difficult to find in practice, although we can well imagine such circumstances in a besieged town, where food was rationed in quantity. But the argument is clear, and illustrates the law of diminishing utility or of satiable wants: as the consumer's stock of any commodity increases, the utility of each successive increment decreases.

Now if we imagine that the loaves of bread are available on the market in the normal way for purchase by a consumer, the price of *all* loaves bought by him will be measured by that of the marginal loaf. All the loaves are interchangeable in that each has an equal importance for his well-being. As instalments under the hypothetical conditions mentioned they have each a differing and decreasing utility, but as an available stock they all have the same importance. The price at which the marginal loaf would be bought is the price at which any of the stock will be bought, so that price is the measure of the marginal utility of the supply. So, in the ordinary market, our consumer gets his five loaves at 5d. each; i.e., for 2s. 1d. in all. Thus for 2s. 1d. he obtains that for which he would have been prepared to pay much more rather than go without; he would have paid at least 7s. 1d. for what he is actually called upon to pay 2s. 1d.; and so we can say that he gets a "*Consumer's Surplus*" of at least 5s. on his purchases.

It is important to note that this excess is only the economic measure of this surplus of satisfaction, and that it is necessarily a rough and ready one. But it should be clear that this Consumer's Surplus does exist, though it would be necessary to have actual successive supplies and a range of prices for one consumer, as in the example, before we could attempt to measure it, however roughly.

Examples from Daily Life.

Some critics have maintained that this conception is a hypothetical one which does not actually exist. But this surplus is concrete enough in fact. We can see it in transactions in the every-day world—what is hypothetical is the method of measuring it.

The principle is well illustrated in the sale of books. Some people are so constituted that they must have the latest books by well-known authors immediately they are published. Publishers recognise this fact, and when a popular novelist brings out a new book they publish it originally at a price of 16s. or even a guinea. A certain class of people will buy at this price, though it is well known that the cost of producing such a book is not

in proportion to the price charged, and although it may be anticipated fairly certainly that a further edition will be issued at a lower price.

Of necessity the sale at this price will not be large, and the publisher may if he wishes take the alternate course of charging a lower price in order to increase the sales. If we imagine him to publish the work at 10s. instead of at one guinea, the same people who would have bought at a guinea will still probably buy at 10s. In other words, they receive for 10s. that for which they are willing to pay at least 21s. rather than go without, i.e., they get a consumer's surplus of at least 11s. on their purchase.

To proceed a step further we may assume that the publisher decides to aim at securing a large circulation, and publishes from the outset at the low price of 3s. 6d. Then those who would have paid as much as a guinea will get a considerable surplus of satisfaction, and to a less degree will those also who would pay up to 10s. if they could not otherwise obtain the volume.

The purchase of coal for various purposes is a further good example. Coal is used in a variety of ways: for manufacture, for cooking food, for making gas, and for heating the drawing-room and greenhouse. Clearly its application to purposes of manufacture and for cooking food is more important than its use for heating a drawing-room or a greenhouse. This is clearly shown in times of scarcity, for high prices would be paid for manufacturing and cooking coal whereas the use of dear coal in the greenhouse or the drawing-room would be discontinued by most people. But, as we have seen, all coal (subject, of course, to necessary allowances for transport and differences in quality) *is sold at the same price*, so we may say that the consumer of manufacturing and cooking coal obtains a surplus of satisfaction—the price he does pay in normal circumstances is not as high as he would be prepared to pay were he compelled to do so.

Another instance can be seen in the case of *The Times* newspaper, which now sells at twopence per copy. All pay the same price: those who can just afford the luxury, those who paid 3d. during the War and 6d. some years ago, and those, also, who would pay as much as one or two shillings rather than go without it. If, therefore, it may be assumed that the standard of the paper is unchanged, we can see that many people who now pay twopence only obtain a surplus of satisfaction, and are enabled to apply in other directions any difference which exists between what they *do* pay and what they *would* pay.

On the same basis, we may say that when a millionaire buys bread and potatoes and pays only the same price as is paid by his gardener or footman, he thereby obtains a consumer's surplus. Indeed, such a person may be said to obtain a

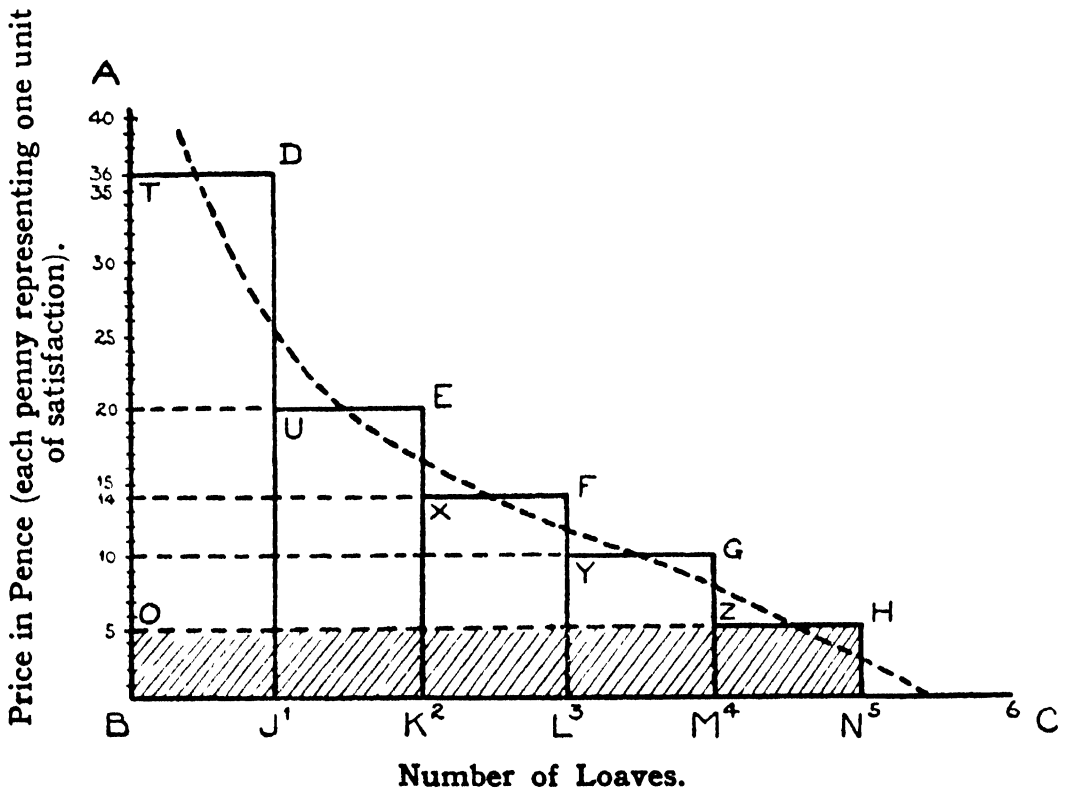
consumer's surplus in respect of practically everything he buys.

Further, it is clear that there is a greater consumer's surplus in respect of some articles than in respect of others, and particularly those very cheap items of everyday need which contribute so materially to our happiness and enjoyment, such as newspapers, matches, bus and tram fares and milk. In other words, consumer's surplus is high in the case of commodities for which the demand is inelastic.

We can then say with confidence that consumer's surplus is a surplus of satisfaction which is often obtained in transactions in real life, but that its actual measurement is a matter of hypothesis and difficulty. Consciously or unconsciously, its existence is recognised by statesmen in considering the effects of a new tax. Since consumer's surplus represents the difference between the price paid and the price a consumer will pay rather than go without a commodity, price can be raised to the full extent of this surplus. Hence taxes on commodities are more productive in the case of necessaries, where the consumer's surplus is large, than in the case of luxuries, where the surplus is smaller. Moreover, a tax cannot profitably be increased beyond the point where the consumer's surplus disappears, for, if such is the case, people will buy as little as possible of that commodity and probably turn to substitutes.

Diagrammatic Representation of Consumer's Surplus.

The conception may be illustrated in the form of a diagram as below :—



Along A B is measured the price paid for each stock of loaves, and along B C the respective number of loaves purchased. In the schedule given previously, when one loaf only is available, the consumer pays 36d. for it rather than go without it. The parallelogram B J D T then represents its total utility as well as total price to him. When he buys two loaves at 1s. 8d. each the sum of the parallelograms B J D T and J K E U measures the total utility, and so on with the other quantities bought. But in a normal market the price he pays is 5d. per loaf for five loaves ; i.e., that is the measure of the marginal utility of bread to him, so that the price for which he actually gets his five loaves is represented by the shaded area B N H O. The surplus satisfaction or consumer's surplus in respect of each loaf is represented by the difference between each successive parallelogram and its shaded portion. This difference in respect of each loaf decreases with each addition to the stock, until it finally disappears altogether. The total surplus in respect of all the purchases, when he buys all his loaves at the price O B, is represented by the whole of the white area of the figure.

THE PRODUCTION OF WEALTH

CHAPTER 5

THE NATURE AND AGENTS OF PRODUCTION

PROVISIONALLY we have defined Production as that branch of economic activity which is concerned with the efforts of man to satisfy the wants of himself and of his fellow-man, by changing the form and arrangement of matter. As in the case of many other terms used by the economist, the exact meaning of the term production, as used in economic science, has been the subject of prolonged controversy; from the time of the Physiocrats considerable difficulty has been experienced in deciding as to what should or should not be defined as *productive* labour. The question is dealt with briefly at a later stage, but it is clear that we cannot determine whether labour is productive or not unless we understand exactly what is meant by the term *production.*

By most economists production is stated to be the creation of *utilities.* Man, they say, cannot create matter, but he can so change or move it as to make it of greater service to him; he can render matter of greater utility to him insofar as it will more completely satisfy his needs. It is said that the miner adds utility of place to coal when he removes it from the bowels of the earth and makes it more accessible at the pit mouth for transport to the consumer. Again, the carpenter adds utility of form to the rough wood when he converts it into a table or cupboard.

But this definition of production is scarcely as exact as we could wish.

We have defined our science—Economics—as that body of knowledge which considers the actions of man in relation to *wealth*; it is concerned with the production, consumption, exchange, and distribution of wealth, and the term wealth as used in this definition is to be understood in the strict economic sense to mean *all things which have value-in-exchange.* As we have seen, all articles of wealth have utility, but not all things possessing utility are economic wealth.

The economist makes a study only of those special forms of utility which possess exchange value, and just as he distinguishes wealth and welfare, so also must he distinguish, in all departments of his investigation, those utilities which give rise to economic

value from those which possess no value-in-exchange, although they may be of the greatest benefit to man.

Production is therefore correctly described as the creation of utilities only when we understand utilities to mean things which have value-in-exchange. Professor Nicholson [1] suggests the use of the term *economic utilities* to enable us to " get rid of many vague and inconsistent ideas popularly associated with the term ". He defines production " as the production of *economic utilities* ; those, namely, which in general are the result of labour, possess exchange value, and are appropriated ". It does not seem necessary, however, to introduce any new term of this kind, when we have the term *value* already available. We have previously stated that man cannot create matter, but he can add value to matter by moving it or changing its form so that it will command a higher price than before. Coal in the mine will not command a price from a consumer, but if it is raised to the surface and taken to his home it possesses value-in-exchange. It is certainly true to say that its utility is greatly increased, but the economist considers production only insofar as its results are economically measurable, and the result of moving the coal is at once measurable in the price which it now commands.

We can quite conceive instances of intense effort which may be productive of great utility, but of nothing which can possess value-in-exchange. Thus the continuous effort of a keen tennis player may result in great utilities in the form of improved health and increased muscular strength, but rarely would his skill be such as to command a price for his services. Only when his effort falls in the latter category does it come within the purview of economic science, as when he becomes a professional player whose efforts command a price. Production in the economic sense would not, in fact, be continued merely to provide utility ; it is the desire to claim a proportion of *created value* which greases the wheels of all productive occupations. Those things are produced which are demanded by consumers ; man gets to work in order to produce something which will command value-in-exchange. All his work may create utility, but he is *producing* in an economic sense only when the utility which he creates will possess value-in-exchange. If we adopt this conception most of our difficulties will disappear. We can appreciate more fully how the whole structure of economic science is built upon the conception or attribute of value, and we can more readily explain such anomalies as that of the existence of a starving man side by side with the extravagantly wealthy. To provide a starving man with a meal would be an act of immense utility, but as the man can presumably give nothing of value in return, the meal will not be forthcoming (i.e., *produced* for his benefit) except as a result of motives which, although in themselves praiseworthy, yet cannot be described as economic.

[1] *Elements of Political Economy*, Book I. II. i.

Production is therefore best defined as the *addition of values.* Such values may exist in the form of goods, as in the case of the butter produced by a farmer; or in the form of services, as, for example, the services of a labourer or of a doctor. The values may concern the same article at different stages of its existence, as, for example, the values respectively created when iron ore is converted into iron bars, when the iron bars are converted into steel, and, finally, when the steel is converted into screws or fine nails. In all cases there is an addition of value which did not previously exist, and, in the case of the iron ore, there is a progressive change in the nature or form of the original material which may be regarded as the crystallised labour of the producer.

Production is not, however, confined solely to the addition of value by changing the form of an article or material. Value may be added to an article in other ways, as by transporting it from a place where it is of little use, to another place where it can satisfy man's needs and will command a higher price; or by making it available at a certain period of the year and thereby increasing its value because it is more in request and commands a higher price. The former is termed the creation or addition of *place value*, and, as an example, we may consider the value added to bananas by their transport from the West Indies, where they are of low value, to the British market, where they retail for perhaps 1½d. each. The services of those concerned in the collection, transport, sale and distribution of the fruit are as productive of value as are the activities of the actual cultivator, and for such services each producer obtains his proportion of the difference between the original expenses of production and the selling price. Similarly, those concerned in the creation of *time value* are termed producers; as, for instance, the grain merchant who stores up grain during the period of plenty and low prices, and sells it, at an enhanced price, during the "seed-time", either for ordinary consumption or for use as seed.

Production Consists of Many Stages.

It is frequently stated that "production is not complete until the commodity is in the hands of the consumer", but such an assertion is capable of being misinterpreted. Strictly, "production" and "consumer" are here only relative terms. It has been shown previously that production, as of screws, is capable of division into a number of independent stages, each of which has its own producer and consumer. The maker of iron bars consumes the product of the ore miner; the screw maker the product of the maker of bars. Still further, we shall find that the screws are consumed by the carpenter who is engaged in the production of cupboards or windows, and these in turn are consumed by the occupier of the premises wherein they are fixed.

Under modern conditions, production is a most elaborate and frequently prolonged process; it may extend over years and absorb the activities of a multitude of producers, each intent on perfecting his own process of the ultimate article, and aiming at satisfying the wants of the consumer immediately next to him. Miners, transport-workers, clerks, manufacturers, wholesalers, retailers, and carmen, all contribute their quota to present us with a finished article, the perfection of workmanship of which we may regard with wonder, but a full story of the production of which, did we but know it, would be still more worthy of our admiration and astonishment.

Clearly, all those who are thus engaged as producers are also consumers of the products of others. Each worker has two interests: his narrow interest as a producer intent on satisfying some want of Society, and his wider interest as a consumer of the varied products of other workers. As a producer, he aims at providing a commodity or service wanted by Society, and his object is achieved when that commodity or service is supplied in that form or place where it satisfies the consumer's need.

The Division of Productive Occupations.

We have hinted that the services of the farmer, miner, doctor, labourer and wholesaler, amongst others, are correctly regarded as productive, but a little reflection will show that there are distinct differences between the nature of the work performed by each one of such producers. The farmer cultivates his soil, sows his seeds and leaves much of the production to nature, returning to the soil in the form of manure the goodness which is taken away by the growing plants. The miner finds his product ready to hand, awaiting its removal from nature. His is essentially an *extractive* industry; the product once removed cannot be restored. For present purposes, however, both mining and farming may be classified alike as extractive industries. Both are concerned in taking away from nature some of her resources, whether they exist as minerals or as properties of the soil. Similarly, the manufacturer, who employs his skill in fashioning articles of value, belongs to a distinct section of production, and so do the doctor and lawyer, whose work is expended on no material object, but is nevertheless productive of services which directly satisfy the wants of consumers.

Before attempting a detailed division of productive occupations, we may distinguish two broad classes, as follows:—

1. INDUSTRIAL FUNCTIONS, which concern the growing, extracting and manufacturing of material goods;
2. COMMERCIAL FUNCTIONS, which concern the buying and selling of goods, advertising or bringing the goods to the notice of consumers, and the services of those who anticipate

market conditions and forecast the probable demand of the public. More shortly, we may say that the commercial functions are those which link up the industrial producer and the consumer of his products.

For convenience, these broad classes are further divided as follows, and a further division is added to include the services of the doctor, lawyer, and teacher, which are neither commercial nor industrial, but assist the producers of both the principal groups to discharge their functions.

1. INDUSTRIAL OCCUPATIONS.

(*a*) *Extractive Industries*,—the extracting of raw materials from nature, from the earth, sea, air, etc., such as farming, rubber-growing, coal-mining, fishing, obtaining gases from the atmosphere and power from the wind.

(*b*) *Manufacturing Industries*,—the making up of raw materials and semi-manufactured goods into finished commodities.

It should be noted that the term "finished" commodity is only relative. The maker of screws regards his product as a final article; the screw to the joiner is almost a raw material, with which he builds up such articles as cupboards and tables.

2. COMMERCIAL OCCUPATIONS.

(*a*) *Transport Industries*,—including railways, shipping and road-transport, and the clerical, mental and manual occupations involved therein.

(*b*) *Distributive Industries*,—the functions of those who arrange for the distribution of the goods amongst those who desire them as distinct from those who transport them; e.g., commercial travellers, commission agents and advertising agents. Other productive services may be included under this heading also, such as those of an accountant.

(*c*) *Banking and Insurance*.—Services of this kind increase the efficiency of production and make possible the growth and the development of commerce and industry on an extensive scale.

3. DIRECT SERVICES TO CONSUMERS AND PUBLIC SERVICES.

Under the former are included the services of the doctor, teacher, lawyer, and domestic servant; under the latter, the work of civil servants, local government officials and policemen.

The Agents of Production—Land, Labour, Capital, and Organisation or Enterprise.

Man, alone and unassisted, has no power of producing material objects or of producing values; he can do so only by exerting

his effort, or labour, upon one or more of the natural resources which exist around him. Nature herself can, of course, produce in great abundance, but whilst such production may satisfy man's requirements in an elementary state, it soon becomes necessary for him to apply at least some of his labour in accommodating natural supplies to his needs. At this stage production is simple in the extreme ; nature is lavish in her endowments, and little exertion is required to harness and control her forces so that they may bring about those changes in materials and food products which man may desire.

In all stages of production, nature's contribution is supreme. Without air, light and water, life itself is impossible. But apart from this, man harnesses air, water and electricity to drive his machines ; he entraps the light and warmth of the sun to meet his physical needs and make possible his industry ; from the soil he draws forth its nutriment in the form of food and raw materials ; nature's vast storehouse provides minerals for his furnaces and jewels to please his eye, while on the surface of land and sea—even, indeed, in the air—nature provides space whereon and in which he may live and work, directing her forces to minister to his need and satisfy his pleasure.

The Need for Capital.

Labour and natural resources are thus the two fundamental or primary agents of production, but with these alone man cannot progress very far. The need for another factor makes itself felt at an early stage in human progress. The primeval fisherman, relying for his daily supplies upon the skill of his hands, discovers that with the aid of a rough net or sharpened stick he can greatly increase his catch within the same period of time, and provide sufficient food to enable him to enjoy a larger degree of leisure.

Time and labour are involved in obtaining and fashioning the crudest tools, but even whilst he is so engaged, man must eat and live. Hence, he must at first redouble his exertions to increase his available supply of food, or lessen his consumption of food whilst he fashions his implements. We may say, therefore, that such implements are the recompense for waiting, the result of abstention, the reward of saving. The better the tool, the greater the care bestowed on it ; the greater the effort needed to develop it, the more valuable does it become and the larger the reward it is expected to yield. As it is sometimes aptly stated, " the longest way round is frequently the shortest way home ". So does producing become more simple once the labour of making the tool is past.

The primitive implements to which we have referred are, indeed, a form of wealth, and as they represent wealth *which is utilised to produce further wealth*, the economist designates them

as "*capital*", the third agent of production. Other implements or tools of the primitive man are similarly designated, and as civilisation develops and knowledge spreads, we find capital taking a vast variety of forms, from the simple cutting tool fashioned from hard flint to the floating dock wherein a mammoth liner is housed, repaired and renovated for a further period of productive usefulness. Man had indeed made a tremendous step forward when he fashioned the rough harpoon from the growing stick, and the primitive hammer from the rough hewn stone.

The Last Factor—Organisation or Enterprise.

The last agent — organisation — appears when man begins to organise his activities, and to specialise his capabilities as a part of a modern industrial community. Now it becomes necessary to produce for a market; to forecast demand and to anticipate supply; to probe into the future and to profit from the experience of the past; to unite the labour of some, the capital of others and the resources of nature in a harmonious, productive whole, working smoothly and certainly in the production of articles to satisfy human desire. All this involves the assumption of responsibility and risk of loss, the development of skill and the formation of plans for the future. In modern industry the factor thus called into play is termed *Organisation*, Business Ability or *Enterprise*, and, as we shall see later, it tends to the development of great efficiency in industry, and involves the exercise of the greatest intelligence, forethought and courage.

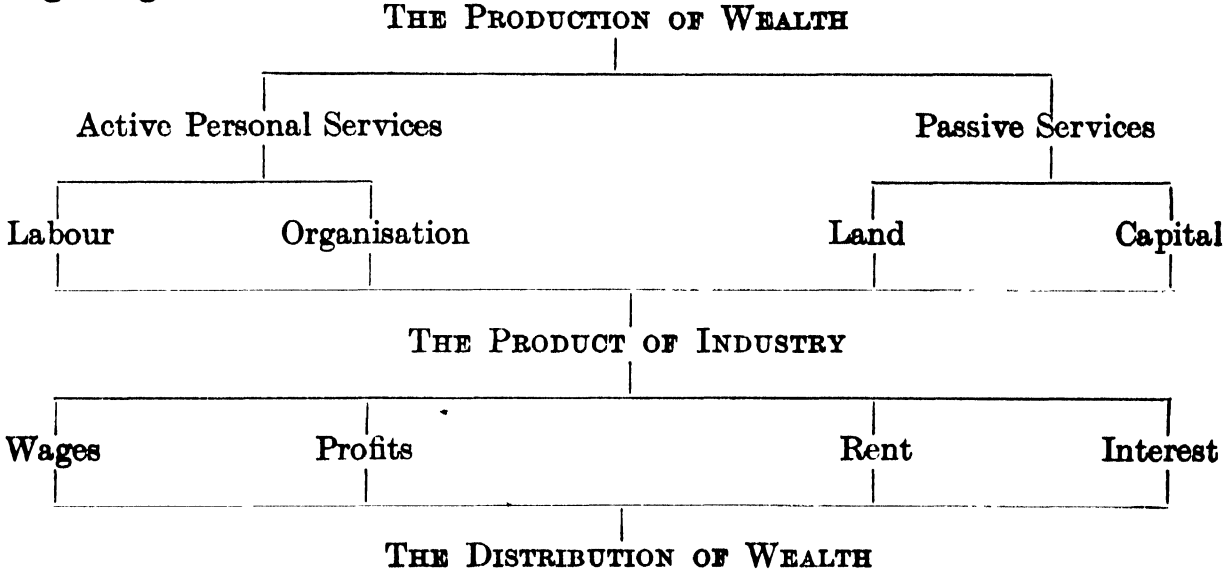
The Suppliers of the Agents of Production and their Reward.

The four factors of production—land, labour, capital and organisation—are provided respectively by the landowner, the labourer, the capitalist and the organiser or *entrepreneur*. Of these, the labourer and organiser actively co-operate in production, and receive their reward as a share of the ultimate product in the form of *wages* and *profits* respectively. Their services may be described as "active personal services", in contrast with the "passive services" of the landowner and capitalist, who take no active part in productive work, but receive in the form of *rent* and *interest* their proportion of the product of industry in return for the use of their land and of their capital.

In the following chapters, under the general heading of Production, detailed consideration will be given to the characteristics of each of the four agents mentioned. The manner in which their respective shares of the product of industry are determined will be considered under the heading "Distribution", of all sections of Economics probably the most difficult and controversial, inasmuch as it is concerned with the conflicting interests of the

various agents in endeavouring to satisfy their own conception of the value of their contribution in the making of the final product.

The relation of the various factors and the distribution of the product may be more clearly grasped by the aid of the following diagram:



Are Capital and Organisation Forms of Labour?

It is sometimes maintained that there are only two actual agents of production: land or nature, and man. Capital, it is maintained, is merely the joint product of man's labour and of nature's resources, whilst Organisation is simply a form of specialised labour. There is something to be said for this contention, and consequently land and labour are frequently described as the *primary* agents of production in contradistinction to the secondary or evolved factors, capital and organisation. Nevertheless, capital has existed since the earliest stages of man's development, and to-day is of such far-reaching importance that it must be classed as a separate factor. The same may be said of organisation, which, under modern conditions particularly, is also a factor of the utmost importance, for, as we shall see later, it is the branch of production which undertakes the co-ordination and harmonisation of the other factors engaged in productive effort. Without it those factors would be without aim or achievement; their co-operation would be a hopeless medley.

Sometimes, too, it is contended that land is merely one form of capital, and for this argument there is some justification from the point of view of the business man who regards his land as an asset in the same way as he regards his building or his plant. The economist, however, draws a distinction between these two agents on the ground that land is imperishable whereas capital goods perish, though sometimes slowly, and have to be replaced; land is a gift of nature and capital the product of both land and labour; and, finally, land is fixed in quantity while capital is reproducible and capable of being increased.

Productive Capacity.

The aim of production is the satisfaction of demand. Men produce only because they desire to consume. The productive organisation represents society's attempt to satisfy its wants. How then can we judge whether society is successful in this endeavour? What is the extent of the productive capacity of the community? By some it is maintained that society never produces to the full extent of its productive capability, while others stress the phenomenon of *over-production* as the cause of many evils of the modern industrial system.

The first of these contentions has the greater semblance of truth. Before a community can be said to be producing to the limit of its productive capability, its economic resources, both human and material, must be employed to the highest pitch of efficiency and to the full extent of their ability, while the processes of production must be conducted efficiently and without disturbance or interruption. But in no country are these conditions fulfilled. In all countries political and other causes render it impossible for the best results to be obtained from natural resources. It cannot be said of any country that the technical equipment of its industry and commerce is incapable of considerable improvement. Throughout the whole range of production out-of-date processes, machinery and methods of organisation continue in existence long after the most progressive firms have adopted improvements, or after the possibility of such improvements has been demonstrated by progressive minds. Moreover, we find in every industrial community that there is an enormous annual wastage of industrial power through strikes and lock-outs, while even more serious is the loss involved through the lack of good-will and the absence of the spirit of hearty co-operation between employers and employees.

On the other hand, there is little justification for the idea of *general over-production*. Production, we have seen, results in the creation of wealth—a constant addition to the volume of goods available for consumption. Can we say that all the goods produced will be consumed? To admit that they will not, that is, to acknowledge general over-production, involves the absurdity of supposing that society labours to produce what it cannot consume. It is to admit that each individual has as many goods and services as he requires; that children without boots, and people without homes or without the services of a doctor are not realities, that like Marie Antoinette, we would advise people who have not bread to eat cake.

But in modern society no such conditions actually exist. People have not achieved, and apparently never will achieve, full satisfaction of their desires. At no stage in society's progress is there a *definite* amount of the necessaries, comforts and luxuries of life which it is prepared to consume. Man's wants are un-

limited, and since production is directed to the satisfaction of wants, there cannot be too great a production of wealth.

Moreover, society is not *static*; numbers increase and social standards vary considerably from one generation to another. Changing fashions, new discoveries, improved methods and better conditions of life and work bring a constant and apparently never-ending addition to the variety of goods and services desired by human kind. Production, it is true, is conducted in anticipation of demand, but productive capacity will never succeed in overtaking man's insatiable, ever-changing needs.

Equally incorrect is the conception of *under-consumption*, the idea that a community is consuming less than it should consume, or that the wealth already produced is so far in excess of the needs of the community that until it is consumed the production of further wealth will be impeded. Under-consumption and over-production are thus in effect two aspects of the same thing. They both imply the absurdity that society has laboured to produce more than it desires, sooner or later, to consume.

The fact is that both these terms are applied to conditions where *partial* over-production in certain branches of industry has resulted in the supply of certain goods exceeding the normal demand therefor. Large stocks of unsaleable goods are accumulated and such stocks are disposed of only very slowly; consequently, conditions of partial *under-consumption* prevail. Meanwhile, the result, strangely enough, is *general under-production*. The labour and capital which have been directed into those branches of industry producing the excessive supplies cannot without difficulty be transferred to other branches; the labour and capital remain where they are, half employed, waiting for the renewal of demand. The glut in the market for the products of such industries results in the producers having to dispose of their goods at minimum prices at or even below the actual cost of production. Ultimately, slackness in these branches leads to depression in others and consequently there is a *general* diminution of production.

Over-production is thus used to describe the conditions existing when the market price of a commodity is for a time below cost of production owing to the fact that more is being produced than is effectively demanded at a price high enough to cover cost of production. It may result from a faulty anticipation of demand such as may arise from bad organisation, or it may be due to excessive competition, or to climatic or other causes beyond human control. For example, the production of straw hats will, in a wet season, exceed the demand. The failure of the Australian wool supply to reach the English market will cause slackness in our woollen industries and over-production in industries catering for the needs of those engaged in woollen manufacture, as, for example, makers of woollen dyes and weaving machinery.

The phenomenon of over-production, it is obvious, cannot be permanent. It is primarily due to lack of harmony in the economic system, and gradually disappears as the various parts of that system adjust themselves to the changing conditions of demand and supply. The effects, unfortunately, are cumulative. So closely interwoven are the many parts of the productive machine and so delicate the mechanism, that disturbance in any one part must inevitably be widespread and frequently disastrous. Since production is indirect, the producer of one class of goods is necessarily the consumer of another class of goods, so that alternate conditions of activity and depression are reflected along the whole chain of production. This problem will be discussed in greater detail in our analysis of the causes of the rhythmic movement of industry known as the " trade cycle ".

CHAPTER 6

LAND OR NATURAL RESOURCES

In a primitive state, man was able to satisfy his needs by profiting from the bounty of nature, the spontaneous producer of his food, clothing and shelter. Little effort was needed on his part to obtain the fruit, meat and fish which satisfied his natural desire for food, and to collect the branches and leaves which formed his first shelter and clothing. Later, as he passed from the hunting and fishing to the pastoral stage, nature provided him with land on which to pitch his tent and feed his flocks, water wherewith to supply the needs of himself and of his animals,—indeed, the animals themselves which he tamed and made submissive to his will. At still later periods in man's evolution, nature provides the soil, seeds and producing agents which yield crops and fruits; wind and water-power which are harnessed to supply motive force; metals which are utilised by man for the fashioning of tools, implements and jewellery of endless form and design, and finally minerals, which furnish him with power, heat and light, warmth and comfort.

All such items are described as *natural resources* in that they form part of Nature's bountiful goodness to the lord of creation, and include, in addition to those already referred to, such natural products as natural gases, electricity, sunlight and air, fish of all kinds, the forces of the tides, gravity and magnetism, the skins of animals, and the fibres which provide clothes and cloths of every description and hue.

In Economics, natural resources and forces are all epitomised in the term *land*, the first and primary factor of all production, and the source of all material objects, whether used in the raw state or eventually manufactured. "By land is meant the material and the forces which Nature gives freely for man's aid, in land and water, in air and light and heat".[1]

We find that man develops little if he remains content to rely for his sustenance on the bounty thus at hand. His civilisation and the improvement in his standard of living follow closely the degree in which he utilises these natural resources and develops them to meet his needs. In the primitive hunting stage he lives solely by taking such food as nature provides; in the pastoral stage he more or less methodically causes nature to yield him flocks and herds in the manner and kind of his desire; and

[1] Marshall, *Principles*, IV. I. i.

in the agricultural stage he carefully controls the yield of crops and animals, assisting nature to produce by returning in the form of manure and tillage some of the goodness yielded from her store. Man's power increases and his outlook widens as he creates things of value to himself by putting natural products into useful form, and, as society progresses, so do the form and design of his creations assume an infinite variety and amazing complexity.

So important are natural resources in their influence on production that they are frequently of paramount importance in determining the supply and amount of a nation's wealth. The nations which to-day stand in the front rank of the world's producers are those whose natural endowments are extensive and valuable. Britain herself is fortunately situated in this respect. Her supplies of coal, and of iron, her geographical position, her climatic environment, her natural harbours, navigable rivers and fertile soil gave her a long start in industry, and enabled her to retain her supremacy for a considerable period. The United States to-day are developing leadership in the world's industries for similar reasons ; their natural resources are unrivalled.

Determinants of the Productivity of Land.

Natural resources are not, however, always of first-rate importance, and considerable variations occur in their productivity and usefulness. Land, in particular, is capable of extreme differences both in fertility and in advantage of situation. At one extreme we may have such intensely fertile areas as the Red Basin of China, and on the other, such arid wastes as Greenland and the Sahara Desert. Among the factors which determine such differences in productivity may be mentioned :

1. PHYSICAL AND CLIMATIC CONDITIONS, including the natural fertility of land, its mineral wealth, its natural vegetation, its latitude and its climatic environment. Much of the soil of India is of the utmost fertility, its natural supplies of sunshine and heat are abundant; but the productivity of certain parts is negligible because of the absence of rain. This deficiency may, however, be remedied by the second factor—

2. HUMAN ACTIVITY, including the efforts of the farmer in improving the soil by cultivation and the rotation of crops ; by the application of natural and artificial manures ; by drainage and irrigation, either alone or with the assistance of the State; and the activities of the State in modifying climatic conditions, as by planting trees with the object of attracting rain.

Not only does such activity increase the productivity of the soil, but it also counteracts the exhaustion of land already

under cultivation. The application of natural and artificial manures returns to the soil the properties which are absorbed by the plant, and this process takes place also through the decomposition of rocks and of vegetation, and by the natural formation of nitrates from the nitrogen of the air.

3. GEOGRAPHICAL SITUATION IN RELATION TO MARKETS. —The most fertile land may be of little productive value unless it can be made accessible to markets wherein the produce raised can be sold. Hence the productivity of many areas depends largely on the facilities of transport and communication. The prairie lands of Canada have always been of enormous potential capacity, but their resources could not profitably be turned to account until the advent of the railway and the steamboat.

Extensive and Intensive Cultivation.

The cultivation of land, usually called farming, may be of two types : (*a*) extensive, or (*b*) intensive.

EXTENSIVE CULTIVATION is found where there is ample land for everyone, particularly in new countries where all the land is not taken up and there is little necessity for conserving its resources. The object of all cultivation is to obtain the greatest net return, in the form of produce, for the least effort and expenditure. Agricultural effort is therefore spread over a large area. This is divided into plots which are cultivated in rotation, being allowed alternately to lie fallow and to recuperate their productive properties either naturally or from manures applied to them. In most cases the land may be tilled indefinitely without exhaustion and without the application of manure, provided that it is given its due proportion of rest. The old three-field system, widespread in this country until the end of the eighteenth century, was a form of extensive cultivation ; the land was divided into three sections, each of which was allowed to lie fallow in turn once every three years.

In newly developed countries, such as Canada and the United States, with enormous areas of undeveloped land of great natural fertility and of convenient situation, the early settlers cultivated on extensive principles, and used much of the land with prodigality and wastefulness. An area of ground was cultivated until its growing properties were exhausted, whereupon it was left to become a dreary waste of rank vegetation and a fresh area was taken into cultivation. With the colonisation of the open spaces such methods had to be discontinued and the modern methods of manuring and of crop rotation became necessary.

INTENSIVE CULTIVATION implies a distinct limitation of the area of land in the hands of each cultivator. It is found in its most pronounced form in countries such as Denmark and

Holland, where the available land is limited and consequently dear, the population comparatively large, and the other natural endowments comparatively scarce. It exists also in countries such as China and India, where the population is extremely dense and agriculture forms the chief basis of the existence of the inhabitants. Under these conditions every inch of ground has to be utilised, scientifically and carefully, to its maximum advantage. This necessity is frequently accentuated by the limitation of the area of cultivable soil for one of various reasons, such as a dearth of water supplies, inaccessibility or natural infertility of the land in other areas.

In such cases the available land must be cropped continuously, and consequently, natural and artificial manuring, deeper ploughing, and a careful application of the principle of rotation of crops must be resorted to in order to stimulate and invigorate the soil and restore its properties. So pressing is the burden of population upon the land in modern times that science is constantly being called upon to assist the farmer in obtaining a larger and a better crop. Thus in most agricultural countries are to be found experimental laboratories and testing farms, engaged solely in endeavouring to improve present methods, and in searching for new varieties of crops which can be grown more profitably. By the adoption of such methods it is remarkable to what degree man can continue to draw profitable crops from the same area, and the intensive cultivator devotes his whole energies and his organising ability to ensure that the area under his control shall produce to its fullest extent and yet retain its fertility. Agricultural science teaches him that one crop grows much more satisfactorily if it is seeded in ground which has previously borne a certain other crop, for the latter breaks up the soil and adds to it certain chemical productive properties. It shows him also how to arrange his crops in such order as to give him ample time and fair weather for harvest and subsequent tilling. It explains that, in some cases, more than one crop may be taken without harm from the same area in one year ; that poor soil will be improved by drainage, by being mixed with other soil, or by utilising it for a period as pasturage for flocks and herds.

Large- and Small-Scale Farming.

As in other departments of production, we find the cultivation of land carried on by the individual or small producer, and by the large organisation composed of an association of cultivators or of a number of employees and assistants working under one direction. The small tenant farmer, the small holder, and the small owner-farmer in England, the peasant proprietor in France and Belgium, the *métayer* in Southern Europe, and the *ryot* in India are all examples of the former type. Farming on a large

scale is characteristic of the new countries, where one man may control great areas, and conduct his farming operations on a vast and efficiently organised scale. In the former case, the farmer himself, his wife and family, do most of the work ; their implements are simple and their capital small. Generally, the large-scale farmer has a large reserve of capital available ; he employs his time solely in directive work, utilises the most modern machinery and implements, and makes his purchases and sales in large quantities.

We should, therefore, expect that intensive and extensive cultivation would be the natural accompaniments respectively of small- and large-scale farming, but although this is generally true, it is not necessarily so. Intensive cultivation may be conducted on a large scale by a capable organiser, and extensive methods may be employed by an individual farmer in a new country, who is fortunate enough to have at his disposal a considerable area of undeveloped land.

Advantages and Disadvantages of Small-Scale Farming.

The characteristics of large- and small-scale farming are essentially those of large- and small-scale production generally, and they will therefore be considered in a later section. We may, however, usefully observe the following advantages of farming on a small scale :

1. The crops receive more personal care and attention from the farmer himself. The system is therefore the better when crops requiring minute attention are raised : e.g., fruit and vegetables in Northern France.
2. The tenant or owner takes a greater interest in the work, whilst a sense of responsibility and independence is fostered.
3. The land gives a greater return per acre, and can accordingly support a larger population than areas which are not so intensively cultivated.
4. There are fewer labour troubles and disputes when master and man are in personal contact.

One of the greatest disadvantages of small-scale farming in the past was that the cultivator had no security against eviction and had no claim to compensation for the results of his labours or in respect of capital values which he had sunk in the soil. This disadvantage has been recognised as civilisation developed, and in most countries the law has intervened to give security to the cultivator, frequently, as in France and Belgium, dividing up the large estates of landowners into small free-holdings, managed by peasant proprietors and their families. The results of these arrangements have generally been favourable. As Arthur Young, a shrewd observer and authority on agriculture

in the late eighteenth century, observed: "Give a man the secure possession of a bleak rock, and he will turn it into a garden; give him a nine years' lease of a garden, and he will convert it into a desert".[1]

It is probably true that the social and moral advantages of peasant proprietorship are greater than the economic benefits. Undoubtedly the work on small holdings is extremely hard and the return very low in relation to the work involved.

Systems of Land Tenure.

Various systems of land tenure have been referred to in the foregoing paragraphs. For the convenience of the reader these may be summarised as follows:—

1. LANDLORD OWNER AND TENANT FARMER.—The latter pays a fixed annual rent and employs his own capital (or borrowed capital) in cultivation. The landlord receives the rent and makes any necessary permanent improvements, such as draining and hedging. This system exists largely in England and in the United States.

2. PEASANT PROPRIETORS, as in Belgium and France. The peasant owns the land and cultivates it usually with the help of the members of his family.

3. THE MÉTAYER SYSTEM, as in Russia, Italy, Portugal and other continental countries. The landlord supplies the land and most of the capital, and in return receives from the cultivating tenant a fixed proportion of the annual produce, e.g., one half.

4. RYOT TENURE, as in parts of India. The "ryot" or native farmer owns the land, but pays a proportion of the produce to the State, thus recognising the rights of the State in the land and incidentally contributing towards the expenses of irrigation and development undertaken by the Government.

5. COTTIER TENURE.—This is the old system under which a cottage and a small area of land were rented by sub-tenants from a farmer. Nowadays a "cottier" simply means a peasant farmer.

6. SERF TENURE is now obsolete, but was general in Europe before the emancipation of the serfs in the nineteenth century. It involved the rendering by the tenant of a certain number of days' work on the land of his lord in return for the privilege of holding a small area of land for the personal use of himself and his family.

A little consideration will make it apparent that land which is cultivated and improved contains in itself the capitalised product of the past work of man, extending in many instances over hundreds of years. The results of such efforts may quite

[1] *Travels in France*, 1789–1790.

conceivably be far more valuable than the actual inherent properties of the soil, such as its situation, climate and original chemical and mechanical properties. But in practice no advantage is to be gained by distinguishing the original properties of land from those which it has acquired through the action of man, for such values as have been added to the land are so irretrievably sunk as to form part of the land itself. They have ceased to function economically as capital, and accordingly their contribution to production is included in that of land generally.

A Limit to Nature's Bounty.

Since time immemorial it has been recognised that the fertility of land is lessened by every crop which is taken from its surface. The growth of plants removes from the soil certain valuable constituents which can be returned only by the application of manures or by allowing the land to recuperate its properties during a period of rest. The early cultivator recognised these limits by moving his household from plot to plot. To-day the agriculturalist knows instinctively that there is a limit to the amount of labour and capital which he can profitably apply in the cultivation of his fields ; he realises that, sooner or later, no amount of hard work and manuring will appreciably increase the crop which he can obtain from a given area. At first the employment of labour on previously undeveloped ground naturally increases the resulting crop, but labourers and implements utilised on one field cannot be increased very far before the farmer realises that the value of the extra crop he obtains as a result of the work of each additional labourer does not cover his expenses. The farmer eventually experiences the operation of one of the most vital laws in economic science, one which permeates the whole productive organisation, and makes itself felt in every branch of industry—the Law of Diminishing Returns.

The Law of Diminishing Returns.

The Law of Diminishing Returns, as applied to land, is thus stated by Professor Marshall [1] :—

> " An increase in the capital and labour applied in the cultivation of land causes IN GENERAL a less than proportionate increase in the amount of produce raised, unless it happens to coincide with an improvement in the arts of agriculture ".

In other words, it may be taken as being generally true, that after a certain stage in cultivation has been reached, the soil fails to respond to the efforts of man, and yields a proportionately decreasing return to new applications of labour and capital, unless new methods of agriculture, new machines or new fertilisers

[1] *Principles*. Book IV. III. i.

are utilised to counteract the tendency of the soil to exhaust its properties.

In illustration of the law, we may consider the case of an immigrant farmer in the prairie regions of Canada, who settles on an uncultivated tract of land, one hundred acres in area. Let us assume that he devotes himself to the cultivation of wheat, and that he is assisted in his efforts by ten labourers, each of whom is supplied with the tools and implements necessary for his toil. We may regard the ten labourers and their accompanying implements as ten units of production, i.e., ten units or " doses " of labour and capital utilised for productive purposes.

In the first year much labour has to be expended to clear the land of growing trees and weeds, to cut ditches and to remove stones. The work is hard and possibly does not yield a very abundant harvest in the first year or in the next succeeding year. We may assume, however, that after four years' work the farmer and his assistants have raised the annual crop from 1,000 bushels in the first year to 2,000 bushels in the fourth year. The careful cultivation of the soil has resulted in a gradually increasing crop until at last the employment of each of the ten units of capital and labour yields an average yearly return of 200 bushels of wheat. If the annual expenses of hiring each man and of the upkeep of his tools are equivalent in value to about 150 bushels of wheat, the farmer has reason to be satisfied. His surplus from the employment of each man is 50 bushels, or 500 bushels in all.

But man is rarely satisfied, and one day, we may suppose, the farmer is visited by a more prosperous American cousin. We can well imagine the comparisons which are made, all to the advantage of the place " over the border ", and no doubt the farmer begins to feel that he is not getting rich quickly enough ! He is advised that if he will but extend his labour force he will be more than compensated for the extra expense involved by the great addition to his total produce. The gradual increase in his crop during the early years disposes the farmer to accept the arguments of his friend. Accordingly, he employs two more labourers, and, after supplying them with the necessary tools, sends them forth into the fields. In order to clarify our argument, we may assume that beyond adding to the number of workers the farmer makes no change in his methods of cultivation.

When at last the harvest is over, and its eagerly awaited returns are analysed, the farmer finds that his experiment has proved successful—the total yield amounts to 2,400 bushels. The additional crop of 400 bushels more than covers the hire of the two extra workmen ; so, not unnaturally, he proceeds to increase his staff still further in the following year. Again two more labourers are recruited, and again the total crop is raised, this time to 2,700 bushels. The increase is only just sufficient

to cover the expenses of the extra labour, but the farmer is not deterred. He adds to the number of his assistants in the hope that eventually not only the total return but also the increased return due to the extra labour will more than repay him.

Nature, however, decrees otherwise. The total crop can be increased, it is true; but eventually the extra return is not sufficient to compensate the farmer for the additional labourers whom he hires. In fact, a stage may be reached when the total crop raised may be only just enough to pay the labour force and leave nothing for the farmer. Nature has at last called a halt, and no amount of energy and application will make her continually increase the proportionate return of her bounty.

In the following table are given imaginary figures of the production of the farmer, as a result of the application to the same piece of land of equal successive doses of labour and capital. It is important to remember that the methods of cultivation are assumed to be the same throughout; obviously the application of a new fertiliser or the use of a more efficient plough may easily add considerably to the crop obtained in two successive years by the same number of workers:—

Imaginary Return on a 100-Acre Farm from the Application of Successive Doses of Capital and Labour.

Year.	"Doses" of Productive Units.	Total Bushels Grown.	No. of Bushels per Unit.	No. of Bushels per Acre.	Increase per Extra Unit.
1	10	1,000	100	10	..
2	10	1,500	150	15	..
3	10	1,850	185	18·5	..
4	10	2,000	200	20	..
5	12	2,400	200	24	200
		Marginal Dose.			
6	14	2,700	193	27	150
7	16	2,900	181	29	100
8	18	3,100	172	31	100
9	20	3,200	160	32	50
10	22	3,250	148	32·5	25

During the first four years the development of the soil results in a continually expanding crop. This is a period of steadily increasing returns, and in the fourth year it may be assumed that the crop is as large as can be got out of the land by ten labourers employing the same methods of cultivation. The increased crop in succeeding years is to be attributed to the additional energy and capital applied in the cultivation of the farm. Every extra worker brings some increase to the crop: his work is not altogether without reward, but the reward is in

a constantly diminishing proportion. Not only does the return for the extra labour continually fall, but the average return for all the labourers falls also. The output per unit increases gradually as the land is opened up until, when ten men are employed, the contribution of each to the final product is represented by 200 bushels of grain. The increase from ten to twelve men adds nothing to the *acreage* crop per unit : this is the period of *constant* returns. After that, however, the contribution per labourer steadily falls, until, by employing 22 workmen, the farmer obtains a yield which does not cover the average cost of their hire—150 bushels per man.

The final column shows the *extra* return in bushels which results from the use of the successive " doses " of capital and labour. The increase from 10 to 12 units brings in a reward per unit of 200 bushels, but this falls steadily until the addition of the two final units brings a reward of only 25 bushels each, far too little to pay for the retention of the two additional workers. The point at which the farmer employs 12 labourers is in fact the *margin* beyond which he will not go if he desires to make a profit from his exertions ; and the increase from 10 to 12 units is the *marginal dose* which marks the limit to profitable expenditure.

Static Conception of the Law of Diminishing Returns.

In the preceding paragraphs we have assumed the application to the same area of land of *successive* doses of capital and labour, but the meaning of the law of diminishing returns can be explained by considering the case of a farmer who is actually spending, say, £1,000 in the cultivation of his 100-acre farm. Obviously some very definite reason has induced him to increase his expenditure up to that amount, and some equally definite reason must prevent him from increasing his expenditure. The problem may be presented as follows : Would it pay him to increase his outlay, say, to £1,100 ? Would the extra £100 spent yield more or less than £100 extra in the way of produce ? Obviously it would yield *less*, otherwise any intelligent farmer would find the means of increasing his outlay. On the other hand, would the same produce be raised if £900 only were spent ? Again, obviously not, otherwise no intelligent farmer would spend £1,000 when £900 would do equally well.

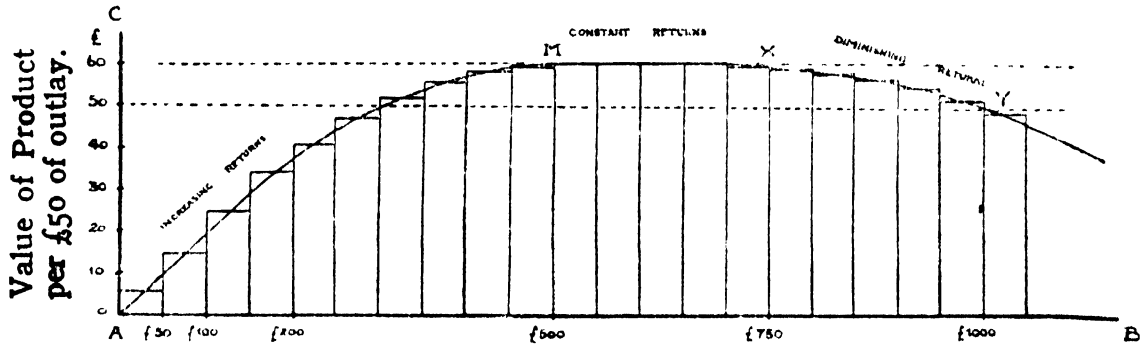
The £1,000 marks the limit of profitable expenditure. We may consider that this amount consists of equal " doses " of £50, each of which the farmer has weighed up carefully before deciding on its expenditure. He knows that if he spends up to, say, £500, each £50 will much more than repay him ; but after that he proceeds more carefully. Possibly in laying out from £500 to £750 he feels fairly sure that he is gaining a reasonably constant return on each dose, but as he nears the £1,000 mark the problem

is more difficult of solution. He knows that his return still exceeds his outlay, but that it tends always to fall. When his expenditure has reached £950, a very small matter may influence his final decision to throw another £50 into the scale. But he will proceed no further ; he is wise enough to see that if he adds an extra £50 the resulting additional produce may be worth £45 only : the twentieth dose of £50 is the *marginal dose*, beyond which the return does not cover expenditure.

Just as the return diminishes progressively towards the end, so at the beginning does the return to each dose increase rapidly : £50 spent on the land at the outset yields far more than would be obtained if nothing at all were spent. So also £100 spent is likely to yield more than twice as much as the first £50. The return *increases* as the land is opened up, but each successive £50 brings a lower *rate* of profit.

This conception of diminishing return is termed *static* [1] because it applies to a given state of affairs as they may exist at any time on a farm. No farmer thinks of his total outlay in sections of £50 at a time ; but he knows only too well when the time has arrived to keep his hand in his pocket.

In the following diagram are illustrated imaginary returns from twenty simultaneous doses of capital, whether expended on the provision of tools and manure or on manual labour :—



Equal Doses of Labour and Capital.

The amounts of £50 are marked off along A B, and the imagined product from each £50 along A C. From A to M the return on the outlay is in constantly increasing proportion : every extra £50 spent brings an increasing value by way of product to the farmer. From M to X the return is fairly constant ; the farmer gets a reasonable rate of profit from each " dose " of his expenditure ; but when X is reached the return begins to fall. Although

[1] The term " static " here refers to the conditions assumed to exist for the sake of analysis. The operation of the law is isolated, and all complicating factors, e.g., progress and invention, new methods of cultivation, etc., are ignored for the time being. Actually, conditions in the everyday world are " dynamic ", i.e., there is continual growth and evolution in the way of progress, new ideas, and increased knowledge, which do not eliminate the tendency to decreasing returns, but serve to postpone the point at which it becomes operative. In other words, " static " is another way of qualifying the law by the limitation of " other things being equal ", i.e., conditions and knowledge of cultivation remaining the same.

the " doses " are still profitable, the margin of profit tends to grow less, and at the £1,000 mark there is very little in it. Y marks the limit ; the land is worked to its full extent and further outlay would prove unprofitable.

Although the reasoning is theoretical it is not difficult to see that the conclusion is sound. Many a farmer has spent an extra £50 in one year in the hope of making a profit, only to find that, however hard he works, the land does not respond.

If proof of the operation of the law were needed, we could obtain it easily by glancing around us and considering that a point of diminishing return in agriculture must exist, otherwise farmers everywhere would be constantly increasing the number of labourers on their farms and the amount expended by them in capital expenses. " If we could always double the produce of our land by doubling our expenditure on it, we could raise all the food of the country on a single acre of land by doubling often enough ".[1]

The same conditions apply not only to the growing of wheat and maize, but also to the mining of coal and iron, to the cutting of timber and the grazing of sheep and cattle. The return may increase satisfactorily at first and make it well worth while to apply extra units or " doses " of capital and labour, but sooner or later man is compelled to march to the tune which Nature calls.

Extensive Application of the Law.

In the foregoing explanation we have assumed that the farmer applies successive doses of labour and capital to the same area of land, with the object of obtaining an extra return for his expenditure. Up to a point his gross output of produce increases, but his profit per unit decreases gradually and finally disappears altogether. Under such conditions he has employed his labour and capital in *intensive* cultivation, but we have seen that land is also cultivated extensively. In Canada, especially, a farmer would be more than likely to proceed in the latter way, and, in order to obtain as great a return as possible for the least expenditure, he would probably bring under cultivation successive areas of land, applying to each of them amounts of labour and capital in proportion to the amounts applied in his original tract. If the successive areas which he takes over are equal in extent to the original tract, we may fairly assume that the amounts of capital and labour used in each will also be equal.

We have shown previously that land varies considerably in productiveness, and it is not unlikely that the successive tracts in our example will vary in fertility, or at least in advantage of situation and accessibility. Even if they are as fertile as the original plot, they may not be as near to the homestead or quite so easily reached : obviously the settler with a wide range of

[1] Clay, *Economics for the General Reader*, page 276.

choice for his original dwelling-place will have chosen the best available plot, and successive plots will not offer to him quite such distinct advantages. For all these reasons we may not unreasonably assume that each plot which is added to the first area yields a net product in decreasing proportion. The capital and labour are equal, the area of land is equal; but its lower fertility or less advantageous situation causes it to yield a lower net return, and this return decreases for each extra plot taken into cultivation.

Finally, a stage is reached when the return from an extra area of land only just equals the cost of the labour and capital applied to its production, and we may fairly assume that the farmer will not extend his sphere of activities further, but will probably decide to adopt intensive methods on the land under his control. The area which it just pays to bring into cultivation is said to be on " the margin of cultivation ", and is referred to as *marginal land.*

Thus the Law of Diminishing Returns may apply to successive doses of labour and capital applied to the same area of land, or to equal doses of labour and capital applied to successive equal tracts of land. In one case, we find a decreasing return accompanying the increase of two factors of production—capital and labour—whilst the third, land, remains constant. In the other case, land is the variable factor and the units of capital and labour applied to each area remain constant. But the influence of nature makes itself felt throughout, and man is compelled, in the end, to limit his activities.

We have already stated that the law applies to all extractive industries. It makes itself felt eventually in all occupations which are concerned with the production of raw materials and foodstuffs. The collection of rubber yields a decreasing return as the collectors penetrate further into the forest and move further away from their bases and from lines of communication. Each further advance adds to the costs of production—transport, porterage, labour and materials. Coal becomes more expensive to work and raise to the surface with each extra yard in the depth of the pit and with each resort to smaller and poorer seams. Oil is almost always a profitable proposition, but its yield decreases with every move forward into the less productive and less accessible territory; every extra mile of pipe-line and railway adds its quota to the burden of overhead charges which each gallon of oil has to support.

All around us the law is in operation in connection with buildings and building sites. Man always chooses the line of least resistance; houses spring up first of all in the best positions and shops in the most remunerative localities. Every move away from these involves a sacrifice of some profit, the suffering of a little more inconvenience. To obviate this, extra storeys are added to the buildings in the best positions; the one-roomed

cottage gives way to the two-storey house ; the place of the latter is taken by a sumptuous building of a dozen floors. New York is not satisfied even with its mammoth skyscrapers of half a hundred storeys—with space enough to house the people of a small town. Nevertheless, each successive storey brings an added proportion of expense ; the costs both of construction and upkeep increase continually and eventually impose a limit on profitable building in a skyward direction.

It is necessary to emphasise, however, that in most of the cases quoted the operation of the law may be postponed for a considerable period by improved method, by the application of scientific knowledge, by invention and research and by the opening up of new areas. But although the limit may be postponed, it is only for a period, and man must eventually give way to nature's inexorable demands.

The Law of Diminishing Returns Affects all Industry.

Professor Cairnes has stated that if the Law or Principle of Diminishing Returns did not exist, " the science of political economy would be as completely revolutionised as if human nature itself were altered ". The law is, in fact, applicable throughout the whole of industry, but it is so applicable chiefly because no industry is independent of natural resources in some form, because no productive process can be carried on without some assistance from nature's store. No human effort can add to the richness of the mine or shorten the period between seed time and harvest. The immutable laws of nature must work their own course. In many cases man can speed up the growth of the plant ; by careful attention and painstaking selection he can increase the yield of fruit from a tree or of meat from an animal ; by the rotation of crops, scientific fertilising and the judicious mixing of soils he may increase the yield from his land ; and by giving attention to costing, using mechanical appliances, and co-operating with his fellow agriculturists he may lessen his expenses and increase his margin of profit. But while man by invention and organisation may thus combat nature's tendency to diminishing returns, the results do not compare with those which he obtains from the inanimate machine.

For these reasons the law of diminishing returns is more evident in the purely extractive industries, where nature plays the chief part, than in advanced manufacturing processes, where man's inventive genius and abilities are paramount. The smaller the part played by raw material in production, the less the tendency to diminishing returns in the industry. We may consider, for example, the manufacture of pig-iron. Increased mining costs and increased expenses of transport from distant sources all add to the price of the iron ore. This would be constantly reflected in the enhanced selling price of pig-iron, but

new processes of production and new methods of transport tend continually to counterbalance the increased costs of supplying the raw material, and to retard the operation of diminishing returns. On the other hand, the cost of producing a standardised product such as a fine steel nib is unaffected by quite appreciable changes in the cost of the raw material. Improved manufacturing processes cause such changes to have little effect on the final product—man's contribution is far superior to that of nature, and consequently diminishing returns are avoided and *increasing returns* are obtained. This tendency will be considered more fully in a later chapter, but we may conclude our analysis with the statement that in all branches of industry the law of diminishing returns tends to operate, but its operation is more evident and pronounced in the extractive industries, or wherever the influence of nature is paramount. In manufacturing processes the part which man plays is generally supreme, and by his increased knowledge, invention and skilful organisation, he aims continually at combating this niggardliness of natural resources. Thus the economic structure of society at any period may be said to represent the organised attempt of mankind to overcome the tendency to diminishing returns and to substitute therefor a tendency to increasing returns. Failure in this attempt means the acceptance by society of one of two alternatives: it must either voluntarily restrict its own growth or be content with a lower standard of living.

CHAPTER 7

LABOUR—ITS SUPPLY AND EFFICIENCY

HITHERTO we have considered in detail only those factors of production which are external to man, but the third factor—labour—cannot be considered apart from man himself. Labour and the labourer are inseparable; consequently any discussion of the problems relating to labour must take into account also the multitude of factors—physical, mental and moral—which enter into the composition of the human being. It is this uncertainty of the human element which makes the section of Economics dealing with labour and labour problems at once the most difficult and the most fascinating: it is probably true to say that it is also the most important. Certainly Economics as a science would have little concern with natural resources only: its problems are those which arise through the changing of those resources by the action of human labour, in order to satisfy immediate desires or provide capital for future use. The resources of nature, in themselves, are of little service to man; their position must be moved and their form changed before they can satisfy his wants. Hence, even in the most elementary forms of production some amount of labour must enter. However lavish nature may be; however rich and extensive her resources; however favourable her skies and climatic conditions, man will profit but little unless he exerts himself to accommodate these things to his desires. Even the plucking of an orange or of a banana implies some effort, and as we pass from the prolific bounty of the tropics to the less favoured places of the earth, it becomes more obviously true that man shall live only by the work of his hands and by the sweat of his brow.

What is Labour?

Labour connotes all human effort, of body or of mind, which is undertaken in the expectation of reward. Alternatively, we may define labour as all mental or bodily effort which is undergone partly or wholly with a view to some good other than the pleasure derived directly from the work. The second definition is that of Jevons, and is followed by Marshall.

Obviously, these definitions exclude exertion, either of body or of mind, which is undertaken merely for amusement or for pleasure; as, for example, an ordinary game of tennis or of chess, a long railway journey, or a half-mile swim against the

tide. Some of these may involve a high degree of effort: as much probably as is necessitated by several hours' hard work in the making of a useful object. But no exertion is considered by the economist as *labour* unless it is undertaken for a reward, whether or not it actually produces something which has value in exchange.

The labour may be of two kinds: it may result in the creation of a material or commodity, such as the making of a shoe or of a pair of scissors; or it may involve simply the rendering of a service by one person to another *in return for a reward* in money or in kind, such as the labour of a domestic servant, or of a doctor or lawyer. Economists at one time regarded only the former type of labour as *productive*. The performance of a service was considered by them to be *unproductive*, inasmuch as it did not result in the creation of any tangible commodity. Modern economists do not recognise any such distinction, and regard the making of commodities and the rendering of services *for reward* as being equally productive. To them the labour of transport workers and of commercial agents, of the great army of black-coated workers, and of all those—organisers, inventors and managers—who supply the brain force of industry, is as vital to production as the work of the maker of tools or the grower of raw materials and food. This idea is in direct opposition to that of the Physiocrats, who regarded as productive no labour except that of the agriculturalist. Production to them meant the creation of objects, and not of wealth in its many other equally necessary but less tangible forms.

We have emphasised the fact that before effort can be regarded as productive labour, it must be *undertaken in expectation of a reward*. This conception rules out numberless tasks which involve considerable effort, but which are undertaken solely for love of others or for family affection, such as the nursing of a sick relative or the teaching of a child by its parents. Such effort is not labour in the restricted sense in which we have defined it; there lies behind it no economic motive, and it is not generally given in the expectation of a reward or in the hope that value will accrue to the worker concerned.

We have stated that we prefer to say that production in economics means the production of *value* rather than of utility: for the same reason, it is preferable to recognise as labour in the economic sense all labour which is intended to produce value, whether that value be measured in goods or in the form of a monetary reward. Many economists regard as productive all effort which results in the creation of *utility*, but we have shown that utility is not necessarily value: many things have great utility but no value. Similarly, effort may result in a great addition or creation of utility, but it is not labour in an economic sense unless it is expended for an economic motive, i.e., to earn a wage.

Labour cannot create matter; but it can move and change

the form of matter so as to give it economic value. When it discharges this function it is labour in the true economic sense.

Thus the effort of an ordinary club player at tennis produces utility in the form of health, strength, enjoyment to the player and pleasure to the onlookers; but it is not economic labour. It may become so if the player develops into a professional and can command wealth in exchange for a display of his skill. Again, singing as a form of pleasure in the drawing-room is creative of utility and is not labour; but the singing of a street beggar or of a professional singer is productive of value, so that it is correctly regarded as labour.

"In conclusion, it must be laid down with the greatest emphasis that labour, as an agent of production, must be held to include the very highest professional skil[1] of all kinds, as well as the labour of unskilled workers and artisans; we must include, not only the labour of those engaged in business in the ordinary sense of the term, but that of those employed in education, in the fine arts, in literature, in science, in the administration of justice, and in government in all its branches; and we must include also, not only the labour that results in a permanent form, but also that which renders services that perish in the act".[1]

Sometimes labour may fail in its purposes; its *intention* may have been to create value, but the resulting work or product may have neither utility nor value. Such labour should not be regarded as unproductive although, in effect, its efforts are wasted. This was the case with the labour applied in the early construction of the Panama Canal; the labourers themselves were rewarded, but the work fell in and had to be done over again.

Again, much labour-power is wasted because it is *misdirected.* Workers are frequently employed on jobs for which they are quite unsuited. Inadequate supervision results in the encouragement of the idle and incompetent while the most efficient workers are not properly encouraged. In work involving several processes, the application of the wrong proportions of labour to the several processes may result in considerable loss of time. As we shall see later, it is the function of the organiser to eliminate such wastage and to secure the maximum efficiency of the labour force.

The Two Aspects of Labour.

We have stated that labour is inseparable from the human being, and that, consequently, the two must generally be considered together. Nevertheless, it is sometimes necessary to distinguish the labourer from his labour, or the human effort of body and mind from its economic result. In the process of economic investigation not only have we to classify labourers

[1] Nicholson, *Elements of Political Economy*, Book I. II. iv.

so as to determine what remuneration they should receive, but we must also classify labour itself as a function or commodity to which the law of value applies. Different classes of labourers command different rates of remuneration: the managing foreman is paid at a higher rate than the unskilled navvy; the work of the manager in controlling a business is a form of skilled labour. From the point of view of the production of goods it does not matter who performs the functions: the functions of the navvy, artisan, foreman and manager are all essential, and are grouped together as labour. On the other hand, when we come to consider how the product of industry is apportioned or *distributed*, we must differentiate between the *classes of persons* who have to receive payment: we are concerned rather with the grade of the workers than with the results of their efforts.

The two aspects here referred to are sometimes described as *subjective* and *objective*; the former is concerned with the worker's effort and the latter with the economic result. Some economists regard the effort of labour as painful or distasteful to man, or as involving an element of disutility, and they urge this conception in support of the labourer's claim to a larger proportion of the product. Although something may be said for the contention, it must be recognised that labour carried on under healthful conditions is beneficial to man: some amount of labour or of exercise in its stead is essential to human well-being.

Classifying the Labourer.

From time to time economists have classified labourers in various ways, chiefly according to the functions of each class in the productive machine.

One of the best known classifications, that of J. S. Mill, is as follows:—

1. THE LIBERAL PROFESSIONS, recruited chiefly from the sons of the professional and leisured classes; e.g., lawyers and doctors.

2. THE MORE HIGHLY SKILLED MANUAL EMPLOYMENTS, filled by the sons of skilled artisans or of the class of tradesmen who rank with them; e.g., cutlers and watchmakers.

3. THE LOWER CLASSES OF SKILLED EMPLOYMENTS, recruited chiefly from the sons of artisans in the same grade: e.g., weavers, boxmakers and cotton operatives.

4. UNSKILLED LABOURERS, who, with occasional exceptions, consist of father and son from generation to generation, e.g., the casual navvy and the farm labourer.

Mill maintained that there is a distinct line of demarcation between each grade, and that movement from one class to another is so difficult as to result in a person tending to remain always in the same grade and to bring up his children in it also.

This tendency operates even though a better rate of remuneration is obtainable in a higher grade : the sons of those employed in one grade tend to be brought up to the same class of work as their fathers. Consequently, he argued, the rate of wages in each grade is regulated by the increase in its population, and not so much by the increase of population in the country generally. There is much general truth in these arguments, but under modern conditions class barriers are being broken down, and movement becomes easier with every advance of society. The bricklayer's son becomes a lawyer of repute : not very long ago the appointment was announced of a miner as Lord High Commissioner of the Church Assembly of Scotland.

In discussing Mill's classification, Marshall [1] points out the present tendency for such hard-and-fast divisions to be removed ; progress tends to reduce the amount of skill required in some occupations and to increase it in others. He therefore suggests as preferable two broad divisions, the " hard-handed industries " and the " soft-handed industries ", in each of which movement is easier than is movement from one to the other. These broad divisions may be further subdivided as follows :—

1. HARD-HANDED INDUSTRIES—

(*a*) *Automatic Manual Labourers*, e.g., the ordinary navvy and machine tender.

(*b*) *Responsible Manual Labourers*, e.g., a foreman and machine operator.

2. SOFT-HANDED INDUSTRIES—

(*a*) *Automatic Brain Workers*, e.g., book-keepers, typists and cashiers.

(*b*) *Responsible Brain Workers*, e.g., managers, directors and superintendents.

Classifying Labour.

In classifying labour we are concerned chiefly with the result of human effort, both manual and mental. We may adopt the following *social* division of labour :

1. DIRECT LABOUR ON COMMODITIES, meaning work which is actually expended on the ultimate product ; e.g., the labour of a cabinet-maker or of a printer, employed respectively on articles of furniture and on publications of all kinds.

2. INDIRECT LABOUR ON COMMODITIES, signifying work which is essential to the production of an article, but which is not actually expended on the article. The work of the sailor who brings grain to Liverpool is not visible in the flour made from the grain ; but the service is nevertheless vital to its production. The result of such labour on the final

[1] *Principles*, IV. VI. viii.

product is *indirect*—it is not at once obvious; but the work of several classes of producers is involved before an article can be marketed. These functions may be enumerated as follows :—

(*a*) *Producing of Subsistence*, i.e., those efforts which are necessary in order that workers employed on commodities and in other ways may be fed, clothed and housed.

(*b*) *Producing Materials* necessary for various industries and manufacturers; e.g., the work necessary to provide sawn timber for the cabinet-maker, paper for the printer, and leather for the boot-maker.

(*c*) *Producing Appliances*, including tools, implements, machinery, oil rags, office furniture, etc., all of which are necessary for production.

(*d*) *Producing Banking, Exchange and Transport Services*, enabling commodities to be bought and sold, to pass from one stage of production to another and to flow from producer to consumer. In this group are included all members of the trading community,—retailers, wholesalers, merchants and brokers,—all of whom perform those commercial services by which the needs of society are made articulate. As production is carried on long in advance of consumption, the functions of marketing and distributing agents become increasingly important to estimate the immediate need and future demands of society, to collect and concentrate supplies, to create new wants and to ensure that such wants are satisfied.

(*e*) *Producing Direct Services to Consumers*, including the labour of all officials engaged in the machinery of state, and the services of doctors, lawyers and teachers.

The Factors of Labour Power.

Possibly the most important question which arises in relation to labour as a factor in production is that which concerns its relative productiveness under differing conditions or in different social groups,—the question of what may be termed the *labour power* of the workers of various nationalities, or their effectiveness as productive agencies. It requires little reflection to convince us that the productivity of British labour is far greater, *per capita*, than that of Indian or native African labour, for example.

We are prone to take for granted the statement, so frequently repeated, that the labour of the British or American workman is more productive than that of workmen of other nationalities; but the economist must seek to determine why this is so. An analysis of the subject of labour power and productivity shows that it is compounded of two factors: (*a*) *The Efficiency of the*

Individual Labourer; and (*b*) *The Organisation and Direction of the Labour Force.*

The former is a purely personal matter: it concerns the labourer's ability and skill, and the conditions under which his work is done. The second factor is broader. It relates to the way in which the labour force engaged in any one branch of production is organised and managed: the better the organisation and the more skilful the management, the larger the output both of the individual and of the labour force as a whole. As will be explained later, improved organisation itself results in the greater efficiency of the individual labourer; but under the first heading will be considered only those personal factors which influence productiveness.

The Efficiency of the Labourer.

Most of us are familiar with the statement that the British workman is the best in the world; and few would dispute the statement that an English weaver, for example, can turn out a larger quantity and a better quality of material than an Indian native weaver working for the same time, under similar conditions, and with the same materials. We know, too, that in the office, factory or workshop in which we are employed, there are noticeable differences between the working capacity and output of clerks and workmen similarly occupied. If asked for an explanation, we should probably reply that one works harder than the other; but there are many other reasons which may account for the differences to which we have referred. Can we say that the average worker of to-day works harder than his forefathers did a century ago? Obviously not; yet the average contribution of a present-day worker to production is far more effective and brings a much greater net product than did the contribution of a labourer working one hundred years ago. Among the many diverse factors which affect the productiveness or efficiency of the worker, those dealt with below are of chief importance.

Peculiarities of Racial Stock and Breeding.—Britain and Norway have long been famed for the courage and skill of their sailors, Switzerland for her handicraft workers in metal and wood, Italy for her artists and sculptors. America leads to-day as the home of scientific management and skilled advertising. Districts as well as countries become renowned for peculiar skill and artistry; Sheffield cutlers are as famous as are the sword-makers of Toledo or the lace-makers of Valenciennes. As between the nations, the infinite differences are traceable to racial characteristics: to differing degrees of general health and strength, to variations in the ability to sustain prolonged exertion, and to differences in intelligence and skill. The average British workman is stronger and healthier than the Italian of the South; but the latter has generally greater artistic ability and a finer perception of beauty.

Great variations in productiveness exist also as between the workers of different countries engaged in the same trade. This is well illustrated by the conclusions set forth in a 1908 report on Indian Factory Labour.[1] The Report showed that neither wages alone nor hours alone can form a basis for comparing British and Indian labour cost. The Indian factory operative is comparatively uneducated and unskilled at his work, he is deficient in application and is fond of change, preferring to wander from mill to mill rather than to remain settled; he works leisurely throughout and takes intervals of rest whenever he feels disinclined for further exertion; he is wasteful and careless in his methods, with the result that machinery is frequently damaged through want of cleanliness and proper care, and, furthermore, he has no desire to improve his output or to enhance his skill.

As between crafts and districts, the differences in productiveness are traceable rather to inherited skill and application, and to the upbringing of children in the "atmosphere" of the craft, which is carried on by father and son successively through many generations. Much of this ability is natural; some of it is acquired from example and familiarity with its object. Undoubtedly family pride in a trade is also a strong inducement to efficiency. The author recently interviewed a master clockmaker, whose business in London had been carried on by father and son for 150 years. In almost dilapidated surroundings work of the most exquisite kind was being produced with infinite pride and application: unquestionably the family tradition was being well maintained.

General Intelligence.—This factor is frequently a racial characteristic. The intelligence of the average European is keener and broader than that of the average African, while the American worker is probably second to none in this respect. The degree of intelligence is a vital influence in determining efficiency: one man may differ completely even from his own brother in clearness of thought, speed of action, breadth of perception, accuracy of judgment and strength of memory. Whereas one worker cannot be entrusted to perform the simplest operation without supervision, another may be capable of personally carrying through the most intricate process of production, or of controlling with success a machine of the greatest complexity and liability to damage. Such intelligence may be inherent or acquired, but most frequently is due to natural gifts. It becomes more widespread and pronounced with the advancement and progressive civilisation of a community, and also as we pass from the purely extractive industries to those highly skilled and specialised occupations in which the finest and most delicate scientific instruments are made.

Climate and Physical Conditions.—Closely related to racial characteristics and general intelligence are the climatic

[1] *Indian Factory Labour Commission*, 1908. (Cd. 4292.)

and physical conditions under which work is done. It may fairly be argued that these influences are included under the first heading, for racial peculiarities are largely the result of climate and physical conditions. Temperate weather and cold winters are conducive to hard work, which is also necessary where such conditions prevail because nature's resources of readily available food are not abundant. Conversely, tropical heat makes sustained labour wellnigh impossible, while its accompanying abundance of natural food makes human effort almost unnecessary. Britain and Norway owe their hardy seamen to a rigorous climate and a well-indented seaboard. Italy owes her renowned northern agriculturalists to the natural fertility of the soil and the favourable climate of the Po valley.

General, Technical and Commercial Education.—The efficiency of the worker naturally increases with the extent of his knowledge, particularly of his own branch of industry or commerce. Technical and commercial knowledge enable the workman to perform his duties intelligently and with a full appreciation of his contribution to the final product. General knowledge enlarges his conception of man and of matter, and adds to his general efficiency by broadening his outlook. The age of the successful business man unable to write his name has given place to that of the business specialist and technical expert.

Moral Qualities and Social Conditions.—A worker's efficiency increases with his cheerfulness, hopefulness, honesty and sobriety, and these depend essentially on his self-respect and on his social ambition. The free worker with a prospect of promotion has always an incentive to work harder and better: the slave has little inducement to do other than "please the eye" of his master; he requires constant supervision and is always inefficient. A factor of ever-increasing importance under modern conditions is the confident expectation of reward and the knowledge that it can be enjoyed in security when finally obtained. Discontent and dissatisfaction are most fruitful causes of bad workmanship and of that constant friction between employer and employed which reacts so seriously upon efficiency.

Quality and Amount of Food, Clothing and Shelter.—Good work cannot be expected of labourers who are badly fed, insufficiently clothed and poorly sheltered. The American workman is better fed and clothed than the workman of any other nation; this fact alone is sufficient to account for his eminent capacity and productivity. Generally speaking, efficiency increases with greater variety in food and other necessaries, but although the worker requires sufficient food to satisfy his needs, there is a limit beyond which extra food tends to reduce efficiency. The manual labourer requires more food than the sedentary worker, but in both cases an overabundant supply does quite as much harm as an insufficiency of that nourishment required to maintain health and strength. The adequate supply of such

necessaries is, of course, a factor of the greatest importance in developing such moral qualities as cheerfulness and hopefulness, already mentioned. No national problem is of greater importance as affecting the future than that which concerns the feeding, clothing and housing of the labouring population; hence the present significance of the next factor, that of the *real* value of the wage received.

THE REAL REMUNERATION OF THE EMPLOYMENT.—This depends on the purchasing power of the wages earned, which varies with the general level of prices. As a rule the worker benefits from each increase in his real wages, for he can afford a greater variety of food, clothing and amusement, all of which add to his efficiency as a productive unit. Changes in real wages may be due to actual increases or decreases of pay, or to movements in the purchasing power of the money received. If prices rise and wages remain the same, the wages buy less: workers then become discontented, and discontent brings inefficiency. (See also *post*, Chapter 18.)

Necessarily a great deal depends on how wages are spent: this consideration comes under the heading of the moral qualities already discussed. The sober and industrious workman is more efficient and derives greater benefit from each addition to his wages than the worker who spends his earnings on drink or gambling.

GENERAL WORKING CONDITIONS.—Long experience has proved beyond doubt that workmen are benefited immeasurably in general health and in productive capacity by the improved lighting, heating, ventilation and sanitation of factories and workshops. The confinement of human beings in badly ventilated rooms inevitably causes a loss of vigour, mental and muscular, whilst such conditions are without equal for the preservation and communication of the germs of disease and of ill-health, with their detrimental influence on production generally. Recent investigations, too, have proved that the productivity of labour is increased by the elimination of excessive noise in workshops, and even by ensuring that factories are painted in soothing, bright colours instead of in colours which are cold, cheerless and irritating.

THE NUMBER OF HOURS WORKED.—Similar evil effects follow too great an increase in the number of hours during which the worker is employed. No man can permanently sustain long hours of hard work; some period of relaxation is essential if breakdown is to be avoided. Again and again it has been proved that a *reduction* of the hours worked, up to a point, results in an increase in efficiency, inasmuch as the labourer has greater opportunity for beneficial recreation and amusement. For this reason it is maintained that a short working day does not necessarily diminish output: the greater efficiency due to the shorter working period reduces *industrial fatigue*—one of the greatest

causes of diminished output—and more than counterbalances any diminution in production which might be expected to result from the working of shorter hours. Such increase of efficiency is, of course, more likely to be achieved in heavy manual work than in purely automatic work where the influence of machinery predominates.

DISTRIBUTION OF THE WORKING TIME.—Apart from the question of the *number* of hours worked, recent psychological investigations have shown that the *distribution* of the working time has a most important bearing upon the efficiency of the worker. This is particularly the case in monotonous occupations, where it has been found that the judicious introduction of "rest-pauses" leads to greater contentment among the workers and to a net increase in the productivity of labour.[1]

THE ORGANISATION OF LABOUR, involving the allocation to the labourer of the tasks for which he is best fitted, and the management and co-ordination of a group of labourers to the best advantage. This aspect will be considered in detail in the following chapter.

The Advantages of Efficient Labour.

Obviously an intelligent labourer is of greatest advantage to an employer because: (*a*) he takes a shorter time to learn his work or duties; (*b*) he can act with little or no supervision, and may be relied upon to perform his allotted task according to instructions and with discretion; (*c*) he is less wasteful of materials; (*d*) he can be entrusted with delicate machinery, and readily learns how to use and supervise it; (*e*) he applies his abilities and strength to the best advantage; (*f*) he is naturally watchful for improved processes and methods; (*g*) he is alive to the fact that his progress depends on his efficiency; and (*h*) there is an increase of output at less cost, the trained intelligent workman proving cheapest in the long run.

The Mobility and Immobility of Labour.

By the mobility of labour is meant its ability and willingness to move from one trade or occupation to another. Of all the agents of production, labour is possibly the most immobile, inasmuch as the worker changes his place of employment, and particularly his kind of employment, only with difficulty. Labour is part of the labourer; and many personal factors tend to prevent a labourer from moving although it is in the best interests of the product—labour—which he has to sell, that he should move. Among such factors are patriotism, national and family ties, religious principles, apathy, ignorance, affection for one locality and objection to another, or appreciation of life in the country

[1] See the Sixth Annual Report of the Industrial Fatigue Research Board, 1925.

as opposed to dislike of life in the town. All these affect principally the worker's *Geographical Mobility*, or his movement from place to place. Factors such as family pride in a craft, apathy and absence of ambition and fear of the future, may affect the *Vertical Mobility* of labour, i.e., its movement from one grade of occupation into a lower or a higher grade, either in the same or in a different industry. An example is the movement of a joiner to become a cabinet-maker, or of a miner to become a colliery accountant. The other type of mobility, i.e., *Horizontal Mobility*, from one grade in one trade to the same grade in another, is not so much affected by personal factors, and in certain occupations there is a widespread and continuous movement of this kind. Bricklayers and plasterers, for instance, will work on any building within reach of home and family, while mill hands or clerks move fairly easily from one firm to another. This mobility is, of course, lessened if technical or trade knowledge is required in addition to the mere knowledge of duties. For example, it might appear that a cotton spinner could easily become a woollen spinner, but this is not the case in practice, as both are highly specialised occupations. On the other hand a watchmaker can, without great difficulty, become a maker of scientific instruments.

By an increase of this horizontal mobility and of the geographical mobility of labour, its supply is better adjusted to the demand for it; workers are thus employed in those areas and districts where work is available, and unemployment is accordingly minimised. Employment exchanges aim at accomplishing this distribution by assisting the movement of labour. When, however, labour cannot find employment and is incapable of vertical mobility, either in an upward or downward direction, there is a likelihood of extended unemployment.

Very pronounced cases of this kind were in evidence after the Great War. In the neighbourhood of the great munition factories many thousands of workers had become specialised in that form of production, and on the cessation of work were left out of employment for long periods. In such cases vertical mobility was difficult and often impossible; horizontal mobility was out of the question, and geographical mobility was attended in many cases by the difficulty and hardship of transferring homes and families, and of obtaining housing accommodation in new areas.

CHAPTER 8

THE ORGANISATION OF LABOUR

THE organisation of labour is strictly a branch of the wider subject of the Organisation of Industry as a whole, to which we have referred as being the fourth factor in the production of wealth under modern conditions. Nevertheless, many special problems arise and have to be considered in connection with the organisation of labour, which in itself exercises a profound influence on the efficiency of the individual labourer. We propose therefore to devote the present chapter to this important branch of our subject, and to consider herein the organisation of man's efforts for production, as they are affected by the Division of Labour, by the specialisation of processes and functions, and by the introduction and use of machinery.

THE DIVISION OF LABOUR

In the elemental or primitive stage, each man labours to satisfy his own desires; as we have already pointed out, there is at first little in the way of the exchange of goods of one kind for those of another. Gradually, however, man discovers that such an exchange of his surplus commodities for the surplus commodities of other men enables him to vary his food and possessions and to obtain greater enjoyment out of life.

A further stage is reached when an individual entirely gives up the endeavour to satisfy his personal wants for a certain commodity, and comes to rely on his neighbours for supplies of fish, for instance, or for fodder for his horses or oxen. In turn he must apply himself to the production of something required by his neighbours, which they will accept in exchange for the fish or fodder. He may possibly decide to produce meat or fruit, and in specialising in the production of such commodities he obtains better returns for his efforts both in quantity and quality.

At a still later stage in evolution, we find the potter, blacksmith, weaver, and other craftsmen devoting the whole of their time and effort to their own trade; relying on other craftsmen for the hundred and one necessaries of their existence. At first, exchanges are made of goods for goods; a hat for a pair of sandals, a pitcher for an iron fork. Later, forms of money intervene, and make exchanges more simple and mutual satisfaction much more easily obtainable. At first, too, only such

things are produced as can be disposed of without difficulty; goods are made only in small quantities, because it is not known with certainty that they can be exchanged. But later, the craftsman works in the knowledge that his goods *will* sell. He labours to-day in anticipation of the demand of the morrow, relying on a demand from his fellows just as he knows they rely upon him to buy.

The arrangement to which we have referred is an elementary form of *Division of Labour*, or of the specialisation of functions, each man producing what he can make best and what he can sell best. Industry is divided into *particular callings*: such as those of the weaver, bootmaker and smith. The next step is the co-operation of a number of similar craftsmen under the direction of a master-craftsman or "boss". The individual workers no longer labour for themselves; they are paid a wage either in kind or in money, and the sale or exchange of the product is the concern of no one but the master. Such was the "domestic" system of industry which prevailed in this country before the Industrial Revolution at the end of the eighteenth century. Under these conditions, there is little need for organisation other than the supplying of the necessary material to the workers and the sale or exchange of the product. Each worker turns out a complete article from the raw material, receiving in return for his work a regular payment, and being relieved of the trouble of obtaining the material, and of finding a market for the product.

But before long, yet another division is made. It is found that it is to the advantage of the master-craftsman (and eventually of the workers) if each man concentrates on one process or stage of the production of the article. Instead of cloth being made entirely by one man from the raw wool, the spinning, weaving, and dyeing are done by separate workers, each of whom thus becomes specially skilled in his own branch. We have reached a stage in the Division of Labour which is well termed *co-operation*; the division of each industry into complete processes or stages, the production of the final product being made possible by the co-operation of various workmen concentrating on respective parts or processes. The work of the master-craftsman is naturally increased in such circumstances; he must not only provide the materials and the sales organisation but must arrange also for the workmen at each stage to be kept fully employed. The weaver cannot profitably be kept waiting for yarn, or the dyer for woven cloth. The efforts of all must be co-ordinated and arranged to the best advantage.

As industry develops, so does this specialisation extend; complete processes are divided up into part-processes, and the worker applies himself to a continually decreasing part of the whole production of the final article.

Coal is now used to produce steam, which displaces water and wind as sources of power. Hand-power gives way rapidly

to the machine, which is more speedy, accurate and capable than man can ever be. The master-craftsman passes away. The functions of labour and of management become quite distinct. No longer does the master know and understand every detail of the work; no longer has the worker anything to do with the final form and disposition of the product. The organisation of industry becomes increasingly complex, and develops, as we shall see later, into an important and essentially separate branch of production.

This specialisation is accompanied by another tendency, that of the localisation of particular industries and callings in certain districts. At first, the spinning and weaving of wool, for example, may be carried on by the individual craftsman near the source of his raw material—in Yorkshire, around the moors and Pennines. When the factory of associated weavers springs up, it also remains near the raw material, the water power of the rivers, and later the power supplied by the coalfields. Climatic, geographical and geological conditions frequently favour development and prevent the migration which might otherwise take place. As the industry divides, the various divisions remain close to one another: the spinning mill near the weaving sheds, and the dyeing houses at no great distance. It is advantageous for any new firm to settle in such surroundings, for all necessary resources are already available, adapted to the requirements of the industry, and specialised labour, with the skill of generations behind it, is to be found in the locality.

For the reason that labour thus becomes indigenous to particular areas, the localisation of industry is frequently described as the *Territorial Division of Labour*.

Thus as society progresses, division of labour involves not only the division of processes and the specialisation of functions, but also the combination and organisation of various kinds of workers, and of various processes in an industry. From its narrow meaning of the separation of employments or of crafts, it is extended to its widest sense of specialisation, localisation and co-operation in industry, with the necessary intervention of exchange in all its forms, and the necessary specialisation of capital under countless designations. With every extension of the division of labour the importance of capital becomes constantly more marked. Greater outlay is required for tools and machines, more labour becomes necessary for upkeep and repair work, while the functions of marketing and distributing demand separate organisations from those which are concerned in the making, mining or growing of the product.

The Forms of Division of Labour Summarised.

The foregoing survey should enable the reader to grasp more readily the following summary of the stages in the development of the Division of Labour.

1. THE DIVISION INTO CALLINGS, as where each craftsman applies himself to a trade or craft, making a finished article from the raw material, and working independently as his own master.

2. THE DIVISION INTO INDUSTRIES.—This may be regarded as a further extension of (1), where the craftsman still turns out a finished article, but works in combination with other similar workers under a master, who provides materials and does the selling. The craft becomes more identified as an industry; the home product is displaced by a factory article, but one worker still does the whole job.

Gradually the division into industries assumes the modern form described on pages 63 and 64.

3. THE DIVISION INTO COMPLETE PROCESSES.—The pin is no longer made by one man; the wire is cut, the point made, the head is fashioned and attached, the whole is polished—all by different workers, each of whom is responsible for and efficient in his own special branch. The textile industry is divided into the separate but complete processes of spinning, weaving, dyeing, etc. No longer does one man perform the whole of the work involved in producing a pin or a coat.

4. THE DIVISION INTO INCOMPLETE PROCESSES.—Each worker is now responsible for a still smaller contribution to the final product: with the introduction of machinery, his share continually decreases and becomes constantly more specialised and more efficient. The number of separate processes extends, and what were formerly processes in production become in themselves separate industries with their own numerous sub-divisions; e.g., spinning and weaving are specialised and form separate industries in the production of cotton and wool, each with a multitude of forms, fashions, designs and processes; the woollen industry is divided into "woollen" and "worsted" sections, and so on.

5. THE TERRITORIAL DIVISION OF LABOUR, OR THE LOCALISATION OF INDUSTRY.—We have seen that labour in some districts becomes specialised to certain industries which have become localised there on account of geographical, geological, climatic or political reasons. Frequently, this specialisation applies to different parts of the same district. Lancashire, the home of the cotton industry, is the famous example. For generations its inhabitants have grown up with the cotton mills; the whole environment has developed factory hands of the highest skill and efficiency. Various conditions have contributed to the further specialisation of spinning in certain South Lancashire towns, such as Oldham and Bolton, and of weaving in the northern towns,

such as Blackburn and Burnley. The division is carried even further, and with every stage, labour has become more closely adapted to the demands made upon it.

In the past, political causes have often led to this concentration of groups of skilled workers in certain areas; as for example, the Flemish and Huguenot artisans who settled in East Anglia and Yorkshire. This matter will be referred to in a later chapter.

Simple and Complex Division of Labour.

Division of labour is described as *simple* when two or more men, working in the same way, co-operate to perform a single task, too extensive, difficult or burdensome to be carried out effectively by one man alone; such as mowing or ploughing a field, lifting heavy goods, and hoisting sail on a ship. The division is described as *complex* when each man or group of men undertakes a specialised function which is contributory only to the final result; in other words, when several persons or groups unite to produce some result by each undertaking some contributory part; e.g., the complex division of the cotton industry already described, where one man spins and another weaves.

The Use of Machinery.

The use of machinery has extended with every development in the arts and processes of production. In the early stages of industry the tools and appliances were of the most elementary kind, but always man sought for implements which would increase his output, relieve him of heavy work, and assist him to obtain finer and more accurate results. The utilisation of steam power resulted in an enormous advance; the harnessing of electric energy was no less important. Inventive skill has placed at the disposal of the producer machines of the most amazing complexity and intricacy, of the greatest delicacy of touch, of enormous strength and power, and of an endless variety of design and usefulness.

It is worthy of notice, however, that while the sub-division of labour and the specialisation of machinery is constantly increasing, many of the lines of division between different trades are becoming narrower and less difficult to be passed, i.e., in some cases there is an *interconvertibility of industries*. In illustration of this Marshall cites the case of a watch factory in which most of the machines used differ very little in general character from those used in any other of the lighter metal trades. In the event of a diminished demand for the products of the watch-making industry, most of the operatives would find machines in other metal trades very similar to those with which they were already familiar; hence a watch factory with those who work

in it could be converted into, say, a sewing-machine or gun-making factory without overwhelming loss.

Each additional application of machinery has necessitated the further specialisation of the functions of labour; on the other hand, the extension of the division of labour has frequently necessitated and generally resulted in the creation of new types of machine capable of dealing with a particular process or of perfecting some part of the product. Thus the use of machinery is sometimes an effect and at other times a cause of the division of labour, but it has some important general results on labour as a whole. We may consider these respectively under the advantages and disadvantages of the use of machinery in production, noting that some of the former constitute also the general advantages of the division of labour (see page 107) as it is to-day conceived in its widest sense.

The Advantages of the Use of Machinery.

Generally, the use of improved tools and machinery eliminates much waste of energy, assures a more perfect and satisfactory product, and enables the labourer to employ his ability and strength to the best advantage. Machines enable man to overcome such physical limitations as those of time, distance, and gravity; yet whilst they enable him to increase his independence of nature, they tend nevertheless to make him more reliant upon his fellows, and consequently bound to them more closely by ties of solidarity and mutual dependence. More particularly, the advantages of machinery are that:—

1. Man's Power and Command over Nature are Increased.—No human effort can achieve the same results as the floating dock, the mammoth crane, or the steam hammer. The Suez Canal, like the Pyramids of old, could have been constructed by the manual toil of a myriad men; but the time and methods involved would have been quite unsuited to modern conditions.

2. Man is Relieved of Drudgery and Monotony.—Many processes of production are monotonous in the extreme, whilst others are of such a heavy and objectionable nature as to shorten the lives of the workers engaged in them. Machinery does much to eliminate these features of industry, e.g., the planing machine has eliminated the wearying toil of smoothing boards with a hand plane; a printing machine now prints and folds our newspapers, the folding of which once constituted a most monotonous form of hand labour.

3. The Construction and Care of Machinery develops Ability, and facilitates Mobility of Labour.—It goes without saying that the construction of a delicate machine and the handling of a fine instrument are in themselves

conducive to keener perception and greater intelligence. The same is true in greater or less degree in regard to all forms of machinery: the agricultural labourer who has become accustomed to the control of a motor plough and perhaps a small oil engine, is generally quicker-witted than he who has toiled always with fork and spade, hand-plough and harrow. Machinery makes man mechanically inclined; experience with one type assists the worker to grasp the control of another, and thus to move more easily from trade to trade than would otherwise be the case. This increase in the mobility of labour tends to reduce unemployment among machine tenders of all grades.

4. Machinery is Faster, more Accurate and more Regular.—It requires little imagination to appreciate the disparity between the output of a hand-printing press worked in conjunction with manual folders, and that of a present-day newspaper press, capable of printing, folding and counting 80,000 sixteen-page papers in one hour of running speed. The hand of man cannot work as rapidly as a steam riveter, or even his eye follow its blows, delivered with amazing speed and wonderful precision. Innumerable similar examples might be quoted.

5. Output is Increased at a Lower Cost.—At one time, nails were fashioned by hammer and hand from short lengths of iron, and naturally, they were comparatively expensive. To-day a simple machine feeds itself with wire from a spool, and delivers the nail complete with head and point, ready for immediate use, at an astonishing rate and with a minimum of trouble. One operator may quite easily control as many as twenty of such machines, turning out nails of every variety and size. To-day we regard as commonplace the carrying of a ton of goods at the cost of a penny a mile, or the printing of a large newspaper and its distribution for sale at one penny per copy. There is also a great saving in outlay on tools: a worker requires fewer tools for a specialised job than if he does several different jobs. Machinery and tools, being in constant use, give a better return on the capital they represent.

6. Standardised Production is made Possible.—The production of the much maligned but remarkably efficient Ford car at such a low price is made possible solely by the use of machinery, which by its speed and accuracy enables the manufacturers to employ mass-production methods, and to turn out vast quantities of parts, all of which are accurate to a degree and easily interchangeable. A skilled worker can, of course, turn out products of quite remarkable accuracy of measurement; but, generally speaking, no two parts made by hand would be sufficiently identical as to be

interchangeable at a moment's notice. The advantages of such standardisation are incalculable, an axle or wheel to fit *any* Ford car can be obtained almost anywhere at a cheap and fixed price. Machinery also makes possible the *standardisation of method*, whereby one establishment may specialise in a great variety of related products (e.g., pressed metal ware), which involve similar, if not identical processes.

The Disadvantages of the Use of Machinery.

It is only to be expected that the tremendous change wrought in production by the introduction and the extension of machinery should be accompanied by objectionable features, and although these are more than offset by the advantages, they are sufficiently important to demand attention. In some cases, the introduction of machinery has caused so much hardship and dissatisfaction among workers as to have resulted in widespread revolts of the working class. Some classes have undoubtedly suffered severely, but the life of the working class as a whole has been considerably brightened by the great increase in production and the vast variety of products which have followed the introduction of machinery, in which term we must of course include the railway and the steamship, as well as the printing press and the power-loom. Among the chief disadvantages are those dealt with below.

Machinery causes Hardship by Displacing Labour.—A motor plough, tended by two men, can do in one day the work previously done by ten men working with hand-ploughs. In English fields during the war, motor ploughs were used because of the dearth of man power: their advantages have been recognised and their use is extending. Consequently, many agricultural labourers have been displaced and thrown out of employment. The hardship is evident, for they are fitted neither by training nor inclination for other work, even if it were available. The story of progress has been the same for nearly two centuries: the loom has displaced the hand weaver, the steamship has ousted the sailing vessel, and the motor taxi has driven from our streets the horse-drawn cab. Can we wonder at such conditions when we learn that a single horse-power developed from about three pounds of coal costing less than one penny, can perform the work of twenty men?

In most cases, the labour displaced is absorbed elsewhere in the ever-growing maw of industry, but the process is not always easy and at best is slow, the younger generation faring better than the older men, to whom change comes hard. This absorption is made possible because, first, the production of new machinery in itself finds work for more labourers, although probably not to such an extent as to absorb all those displaced, because the invention and construction of every new machine

makes more simple and easy the production of a new or improved type. Secondly, the use of machinery has resulted in the production of more goods, and of a greater variety of goods, at less cost. The cheapening of many articles leaves buyers more to spend on other things. Thus demand has constantly extended and markets have continually expanded, with a consequent necessity in the long run for the employment of extra labour in production.

Machinery has made possible the vast extension in quick travel, the widespread use of books and newspapers, the utilisation of such time-saving devices as typewriters and sewing-machines. All such articles require labour, and constantly increasing labour, for their production, sale and distribution.

Apart from the question of employment, the worker benefits also as a consumer of articles, such as clothes and kitchen utensils, which are produced by machinery at much lower prices than were previously possible.

HANDICRAFT WORKERS ARE REDUCED TO SEMI-SKILLED MACHINE TENDERS.—The machine-made watch and clock have almost displaced the pride-wrought productions of the skilled watch and clockmaker. Machine-made lace has long displaced the delightful handiwork of skilled and painstaking fingers. Only a few centres and a very few firms have made such a reputation for craftsmanship as to be able to compete with the modern product, which satisfies ninety-nine per cent. of those who come to buy. As a rule a craftsman cannot, therefore, afford to train his son to follow in his steps; the lad (and frequently the father himself) is forced by the pressure of competition to enter the factory, where his energies are applied in tending machines, and where his abilities are assessed, not according to the beauty of the product, but rather according to the amount of work which he gets out of the machine, according to the care with which he feeds and oils it, and to the quickness with which he detects a warning note in its steady hum.

The results are wider than this. The number of master-craftsmen is necessarily reduced, and there is a consequent loss of moral independence and of self-reliance. The machine tender is but one of many, capable of being replaced almost at a moment's notice; and his product carries with it no mark of the skill of a craftsman or of the painstaking labour of a man in love with his work.

MACHINE WORK IS NOT ALWAYS AS SUPERIOR AND ARTISTIC AS HAND-WORK.—We all know that the quart milk-can made by the local tinsmith wears longer and is far superior to the average machine-made product, purchasable at the bazaar. Speaking generally, the machine cannot give that care and attention which distinguishes personal work, and many people will still travel far in search of the hand-made article and pay a high price for it. It seems, however, that under modern con-

ditions, the preference is fast losing ground; with an ever-increasing variety of objects on which to expend his money, man becomes more content with a reasonably-made machine product which fulfils its purpose and sells at a low price. Only to the more wealthy classes and to the artistically inclined do the hand-made articles nowadays appeal.

There is, however, another aspect. Machinery to-day has reached an almost inconceivable state of delicacy of touch and perfection of execution; it is capable of minute work to a degree which man can never equal, whilst it can perform work on heavy articles quite beyond human power. Only in a very few branches of production can hand-work be said to excel; in such luxury trades as those of gem-setting, expensive lace-making, dress-designing and hand-painted work, which still require the individuality of the craftsman. In many of the cases in which the machine product is inferior, man is to blame rather than the instrument, which is employed to produce a cheap article on a vast scale. Machinery in such circumstances may be said to be abused rather than used; it is worked to its full capacity to supply any kind of article so long as it is an article of the kind desired. The lasting qualities and usefulness of the products are a secondary consideration. For example, some machine-made toys will break with the least handling, or a cheap clock will go perhaps for a few weeks, and then stop for ever.

Advantages of the Division of Labour.

The division of labour is so closely related to the employment of machinery in production, that its effects on industry have been necessarily referred to throughout the foregoing paragraphs. The general beneficial results of division of labour may be summarised as follows :—

A. On Production as a Whole :

1. *The Increase of Output at Less Cost per Unit*, such cost implying *expense* of production as well as the *sacrifice* involved in human effort.

2. *The Extension of the Use of Machinery*, with its attendant effects both in increasing production and in making it more economical.

3. *The Making of a Superior Product*, in many cases. Each part is the work of a specialist.

4. *The Extension in the Demand for and Use of Capital* in all its forms, *and of Organising Ability and Invention* in all its phases.

5. *The Extension and Diversity of Occupations.*—New inventions and new machines tend to provide additional employment. Unemployment is thus lessened and the mobility of labour assisted. Women, children and partially disabled men can be employed on less onerous tasks, and

production as a whole benefits because each man can be assigned the job for which he is best fitted.

6. *The Increase of Invention and Discovery of New Materials and New Processes.*

7. *Time and Tools are Saved* as there is no passing of labour from process to process, and the worker requires a few specialised tools and not a large number of different tools and machines.

B. On the Labourer:

1. *The Increase in his Dexterity and Skill*, as he becomes more accustomed to the same task, usually limited in its range. Muscles, brain and eye are adapted to certain movements, and become almost automatic in their speed and precision.

2. *Time and Effort are Saved in Learning a Trade.*—Apprenticeship is shortened, for as the task becomes sub-divided, its difficulty is lessened. It is much easier and more economical to learn one branch of a craft than to learn it in all its branches.

3. *Strain is Diminished* by the use of machinery on burdensome tasks, although a fast-moving machine may tend to tire out the worker.

4. *Ability and Inventiveness* are increased: the mechanically inclined worker is generally keener and more adaptable. There is also a continual demand for invention, organising ability and power to control others. Frequently it happens that the simpler a task becomes through sub-division, the more easy is it to invent a machine to perform it.

5. *Skill is Saved* by the employment of the worker on specialised tasks, and by his being relieved of the less exacting and monotonous work by women, young people and partially disabled workers. The worker with peculiar qualities and aptitudes is employed on the task for which he is best suited.

6. *Change of Trade is Facilitated*, i.e., the mobility of the labourer is increased in certain cases.

7. *Labour becomes Specialised in a Locality*, and generally commands a higher price in consequence.

8. *Hours of Labour are Shortened*, and the worker is thus allowed greater leisure for physical and mental recreation in pursuits and hobbies not connected with his work. Furthermore, factory life implies association with many fellow-workers, and consequently, there is more social intercourse and each worker has greater opportunities for self-expression both within and outside the workshop.

The Disadvantages of Division of Labour.

Against the general advantages must be offset a number of

disadvantages, which concern the worker chiefly, although they ultimately affect production as a whole.

The disadvantages from the point of view of production as a whole are in the first place, those, already enumerated, which accompany the extending use of machinery. Secondly, there are the moral and social evils which have resulted from abuses of the factory system and from overcrowding in industrial neighbourhoods. Many of these evils have had to be remedied by special legislation, as, for example, the insanitary, demoralising conditions in factories and workshops, and the employment of young children.

From the point of view of the workers there are three important disadvantages. First may be mentioned the *loss of skill and sense of responsibility.* The skilled artisan becomes simply a machine tender, and has no direct personal pride in the product. His responsibility is very limited, and cannot easily be fixed when a product passes through many other hands ; in any case, he is usually accountable only to a minor official occupying a slightly higher position. The division of labour also tends to *monotony.* Before the Industrial Revolution strong personal ties existed between master and man, and work provided to some extent a means of self-expression. Processes were varied, and the worker's product often reflected his own personality. Since the introduction of the machine-processes, however, conditions have changed. To a great extent the factory system, and especially the development of large-scale production, have dehumanised industry, while the processes of industry have become highly specialised, and, in many cases, highly standardised. Workers lose pride, pleasure and interest in the production day by day of an article of the same size and design, and it cannot be denied that many processes of modern industry tend to a narrowing of interest, an absence of vision, a blunting of intelligence and a loss of artistic sense. Moreover, the continuous performance of the same processes results in industrial fatigue, mind-wandering and day-dreaming, with consequent ill effects on the mentality of the worker and on the amount of his output.

The third disadvantage to the worker is his *loss of mobility.* Specialisation is frequently one of the greatest obstacles to the free movement of labour. A workman who has been engaged for years in performing a single operation, may find, when faced with the necessity of securing new employment, that he is fitted for no other occupation ; and in this respect the skilled worker is frequently worse off than the unskilled, whose market is much wider. Nevertheless, the tending of one machine, especially of the automatic variety, closely resembles the tending of another machine ; and there is little doubt that, when specialisation is carried to an advanced stage, mobility of labour is actually assisted rather than hindered. For example, an unemployed

watchmaker may find suitable employment in the scientific instrument trade, while a workman accustomed to the lathe or drilling-machine may find employment of similar character in one of a multitude of different workshops. The more mechanical the operation, the easier it is to transfer labour thereto, and with the increase in the use of machinery this influence of the simplification of processes may ultimately predominate. At present, however, the factors making for immobility appear to be the more powerful.

As was indicated in discussing the efficiency of labour in the previous chapter, numerous and varied attempts have been made to reduce these disadvantages by far-seeing and benevolent employers. Shorter hours, leaving more time for leisure ; rest pauses ; welfare schemes involving the provision of rest rooms, reading-rooms, dining-rooms and playing fields ; co-partnership arrangements and profit-sharing schemes—these are among the methods now being widely adopted to restore to the worker some measure of responsibility and to counteract the effects of routine and monotony.

There are certain limits to the increased division of labour, in just the same way as there are limits to the profitable application of capital and labour to the cultivation of land. These will be considered in the chapter on the Organisation of Production.

CHAPTER 9

CAPITAL—ITS EVOLUTION AND CLASSIFICATION

PRIMITIVE man, living on such foods as he was able to gather from nature, was possessed of very little which would to-day be regarded as capital. He lived from hand to mouth, setting little store aside for the future, and exerting himself only as might be required to satisfy his immediate desires for subsistence and shelter. The discovery that the provision of this subsistence was facilitated by the use of simple tools and implements marked a great step forward: with a little sacrifice man could provide himself with articles which made his labour easier and more productive. But we can imagine that the making of even the simplest of these involved considerable effort which could not be sacrificed without loss and the necessity for further effort to replace it. The simple tool was the reward of past labour: it was, in fact, "crystallised" labour, and the better it was made and the more intricate its form, the greater the effort required to produce or to replace it.

As civilisation progresses, the primitive implements and the elementary forms of clothing and shelter give place to more elaborate and much improved types. With every extension in man's wants and with every changing caprice of the human mind, new productive implements are required and more involved methods become necessary. Man labours not solely to satisfy his own needs but also to provide for those of his fellows. Production, at one time direct and self-centred, becomes continually more indirect and complex. The Industrial Revolution, marked by the application of steam to industrial purposes, was the beginning of the modern era, with its myriad producers, bent on satisfying the hundred and one desires of a world-wide market, and surrounded by the most intricate and expensive machinery, far-flung transport systems, elaborate buildings, and all that is included in the mighty forces of wind and water, steam and electricity.

In all such items we are able to recognise a common characteristic. The simplest instrument of agriculture, the vast transport system, the mighty liner—all are the result of past labour, and form part of *that wealth of individuals and of communities other than land which is used to assist in the production of further wealth.* The words in italics supply the generally accepted definition of capital, whether it exists in the form of food, clothing, shelter, tools, measuring instruments and machinery; or as

seed, raw materials and minerals drawn from nature for productive uses ; or as transport instruments, such as roads, railways, canals and bridges ; or as instruments of exchange and stock-in-trade. The forms of capital are endless ; its uses and application in industry are without number.

Some economists object to the definition of capital given above, and prefer to regard it as consisting of *all kinds of wealth, other than land, which is expected to yield an income.* But there is actually little difference in the two ideas ; they are in fact two conceptions or two points of view of the same thing. Wealth is used in production only in so far as it will yield an increase or income to its owner ; otherwise it might just as well be allowed to repose in a safe in secure idleness. There is no point in hazarding capital in production unless some return can be anticipated, although it may actually not materialise.

The confusion possibly arises because of the failure to recognise that the same amount of capital may be the subject of two distinct ideas. By the producer it is regarded as an *agent of production* ; by the capitalist-owner it is essentially a source of income. In both cases the basic idea is the satisfaction of future needs : the satisfaction is obtained either by utilising the capital in production or by lending the capital for productive purposes. The attribute of capital as an agent of production may be described as its *natural characteristic* ; its attribute as a source of income is its *acquired characteristic.* There is nothing conflicting in the ideas, for in both cases the capital, by its use in production, yields to its owner an addition to his existing wealth. If this were not so, the capitalist would not lend, and the producer would not conduct business on borrowed money. The characteristic of capital as a source of income is partly responsible for the socialistic and communistic opposition to the " capitalist " system. It is recognised by such opponents that capital is essential to production under modern conditions ; but it is maintained that it should be under State control and ownership and that the income which is created should accrue to the State. Socialists have no desire to *destroy* capital, as is frequently stated : they aim solely at effecting a change in the ownership of capital in the essential means of production, e.g., in the coal industry and in banking.

Capital and Money.

Some difficulty is frequently experienced in obtaining a clear idea of the economic conception of capital because of the use of the term in reference to the " capital of a limited company", or to the " capital " value of the national debt, and so on. From the point of view of the shareholder or stockholder such items are correctly described as capital, but in so far as the company and nation are concerned they are forms of debt, on

which interest and dividends are paid. National loans may be employed for the destruction of wealth, as for example, in warfare; and individual wealth may be wasted by a spendthrift. Nevertheless, the sums so represented which are owned by sundry individuals are capital, and yield an addition to the wealth of their owners in the form of interest and dividends; and that portion of the national debt or of the capital of a company which is represented by buildings, office equipment, machinery and vehicles, is its real capital, its real instrument of production. Monetary values are, in fact, not necessarily the same as capital in the economic sense. Money is only capital when it is consumed productively, i.e., when it is spent and not merely hoarded. £100 in gold sovereigns in a stocking may be wealth, but it is not capital until it is spent for productive purposes. It does not become capital if it is spent on cigars and cigarettes, on luxuries or on pleasure; as such it is neither a source of income nor an agent for producing further wealth. All money is wealth, but not all money is capital. Again, all capital is wealth, but not all wealth is capital.

The Functions of Capital.

J. S. Mill[1] stated that capital consists of "whatever things are destined to supply productive labour with its various prerequisites". It enables production to be carried on, and producers to await the result of any work which occupies a period of time. As Professor Macgregor has said, "Futurity is the fundamental idea underlying capital". Capital performs its functions only in being consumed; its existence depends not on its preservation and retention, but on its being used up, whether rapidly or slowly over an extended period.

The various forms of capital fulfil this function of assisting labour in different ways: the seed is consumed in giving birth to the crop; clothing and shelter are used up productively as they are used and worn out; food provides the worker with subsistence and strength; machinery helps him by relieving him of monotonous tasks and of heavy, fatiguing work, releasing him for more responsible duties and lengthening the period of his utility as a producer; canals and railroads are consumed as they are used for transport and communication, whilst media of exchange perform their functions as they pass from hand to hand and assist the circulation of that wealth which they represent. Briefly, the functions of capital in a modern community may be said to consist of:

1. The Provision of Subsistence, in the form of food, clothes and shelter, maintaining the labourers and producers while they await the results of their efforts. Under modern conditions productive processes are frequently involved and

[1] *Principles*, Book I. iv. i.

long lasting, hence the provision of subsistence is an important factor.

2. THE PROVISION OF APPLIANCES essential to production, and nowadays necessary to enable production to be speedy, accurate and automatic; to relieve the worker of drudgery, fatigue and over-exertion; and to correlate the various productive agencies.

3. THE PROVISION OF MATERIALS.—At first of the most simple kind, the materials of industry are to-day of the utmost variety and complexity, and include not only such raw products as are derived from nature but also semi-manufactured and manufactured articles which are utilised as the raw materials in yet another stage of industry and manufacture.

In the same way as capital itself may be regarded as a form of "crystallised" labour, so may those forms of capital which are grouped under the headings "appliances" and "materials" be regarded as "crystallised" subsistence; i.e., as representing in objective and material form the food, shelter, and clothing consumed by producers during the creation of such appliances and materials.

Forms of Capital.

As capital exists in such remarkable variety and is utilised in so many different ways, it is usual to classify its various forms and to distinguish types of capital according to their functions in the productive organisation. The following are the principal divisions, none of which is entirely watertight and exclusive, and some of which overlap:

1. PRIVATE, SOCIAL AND NATIONAL CAPITAL.—*Private* or *individual* capital consists of such possessions as are owned or partly owned by an individual or private person, as distinct from those things comprised in the term *social*, or *public* capital, which belongs to the community generally. Compare for example, the ownership of a freehold house, or of a piano within it, and the ownership of a public highroad, or of the Houses of Parliament. The term *national* capital is used to mean the total capital of the nation as a whole, i.e., the aggregate of the private capital of its nationals, together with the total of the nation's social or public capital.

2. MATERIAL AND PERSONAL CAPITAL.—The former consists of objects which exist in a concrete, tangible form, and are capable of being transferred from one person to another, such as a surgeon's instruments, his garden roller and motor car. The term *Personal Capital* comprises an individual's ability, capacity or faculty—"all those energies, faculties, and habits which contribute to make a people

efficient". These cannot be transferred in themselves, but they can transfer benefits which are valuable to others. Examples are a surgeon's skill and a singer's voice. Although such skill usually represents considerable invested wealth, it cannot be regarded as wealth in the economic sense, inasmuch as it does not comply with our definition (see *ante*, page 33). To the possessor, nevertheless, such personal capital is a source of income, and in the case of a lawyer, for example, his skill is actually productive.

3. Trade (or Production) and Consumption Capital. —Included in the former conception are commodities actually used in the production of other articles or commodities, such as tools, machinery and raw materials. *Consumption capital* includes all goods which satisfy wants directly by being consumed; e.g., food, clothes and houses.

4. Fixed and Circulating Capital.—*Circulating capital* fulfils the whole of its office by a single use in the production in which it is engaged, its value passing once and for all into the value of the final product; e.g., raw materials, seeds, fuel and money paid away in wages, all of which are used once only. *Fixed capital*, on the other hand, exists in a durable shape and brings in an income or return according to the length of time during which it is used; it can fulfil its office in production more than once, and its utility is not exhausted by a single use. Examples of fixed capital are buildings, machinery, canal barges, railway trucks and office furniture. As circulating capital is used once only, its single use must result in a replacement of the original capital, and also in a creation of sufficient additional wealth to make its use profitable. The return to fixed capital is usually spread over a long period, but the aggregate value of the return must be sufficient to cover the original capital and also to provide a fair rate of interest thereon.

5. Sunk and Floating Capital, sometimes called *specialised and unspecialised capital.* Capital is said to be *sunk* or *specialised* when it has assumed a form which makes it unsuitable for any other purpose, or when it cannot be changed or recovered; e.g., capital invested in tunnelling or in the drainage of land. Capital is said to be *unspecialised, floating* or *free* when it can be changed at will for employment in any branch of industry, and can at any time assume a different form; e.g., money, stock-in-trade, fuel, raw material and book debts.

J. S. Mill defined sunk capital as capital which is "rendered permanently incapable of being applied to the maintenance and remuneration of labour". Obviously capital will not be sunk unless the owner has reasonable security, a fair hope of a return on his investment, or unless business activity and

enterprise are such as to justify the sinking of capital for productive purposes.

The proportion between sunk and floating capital is of importance to the economist; in fact some economists consider a bad adjustment of sunk to floating capital in production as an important cause of the recurrence of crises. Such a mal-adjustment may in fact seriously hamper a nation's productive capacity, for it is difficult and sometimes almost impossible to effect the necessary change. The specialisation of capital is frequently a cause of unemployment, for in the event of inactivity in the trade in which it is utilised, such capital cannot easily be applied to other purposes; e.g. blast furnaces and floating docks.

6. REMUNERATORY AND AUXILIARY CAPITAL.—*Remuneratory* or *wage* capital is that wealth which is applied to the payment of labour engaged in production. *Auxiliary* or *instrumental* capital comprises all other forms of capital which assist labour in production; such as machinery, raw materials, tools, ships and railways.

In any business or industry both remuneratory and auxiliary capital must co-operate, but the proportion of one to the other varies considerably, chiefly according to:

(*a*) *The Nature of the Business.*—In some businesses the labour force is extensive, in others it is not. Compare, for example, a coal mine and a stockbroker's office.

(*b*) *The State of Invention.*—As processes become more complex, so generally does the labour force increase. On the other hand, the constant invention and application of machinery for industrial purposes tends to lessen the need for labourers, and to increase the proportion spent on fixed and auxiliary capital.

(*c*) *The Relation between the Cost of Capital and Labour.*—In many businesses it is possible up to certain limits for an employer to utilise capital and labour in competing proportions in the same production, substituting one for the other as may be more profitable. The same process may be done by hand labour or by machine. If an employer decides to utilise chiefly hand labour, he pays more in wages. If he utilises machinery on a larger scale, he pays more interest on capital. This competition between two elements engaged in production is an instance of the *principle of substitution.*

7. REVENUE OR LUCRATIVE CAPITAL is so called because it yields a money income to its owner.

8. LOANABLE CAPITAL exists in such forms as can be lent for productive uses. The best example is money or credit, and the most easily accessible form is that of a bank balance, which can be lent to others by its owner or by the holding bank.

How Capital is Produced and Accumulated.

We have already seen that land and labour are the primary or *natural* agents of production. Capital is obtained only as the result of the co-operation of these factors ; it is a *produced* agent or instrument of production, which under modern conditions is sufficiently important to be regarded as a separate factor. It must be so regarded because we know that the production of wealth is impossible without the help of pre-existing wealth in some form or another, elementary or complex, simple or intricate.

Under primitive conditions capital accrues as the direct result of abstinence or saving on the part of its owner. The early fisherman who constructs a canoe or net, wherewith to increase his production of food, must reserve a portion of his catch in order to sustain himself during the process of making his canoe or net, or go short of food during that process. The primitive farmer harvests his crop and retains a portion of it as seed for future crops. The product, in whatever form it finally appears, is *the result of past labour and of saving or "waiting"* ; it represents a *surplus of production over consumption*, obtained as a result of setting aside something for the future.

In modern times the saving of capital rarely takes the form of the retention of material objects such as seed and materials. The labourer of to-day is paid in money, and his savings are most frequently accumulated in the form of a deposit at a Savings Bank or with a friendly society. The present-day workman rarely hoards up actual coin or paper money ; he is enlightened enough to realise that a deposit account brings him interest and increases in amount with the passing of time. But no new principle is involved. Money merely represents goods which it will purchase, and the saving of money instead of its immediate spending is actually the putting away of the right to obtain goods in the future.

Possibly the money or capital will be left almost indefinitely with the bank : it then becomes a source of income to its owner, who *lends* it to the bank. In turn the bank lends such savings to other borrowers for use in production, so that the original savings of the workman come to be applied in the production of further wealth, and his capital fulfils the two functions previously noted of an agent of production and a source of income.

The term "waiting" used above is to be preferred to the older term "abstinence", because of the implication by the latter of a painful or exhausting process. The saving of capital does not necessarily imply any personal discomfort or sacrifice, or a deliberate sacrifice of present for future pleasures.

Undoubtedly much capital is obtained as the result of deliberate saving and some degree of effort, but in many cases the

income of the individual is so large as to make it possible to satisfy every desire and yet leave a surplus to be saved for future needs.

Frequently it is stated simply that capital is the result of past saving or abstinence, the element of past labour being omitted. Such a statement is, however, incomplete, and in some respects unreasonable. "It is inconceivable how anything whatever could be *produced* by a purely negative act; whether we call it abstinence or saving, in either case it is simply an abstention. . . . Production is a positive act, not a negative one. . . . As Bagehot very pertinently enquires, how does a herd of cattle represent any saving whatever? Has its possession entailed any privations on the part of the owner? Quite the reverse, for thanks to the milk and meat he has been better fed, and thanks to the wool and leather he has been better clothed".[1]

It is, therefore, preferable to say that capital is the result of the saving of a surplus of production over consumption. This means either that the wealth produced has exceeded demands for immediate consumption, or that people have consumed less than was actually required to satisfy their wants, and that they have been sufficiently careful to lay aside the surplus as a provision for the future. "The fund from which saving can be made is the surplus of the produce of labour after supplying the necessaries of life to all concerned in the production. . . . More than this surplus cannot be saved under any circumstances. . . . This surplus is the fund from which all additions are made to capital".[2] Thus the formation of capital is dependent on two factors: (*a*) The power to save, and (*b*) The will to save.

The Power to Save.

The Power to Save implies a surplus of production over consumption, such as may accrue from increased production or more economical consumption. It therefore depends on the efficiency of the commerce and industry of a country. This in turn depends on many factors, including the natural resources, such as climate, mineral wealth, good harbours and transport facilities; on the geographical position relative to other nations; on the efficiency of the banking and credit systems; on the profitable organisation of the factors of production—land, labour and capital; on the utilisation of machinery, inventions and new processes, and on the business and moral characteristics of the inhabitants.

The Will to Save.

The Will to Save is more of a personal matter, and depends chiefly on individual characteristics, particularly on the various

[1] Gide, *Political Economy*, pp. 112-113. [2] Mill, *Principles*, I. xi. i.

motives which create in man a desire to accumulate wealth. It is also profoundly influenced by the conditions within a country: saving is encouraged in a civilised community where law and order are maintained, and where a man can reasonably look forward to the future enjoyment of the results of his efforts. Security, or the possibility of preserving the wealth saved against fraud, theft and exaction, and the existence of means of safeguarding wealth or of investing it safely, are thus essential factors. They depend largely on good government, on the maintenance of peace and tranquillity, on the existence of stable currency conditions, and on the prevalence of good credit both at home and abroad. There can be little desire to save if revolution, war or natural calamities such as floods and earthquakes make the future uncertain and the preservation of wealth hazardous, or if the effort of saving is rendered futile by heavy taxation or by inflation of the currency. On the other hand, saving is encouraged by the existence of money as a store of value; by the development of savings banks and of deposit banks, and by the perfection of such mechanism as that of the Stock Exchange, whereby the investment of capital is made possible and facilitated.

The Motives which Induce Men to Save.

The Desire to Provide for Oneself and one's Family.—This is commonly termed "*foresight*", and is undoubtedly the strongest incentive to saving for future needs.

Ambition to Command Social Esteem, Power and Influence.—The greater the esteem in which wealth is held and the greater the power it wields, the stronger is the ambition to accumulate capital. In the United States and Britain this motive is especially prominent.

Ambition for Success in Business.—This is closely allied to the previous motive, and induces men to exert themselves to the utmost in order to excel and surpass their fellows and competitors. Ambition for success may be quite independent of any desire to possess wealth as such, and is therefore frequently influenced by the "tenacity of the habit of work".

Desire to Postpone Consumption in order to obtain Interest.—Accumulation is stimulated if the rate of interest is high, and a high rate of interest in itself provides a fund for further saving. We should thus expect saving to be more pronounced in countries where the rate is high, but generally a prevailing low rate of interest, as in England, indicates a high degree of security and ample means of investment which are in themselves sufficient to keep up the rate of accumulation. On the other hand, a high rate—where it is not due to a scarcity of capital and an absence of thrift on the part of the inhabitants—is frequently a sign of

insecurity, and its continued existence may tend to restrict production and thus to check accumulation.

Desire to Avoid Expense.—Some persons are so constituted, either from weakness or timidity, as to endeavour at all times to avoid expense and expenditure on luxuries. Others spend boldly and without too great consideration ; they consequently accumulate less on the average than people in the former class.

Britain and U.S.A. Instanced.

In Britain and in the United States we find the best conditions for the growth of capital. Their natural resources ; their numerous seaports, excellent climate and geographical situation ; their good and stable government ; their highly developed banking, monetary and credit systems, and their organised capital markets, which serve to bring the accumulators of capital into close touch with those who can make use of it, have resulted in eminent efficiency in industry and commerce. The power to save therefore exists in a marked degree. The will to save is equally pronounced. In both countries great importance is attached to social prestige and power ; the possession of wealth and all that it brings is a most powerful factor in inducing men to work hard and to save for the future. The tenacity of the habit of work is also noticeable in both peoples. The standard of morality is high ; there is a love of order and of peace, a desire to work in harmony and tranquillity, a strict enforcement of the law and of the rights of property. Everywhere one finds that moderation and consistency in the consumption of wealth which are essential in a people ambitious to provide for the future rather than to enjoy to the full the benefits of the present. All these have resulted in a remarkable accumulation of wealth in both countries, and with the accumulation of wealth goes hand in hand the advancement of all civilised arts and institutions.

Capital and Society Progress Together.

In the foregoing paragraphs we have treated capital as a whole, and in discussing its growth and accumulation have not sought to differentiate between the various types. There are, however, considerable variations in the growth and rate of growth of capital in its several forms, variations which become greater and more accentuated with every advance of industrial science and art. The growing application of machinery to industry and the improvement in processes and methods have tended to the replacement of expensive labour by the less expensive machinery : *fixed* and *auxiliary* capital thus tend continually to increase. Similarly, the accumulation and distribution of wealth in a progressive community tend to a constant increase in the quantity and value of *consumption* capital : people who

earn more spend more on houses, furniture, clothes and food. Again, increased industrial efficiency and improved organisation tend to reduce the proportion of *circulating* capital utilised by a business; less stocks have to be carried and money is turned over more quickly. *Private* and *social* capital increase together: the more wealthy the community and the more advanced its development, the greater the amount of wealth which is spent on such general utility undertakings as roads, harbours, public buildings and water supply schemes.

Thus we may find that one kind of capital increases with progress, and that another decreases, but generally speaking, we can say that almost all forms of capital increase with the development of human society.

Assurance and Saving.

The accumulation of capital or saving is considerably encouraged by the growth of life and endowment assurance, which impose on the assured a kind of forced saving for future needs. The system of endowment assurance is a strong inducement to save because it enables the assured, while he is providing for himself and his family in the future, at the same time to protect his family or other dependants against loss of the wage-earner. Furthermore, the system of industrial life assurance, by enabling the poorest classes in the community to pay premiums in small weekly sums, encourages saving in quarters where it would appear wellnigh impossible.

As a result, numberless comparatively small sums, collected from all classes in the community, are gathered by the assurance companies into large centralised funds, which are remuneratively employed in investments on the Stock Exchange, in loans and in other profitable ways. Such capital is thus made available for industrial and commercial purposes, with advantage to the community as a whole. The skilled investment of funds results in a relatively high and regular return which enables the companies to strengthen their financial position by the establishment of healthy reserves. As a rule, periodical distributions are made to the policy holders, whose savings are correspondingly increased by no real effort on their part, while the establishment of strong positions permits the companies to lower their rates of premium and make the method of saving by assurance still more attractive.

These facts are becoming recognised to a constantly increasing degree. Progressive companies are always anxious to extend not only their existing business but also the scope of their different schemes. Assurance or insurance is thus a force of ever-increasing importance in its effect on the accumulation of capital in the modern community.

CHAPTER 10

THE ORGANISATION OF PRODUCTION

In a previous chapter it has been pointed out that the two primary agents of production—Land and Labour—could not advance far before a third factor—Capital—became necessary. But just as land and man's efforts alone could do little without such forms of capital as implements and sustenance, so does the need for the fourth factor—Organisation—become increasingly more apparent as production moves away from the elementary type and as civilisation advances. Even the peasant proprietor, himself controlling all three factors of production, must exercise some degree of organising ability if he is to get the best results. The best sections of his land must be developed to their full extent by capital and labour ; but only to such an extent as to make the applications worth while. Possibly he must decide to apply a greater proportion of capital and more labour to the poorer land in order to increase its productiveness. Then the work in the fields has to be done in appropriate order ; seeding must precede reaping and harvesting ; each labourer must be provided with the necessary amount of capital in the form of tools, and to each must be allotted a fair proportion of the work so that his labour will not overlap that of others.

Thus, even under elementary conditions, some degree of organisation or superintendence is necessary. But the necessity is emphasised when the various factors are owned by different persons, or are situated in different places. Then an agency is required which will bring them together and co-ordinate their functions, supply the various factors in the right proportion and at the right time, and see that each factor is remunerated fairly for its contribution to production. Generally speaking, the agents of production can achieve nothing unless they are in effective co-operation ; their strength lies in their union under one management, which will assume the lead in production, endeavour to utilise each of the three factors so as to achieve the best results and obtain the highest return, and undertake any necessary risks which may accrue as a result of the association.

Such are the functions discharged in production by the fourth factor, Organisation or Enterprise. Where these functions are combined in one person—as in a one-man business—that person is variously described as the *Organiser*, *Entrepreneur*,[1] *Venturer* or *Captain of Industry*.

[1] From the French, *entreprendre*=to undertake.

The Entrepreneur in Modern Industry.

It is clear that the functions of the entrepreneur under modern conditions are of the first importance, and fully justify the claim that they should be regarded as a separate factor in production. It falls to the organiser to correlate the other factors, to set them in motion, to get them to work harmoniously to the best advantage, and to remunerate them satisfactorily.

Upon the entrepreneur devolves the necessity of planning the whole of the business and of building it up from its foundations. He must assume responsibility for the nature, quality and quantity of the product; for the purchase of the raw material and for the sale of the finished article; for the discipline, control and payment of the great body of labourers under his direction, and for the general care of the whole property of the organisation.

In co-ordinating and directing the several factors of production he utilises the land for building purposes; turns the monetary capital placed at his disposal into buildings and machinery, tools and raw materials; and organises the labour force to obtain the best results. The provision of appliances necessitates the utilisation of the most up-to-date types, the supervision of their repair and replacement, and the ensuring that all machinery is adequately employed. The direction of the labour force involves the employment of the right proportion of skilled and unskilled workmen, the correct and equitable allocation of duties, the encouragement of energy, skill and industry, and the elimination of waste labour-power. When the product is complete, arrangements must be made for its marketing and sale. This necessitates the institution of advertisement campaigns, the employment of sales managers and travellers, the fulfilment of orders and the despatch of goods to the purchasers. The extension or reduction of the business to meet fluctuations in demand and changes of fashion forms part of this work, and requires special gifts of foresight, judgment, intelligent anticipation of the future, and a wide knowledge of markets and of market conditions.

Finally, the entrepreneur undertakes the distribution of reward and remuneration to each of the other factors of production: rent to the landlord, interest to the capitalist, and wages to the great body of labourers. In this direction he has to face many difficult problems, which call into play his moral qualities of leadership, courage and ability to inspire confidence.

The co-ordination of such a vast variety of interests and their exploitation in such a manner as to achieve results which permit of a product and remuneration satisfactory to all, is necessarily a task of magnitude and intricacy, within the capacity of the very few. Only one man in a thousand has the ability, spirit and power to direct an army of men through a maze of diffi-

culties, any one of which might well deter a less able man, but which serve only to arouse the faculties of the master mind. One of the world's greatest entrepreneurs was the late Mr Carnegie. It is said that the great United States Steel Corporation was formed to remove him from the industry before he had absorbed it all. But when once he was removed no one else could be found capable of controlling the vast organisation which he had built up from an insignificant beginning.

"When, however, the hand-loom gives way to the power-loom; when the giant factory absorbs a thousand petty shops; when many persons, of all degrees of skill and strength, are joined in labour, all contributing to a result which perhaps not one of them comprehends perfectly or at all; when machinery is introduced which deals with the gauzy fabric more delicately than the human hand, and crushes stone and iron with more than the force of lightning; when costly materials require to be brought from the four quarters of the globe, and the products are distributed by the agencies of commerce through every land; when fashion enters, demanding incessant changes in form or substance to meet the caprices of the market, the master becomes a necessity of the situation".[1]

The Assumption of Risk.

A feature of modern industry is that most production is instituted long before the product is marketed. The organiser lays his plans and sets to work months, or even years, before he is in a position to satisfy the anticipated demand. The more complex the arrangements the greater the danger that they may be completely upset by an unforeseen contingency; the greater the risk of loss through such uncontrollable factors as the failure of the human element, the breakdown of expensive plant, the exhaustion or failure of supplies of essential material, the change of fashion, or a hundred and one other contingencies. But if every man were deterred by such considerations, many great enterprises would be still unstarted. It is the function of the entrepreneur to stake his reputation and fortune, to "back" his luck and judgment, and to *undertake the risk*. The greater the risk which must be run, the larger the expectation of reward. It is too often forgotten by those who disapprove of the present distribution of wealth that the vast resources in the hands of the captains of industry have been fairly won by men who have boldly stepped where others have feared to tread.

Some of these risks are of a purely *financial* kind, others are essentially *industrial*, as, for instance, the risk that fashion may change or that invention may lead to the substitution of a better product.

[1] F. A. Walker, *A Brief Political Economy*, p. 60.

The Entrepreneur's Reward.

Clearly, the functions of the entrepreneur are of a most diverse kind, and economists are far from unanimous as to the precise nature of the reward which attends his efforts. The modern tendency, however, is to regard the entrepreneur's remuneration as comprising returns for three distinct functions: (a) *Wages of management*, being a special form of wages paid for the special form of labour involved in organisation; (b) *Remuneration for risk-bearing*, whether financial or industrial; and (c) *Profit*—the true return for the essential entrepreneurial function—which is a surplus remaining after all the other factors of production (including (a) and (b) above) have been rewarded, and which increases or decreases with the degree of success attending the entrepreneur's efforts.

Delegation of the Entrepreneur's Functions.

Entrepreneurs abound in any progressive community, for, apart from those who control large personal businesses, there are numberless retail shopkeepers and professional men all of whom are entrepreneurs in greater or less degree, assuming responsibility for the organisation of their businesses, carrying such risks as are inseparable from even the smallest concern, and taking any profit which accrues as a result of their efforts.

Nevertheless, the tendency at the present time, especially in joint-stock organisations, is for the functions of the entrepreneur to be split up and delegated. Nowadays, the skilled entrepreneur can attract to himself not only the assistance of hundreds of his fellows, but also as much capital as he requires from numerous sources. Investors are constantly on the look-out for an outlet for their savings; so the greater the prospect of reward and the better known the powers of the entrepreneur, the more easily is the requisite capital forthcoming. The incessant flow of company prospectuses in a period of trade activity is sufficient to indicate how easy it is for capital to be attracted by the possessor of enterprise, capacity and ability.

To some extent the development of the joint stock company has made the separation of the entrepreneur function more difficult than was possible fifty years ago, when the "master" was a distinctive, well-recognised type. Great industrial leaders such as Ford, Leverhulme and Carnegie are easily distinguished, and no one would deny the right of many smaller producers to be classed as entrepreneurs. But what of the salaried directors and managers of modern concerns? To the extent that such persons are themselves holders of capital, they combine the functions of risk-bearing with those of management. Where, however, the bulk of a company's capital is publicly subscribed, the ordinary shareholders are the main financial risk-bearers,

and the work of organisation is undertaken by salaried managers or directors, who may or may not take a share of the profits. In either case, however, the high salary paid for exceptional organising and directorial ability is in the nature of a scarcity rent, and it includes a certain reward for the risk of reputation and livelihood.

Again, in modern industry much of the risk which was at one time assumed by the manufacturing entrepreneur is shouldered by the merchant who, himself a true " venturer," does not undertake actual production. He acts as a market specialist, employing his abilities in studying design and fashion, the state of trade and the probable source of demand for a given product or group of products. When he has decided on the nature and design of the product which he proposes to market, he may arrange for its production by manufacturers in this country or abroad, supplying them with the benefit of his experience and abilities, and possibly also with a large proportion of the necessary capital. The merchant acts as an intermediary between the producers of the commodity and the retail and wholesale agencies by which it is distributed to consumers. He initiates the production of goods to meet his estimate of the demand, and he stands to lose if his anticipations are incorrect and the market turns against him. The merchant class is thus largely responsible for the direction of productive effort.

Protection against many of the risks inherent in modern production may be secured in other ways. Both merchant and manufacturer may avail themselves of the wonderful organisation of the produce markets in order to eliminate risks attaching to the purchase of raw materials, while they may resort to insurance in order to safeguard themselves against loss from fire, theft, accident and other contingencies. These matters are explained in Chapter 12.

Thus the organiser to-day may not contribute either natural resources or capital to production, and he may not bear all the risk. Conditions have greatly changed since the master provided the raw materials, buildings and tools, and worked also side by side with his men, obtaining as his reward a share of the product compounded of rent for his land and buildings, interest on his capital, wages for the labour of his hands, and profits for his organising ability and powers. Only in one great modern industry, that of agriculture, do we find the ownership of the various factors except labour retained in one pair of hands. Generally, the various factors are contributed by many persons, and are assembled from countless sources under one management. Raw materials are gathered from the ends of the earth ; workers are recruited from every type of employment and from many districts, while most of the capital used in production is supplied by numerous investors from every grade of society, who take no part in the management of the business. In certain cases the workers

employed are not assembled under one roof, but work in their own homes on tasks which are allotted to them by the master ; as, for example, in the cutlery trades of Sheffield and the ready-made clothing trades of London.

But although several assistants may manage or control their respective sections, and although the capitalist may carry much of the monetary risk of the business, yet the organiser stands behind them all. The initiation of the enterprise rests with him, and by its failure he stands to lose most—reputation, employment and perhaps capital. That modern society recognises the value and necessity of the entrepreneur is indicated by its payment to him of a reward which may be far in excess of the return made to other factors of production.

The Dangers of the Entrepreneur System.

The tendency for industrial control to be centralised in the hands of comparatively few individuals is accompanied in some respects by an increasing liability of industry generally to damage and hardship. The ruin of one great organisation spells disaster for numberless persons, and spreads far beyond the circle of its actual employees. The danger is accentuated with every advance of society, for the commercial organisation becomes increasingly sensitive, and business success is continually more dependent on innumerable factors which are beyond the control of man. Specialised productive agencies, organised markets and intricate financial machinery become ever more subject to dislocation. The more complex the machine the greater the difficulty of its control and repair. We have stated, too, that the degree of organising ability varies considerably ; those at the head of great businesses vary from the man of rare gifts to the organiser of quite average ability. So long as all is well the differences are not marked ; but when danger threatens the weaker characteristics make themselves evident. Recklessness on the one hand or over-cautiousness on the other—both bring their disastrous consequences, with widespread adverse effects on the industrial machine.

There are other more obvious dangers which may be mentioned ; such as the hardship which follows the activities of the unscrupulous entrepreneur, including the one who obtains capital for a worthless enterprise and the master responsible for the social abuses of sweated labour, unhealthy factories, and other evils of large-scale production. There is also the menace to social life which arises when one man or a small number of men obtain monopolistic control of certain branches of industry or of products which are necessary for human existence. Such control may amount almost to a dictatorship, conceivably to a power which even the State itself dare not oppose.

Nevertheless, the advantages of the present system more

than counterbalance the defects which necessarily mark its evolution, but which tend to decrease with every forward step. We have already shown that specialised labour and capital can with little difficulty accommodate themselves, if necessary, to kindred functions. Further, the elaborate sources of information which are available to the entrepreneur and the unrivalled resources at his command enable him to minimise risks very considerably, and approximate production closely to anticipated demand.

The Aims of the Entrepreneur—Cost of Production.

The entrepreneur does not institute production merely for the joy of achievement. Like all producers, his aim is the production of wealth; he endeavours to obtain the greatest net yield at the lowest possible cost. By cost is here implied the *expenses of production*; the price which the entrepreneur must pay in the form of rent, wages and interest for the hire of the three necessary agents—land, labour and capital. Economists usually refer to such expenses as the *costs of production,* but more strictly this term should be used in its *real* or social sense of the sum of the efforts, space and time, or of the sum of the efforts, abstinences and risks, required to produce a commodity. *Real cost of production* is strictly a question of sacrifice. In order that anything may be produced, labour must sacrifice effort; the capitalist must sacrifice control of his capital, and the landlord must give up the tenancy of his land. But such sacrifice cannot well be measured except in monetary values, and consequently relative sacrifices can be estimated only when considered as expenses, i.e., in the prices which must be paid before such sacrifices will be made.

In analysing his results, the entrepreneur must evaluate all items which contribute to his total costs of production. Consequently, he must make due allowance for such expenses whether the factors are supplied by outside sources or by himself. If he supplies any of the capital, he must make an appropriate allowance for interest thereon. Similarly, if he provides land or utilises his own factory, he must duly take a reasonable rent into account before striking a balance to determine his net return. If his calculations have been accurate and his judgment correct; if outside factors have been favourable and the state of trade has enabled him to sell his wares at a profitable price, then the values which he receives for his goods should more than compensate him for the values which he has paid out in the form of rent, wages and interest. The difference will, in fact, represent his profit, and, generally speaking, the greater his ability and the keener his judgment, the higher will be his reward from the enterprise.

Obviously, then, the entrepreneur aims at employing land,

labour and capital in such proportions and under such conditions as to ensure their maximum efficiency. He endeavours to obtain the greatest possible reward for each £100 of capital or for each extra labourer that he employs. As long as he finds that additional doses of capital and labour give him a greater than proportionate return, he will continue to apply them, and this in fact does happen in manufacturing industries. The factors of production can be increased to very considerable proportions without any falling off in the return which they yield. On the other hand, the employer will ruthlessly cut down his expenses on any one factor if he finds that its extension is not warranted by the ultimate yield. *He aims at a maximum yield by the utilisation of each factor up to its marginal utility or marginal productivity.*

If the price of one factor—as measured by rent, wages or interest—increases, the demand of the entrepreneur tends to decrease, and the converse is equally true. He employs less of that factor or endeavours to substitute it by another. He has no special partiality for land, labour or capital ; he is concerned only with utilising them to the best advantage, and, frequently, he finds that a better yield is obtainable by the substitution of one factor for another. An extra £250 laid out on machinery will possibly give him a better return than the employment of ten labourers. So he alters the proportion of capital and labour which he employs, until each factor is utilised to its point of maximum efficiency. The laws of utility and indifference are therefore just as operative in production as in any other branch of Economics, and enter to determine the quantity of the factors of production employed or purchased by an entrepreneur just as they determine how much of a man's income shall be spent on bread or on boots and shoes.

The Law of Increasing Returns.

The foregoing consideration of the aims of the entrepreneur will enable us to approach the remaining branches of the Laws of Returns, to which reference was made in an earlier chapter. The entrepreneur, as we have seen, aims at obtaining a maximum return from the agents of production under his control. He will continue to increase the scale of his operations so long as he obtains a more than proportionate return from additional applications of capital and labour. This tends to occur in manufacturing industries, as a result of the operation of the *Law of Increasing Returns*, which states that, *up to a point, the expansion of an industry, in which there is no dearth of the necessary agents of production, tends to be accompanied by a more than proportionate increase in the returns.* Just as the law of diminishing returns applies primarily to extractive industries, such as mining and agriculture, so does the law of increasing returns apply principally

to manufacturing and constructive industries. "While the part which nature plays in production shows a tendency to diminishing return, the part which man plays shows a tendency to increasing return".[1]

Like the law of diminishing returns, the law of increasing returns has two aspects, the *static* and the *dynamic*. In the static sense methods of production are assumed to be unchanged, and the law operates when an increase in the scale of production, with existing machinery and appliances, results in a fall in the average cost per unit of output. In such circumstances the fall in costs takes place mainly as a result of administrative and commercial economies—i.e., overhead charges are distributed over a larger output: production is more economical *at one level than at another*.

In the dynamic sense the law operates in consequence of changes in methods of production due to the introduction of new machinery, improved processes and better organisation. In such circumstances the average cost per unit of output may be reduced although no change is made in the scale of production, or an increased output may be obtained at a lower average cost without any addition to capital and labour charges.

No hard and fast line can be drawn between those industries which are subject to the law of diminishing returns, and those which are subject to the law of increasing returns. In the long run, a stage is reached in every industry at which diminishing returns tend to operate, for all production depends to a greater or less degree on natural resources.

In manufacturing industries, however, the economies of large scale production, the increased application of science, the extension of the division of labour and the use of machinery, and the constant flow of inventions tend continually to push further away the point of diminishing return, and to promote the operation of the law of increasing returns.

For these reasons the large organisation is much more usual in manufacturing industries than in extractive occupations; we have but to look around us to realise the prevalence in agriculture of the small producer. The smaller concerns in manufacturing industries tend constantly to be squeezed out of existence by the larger and more powerful organisations, whereas in agriculture the small farmer and large landowner cultivate the ground side by side and sell their products in the same market. The larger producer gets little, if any, advantage in agriculture, and this accounts for the fact that no cultivated area anywhere represents the investment of anything like the capital which may be employed in a vast industrial organisation such as that of Lever Brothers at Port Sunlight.

But although the point of diminishing return becomes operative at a much later stage in manufacturing than in extractive in-

[1] Marshall, *Principles*, IV. XIII. ii.

dustries—so late in fact as to make the law of increasing returns of practically general application in manufactures—there is nevertheless a point at which the entrepreneur has to stop, when it becomes unprofitable to spend more on buildings and machinery, labour and land. It is obvious that the division of processes must eventually reach its limit. Then, as it has been proved again and again in actual practice, it pays the employer better to start a totally independent plant, and to increase it, alongside its predecessor, to the point of maximum efficiency. Thus instead of one plant of vast size, so cumbrous and over-organised as to be on the point of yielding diminishing returns, we have a number of individual units keyed up to the highest pitch of productive efficiency.

The entrepreneur will seek to co-ordinate the activities of each of these units in such a way as to secure constantly increasing efficiency. The average cost of production will be continually decreased by careful attention to administrative and commercial economies. Thus there will be unification of the purchase of raw materials, of advertising, of distributing the products and of research and experiment. New methods and processes discovered in one plant will be applied in others, and in several other ways each section of the organisation will benefit from the centralisation of control.

The Law of Constant Returns.

It has been stated in an earlier chapter that the influence of the law of diminishing returns makes itself felt in every industry. In the extractive industries the law operates directly ; in manufacturing industries its influence is felt, and has constantly to be combated by man's ingenuity, because every such industry is dependent in some degree on the raw materials and minerals provided by the extractive industries. In agriculture the part which nature plays preponderates over the part which man plays ; in manufacture man's influence is sufficiently marked to delay the halt which nature eventually calls. In reviewing these conditions it is not surprising to find that in some industries the two opposing tendencies operate to balance or neutralise each other ; man's organisation and inventiveness are just able to keep pace with the lessening yield of nature's bounty. Here we have what are described as *constant returns*, the result of the operation of the *Law of Constant Returns*. Increases in capital and labour result in a constant increase in output ; or, in other words, the output is always proportionate to the capital and energy required for its production.

This law of constant returns is of very limited application, and industries in which it operates are very rare. We have previously noticed, however, that a stage of constant returns is frequently reached in agriculture, when the application of

new machinery, of new manures and of better labour tends for a period to counteract nature's "niggardliness" in yielding her bounty.

The Law of Varying Returns.

The laws of increasing, diminishing and constant returns are sometimes considered to be merely branches or aspects of the same law—the Law of Varying Returns, or the Law of Productivity of Industrial Effort. This law states that productivity, or the return to the effort of the factors of production, varies according to the efficiency of each of the factors considered individually and also according to the way in which the factors are combined and organised in production.

The Localisation of Industries.

The localisation of industries is the tendency of industries to be carried on and developed in those districts which are most suited to them and most likely to make them profitable. Most of us are familiar with the association of Staffordshire with the pottery industry, of Lancashire with the cotton industry, of Macclesfield with the manufacture of silk, and of Yorkshire with the making of woollens—all outstanding examples of the growth and development of industries in particular districts. It is the business of the economist to determine and to classify the reasons for this localisation, and the matter is suitably considered in the present chapter, inasmuch as the situation of an industry is necessarily an element in its organisation, and also because it devolves upon the entrepreneur under modern conditions to fix the site of the factory. He must consider the relative advantages of such diverse factors as climate; geographical and physical situation; nearness to sources of labour, raw materials and fuel; proximity of ports, markets, railways and canals; the cost of the site and the available space for extensions. Account of these and of many other factors has to be taken before a site will be finally determined; but, generally speaking, entrepreneurs engaged in the same industry will be influenced by similar considerations, and will tend to gravitate to the same areas, just as in earlier times craftsmen following the same trade drifted into particular localities and left their mark for posterity in such well-known names as Bread Street and Ironmonger Lane. The localisation of industry is, in fact, the extension to the whole country and to the world at large of the principle of the division of labour. Each district tends to devote itself to the production of that commodity or commodities in which it has the greatest relative advantages. The maximising of the efficiency of all the productive units is at the bottom of it all. Lancashire makes cotton goods, not because she could not make boots or hats equally well, but because her advantages are such that she can

turn out cotton goods of better quality and of greater quantity per worker than any other locality. It pays Lancashire to concentrate on cotton production just as it pays a bootmaker to make boots only, and not try to make hats, gloves and bicycles as well.

Causes of the Localisation of Industries.

The reasons which have determined the birth of industries in certain districts are naturally as numerous and diverse as the industries themselves, but the localisation of the great industries of to-day is generally attributable to one or two marked influences, such as nearness to raw materials or to sources of power. Frequently, several very important factors have been at work, and in such cases the hold of the district upon the industry is considerably strengthened. Among the principal causes of the localisation of industry are those discussed below.

Nearness to Materials.—This is one of the most important and one of the oldest reasons. The extractive industries, such as mining, quarrying, lumbering and fishing, are necessarily localised in the neighbourhood of their supplies. Industries utilising bulky materials, such as coal and iron, develop near the sources of supply so as to avoid transport costs. Metallic in- industries spring up around the mines or as near as possible to fuel supplies. Iron-smelting in Britain was carried on originally near the forests, whence wood and charcoal were obtained as fuel. Now this industry is localised chiefly on the coalfields. Staffordshire clay first gave rise to her potteries; her extensive coal areas caused the industry to persist when the finer materials gave out. Wool from local sheep first started Yorkshire's woollen industries; cheap coal maintained and materially assisted their development.

Nearness to Power.—As the mills and factories of former days were set up on the banks of swift-flowing rivers, so are the hydro-electric works of to-day similarly attracted. And while the vast electric generating stations now being established in this and other countries tend on the one hand to attract to their neighbourhood industries which formerly prospered only in close proximity to water-power or to coal supplies, they tend on the other hand to reduce in importance the factor of nearness to power. Coal has already been referred to: it may be regarded both as a raw material and as a source of power.

Physical and Climatic Conditions.—Physical conditions naturally determine the distribution of raw materials and of sources of power, but under this heading may be grouped such attractions as advantageous situation relative to ports, rivers and other areas; natural facilities for transport; and climatic environment specially suited to a particular industry. The industries centralised in London owe much to its position relative

to Europe and England. Lancashire's damp climate is specially suited to cotton spinning, enabling finer yarns to be spun there than in other localities.

NEARNESS TO MARKETS.—In earlier times industries tended to congregate around the royal court or around the seat of fashion. The existence of a market was in itself sufficient for the birth and growth of such industries as catered for personal tastes and requirements. To-day industries are similarly attracted to the neighbourhood of large towns. The multifarious industries of London are famous both for their infinite variety and remarkable success.

Again, industries producing perishable commodities, e.g., milk, or bulky commodities which will not bear the cost of transport, e.g., bricks and bread, are generally found in close proximity to their markets and are in consequence comparatively widely distributed. Industries and services conducted by local authorities are also essentially localised, while all professional occupations, such as those of the doctor, lawyer, actor and accountant, are necessarily carried on in immediate proximity to the market.

LOCALISED LABOUR.—In past times political and religious causes have resulted in the settlement in certain districts of groups of skilled artisans from other districts or countries. These artisans have continued and developed their home pursuits, and a localised industry has resulted which tends to persist in face of lessening advantages : it is said to be blessed with the " momentum of an early start ". Numerous examples are to be found in British history, particularly the establishment of the silk industry at Coventry and Macclesfield by Huguenot silk weavers, who took sanctuary in Britain upon the Revocation of the Edict of Nantes in 1685.

Further, the centralisation of an industry in one area results in the development of a fund of specialised labour, in itself a powerful attraction for future industries, and sufficiently important in some cases to overcome deficiencies of materials. Thus textile industries have been developed in the neighbourhood of great engineering centres, solely because of the local supply of the labour of women and children.

The Persistence of Localisation.

The last paragraph brings home to us the fact that the localisation of industry in itself is one of the strongest factors inducing further localisation : we cannot imagine a cotton mill being set up anywhere else in England other than in Lancashire, or a woollen factory in any district other than Yorkshire. Among the reasons for this are, first, the fact which we have already indicated, that *labour and capital in the district become specialised* in the industry. Local skill in particular trades becomes a

matter of family pride and tradition ; the best cutlers in Britain are obtainable around Sheffield, the most skilled silk weavers around Macclesfield, and the handiest potters in the famed Black Country. Capital also becomes specially adapted to industry. Railway sidings and canal wharves are equipped with gear which is specially made for handling the particular type of raw material and finished product, such as derricks for lifting cotton bales, huge cranes for handling engineering products and suction plant for unloading grain and oil.

Secondly, *subsidiary industries of all kinds develop in the locality*, bent on supplying the necessary implements and machinery utilised by the main industry. In Lancashire are to be found some of the greatest and most skilled cotton machine engineers in the world. Not only does this mean that the factories can obtain the most up-to-date machinery close at hand, but that they can rely on first-class assistance for repairs at a moment's notice.

The cotton industry of Lancashire includes not only spinning and weaving and the manufacture of mill machinery, but also such ancillary industries as dyeing, calico printing, schreinering and other " finishing " trades. Thousands of people are also employed in the marketing and warehousing sections of the industry.

Thirdly, we note *the specialisation of means of transport and communication*, both for the acquisition of materials and for marketing the product. An outstanding instance is the Manchester Ship Canal, built to enable the cotton ships from the United States and other countries to proceed right inland to the heart of the cotton manufacturing area, there to discharge their cargoes of raw material and load up with finished products for carriage overseas. This adaptation of the means of communication is strictly only a form of the specialisation of capital, which is, however, manifested more clearly in the specialised facilities for the loading and unloading of particular products.

A fourth factor of importance is *the establishment of technical journals and of technical institutes*—in many cases financially supported by the industry—the primary function of which is to discuss and give publicity to the technical problems of the industry, to initiate and foster investigation and research concerning those problems, and to direct the thought of the neighbourhood to factors which intimately concern its progress and prosperity.

Finally, may be mentioned the influence of *industrial inertia*, which results in an industry tending to remain in a district although the original reasons for the localisation have disappeared, or because they have become unimportant under modern conditions when " transport systems eliminate space ". Then we have a species of industrial immobility, due largely to the local specialisation of labour and capital, and to the established reputation which the district bears. Thus we may find that an industry refuses to move after raw material which is now no

longer obtainable locally, but remains in its locality and draws its requirements from far distant sources. A well-known example is that of the Staffordshire potteries. Their local supplies of clay have been long since exhausted, and the raw material is now brought by rail, by sea and canal from many sources at home and abroad.

This persistence is sometimes promoted by local and national *protection.* The restrictions on trade imposed by the gilds and corporations in earlier days, and by the government itself in modern times, have caused an industry to persist in a locality or in a country long after its initial advantages have disappeared, and when, but for such protection, it would be moved elsewhere. Not only this, but such protection has sometimes led to the actual *establishment* of an industry in a district even though local conditions were not as advantageous as in other places. Nevertheless such artificial stimuli do not long maintain their hold in the face of economic forces.

The Benefits and Disadvantages of the Localisation of Industries.

Certain advantages and disadvantages naturally attend the concentration of industries in particular localities. These are in many cases similar to the benefits and disadvantages, already given, which arise from the extension of the principle of division of labour. We may note, however, the advantages of (*a*) a very high degree of localised skill in the particular industry; (*b*) the development and invention of highly specialised machinery; and (*c*) the promotion and growth of subsidiary trades. Against these may be set the disadvantages of (*a*) the dependence of a district on one great industry, slackness in which causes widespread unemployment and hardship, and the migration of which to more suitable surroundings may result in great distress; (*b*) the development of certain classes only of skill and labour, with a consequent narrowing of outlets for a growing population. This defect is mitigated by the growth of subsidiary industries and also by the birth of industries which are specially adapted to absorb labour of different classes; as, for example, the establishment in great engineering centres of textile industries employing women and children.

The Decentralisation of Industries.

In recent years strong forces have come into being which tend on the one hand to check the tendency towards centralisation and, on the other, to encourage the converse process, the *decentralisation of industry.* Industries which once sought the town are now going farther afield into the country. In England this movement has assumed such importance that a report of the Ministry of Labour has directed attention to the " tendency

for industrial development to move from the North towards the Midlands and the South". The industrial activity which forsook the valleys of Southern England for the coalfields of the North may yet be seen again in its former home.

Three important forces are at work in this connection. The first of these we have already mentioned—the growing use of electricity, that mysterious energy which can be so cheaply and easily carried over long distances that it enables industries to shake off the shackles which have hitherto bound them to the coalfields and betake themselves to the "wide open spaces". In the past, those countries with the best coal, as regards quantity and quality, have acquired industrial eminence, while the important industries within these countries have had to move to the coalfields in search of power and raw material. The sources of electricity, coal, water and oil, however, are widely distributed, and while the generating plant may be centralised in proximity to power, the energy itself may be distributed over a considerable area. Its use will thus permit greater industrial development in countries which possess little or no coal but adequate water power, while at the same time it will enable factories to flourish in clean, wholesome surroundings.

Improvement in transport we have already noticed as one of the factors favouring the localisation of industry. Strangely enough, this factor tends also to exercise the reverse effect. Reduced transport charges or quicker transit, or both, tend to lower the disadvantage of inland towns as compared with coastal towns, and of industries far from raw materials or markets as compared with industries working in closer proximity. Hence the tendency of inland industries to migrate to coastal districts is arrested, while the manufacture of bulky commodities in inland towns is encouraged, e.g., the manufacture of furniture and doors in the forests of Canada and Scandinavia.

Decentralisation is also encouraged by the constant increase in urban rents. The use of electricity and improvements in transport strengthen the tendency of industry to forsake the areas of high building and rateable values for country districts where greater room to expand may be obtained at lower cost. Urban sites thus tend to be left for warehouses and show-rooms which must be accessible to clients, and which must be sufficiently attractive to withstand criticism both from chance visitors and from customers.

The greatest difficulty in the way of decentralisation is clearly that of obtaining an adequate supply of suitable labour. Nowadays, when unemployment is so prevalent, it is not difficult to attract an adequate labour force outside the towns, but it is patent that the task of securing labour skill in a certain branch of industry will always be a deterrent to the movement of concerns engaged in that industry from the towns and neighbourhoods in which such labour is to be found.

CHAPTER 11

MODERN INDUSTRIAL ORGANISATION

We are now in a position to appreciate the leading characteristics and the many different forms of the productive organisation in a modern industrial community.

Attention has already been drawn to the importance of *the increasing specialisation of functions*, involved in the division of labour and in the departmentalisation of production in all its forms. In illustration, we may refer to the making of watches. Not only are different workers employed on different parts of the same watch, but the various types of watches are produced by independent groups of workers: some specialise on first-class lever watches, others on cheap luminous varieties, others on wristlet watches of endless kind, and so on.

The second feature of importance is *the intervention of the entrepreneur*, necessary to co-ordinate the numerous factors, and to utilise them to a high state of efficiency and productivity. The entrepreneur determines the plan and policy of the business, and undertakes the responsible operations necessary to set it in motion. His functions are distinct from those of labour on the one hand, and from those of the capitalist on the other, although in certain circumstances he may assume both of these functions.

The third characteristic, following as a natural corollary from the specialisation of functions, is *the localisation of industries*, which, as we have seen, implies the birth and development of industries in such districts as offer the greatest relative advantages.

Fourthly, we have *the concentration of industry*, which involves the utilisation in one organisation of capital and labour in large quantities, with the object of maximising their efficiency and obtaining the full advantages of increasing returns. Concentration results in the establishment of enormous industrial organisations under a supreme direction, and the great economies in labour, space and time which such agencies can achieve enable them to overcome the competition of smaller establishments, sometimes to such an extent as to obtain a monopolistic control of the market. This tendency of present-day industry to concentrate the maximum of productive power in one place is sometimes described as the *Law of Concentration*.

Closely allied to the concentration of industry is its *tendency*

to integration, which means the co-operation and co-ordination under one management of all the processes involved in the production of an article from the raw material to the final stage. The firm of Lever Brothers, Ltd., is a well-known example. This great organisation controls the extractive industries which furnish its supplies of oils and fats, much of the transport system which brings the raw materials to the manufacturing centres and takes away the products, and the manufacturing processes of all kinds, including those which yield products and by-products.

The utilisation and development of by-products is one of the marked characteristics of integration, which probably reaches its highest pitch in the food-packing industries of Chicago, wherein it is said, not an inch of a carcass is wasted, every part being utilised. "From the horns and hoofs are made various grades of glues, buttons, and hairpins, and they are made the basis for the manufacture of cyanide and chrome. The albumin in the blood is used to make an insoluble printers' ink. It is also used by tanners to finish leather, and by sugar-refiners to make possible the inviting whiteness of their product. Dried blood, bones, tankage, and the ground waste of hoof and horn scraps make a fertiliser rich in nitrogen which, when combined with acid phosphate, becomes the source by which otherwise infertile soil is made to bring forth the necessaries and luxuries of our tables. The wool from the packing-house sheep is made into fabrics to clothe us, but before it is given to the textile worker, the oil is extracted, making the non-shrinking basis of wool soap and also the essence of various soothing skin lotions and toilet preparations designed to beautify the users. If we are sick, our jaded appetite may be tempted to accept gelatine extracted from the bones of calves; if convalescent, our system may be induced to increase in strength by absorbing 'Soluble Beef', the predigested and concentrated substance of meat. The intestines of the animals are the casings for sausage which is made from meat otherwise unsaleable. The gun we carry on a hunting trip is hardened with bone carbon, the handle of the knife which we use to dress our game is from the packing house. If camp fare disagrees with our stomach, we can vary our diet with beef extract, and allay the pains of indigestion with pepsin and pancreatin. The baby starts out in life using a bone-capped nursing-bottle and teething ring. If in later years nature proves niggardly in her gift of hair, the switch on the end of the beef's tail will be offered to supply the deficiency. Collar buttons, pipe stems, and dice, brewers' isinglass, and brushes, soap and glycerine, washing powder, and sand paper are all products sent forth from the various departments of these great concerns. So minutely has the by-product feature been carried out that the glands of 100,000 sheep are carefully preserved and treated to produce one

pound of suprarenalin, a substance whose astringent qualities have proven invaluable in delicate surgical operations."[1]

Finally, reference must be made to the *principle of standardisation*, resulting in the production on an enormous scale of interchangeable parts, with a consequent great saving of cost to the manufacturers, and great economy to the consumer both in original price and in subsequent expenditure on repairs. Instances of standardisation are the adoption of a standard gauge for railway lines with its enormous saving of rolling stock, time, labour and expense ; and the production of the famous Ford car, with its low initial cost and its famed cheapness in respect of spare parts and renewals.

Since the War particularly, there has been a great drive towards standardisation and mass-production, especially in the engineering industry. The development has proved a mixed blessing. On the one hand it has made possible the production of vast quantities of machine-made goods at a low price ; on the other hand it has helped to make work monotonous and uninteresting and to destroy artistic skill and pride. To some extent, too, quantity of product has been secured at the expense of quality.

Conditions which Determine the Form of Organisation.

The foregoing characteristics exist in very different degrees in various communities. Only in one or two of the older countries, such as Britain and Germany, are they very definitely marked. We cannot expect to find such highly developed industrial organisations in new countries, such as Australia and Canada, as we do in Britain and Germany ; we know that specialisation and organisation are unlikely to become efficient in tropical and semi-tropical countries, where the climatic conditions do not favour hard work, and where the population is indolent and satisfied with nature's bountiful provision. Many other reasons account for differences in the productive organisation, the chief of which are summarised in the following paragraphs.

THE NATURAL RESOURCES AND ADVANTAGES.—Productive organisation is more likely to reach a high state of efficiency in a temperate country endowed with rich mineral resources and natural climatic advantages, than in a tropical or arctic region equally endowed so far as minerals are concerned. Similarly, one country with excellent harbour facilities has a better chance in the industrial struggle than another equally endowed, but with a difficult and straight seaboard.

THE NUMBER AND NATURE OF THE PEOPLE.—However rich the resources, they can neither be developed nor consumed unless

[1] J. C. Duncan, *Principles of Industrial Management*, page 67.

a sufficiently numerous population exists. The more numerous the people, the wider is the market, and consequently the more intricate and extensive the productive organisation. In this respect, we may compare the highly developed state of Britain and the *developing* state of Australia and Canada. Again, as we have already stated above, natural resources avail little to an indolent and satisfied people, but they will be developed to the fullest extent by a hard-working and ambitious community.

THE NATURE OF THE INDUSTRIES.—This is allied with the first factor, for industries depend largely upon natural resources, and industrial organisation is likely to be greater in a country with great mineral deposits than in a country with vast areas of fertile land and of valuable forests. The nature of the industry itself is, however, an important factor. The extractive industries do not lend themselves to such specialisation of functions as do manufacturing industries and transport occupations. One of the chief reasons for this is that in an extractive industry, such as farming, no amount of organisation and specialisation will enable man to outpace nature. The processes of agriculture follow each other in series; those of manufacture may very frequently be performed at the same time.

THE CHARACTER OF THE GOVERNMENT.—In the most advanced communities, the State assists production by providing means of transport and communication, constructing harbours and docks, maintaining efficient legislative and judicial machinery, and by disseminating information concerning home and foreign markets and sources of raw material. In less favoured countries, no such stimulus exists for development, and frequently governmental interference acts in quite a contrary direction by restricting enterprise and limiting organisation. Even in the most advanced states, the government may intervene to prohibit too great an integration of businesses; as, for example, in the United States, where the vast trusts have had to be declared illegal.

GENERAL CONDITIONS, such as those of security and safety from invasion, freedom from war and catastrophe, all of which promote the growth of capital and the extension of enterprise, and make possible and profitable the specialisation and organisation of industry on a large scale.

Conditions which Determine the Size of a Business.

The foregoing are the general conditions within a community which determine the extension of its productive organisations. But no two similar undertakings in the same area can be relied upon to develop at the same rate or to reach eventually the same size. The human element is possibly the greatest cause of the differences, but there are numerous other factors which may

intervene to prevent one firm winning its way to such an enviable position as that of its neighbour. As a general rule a business tends to grow continually, because, with each advance, production becomes more economical and all the advantages of large-scale enterprise are obtained.

It must be remembered, however, that this tendency does not operate over the whole field of industry, and that the small producer still holds his own in a definite, though more limited, sphere. A most cursory examination of the structure of different industries reveals the fact that in some the individual units are small, while in others the general tendency is towards large-scale enterprise, and one is led to inquire why, apart from any consideration of the general abilities of the entrepreneur and the amount of capital available, such differences in the size of the typical business unit should exist. Why, for example, should the average tailoring business be smaller than the average insurance business? Why should the typical business unit in agriculture be smaller than that in a manufacturing industry? How do we explain the existence side by side in the same industry of small and large concerns, both apparently successful? To the second question the obvious reply is that the average business will be smaller in extractive industries, in which the law of decreasing returns operates at an early stage, than in the constructive industries, which stand to gain most from the economies of large-scale production. It is not, however, quite so easy to dispose of the other queries.

In some respects large-scale enterprises are an inevitable result of present-day tendencies in industry and commerce; from another point of view they are correctly regarded as the cause of its vast development and remarkable efficiency. But although the concentration and integration of businesses are attended by great benefits, the advantages are by no means all on the side of the large organisation.

The principal characteristic of modern industry is the division of labour and the specialisation of functions; but, as Adam Smith pointed out many years ago, "the division of labour is limited *by the extent of the market*". Specialisation and large-scale organisation do not pay unless the producer is assured of a wide market and a steady demand. If demand is uncertain or fluctuating, dependent on the seasons, fashion or caprice, then the small producer gets his chance. His organisation is more easily adapted to changes and more fitted to supply exactly what each customer may require. In such circumstances it is both difficult and unwise to extend beyond certain safety limits.

Frequently, too, the demand for a certain product may be so limited as to make impossible its production on a large scale. An industry which caters for individual taste makes only a few articles of a given design; the speciality in itself is a reason for

enhanced value, so that standardised production is obviously impossible. For similar reasons the making of mechanical dies or patterns for large concerns may be left in the hands of small firms who specialise in such products. Thus we may say that the productive unit tends to be smaller at the end of the chain of production, where the individuality of the product or of the consumer has to be carefully considered. A multitude of small shops may supply society with its dresses and gowns, although the materials therefor are manufactured by a dozen large establishments.

In respect of some products, such as bricks, bread, gravel and sand, on which transport costs are relatively heavy, the market is restricted in a geographical sense. The producing establishments are widely distributed, and their size is limited by the extent of the local market, or at least by the range within which the products can be profitably transported to consumers.

A second important factor affecting the size of a business is the *nature of the product or service.* The technical nature of industries such as shipbuilding and railways makes it inevitable that the business unit be much larger and the plant controlled much more extensive than is the case, for example, with engineering repair shops or job printing works. Some industries are incapable of great division owing to technical difficulties; their products cannot be standardised in whole or in part. First-class razors cannot be made wholly by machinery; they are the product of a skilled craftsman whose abilities in that direction are greater than those of any machine.

In various directions the small-scale producer is enabled to hold his own by the very existence of large-scale production, with its standardisation of products and its localisation of industrial processes. In most large industrial centres we find small men who specialise either in supplying a large organisation with a part of its semi-manufactured material, or in the further development of the product of a large-scale industry. In Birmingham, for example, are to be found small motor-cycle producers, whose work consists solely in the assembling of machines from various parts made by large concerns employing mass production methods.

The problem of organisation is a further reason for the existence and success of the small concern. It is axiomatic that large capitalistic undertakings experience great difficulty in obtaining first-class organisers to fill new posts in their establishments or to succeed to others which have been vacated. One reason for this is the high degree of ability which is required; but another is that the capable man often prefers to control a small organisation of his own rather than accept a salaried post at the head of an undertaking owned by others.

In other directions also are circumstances which tend to the

retention of the small organiser. He is assisted on all sides through the dissemination of scientific and technical knowledge by business and technical publications, by Government departments, by Chambers of Commerce, and by specialist information bureaux. Thus is the advantage of the large-scale producer considerably lessened, and in this way is the small man enabled to keep pace with modern requirements and present-day methods of production.

Hence we find in many branches of activity small establishments competing successfully with larger organisations in the same line, and apparently working at least as efficiently. The smaller establishment may offset its technical disadvantages by greater administrative efficiency, or it may survive by reason of some specific advantage which it enjoys, as, for example, a geographical advantage in relation to a particular market or in proximity to supplies of essential raw materials.

Nevertheless, the tendency in manufacturing and transport industries generally is to eliminate the small producer; even the retail shopkeeper is finding it increasingly difficult to maintain his foothold in the face of the competition of large departmental stores and of multiple shops.

The Advantages of Production on a Large Scale.

The advantages of production on a large scale may be classified as *External* and *Internal* Economies. External economies are those which arise from the Localisation of Industries, and are at the disposal of all firms in the same industry. They are dealt with in the previous chapter.

Internal Economies are economies in the administrative, technical and commercial organisation of a business, and are peculiar to individual firms. The most important are summarised below.

The Economies and Benefits of Division of Labour.—These have already been dealt with in Chapter 8.

The Benefits and Advantages of Increasing Returns.—Up to a certain point, the larger the organisation and the wider the application of machinery, the greater the scope for man's abilities and enterprise,—the greater the returns obtained from successive applications of capital and labour. Fixed capital in the form of buildings, machinery and plant is more remunerative or economical when its cost is distributed over a larger output. One factory, *twice* as large and costly as another, may turn out *three* or *four* times as much work in the same period. Rent, rates and taxes, depreciation of plant and machinery, advertising costs, transport expenses, insurance premiums, and other overhead charges are more easily borne when they are distributed over a large number of units. For these reasons, it is sometimes stated that

"Economy of fixed capital is one of the greatest advantages of production on a large scale".

The Economies of Buying and Selling in Large Quantities.—Generally speaking, the greater the quantity of goods purchased, the more advantageous are the terms to the buyer; the larger the quantity of goods sold, the lower the selling expenses per unit which must be paid by the seller out of his gross profits.

The Economies of Material and the Utilisation of By-products.—The larger the concern the less the waste of material, is a statement which is almost universally true. Not only is waste of the raw material of a large organisation carefully checked, but attempts are made to use every part of that raw material and every by-product which results from the manufacture. Organisation has reached a remarkable pitch of efficiency in the meat packing industries of the Middle West of the U.S.A., wherein it is said that of the live animals which enter the vast slaughter-houses, scarcely a hair is thrown away (see *ante*, page 139).

Specialised Machinery and Skill can be Commanded.—Only the great business of to-day can afford to adopt the huge and highly efficient machines which contribute so essentially to productiveness. Mammoth steam-hammers and overhead cranes, electric and hydraulic riveting machines, floating docks and similar devices can be employed only by firms of enormous resources and output. The great assembly belts of the Ford Motor Works, on which the cars travel round from process to process, would be useless and cumbrous in a small organisation. Such machinery necessarily attracts highly specialised skill, and in obtaining such skill, the large organisation can afford to outbid its smaller rivals.

The Larger Concern is not so affected by Market Fluctuations.—Although a large organisation cannot easily accommodate itself to changes in demand and to fluctuations in the market, it is nevertheless in a better position than its smaller competitors to adjust its capacity and organisation; it has greater facilities for varying its products, and can afford to lay in stocks of materials which make it independent of changes in supply. Apart from these advantages, the large organisation generally has at its disposal men of the widest experience and judgment, whose abilities and facilities enable them to form a better appreciation of market conditions than is possible to the small concern. The careful estimation of the future of the market and an appreciation of probable future developments in the industry tend to a continuity of production and an absence of periods of inactivity due to over-production and the faulty anticipation of demand. "The head of a large business can reserve all his strength for the broadest and most fundamental problems of his trade . . . he need not trouble himself much about details. He can keep his

mind fresh and clear for thinking out the most difficult and vital problems of his business; for studying the broader movements of the markets, the yet undeveloped results of current events at home and abroad; and for contriving how to improve the organisation of the internal and external relations of his business ".[1]

Greater Expense can be incurred on Publicity and Selling Organisation.—The advertising appropriations of large organisations reach almost stupendous figures, while their sales are promoted by numerous travellers and sales agencies in every part of the world. Small-scale enterprise does not provide a sufficient margin to justify such expenditure, nor is there usually sufficient capital at its disposal to make possible such outlay.

Greater Expense can be incurred on Experiment and Research.—It is well known that such firms as Lever Bros., Ltd., spend large sums on technical experiments and laboratory research. Thus they are enabled to improve their processes, utilise new raw materials, and take every advantage of scientific progress in so far as it affects their own organisation. Large enterprises are extending such methods in other directions. Scientific management, as it is called, aims at determining the best methods of doing certain jobs and of producing certain results; it carefully analyses the movements of the worker in relation to the raw material and the tools at his disposal, and also takes into account such matters as the psychology of the employees. In America particularly, large concerns are obtaining excellent results from their outlay on such investigations.

The Advantages of Production on a Small Scale.

Most of the advantages of large-scale organisation are attributable to man's increased command over nature and time through the utilisation of machinery in production. On the other hand, the advantages of small-scale production are traceable to the greater personal element which exists in the business. Small-scale enterprises obtain greater importance as the necessity increases for considering the individual consumer and catering for his personal tastes and desires. So long as individual tastes differ and so long as persons remain anxious to have things different from those of other people, so long will there be a demand for the products and services of the small organiser. The chief advantages of the small scale enterprise are :—

Greater Personal Supervision and Interest in the Business.—The reputation and success of the small organiser are closely bound up with that of his product. He works long and late to maintain his originality and individuality, and by personal supervision of his business and interest in his work-people he contributes to its success. There is no shirking of duty and scamping

[1] Marshall, *Economics of Industry*, p. 159.

of work when the employer is constantly on the watch, busily superintending his men and his machines. Apart from the moral effects of such personal supervision, it is attended also by a considerable saving of expense on management and supervision.

Greater Attention to Detail.—This follows naturally from the personal supervision of the employer. Frequently his product sells because it possesses a finer finish and a more individual appearance than the standardised product of a large organisation. The attention to detail in itself is sufficient to attract a large body of consumers, and apart from such advantages, it frequently results in greater economies of production and in less waste of effort and of raw material.

Personal Contact between Employer and Employed, and fewer Labour Troubles.—In a vast organisation the principal is merely a name to the workpeople. He is merely an unseen force whose word is law. In a small concern the " boss " is available to sympathise and to encourage, to adjust differences, to consider grievances, to praise energy and ability. The presence and spirit of the master are sadly missed in industry to-day ; consequently, disputes tend to increase and production to suffer from constant interruption by strikes and lockouts.

The Limits to Expansion of a Business.

In most types of industrial enterprise the advantages appear to be on the side of the larger concern. But even if it can be assumed that the conditions are all in favour of expansion, there are obviously limits beyond which further growth is uneconomical.

This limit to the growth of a concern arises chiefly from the difficulty of efficient management ; ultimately expansion is limited by the impossibility of one man controlling too great a machine : it becomes at last cumbersome and unwieldy ; its efficiency decreases as the personal supervision of its many parts by the entrepreneur reaches a minimum ; expenses tend continually to increase and economies disappear when the master is more often absent than present. Eventually, the average cost of production per unit of the product approximates to the price received on its sale, and at such a stage expansion must cease or production be carried on at a loss. This *position of equilibrium* marks the point at which concentration and integration are no longer profitable, and at which we find a tendency to develop independent productive organisations under associated entrepreneurs, each of whom is responsible for his own unit to a supreme board of control.

Rationalisation.

Rationalisation is the technical term used to indicate the process of reconstruction which has as its object industrial efficiency and scientific organisation in all branches of industry. The

problems of rationalisation resolve themselves into three groups: (*a*) Amalgamation ; (*b*) Modernisation ; and (*c*) Management.

Amalgamation.—Though rationalisation is not identical with trustification and combination, it is now recognised that to ensure the most efficient administration of industry, large-scale organisation is inevitable. This entails the amalgamation of kindred businesses in the same industry, and, in some cases, a degree of vertical combination, the elimination of the inefficient units and the reduction of overhead costs through the economies of large-scale enterprise.

Modernisation.—Obsolete plant and inefficient methods must be scrapped, and capital must be provided to erect the best and most completely equipped works and to implement the most efficient marketing schemes. The latter implies greater attention to scientific research and to the preparation of business statistics. The provision of capital for such reorganisation has given rise to difficult problems and a wealth of controversy between our banks and our industrial leaders.

Management. — Such thoroughgoing reorganisation can be effected only by men of ability ; men who are not afraid to eradicate waste and inefficiency, and who realise to the full the meaning of industrial management in its most complex forms. Such men are difficult to find, and so the problem of management of huge rationalised undertakings is a very real one, setting limits, such as those noted above, to the continued extension of the process.

It is not to be expected that such reorganisation could be effected without arousing a certain amount of hostility from both workers and employers. The owners of inefficient firms rarely acknowledge their weakness and are usually opposed to their elimination. Again, rationalisation, like the introduction of machinery, adds to unemployment by displacing workers, particularly those employed by inefficient units. This is an aspect which in this country calls for most serious consideration, both by the Government and the Trades Unions, and the problem is likely to increase with the growing abuse of the "dole."

THE TYPES OF MODERN INDUSTRIAL ORGANISATION

In the constructive and manufacturing industries the tendency is for the small or individual producer to disappear ; he is forced out of business by the competition of the large organisation. On the other hand, the small producer can adequately hold his own in agriculture and other extractive industries where the law of diminishing returns tends to operate and the nature of the industry itself does not permit of great specialisation and organisation of functions. Thus we have under modern conditions quite elementary types of producing agencies side by side with enormous organisations of vast power and great resources.

In a previous chapter we have described the various types of organisation engaged in agriculture. The following classification relates principally to the manufacturing and constructive side of industry, and indicates the evolution of the productive unit in manufacture.

The Individual Producer.

Under this heading is included the purely personal business, in which an individual produces independently with the aid of his own land, labour and capital; or when we have one man directing and bearing the risk of a business in which he owns or hires the capital and land, and employs such labour as he requires. The best example is that of the peasant proprietor or tenant of land, who cultivates his holding for his own personal support and gain.

The advantage of individual enterprise is the greater personal interest in the business, and a corresponding care for efficiency and economy. The law of the survival of the fittest tends also to the elimination of the weaker and less capable producer, with beneficial effects generally. The private business is necessarily limited in extent and is best suited to a local market where demand is regular and competition is not excessive. On the other hand, it has great advantages over the company in businesses where taste and fashion are paramount, when the whims of customers are a first consideration, and where quick decision and intuitive individual judgment are absolutely necessary. These factors explain the survival of the private business in fashionable shopping centres.

The Partnership.

This arrangement is the simplest and oldest method of extending a business and at the same time relieving the producer of some of the burden. It is the natural method of meeting competition and of keeping pace with progress and development. It is the normal means whereby an employer takes advantage of the skill and energy of a capable employee, retaining him in the business rather than allowing him to go elsewhere. The usual arrangement is for land, capital and labour to be contributed in agreed proportions, and for the management and profits of the undertaking to be shared in agreed ways. Variations occur when one partner provides all or most of the capital and others contribute labour, with or without some of the capital.

A partnership in which the principals work in harmony is extremely virile, mobile, elastic and efficient. It provides for the introduction of new blood and for a union of interest and responsibility. It is less cumbrous than the larger types of organisation, and can adapt itself more easily to different varieties of production and of demand. The centralised control of the

partnership makes it at once more enterprising and more adapted to businesses in which risk has to be taken but wherein large profits are not unlikely.

The rights and liabilities of partners are strictly regulated by law, and the requirement that ordinary partners are liable to the full extent of their private fortune is a distinct safeguard and a deterrent to speculative risks. In some respects the absence of limited liability is a disadvantage ; it tends to restrict enterprise and is one of the reasons for the growth of the joint-stock company. Another disadvantage of the partnership is the absence of continuity ; it comes to an end on the death, bankruptcy, retirement or lunacy of one partner ; its functions must lapse and its liabilities be discharged unless they are taken over by a new firm.

Joint-Stock Enterprise.

The joint-stock company is by far the most important form of modern productive organisation and tends continually to increase in importance, particularly in the manufacturing, mining and transport industries. It is almost unknown in agricultural occupations. The principle of joint-stock enterprise is that the capital of the undertaking shall be contributed in large or small amounts by numbers of shareholders or members, who bear much of the risk of the business but commit its management to an elected board of directors, whose functions are delegated to paid managers and organisers. It is really an extension of the partnership system, with the necessary limitation in the number of those who manage the concern. The vast capitals required for the great enterprises of to-day obviously imply the association of numbers of producers, but all cannot take part in the direction.

In the early stages of joint-stock enterprise the liability of members was *unlimited* ; i.e., they were jointly and severally liable, like partners, to the full extent of their individual properties. The limitation of this liability by various Acts of Parliament during the latter half of the last century marked a great step forward. This limitation and the fact that shares in such companies are quickly and freely transferable, owing to the wonderful mechanism of the stock exchanges, enable rich and poor alike to contribute to the general fund of such concerns, and thus take part in production without experiencing its troubles and responsibilities, and with a limited risk of loss.

Such arrangements have been made necessary by the never satisfied demands of industry for capital. They enable investors in every class of society to employ their wealth in production, no matter how small or great that wealth may be, or how scattered and remote the whereabouts of its owners. The joint-stock principle is the means by which the entrepreneur who requires

capital is brought into touch with the capitalist anxious to utilise his wealth to the best advantage. The mail is most frequently the only connecting link between the two: one way it takes representative capital in the form of a cheque; the other way it carries interest and profits in the shape of interest warrants and dividend warrants.

Joint-stock enterprise is actually the *organisation* of the supply of capital in industry: an organisation which has developed constantly in efficiency and utility, until to-day there are over 100,000 joint-stock companies in this country, controlling quite a large proportion of its productive undertakings.

THE ADVANTAGES OF JOINT-STOCK ORGANISATION. — In addition to the general advantages of large-scale production, such as have been mentioned above, there are a number of advantages of joint-stock organisation.

First, *larger capital can be controlled* under one management than could otherwise be possible, and the extension of capital is an easy matter to the successful concern. Small amounts of capital in the hands of individual investors are useless for large-scale enterprise, but the joint-stock company permits the association of such capital under one control. As a result, the *risk of loss is spread* over a large number of investors and throughout many grades of society. Hardship on a few investors or on one class is thus minimised. From the point of view of the large capitalist, also, the joint-stock system is an advantage, inasmuch as he is enabled to distribute his capital over many organisations and in various types of holdings, and thus to spread his risk of loss. Moreover, the limitation of liability and the transferability of shares *induces investment*: the "small" man gets an opportunity of taking part in production and of benefiting from progress, whilst at the same time he can get his capital back whenever he wants it.

Secondly, the *abilities of the capable entrepreneur would be lost* to the community if he could not obtain such capital as was necessary to give them scope. Large capital makes possible the growth in the size of the business, the utilisation of machinery, expert knowledge and business ability, and the specialisation of functions, all of which increase production and enhance its efficiency, making possible the performance of large and continuous work. And the separation of capitalist and entrepreneur is attended by great advantages; the former is not necessarily capable, whilst the latter is hampered if his own resources are limited.

The third advantage is that the *limited company is a legal entity with perpetual succession*; i.e., it is *continuous*, and may outlive many generations of private producers. Hence, the organisation is specially suitable for enterprises in which a long period must elapse before profits can be made. Such businesses would scarcely attract an individual producer, but are subscribed

to by the investor who is willing to wait some time in the expectation of a high reward.

Finally, the publicity and legal control of joint-stock arrangements are beneficial, particularly in the cases of banking and public utility services. Policy has to be justified and explained in a public organisation, the actions and reports of which are frequently subjected to searching criticism.

THE DISADVANTAGES OF JOINT-STOCK ENTERPRISE are largely those which concern all large-scale production. One or two defects are, however, peculiar to this type of organisation. In the first place may be mentioned its liability to get into incapable hands, chiefly because of the facility with which its arrangements to obtain capital may be exploited by unscrupulous promoters. "Long firm" frauds and the victimising of unsuspecting investors by glowing prospectuses are notorious, although the legal machinery tends to limit such operations. Apart from these factors, it is frequently difficult to appraise the qualifications of directors and managers whose names appear on prospectuses: the investor is largely in the dark; paper qualifications do not by any means signify practical ability or honesty.

Secondly, there is less individual initiative and responsibility. The salaried manager is subject to the control of the directors, so that his enterprise may be limited and his judgment restricted. The individual producer acts quickly and alone; the joint-stock company moves ponderously and only after the agreement of diverse interests. It is always liable to be hampered by divided counsels and an absence of unanimity.

The absence of responsibility of the capitalist for work done with his wealth is frequently a source of evil. Those who supply funds for productive purposes are often unaware of the sweating, of the unsatisfactory conditions, and of the exploitation of women, children and natives which may arise through the utilisation of their capital. Apart from such matters the investors have practically no control over the use to which their savings are put: it may be wasted or applied unproductively, but there is little or no remedy. "Absentee capitalism" or the "depersonalisation of capital" is thus productive of many evils.

Finally, it must be noted that the joint-stock company, with its necessity for providing profits for a large body of shareholders and for satisfying different interests, is not as well suited as the private firm or partnership to pioneer enterprises or to other highly speculative businesses, such as those which minister to quickly changing fashion and to widely fluctuating demand. It is best adapted to take over a successful business with markets already developed; for a business wherein the work is largely of a routine nature and demands no great forethought, enterprise and marketing skill; and for those, such as the cotton industry, wherein many of the risks are borne by specialised

dealers in "futures", etc. In short, the joint-stock enterprise is best suited to those organisations wherein the powers and duties of management and control can be entrusted to paid organisers and superintendents.

Monopolistic Organisations.

Monopoly is defined as the sole power to deal in anything, or the possession of a licence to trade exclusively in a certain commodity. The Government in this country has the monopoly of the postal services: no one else can legally undertake to accept letters for transmission and delivery. In most of the smaller towns one gas company has the sole right to make and supply gas to the locality. The former is an example of monopolistic control which results largely from the vast power of an organisation: none but the Post Office could deliver a letter from Aberdeen to Plymouth at a cost of three halfpence. The monopoly of a gas company is due to the nature of the service rendered: it would not do to have half a dozen companies digging up the roads and generally inconveniencing the public.

Monopolistic organisations of these and similar kinds are a marked feature of modern industrial conditions. Such organisations may exist in a great variety of forms: they may cover only a small village or extend to the length and breadth of the community; they may be permanent or temporary, the result of carefully arranged and sometimes exacting agreement, or merely of informal arrangements between a group of producers or dealers to observe a certain price list, or to conform with certain conditions of sale. The one common factor is the attempt to restrict or to eliminate competition.

The Classification of Monopolies.

Various methods of classifying monopolies have been adopted, but the following classification by Professor S. J. Chapman may be recommended for its simplicity:—

1. NATURAL MONOPOLIES, which arise because of limited supplies of raw material; e.g., Britain's monopoly of first-class anthracite and South Africa's almost complete monopoly of diamonds.

2. SOCIAL MONOPOLIES, which are due to the peculiar properties of some businesses, making it socially impossible or uneconomical for more than one concern to undertake a certain business or provide a certain service within a given area. Examples are gas, water and electric light companies; canals and railways; docks and harbours. The obvious disadvantages of having more than one gas company in a small town, or more than one railway company operating

between two small neighbouring places, result in monopolies of this kind being undertaken or rigidly controlled by local authorities or by the State.

3. LEGAL MONOPOLIES, OR GENERAL WELFARE MONOPOLIES, are those which are conferred or protected by law, such as patents, trade-marks and copyright, which convey to specific persons the sole rights to use certain marks or to sell certain articles. Legal protection promotes the production of commodities which contribute to the general welfare. The same object underlies monopolies granted by the State in order to regulate consumption, e.g., of liquor, or to provide revenue, as in the case of a fiscal monopoly granted to permit the import of specified products.

4. VOLUNTARY MONOPOLIES, which arise chiefly from combinations between producers with the object of eliminating competition, as, for example, the trust and kartell considered below ; or those which result from the absorption or elimination of weaker producers by more powerful organisations. The latter type is, of course, voluntary on one side only : the absorbed or eliminated producers are not generally desirous of going out of business.

Vertical and Horizontal Combinations.

A *vertical* combination is one which links up all the stages of production from the raw material to the finished product. These are rarely monopolies, but sometimes, as in the case of the well-known firm of Lever Brothers, Ltd., they hold a monopolistic position. Other examples of vertical combinations in England are Dorman Long-Bolckow Vaughan, an engineering combine which also controls coal and iron supplies, and Bovril, Ltd., which owns vast cattle ranches in Argentina and Australia and markets its finished products as well.

A *horizontal* combination is an amalgamation or association of firms engaged in the same stage of production. The usual object of horizontal combinations is to check cut-throat competition or to force up prices. Examples of these in England are the Fine Cotton Spinners' Association, the Imperial Tobacco Company, and the Bradford Dyers' Association.

The Trust and the Kartell.

For present purposes the most important type is that of the voluntary monopoly, which results from the voluntary combination between several producers hitherto competing one against the other. The continuous progress of modern industry made even the joint-stock company inadequate, and just as individual producers were forced by competition to associate into partnership and later into joint-stock organisations, so have limited companies themselves been compelled by similar causes to

combine or amalgamate. Such associations are found in several forms and under different names, of which the *Trust* and *Kartell* are the most representative and important.

Both are the result of competition. As joint-stock enterprise developed, so were the benefits of large-scale production realised and so was output increased to vast dimensions. The necessity for retaining and extending markets led to the constant cutting of prices, with the consequent elimination of the weaker concerns who either disappeared from the field or were absorbed by the stronger enterprises. The concentration of production in the hands of a few great concerns with vast resources naturally resulted in a destructive competition for raw materials and for markets. Only by some form of unification of interests could eventual ruin be avoided. Safety was found in the formation of great monopolistic associations. The process has been most marked in America and in Germany, although it is rapidly extending in our own country. In America and Britain these combinations are known as *trusts*"; in Germany they are described as "*kartells*".

A TRUST is formed as a result mainly of horizontal combination, when a number of firms in the same business amalgamate and transfer their individual interests to a board of trustees, which controls the policy of the whole organisation. In some cases, however, a trust controls various stages of production and thus represents both horizontal and vertical combination. The term is now frequently used to mean any giant firm or combination of firms in which the whole or the greater part of the capital employed is under the direction of an individual or a board of directors.

THE KARTELL is a less binding association of the horizontal type; it is a combination or federation of several firms in the same business with the object of adopting a common policy regarding the output of commodities or the prices charged therefor; it aims at apportioning either the marketing area or the whole output among the constituent members, which divide profits or losses on an agreed basis.

The trust is generally the more stable of the two forms; in it the individuality of the combining firms is merged, although by the retention of trade-marks, and even of the original names of the combining firms, a pretence of individuality and even of competition is kept up. In the kartell, on the other hand, the constituent members retain their own organisation and control, and are bound only by agreement to limit their output or their sales area, or to sell at fixed prices determined by a central sales agency. In certain cases where a kartell is formed for a specific temporary purpose, it ceases to function when the object for which it was formed has been accomplished. Amalgamations and combinations between the constituent firms are, however, the almost inevitable result of kartell organisation.

The development of the two distinct types of combination is due largely to the difference in the common law of America and Germany. The kartell is, in effect, an agreement to restrict trade, which is illegal in America, but legal in Germany. Thus, whilst in the latter country the members can legally compel their associates to keep faith, an amalgamation of more binding and permanent effect is necessary in the United States.

Although the origin of the trust and of the kartell is largely traceable to the results of cut-throat competition, the desire to obtain monopolistic control of production and of the market by regulating output and discriminating prices is also a determining factor, more particularly in the case of the trust. The formation of a trust is also considerably influenced by the aim of obtaining as great an advantage as possible from large-scale organisation. The Standard Oil Company, the first and most famous of the trusts, aimed at eliminating competition among American oil firms, and also at controlling the output and the market price of the product. The famous example of the kartell is the great Westphalian Coal Syndicate, which controls a large part of the German coal industry, regulating the output of each mine and fixing the price at which the product sells in various areas.

THE ADVANTAGES OF TRUSTS are largely those of large-scale enterprise, but include also :—

1. *Economy of Management,* both of production and distribution, owing to the concentration of the control of a number of individual concerns in a few hands. The same selling organisation deals with the products of the whole business.

2. *Skilled Management ;* the best organising abilities can be chosen and applied to all the constituent firms. Any specially efficient features of each are applied to all.

3. *Regularity in Supply and in Working.*—Several plants working for the same object can achieve greater regularity of supply, inasmuch as the breakdown or inactivity of one can be balanced by increased production of the others. The wider the organisation the greater the facilities for ensuring a steady flow of materials and of orders for the products : hence, regularity of work is the result.

4. *Economy in Marketing and in Buying.*—The area to be supplied is divided up so that each district is supplied by the nearest branch of the organisation. This results in greater satisfaction to the consumer and great economy in freights and expenses to the producers.

5. *Inventions, Processes and Trade-marks* of constituent members can be utilised by all and applied for the general benefit. The best processes only are adopted throughout the undertaking, and thus its output is beneficially affected.

As compared with the kartell, the trust is usually of greater permanence and exercises a more rigid control over its members. A kartell lapses when its object is achieved; frequently it breaks up before this point is reached, because one or more of the members refuse to continue the agreement and bring about the dissolution of the combination. On the other hand, the kartell has three distinct advantages over the trust. In the first place, since the kartell is a combination which exists purely on the marketing side, manufacturers retain their freedom on the side of production. Secondly, a kartell is not exposed to the danger—inherent in the trust—of over-capitalisation. Finally, it is a more flexible type of organisation. The big disadvantage of the kartell system is that it may perpetuate inefficiency through grouping together efficient and inefficient units. It may also tend to stereotype an industry and hinder the development of more productive methods.

THE DISADVANTAGES OF TRUSTS AND KARTELLS:

1. *Monopolistic Control of Supply and Prices.*—The whole or a great portion of the supply of a commodity may be in the hands of a large combine, which may manipulate prices for its own ends to the disadvantage of the consumer. This policy may not, however, be of lasting benefit to the concern. The elimination of competition may result in indolence and conservatism, a loss of enthusiasm and of capacity, and an absence of desire to keep pace with changing demand and improved methods. Such factors may operate to the disadvantage of the trust and pave the way for the incursion of new and more enterprising manufacturers.

2. *Unfair Methods.*—In America particularly the methods adopted by trusts to obtain control of prices and eliminate competitors have in past times aroused widespread hostility and indignation. Discrimination of prices and freights, secret agreements and "tying clauses" with such objects in view have frequently resulted in the preferential treatment of consumers in one area to the detriment of those in another.

3. *The Displacement of Capital and Labour.*—The concentration of resources which sometimes follows the organisation of a trust, or its policy of restricting output to force up prices, has not infrequently resulted in the closing down of the less efficient or less favourably situated units with a consequent displacement of labour and of capital in the form of buildings, machinery and plant. Hardship may thus result, although in the long run the elimination of the less efficient organisations is a benefit to production generally.

4. *Speculation and Over-Capitalisation* are disadvantages which apply specially to trusts, and frequently result from

too wide an extension of the trust organisation. Considerable watering of capital may take place, as when a combine with a capital of £20,000,000 is formed to take over a number of firms sold to the promoters for £10,000,000, the difference being the promoters' profit. Producers enlarge their operations beyond the limits of reasonable return, and are unable to reduce their commitments sufficiently without considerable loss and frequently ruin. At first the extended organisation and the capabilities of the organisers result in great economies and enhanced profits. But there is always some risk of too great an extension of the combine, and, as the original promoters are removed and the business becomes more complex, the problem of management continually increases in difficulty.

5. *Evil Social Effects.*—Monopolistic combinations may benefit the consumer by providing him with a well-made product at a low price, but results such as those in (4) may occasion widespread distress, particularly to small investors and to the workers in the various branches of the organisation. Apart from these considerations are the social evils of immoral and illegal practices sometimes adopted, and the killing of enterprise on the part of the small producer who is unable to withstand the competition of the large concerns.

Rings, Pools and Combines.

Closely akin to the trust and kartell in arrangement and object are organisations of various types known as Rings, Pools and Combines. *A Ring* or *Corner* is a combination of capitalists or dealers with the object of regulating supplies of a commodity placed on the market so as to increase its price. *A Pool* is a combination of producers with the object of eliminating competition by an agreement to divide the market, total output or earnings on an arranged basis. The formation of a pool was held in the United States to be in restraint of trade and therefore illegal, so the law was evaded by the formation of the trust, in which, as has been stated, the general control is placed in the hands of a number of trustees. The term *Combine* may be applied to any of the forms of organisation which have been mentioned, for any arrangement or agreement for the general benefit is correctly described as a combine. Accordingly the term applies as much to combinations of labour as to those, already discussed, which relate particularly to capital.

Co-operative Enterprise.

Co-operation is the reply of the worker to the entrepreneur system of industry. In its origin it was based largely on the idea that the services of the entrepreneur in production are not essential; that even if the services are necessary the reward is disproportionate, as they are only a highly specialised form of

labour. For these reasons *co-operative enterprise* is frequently distinguished from *capitalistic enterprise*; but although the distinction is useful it is not strictly correct, inasmuch as co-operative enterprise may be conducted on borrowed capital. Co-operation has been tried in many forms in various countries, but in all cases the basic principle is that the workers themselves control the several factors of production and direct the business through elected members of their body or through paid managers, and, in return for shouldering all the risks and paying interest on capital and all expenses, share among themselves any surplus which may accrue.

Co-operation is of two principal types: (a) *Productive Co-operation*, in which the workers unite, as producers, for purely productive purposes; and (b) *Distributive Co-operation*, in which the workers unite, as consumers, to purchase their requirements of commodities, receiving their share of the profits in proportion to their purchases.

Co-operation among Producers.

Productive co-operation has a long record of unsuccess. Its failure is attributable to the cause to which it owes its being—the elimination of the entrepreneur. The workers have aimed at placing the management in the hands of one of their number, who is paid a fixed salary, and at dividing among themselves the profits of industry. Unfortunately, the managers appointed are rarely of high order; the workers are unwilling to pay the high rates of remuneration necessary to attract men of great ability, so that few co-operative managers combine those outstanding qualities so necessary nowadays to bridge the wide gap between consumer and producer. They are also greatly handicapped by petty jealousy which arises from the necessity of controlling men of the same class as themselves, who are generally owners of the concern. Discipline and efficiency are difficult to attain in such circumstances (see *post*, Chapter 22).

Co-operation among Consumers.

In distinct contrast to the failure which has generally characterised productive co-operation, is the well-known success of Distributive Co-operation, or Co-operation in Consumption. The primary object is the supply to the members of necessary goods, which are purchased by them in association and retailed to members of the society or association. Any profits made, after paying interest on capital and all expenses, are divided amongst the members in proportion to their purchases. Such an association is obviously at a great advantage compared with a competing organisation. Its customers are already available and its market developed without the expenses of advertising and of "pushing" commodities; the members are largely of the same class, are

more easily satisfied and are not so insistent upon proper attention as they might be in regard to businesses in which they have no interest. There are also savings in the handling and packing of the goods: the consumer whose profits depend on economies is by no means exacting as a purchaser. For these and similar reasons distributive co-operation has proved a great success as a general rule; so successful, in fact, that its activities have extended back to the productive side, and manufacturing organisations have been developed to supply the distributive societies with necessary articles for sale.

British co-operative societies have organised themselves in this way; the independent branch societies with retail shops in a large number of localities obtain their supplies from the Co-operative Wholesale Society, which buys in large quantities and manufactures much of its requirements. The relationship of the local organisation to the central body is much the same as that of the individual member to the local society, the profits of the central body being distributed among the local societies in proportion to the total purchases of each local society from the wholesale organisation.

It is instructive and interesting to note that the manufacturing organisations of the Wholesale Society are conducted not on "co-operative" but on "capitalist" lines; i.e., the employees, as such, take no part in the management and obtain no share of the profits, whilst they are controlled by first-class organisers who are adequately remunerated.

The movement is extending in this and in other countries, particularly in agriculture, where it is successfully applied for the purchase in association of grain and manures, agricultural implements and general utensils.

On the Continent especially the co-operative idea has been extensively developed. In Denmark the small peasant farmers are associated in societies for the purchase of expensive machinery and appliances, the cost of which would be beyond the reach of the individual. Milk, for example, is forwarded to certain centres where expensive plant is installed for its conversion into butter, each member of the society receiving credit for an amount of the output in proportion to his contribution of milk, and sharing any profit or loss which may result from the associated effort. The members are also assisted by the purchase in association of manures and implements, and by extended facilities for the marketing of other produce. In Germany the co-operative system is applied for the provision of capital for agricultural purposes, the members contributing capital in small sums to agricultural credit banks from which loans may be obtained by those who require capital for improvements, implements and extensions. Similar applications of the same principle are to be found in other countries, notably in Ireland, India and in our Australasian colonies.

Co-operative societies are extending their functions in other ways, as by providing educational and socia advantages for their members, and by establishing allied banking and insurance organisations on co-operative lines. Such developments must have important economic effects, which will be increasingly emphasised in the future with the rapid growth of the co-operative organisation.

Municipal and State Enterprise.

Closely allied in principle to co-operative enterprise are those economic organisations controlled by the central government and local authorities. The State Post Office is merely an organisation conducted by the State for the benefit of its citizens —the consumers of the services rendered. Municipal enterprises of various types—gas and water companies, swimming baths and amusement parks, conditioning establishments such as those which exist at Bradford for wool-testing purposes, municipal banks such as that of the Birmingham Corporation—all are conducted by the authorities as representatives of the consumers, who benefit if profits accrue and must bear any losses which may arise. They are, in effect, co-operative enterprises conducted by associations of consumers for the supply of necessary services or commodities.

With notable exceptions municipal and State enterprises have not usually achieved outstanding success. The reasons are not far to seek. State and local officials with fixed salaries and secure posts have little incentive to extraordinary effort. Political favouritism and family influence sometimes place such enterprises in incapable hands. The capital at stake is obtained from general funds collected as rates and taxes, and is not cared for to the same extent as is the capital of a joint-stock company. Ratepayers are not so insistent upon their rights and benefits as are shareholders in commercial enterprises, whilst State and municipal concerns suffer from frequent changes in the management and from the distribution of that management among too many persons. It can scarcely be doubted that even those enterprises which have achieved success would prove still more successful if it were possible to run them as private organisations.

COMPETITION AND COMBINATION

The present chapter would scarcely be complete without at least a brief reference to the opposed tendencies of competition and combination which are such marked features of modern industrial organisation. In every branch of Economics the competitive instinct is recognised as one of the basic characteristics of man in society. He competes with his fellow-men at every stage of his existence ; there is a constant rivalry for means of subsistence, for the possession of wealth in all its forms, for

occupation and for employment. Buyers compete with other buyers for goods and services; sellers outbid one another in an endeavour to obtain custom. The competition for labour, raw materials and capital exists between one concern and another, between localities, and between nation and nation. The economist considers that as a rule this persistent characteristic may be relied upon to obtain for man a due share of the world's goods, and to lead him to that locality and occupation which will most amply repay such energy and ability as he has to offer.

But, as we have seen in our consideration of monopolies, competition itself leads eventually to combination, to an association of those engaged in similar businesses. This is due largely to the recognition of a common interest, whether of a certain class of producers or of a geographical group of producers. There arises an appreciation that competition has very marked limits beyond which it tends only to defeat its own ends, and to involve in ruin those who pursue it too far. Then, again, producers of one class discover that they can obtain a common benefit by associating for some specific purpose, such as the advertisement of their common product, or the search for information concerning their particular trade. Recognition of these facts underlies the recent vigorous attempts made to rationalise basic industries, both in this country and abroad. For although rationalisation does not necessarily imply amalgamation, its benefits can almost always be best achieved by co-ordination of the efforts of individual producers.

Actuated by similar motives of common interest, consumers associate with one another to oppose increases in the price of manufactured goods; retailers combine to prevent underselling and the incursion of the wholesaler into the province of the retailer. Labourers combine to form trade unions with the object of protecting their common interests and of obtaining some advantage in their conflicts with the stronger forces of employer and capitalist. On the other hand, employers have found it necessary to unite in order to combat the continually increasing forces of labour, and to decide on a common policy regarding strikes, lockouts and the payment of wages.

Thus the two tendencies of competition and combination are found side by side through all the ranks of industry. Producers and consumers who may engage in the keenest competition with other producers and consumers, nevertheless find it to their advantage to unite for some common object. But it is not difficult to understand that competition itself is at the root of all combination. Man is forced by competition into conflict with his neighbour; but eventually the stress of competition and the sense of common interest are themselves inducements to the association and co-operation of one man with another. Combination is in effect the result of the efforts of one group to obtain a greater advantage in its competition with another

group. Combination is an attempt to lessen competition, but in some respects it increases competition. Traders associate to obtain some common advantage which the individual members could not afford, such as the benefits of Chambers of Commerce, and Trade Journals. But competition in other respects, as in regard to internal management, is made keener than ever. Again, there is no competition like that between two large combinations in the same industry. The tobacco war for the English market some years ago was a good instance of this, and more recently we have witnessed a conflict, apparently not yet ended, between the two great oil combines, the Standard Oil Company and the Shell Group.

Competition thus adopts a variety of disguises. Modern society is described as " competitive " mainly because it relies very considerably on the force of these various forms of competition to preserve the balance between producer and consumer. Competition to buy keeps up prices and so protects the interests of the producer ; competition to sell forces down prices and thus safeguards the interests of the consumer. But, as we have indicated, competition is by no means a perfect regulator, while its aim and effect in any given circumstances are not capable of exact estimation.

THE CAPITALIST SYSTEM

The present organisation of industry is sometimes described as the " capitalist system ". This implies that the means of production, that is, the capital-goods and the raw materials, are owned by private persons and institutions whose object in retaining them is to acquire a personal profit. Property, too, is in the hands of the same class and is employed for the profit of the individual. The amount of capital now used is large enough to justify the existence of two distinct classes,—employers and employees,—the majority of the latter obeying the instructions of those who employ them, and receiving as their reward a wage.

The capitalist to-day is more than a merchant who is concerned only with the marketing of goods, as was the case in the earlier phases of organisation. Now, everything employed in production, except labour, is either hired by him or owned by him directly. He is also the owner of everything produced. It does not follow from this that the capitalist exercises any kind of control over man ; he, in his turn, is governed by consumption. His actions and his prosperity depend largely on the satisfaction of the wants of consumers and, if large profits are to be made, their interests must at all times be consulted.

The capitalistic system itself has been subject to extensive changes, from its early beginnings in the factory system to the large business unit, and in its last phase to industrial monopolisation, rationalisation, and world-wide markets.

CHAPTER 12

MARKETS AND THE SAFETY-VALVES OF COMMERCE

How Markets arose.

In the early stages of industrial evolution to which we have referred in a previous chapter, there existed no necessity for the exchange of products. The family group was self-sufficing; its products were intended only to satisfy its own immediate wants, and there was at first little question of exchanging commodities with other family groups. But the development of the gild system marked a change in this respect, and with the separation of employments and the specialisation of crafts the need arose for some organisation whereby products could be exchanged and sold for the goods of other producers. This organisation was found in the *market place*, a central spot or building in a town where commodities could be exposed for sale, and where buyers and sellers could meet on certain days for the purchase and sale of goods.

Thus the term market referred originally to a place or locality where buyers and sellers congregated. Its functions at first were purely local, and regulations were made and enforced to preserve this characteristic by the exclusion of merchants from other localities. Frequently the early markets provided a means for the exchange of every variety of product and of service, but the market, like other productive organisations, had to specialise its functions in order to keep pace with industrial and commercial progress. So in a great city could be found as many markets as there were important branches of trade; in London, for example, this localisation is evidenced to-day in the separate institutions known as the Stock Exchange, the Corn Exchange and the Coal Exchange.

In Economics, however, the term market has a much wider significance. It refers, not to a *place* where commodities are bought and sold, but is used to indicate *a commodity or commodities and the buyers and sellers thereof who are in direct competition with one another.* In this definition there is no restriction of locality; the extent of the market is determined only by the region within which there are buyers and sellers of the commodity around which the market centres. The market may be local

or it may cover the whole world. Examples of the former are the local produce markets or horse fairs to be found throughout England: the traders are usually farmers, dealers and shopkeepers from the surrounding districts. The market in wheat is world-wide, and the buyers and sellers belong to every nation and to every grade of society.

We note, however, that whilst the meaning of the term market is thus extended, it is also specialised or restricted in two ways: (*a*) as regards the commodity dealt in; and (*b*) as regards the buyers and sellers. Thus there may be a market for every commodity, and the market for that commodity is quite distinct from the markets for other articles. From an economic standpoint the tea, wheat, butter and horse markets are quite independent of one another, and they also may be further subdivided to cover various grades of the same commodity, or to cover the same commodity at different times, inasmuch as the buyers and sellers who constitute one market must be in *direct competition*. The retail market in a commodity such as tea is quite distinct from the wholesale market in the same commodity. Retail grocers compete directly in one market to purchase tea from the wholesalers; but this market is quite distinct from that wherein the wholesalers themselves compete to buy supplies from the actual producers.

The Evolution of Markets.

The evolution of markets may be regarded from two points of view: (1) the geographical, and (2) the functional.

THE GEOGRAPHICAL EVOLUTION refers to the growth of the market for certain commodities in so far as it relates to the region inhabited by the buyers and sellers in the market. It may be divided into four stages corresponding to the growth of industry: (*a*) the *family market*, within the bounds of the family only; (*b*) the *local market*, in the town or village; (*c*) the *national market*, covering the whole nation, and (*d*) the *world market*, extending to the ends of the earth.

The last three geographical divisions exist to-day in respect of certain markets. The local market (see also below) covers the neighbourhood of a village or town, within the radius of a few miles. Hitherto the market for fresh milk has been fairly restricted, but present day transport facilities permit it to be considerably enlarged. At one time also the market in fresh fruit, cut flowers and vegetables was necessarily localised, but fast transport services have extended the market in such commodities to the whole nation in the case of smaller countries such as Britain, France and Denmark. The cost of transport is naturally an important consideration; consequently the area of the market tends to be lessened as the prices of such commodities fall—when cut flowers and fruit are in season, their

low prices will not bear heavy transport costs. In the smaller countries most commodities have a national market; in the larger states, such as Russia and U.S.A., transport costs may tend to limit the area covered, but such costs are nowadays kept so low that the market, even in perishable commodities, is ever increasing; in many cases it is already world wide, as, for example, the markets in butter and meat.

In spite of this modern tendency, the questions of portability and cost of transport remain of considerable importance in determining the extent of the market. Hence we find that heavy and bulky commodities of comparatively low value have a limited market; e.g., gravel, common bricks, sand, and road-making materials. On the other hand, world-wide markets exist in the case of those commodities, such as precious stones and precious metals, stocks and shares, which are transportable at comparatively low costs and are in wide demand.

Wide markets exist also in respect of necessaries (except those which are too perishable) and in the case of articles which can be easily graded and described. Costs of transport and distance matter little in the former case, for man must have commodities which are essential to his existence, whatever the expense. In regard to the latter class, we find very wide markets in commodities such as wheat and raw cotton, which are in universal demand, and can be purchased and sold by sample or by mere description. This possibility of sale without inspection of the bulk makes sale and purchase a convenient and simple matter, and enables a larger number of prospective buyers to be approached in a given time than would otherwise be possible.

THE FUNCTIONAL DEVELOPMENT relates to the type of business transacted, and here again four stages may be differentiated :—

(*a*) *The General Market*, concerned with the purchase and sale of a great variety of wares and produce, and attended by buyers and sellers from the immediate neighbourhood. Prices are fixed by bargaining, on a rough estimation of the demand for and the supply of each commodity, but at the same time only one price will obtain for exactly the same article. Such markets have already been mentioned: they are widespread in England and in other countries at the present time.

(*b*) *The Specialised Market.*—Even in the local or mixed markets there is some tendency to specialisation: the local horse fairs and cattle auctions are entirely distinct, and are frequently held on different days of the week. But as industry and trade develop, and commerce extends, so does the need arise for increased specialisation and greater differentiation. The market in raw cotton is a vast organisation

in itself, entirely separated from the markets in yarn, in thread, and in the countless varieties of cotton piece goods.

(*c*) *Marketing by Sample.*—As the range of goods increases, and the varieties of each type of product tend continually to increase, so does it become more difficult to display all the stock which is to be the subject of a sale. The system of selling by sample enables a larger number of buyers and sellers to come together, and gives them a greater variety from which to select. The sample is much more easily handled than the bulk, and permits the bulk to be disposed of in a distant market without its actual transference there or its inspection by the purchasers. A little consideration will serve to make clear the enormous gain in time, energy and money which thus accrues. Naturally, not all commodities can be sold in this way, but the method is particularly applicable to raw materials, such as tin plate, pig-iron, grain and timber. Samples of these may be fairly representative of the whole, and can be conveniently classified according to quality and date of crop, etc. Manufactured goods are, of course, eminently suitable for sale by this method, where they are of a uniform nature.

(*d*) *Marketing by Grade.*—In effect this is a development of sale by sample, and applies more especially to such raw materials as can be conveniently classified according to quality. The efficient produce markets of to-day have made possible the grading of the raw materials dealt in according to fixed standards. Thus the quality of a given commodity is immediately recognisable by a purchaser on being informed that it is of a certain grade. An inspection of samples is unnecessary, for each grade corresponds to a definite standard of quality of the raw material, and, as the grading is frequently done by an independent authority, the buyer is assured of the quality of his purchase. In the cotton markets, particularly, these methods have reached a high degree of perfection, and have made possible the development of dealings in "futures" and "options" on a large scale (see *post*, page 179). Crops and cargoes of the raw product change hands a number of times on the simple assurance that on delivery they will conform to a certain grade or quality.

The Law of Indifference or the Law of Markets.

There are probably no markets in which it can be said that perfect competition exists. But if we assume such conditions to exist in any market, then it follows that no buyer will pay more for any given article than any other buyer is required to pay. So long as the buyer gets what he requires he is *indifferent* as to

who supplies it, and if the price asked by one seller is lower than that of others, then all buyers will purchase from that seller. Similarly no seller will dispose of an article at a lower price than that obtained by any other seller for the same article; if one seller obtains a certain price all other sellers will tend to hold out for at least the same price.

These facts mean that *in the same open market, at the same time, there can be only one price for the same commodity.* By the same commodity we mean, of course, a commodity of exactly similar quality, grade and description, any one portion of which may be used or held *indifferently* in place of an equal portion. This tendency or principle is described by Jevons as the *Law of Indifference.* It tends to operate in all markets, but obviously it is not exactly operative in any market. In the first place, perfect competition exists nowhere, and, secondly, the existence of competition itself presupposes certain *temporary* variations in price as between one dealer and another, although the tendency is to fix one price only for one commodity.

Necessary Conditions for a Perfect Market.

We have already stated that the perfect market would be one in which the law of indifference was allowed free play, so that only one price could rule for one commodity at the same time. But in very few markets are the necessary conditions existent to the requisite degree.

EASY COMMUNICATION AND EFFECTIVE TRANSPORT.—All buyers and sellers in the same market must be in easy and speedy communication with one another, so that they may be in a position immediately to effect transactions, to publish and advise changes in prices and in market conditions, and to obtain information from one another as to the present and future course of events. The transport systems must be such as to permit of the speedy, safe and economical transfer of goods from one point to another as may be desired. Difficult, tardy or expensive transport arrangements tend to make marketing uncertain and inefficient.

FREE COMPETITION.—This assumes that both buyers and sellers will act solely in their own interests, and that there is an absence of rings and combination whereby sellers or buyers associate in order to control prices. Free competition is essential if that criterion of a perfect market is to exist—the existence of one price only at any one time for a given commodity. It is also necessary if *close* prices are to be quoted and middlemen's profits are to be kept to a minimum, as, for example, is the case in dealing on the Stock Exchange, where the commission payable on the sale of £100 of gilt-edged stock is only 5s.

WIDE EXTENT.—Some of the essentials of a wide market have already been indicated. They may now be summarised.

1. *Extensive Demand and Supply*, i.e., many buyers and sellers. The market in wheat is necessarily wider than that in furs, because the latter are of little use in warm countries while wheat is almost universally demanded. On the other hand, the winter market in furs is much wider than the summer market: the market in this case is limited by the *duration* of demand. A very wide market may conceivably exist for a time in a commodity the use of which is dictated by fashion: when fashion changes the market collapses.

2. *Suitability for Grading, Sampling and Exact Description*, so that the bulk can be sold by letter or cable across half the world, without possible misunderstanding or doubt. Cotton and wheat can be so sold; cattle are obviously not purchasable without inspection.

3. *Portability of the Commodity.*—Bulky articles of low value, e.g., bricks and sand, have a limited market; the cost of transport over wide areas is prohibitive. This does not apply to gold and diamonds, silk and shares.

4. *Durability of the Commodity.*—A very wide market cannot exist in perishable and fragile articles because they cannot be transported over the long distances implied in the existence of a wide market. Compare, for example, the market in frozen meat with that in fresh meat. The market for the former is now very wide; that for the latter is still local. Further, the market in perishable commodities is necessarily limited as to time. In the case of cut flowers, for instance, only day-to-day prices can be fixed.

5. *Adequate Supply of the Commodity.*—Only a very restricted market can exist in antiques, curiosities and works of art, the supply of which is limited.

The markets in the non-perishable necessaries of life are generally world-wide. In the case of other commodities, the wider the market the nearer the approach to perfection. A wide market implies amongst other things the capacity to carry through large transactions at a moment's notice, and, if necessary, in return for a small margin. Fluctuations in prices are thus kept to a minimum.

The market for labour is severely restricted. The commodity, labour, can be regarded as perishable, and this, together with its immobility, renders the market narrow. Information penetrates through the market very slowly, though Labour Exchanges and newspaper advertisements now tend to bring demand and supply into somewhat closer communication.

The Market for Invested Capital.

The nearest approaches to perfect markets are those for invested capital, the stock exchanges in various centres, and particularly those of London, Paris, New York and Amsterdam.

The commodity dealt in—Capital—is evidenced by various classes of shares and debentures, all of which can be accurately described and suitably graded : the ordinary shares of a particular company may be regarded as being all of one quality or grade, and any one such share is as good as another. Paper securities can, of course, be transported long distances without difficulty and without much risk of loss. Further, buyers and sellers within each exchange, and also buyers and sellers on different exchanges, are in constant communication one with another, being closely linked by telephone, telegraph and cable. The methods of quoting shares, of making bargains and of settling transactions are absolutely fixed and widely known, its prices are rapidly circulated, extensively quoted and easily understood, while the high moral standard which exists throughout the market is far more efficient than the strictest legal control in preventing fraud and minimising risks. These factors make the stock markets the best organised and the nearest to perfection of all markets. Particularly does a wide and efficient market exist in such stocks and shares as have an international attractiveness ; e.g., the stock in certain American railways, government issues and Suez Canal shares. Equally efficient but not so wide is the market in connection with the stocks of trading and industrial concerns of international repute.

Similar considerations apply to the markets in the precious metals, in first-class bills of exchange and in foreign currencies. The markets in the important raw materials, such as wheat, cotton and wool, are also organised to a high degree, the methods adopted for dealing being similar to those of the stock markets.

The Organisation of the London Stock Exchange.

So important is the London Stock Exchange as an example of a highly efficient market and as a pattern on which is based the structure of other markets, that a brief account of its organisation will not be out of place.

The London Stock Market consists of a voluntary association of the proprietors of the Exchange building, who meet there to deal in shares among themselves under the rules laid down by the Committee for General Purposes and by the Management. The latter is entrusted to nine elected members, three of whom retire every five years, and it appoints the officials of the Exchange other than the secretary.

The Committee for General Purposes consists of thirty members elected annually by the others. Among other duties it (*a*) appoints the secretary ; (*b*) admits members or authorised clerks of members ; (*c*) gives authority for arbitrage business to be transacted ; (*d*) suspends or censures members ; (*e*) re-admits defaulters ; (*f*) notifies the public of suspensions of members. Members may be suspended if they violate or fail to comply with the rules, or if they are guilty of dishonourable conduct.

Members must refer all disputes among themselves to the Committee for arbitration, and are prohibited from taking action against any other member or members over such disputes unless the prior consent of the Committee is obtained. The system of arbitration is attended by several advantages and disadvantages. On the one hand, it permits disputes to be settled promptly and economically; it is not governed by precedent, so judgment to suit each case may be given strictly according to the notions of a body of business men, and, finally, the right of the Committee to expel or suspend a member promotes a better moral code than any legal enforcement. On the other hand, disadvantages result because identical and recurring issues may be decided in quite different ways; time is needlessly lost because the results of previous findings are not recorded for future guidance in similar cases, and a member's legal rights may be waived in favour of a submission to arbitration, the issue of which is uncertain. It cannot be doubted, however, that the system has worked with remarkable success and has maintained an exceedingly high standard of business morality.

Membership of the London Stock Exchange.

Membership of the Exchange is strictly regulated and entry is difficult. Members may be either *brokers* or *jobbers*.

STOCKBROKERS are middlemen acting between the jobbers and the public for a commission, and are liable as agents for their clients. Orders from the public are given to brokers and not direct to jobbers. It is a breach of the rules of the Stock Exchange for a jobber to approach the public direct for orders. On the other hand, stockbrokers do not usually deal in stocks for large amounts for their own profit. They rely for their profits on the commissions which they receive from the public, and seldom carry stocks on their own account.

JOBBERS make their profits by speculation in stocks and from the "jobbers' turn," the difference between the buying and selling prices they quote to the brokers for stocks. Dealers who buy stocks on account "for the rise" are called *bulls*; they buy in the hope of selling to another person before the end of the account or settlement (see below). Dealers who sell in the hope of buying later on at a lower price are called *bears*: their object is to force down prices, whereas bulls operate to force up prices.

Ordinary investors of the "man in the street" type frequently complain that they can find no justification either for the existence of the jobber or for the superlative profits which he is supposed to make. The jobber nevertheless performs an economic function of first importance; his business is to *make a market* in any stock or share in which he is accustomed to deal by being willing at all times to quote prices either for buying or for selling. No reliable jobber can refuse to deal: he must be ready to buy at a reasonable

market price stock which he does not want, and be ready to sell other stock which he may not possess. It is this function of the jobber which makes the London Stock Exchange the freest stock market in the world.

Only members of these two distinct classes are admitted to the Exchange, but outside brokers transact business through the members. Some of these outside firms are legitimate houses controlled by men who were formerly members of the Stock Exchange, but who have come out because they prefer to be free from the arbitrary rule of the Committee, and are free to advertise, which members are prohibited from doing. Other outside brokers are frequently nothing more than "bucket shops", engaged not in the legitimate purchase or sale of shares, but in carrying on a betting business with the speculative public by paying or receiving differences in the prices of shares that have never in fact been bought or sold.

Method of Dealing.

A broker who has an order to execute asks a jobber for a price. The jobber quotes two prices, one for buying and the other for selling. If the quotation is satisfactory, the broker closes at the price for the transaction, and the jobber is bound to abide by his quotation even though he may suffer loss before settlement is effected. The broker forwards to his client a signed and stamped "Contract Note", specifying all charges for commission, stamps and transfer fees, in addition to the price of the stock and the total amount due to or payable by the client. Most bargains are quoted on the basis that they will be settled for at the next Stock Exchange "Settlement."

The Settlement.

This name is applied to certain specified dates on which transactions must be completed by delivery of securities and payment of cash. It is usually held every fortnight, though occasionally the period is three weeks, and lasts four days, as follows :—

CONTANGO DAY is the first day, when it is decided whether the bargain shall be completed, or held over till the next settlement in cases where it is not desired to pay over the money or to deliver the securities. *Contango* is the name applied to the interest for the period of postponement which must be paid by a buyer who cannot hand over the necessary money. *Backwardation* is an allowance which has to be made by a seller who for any reason cannot deliver the security he has sold.

TICKET AND INTERMEDIATE DAYS are the second and third days, when "tickets" showing the names of the actual buyers

are delivered by the buying brokers to the jobbers from whom they have purchased, so that certificates and transfers may be made out in the proper names.

SETTLING DAY is the last day when payments are finally made, either for completing the transactions or for carrying them over to the next settlement.

The Economic Function of the Stock Exchange.

The Stock Exchange performs an essential economic function by providing a market for capital which is already invested. It facilitates the transfer and rearrangement of that capital, and is the means whereby capital represented by stocks and shares may be graded, and realised easily and cheaply. It makes possible international dealings in securities, and renders stocks and shares acceptable as cover for loans. The rigid rules to which the market is subject, and the high standard of commercial morality which prevails, create confidence and bring great numbers of people into business relationship. Consequently, the trend of business on the stock markets has important repercussive effects throughout the community. While, therefore, the Stock Exchange is not itself the market for *new* capital, the advantages which it offers, particularly that of ready realisability, are vitally important in stimulating and encouraging the flow of new capital for industrial and other purposes.

An important function of the stock markets is that they facilitate the sale and purchase of securities at their "*true*" values. The "true" value of a security necessarily depends on the degree of risk behind the security, on its dividend-earning capacity, and on its future possibilities. On the Stock Exchange the influence of expert, well-informed dealers is constantly at work, forcing downwards or upwards the values of securities according to the most up-to-date relevant information. Hence originates the saying—which contains a good deal of truth—that "the true value of a security is what it will fetch"; in other words, that dealers on the stock markets are so well-informed as to risks, future prospects, and all the other relevant factors, that at any given time the current Stock Exchange quotation of a security is a fair measure of its real or true value.

Such a statement is not wholly true, however. It assumes that dealings on the Stock Exchange are always carried out on a rational basis: unfortunately, that is not the case. Speculation and gambling play a considerable part in fixing the market price of stocks and shares. Sometimes attempts are made to "rig" the market; false rumours are spread either to induce hesitating purchasers to buy or to cause nervous holders to sell. At other times, security prices are forced up or down beyond "true" values through big buying or selling operations which sometimes have sinister aims. Again, there is almost an inherent tendency

for movements on the Stock Exchange, either upwards or downwards, to be " over done ", at any rate during short periods. The large, knowledgeable operator always has a large following of blind disciples. The public comes in to buy on a rising market, and to sell on a falling market, with the result that prices of securities frequently rise and fall to levels which bear little relation to true values. Very frequently, uninformed investors are left to " hold the baby," i.e., they have to take up stocks and shares purchased at fancy prices which bear no reference to the intrinsic worth of the holdings.

But such divergencies are temporary. Sooner or later, as the real situation becomes clear, the inevitable adjustment takes place, and in the long run, stocks tend to be purchased and sold at prices approximating to the market estimate of their true worth. At any particular time the market operators and the investing public have a fairly accurate idea as to the different yields which should be obtained from various classes of investments. On first-class trustee, or gilt-edged, securities, such as British Government Stocks, an average of, say, 5 per cent. per annum may be expected, and the prices of the various types of such stocks will tend to that level at which the yield in all cases is approximately the same. Thus, if a war loan stock can be purchased at 100 to yield 5 per cent., the price of Consols, yielding $2\frac{1}{2}$ per cent. only, will be in the neighbourhood of 50.

Yields of other classes of securities will be judged by comparison with the yield obtainable on the first-class group, the yield increasing according to the degree of risk involved. Thus, investors generally may expect on good industrial ordinary shares a yield of from $1\frac{1}{2}$ to 2 per cent. more than is obtainable by investment in the gilt-edged group. Again, on speculative investments, such as those in mining and oil shares, a yield of anything from 10 per cent. upwards may be expected. The yield on the first-class group may be regarded as pure interest, and the additional " insurance against risk " increases as we pass from the better class of industrial securities to the more speculative sections.

In each class there is an average yield which investors generally expect from that class, and in the long run the prices of existing securities, and of new securities entering the class, tend to that level where the average expected yield for the particular class will be obtainable by the investor. Suppose, for example, that investors generally expect to receive 10 per cent. per annum on money invested in oil shares. The price of the £1 ordinary shares in a concern paying 10 per cent. will tend to be at par, i.e., 20s. per share. Other things being equal, the price of the £1 ordinary shares of a similar class of company paying 15 per cent. will tend to be about 30s., giving a net worth of 10 per cent. on the money invested, as in the case of the first company.

In considering the net worth on any type of security due regard must, of course, be paid to the possibility of future capital

distributions in the form of bonus shares or direct distribution of reserves, etc. Clearly, the value of ordinary shares in a concern with vast accumulated reserves cannot be judged solely from the yield per cent. represented by its annual dividends. Due allowance must be made in the valuation of such shares for the possibility that part at least of such reserves may be distributed to shareholders.

For example, the yield of the ordinary shares of the Imperial Tobacco Company at current prices is frequently lower than the yield on other industrial securities of a similar type because that company has an almost unequalled record for the distribution of bonuses to shareholders. A proportion of the market price of these shares represents a payment made by the purchaser in anticipation of bonus distributions, but when due allowance has been made for such factors in this and similar instances, the price of the shares tends to that level which will return to an investor the average expected yield on that type of security.

The Market for New Capital.

In this country the market whose function it is to provide capital for new enterprises is very loosely organised. It comprises a small group of issuing houses, investment trusts and finance companies working in conjunction.

The principal function of the *Issuing Houses* is to offer new issues for subscription to the investing public, not only for domestic purposes, but also to meet the requirements of foreign borrowers. They may be said to act as pipe-lines between industry and the idle resources of the investing public. Their duty is to examine carefully the merits of any proposed capital issue before they offer it to the public, and, thanks to their intimate knowledge of the state of the Capital Market, they are able to advise borrowers as to *when* and *how* an issue shall be made, while, by shrewd timing of an issue, they often save the borrower considerable sums.

The function of the *Investment Trust* is to invest its capital in such a way that, by judicious distribution, by limiting risks incurred in any one direction, and through the advantages of specialised study of investment, a higher income return may be obtained on the money than is available to the ordinary investor. As favourable opportunities arise, the holdings of a trust are varied and those showing capital appreciation are realised, but the making of profits in this way is merely subsidiary to the main business, and any profits so realised are not distributed but are transferred to reserve. The distributable revenue of the trust is derived chiefly from interest and dividends on investments. The investment trust proper is not a speculative concern, but seeks to obtain the maximum income consistent with the minimum of risk.

Finance Companies take many forms but, unlike the investment trusts, they seek to control the enterprises in which they are interested and, with this end in view, concentrate on a small group of undertakings. Their business is much more speculative than that of the investment trusts. They trade in securities but treat the profits derived from purchases and subsequent sales as revenue. They also assist in the flotation of foreign loans and arrange for the exchange of the sterling raised by means of the loans into the currency of the borrowing country. Since these companies seek high returns, and since their holdings are not widely distributed, they take considerable risks and are liable to be seriously affected by financial depression or disturbed monetary conditions.

This position is in distinct contrast to that on the Continent and in the United States, where the banking institutions provide much of the machinery which regulates the flow of fresh capital into industrial organisations. Many of these institutions possess extensive holdings in industrial enterprises, but in this country such a system is not adopted, although here, as abroad, the banks render great service to commerce in the provision of *short-term* credit (as opposed to the *permanent* financing of industry) by granting loans against various forms of security, by discounting and accepting bills of exchange and by issuing letters of credit.

Speculation.

Speculation is a term of wide significance and of a variety of meanings. Primarily it refers to that class of business enterprise which is undertaken in the expectation of a rise or fall in prices. The essential is the purchase (or sale) of a commodity at one time, with the object of making a profit by its sale (or purchase) at another time, usually in the same market.

Speculative business may include any or some of the following :—

1. Legitimate Enterprise, undertaken by a man conversant with the business, with the object of making profits by producing in anticipation of a carefully estimated demand. The element of risk is limited and may be reduced to a minimum by the highly-skilled entrepreneur.

2. Speculation Proper, which involves the investment of money in an enterprise, the risks and details of which cannot be known to any man. Dealers on the produce exchanges legitimately speculate on the probability of a rise or fall in the prices of commodities. If crops are good they sell their stocks or rights to supplies in anticipation of a future fall in prices ; if crops are poor, they buy as much as possible in anticipation of a future scarcity and high prices. The dealer

has expert technical and general information at his disposal, and he speculates according to his own judgment of the future course of events. He makes it his business to forecast demand and to estimate future supplies, and in this respect he performs a legitimate and useful function. But so many factors may intervene to upset his calculations that his business is essentially speculative: whilst his profits may be very great, his losses may reduce him to ruin.

3. GAMBLING OR ILLEGITIMATE SPECULATION, signifying in the main operations undertaken blindly and ignorantly by speculators with the idea of reaping rich rewards in the shape of profits. It also includes deliberate manipulation of the market, e.g., corners, which are operated by highly skilled but unscrupulous operators. The risk of loss is considerable; frequently the whole of the invested capital may disappear. But the evil lies chiefly in the fact that such operators actually risk little, inasmuch as they operate largely on borrowed capital or without capital at all. Thus on the stock markets, bull and bear operators may endeavour to manipulate prices with the object of influencing public demand for stocks. When prices have sufficiently risen, or have been sufficiently depressed, such operators "unload" their holdings at the high prices or buy in as much as possible at the low figures. This form of operation is harmful to the community generally inasmuch as private investors are frequently victimised and violent fluctuations in prices are engineered. Legitimate speculation tends to smooth out fluctuations in price: gambling serves only to accentuate these price fluctuations.

The Economic Justification of Speculation.

A characteristic of modern industrial organisation is that production has to be initiated long in advance of demand. Before a woollen coat can be marketed, numerous producers have to be engaged for many months in obtaining the raw material and transporting it to the manufacturing centres, in spinning and weaving the cloth, and finally in actually making up the garment. At every stage the producers run some risk that their efforts will prove fruitless and that their products will not find a market. Industry itself is thus a speculation; producers must work continually on estimates of probable demand, and on the correctness of these estimates depend the results of their enterprise—whether they will make profits or incur a loss.

The risks of loss are much greater in some industries than in others, and particularly in those industries which utilise large quantities of raw material, such as cotton, wool and wheat. The quantity and quality of crops are always uncertain factors beyond the control of man, while there is an absence of regu-

larity and continuity in the supply of raw produce which is harvested at periodical intervals. In distinct contrast to the irregularity of supply is the steadiness of demand : cotton, wool and wheat are required everywhere and at all times for industrial purposes. Fluctuation in prices would tend therefore to extreme limits in such departments of production unless other forces were at work tending to minimise the movements.

These forces make their influence felt on the highly organised produce markets in this and other countries. The buyers and sellers consist of expert middlemen, who make a living by forecasting price movements and market demands, and by buying and selling for profit. They do not actually touch the raw material, but act as intermediaries between producers on the one hand and manufacturers on the other. They arrange for expert technical and general information concerning crops in various countries, and make a detailed study of all conditions affecting the demand for the commodity in which they are interested. They consider changes in fashion, political conditions, the prospects of peace and war, and any other matters which may influence their market. Their mode of operating is determined by their estimation of the future course of events : if they anticipate a fall in prices, they proceed to sell out as much as possible ; on the other hand, if in their judgment a rise may be expected, they buy in supplies for future sale. Present sales tend to send down prices now, and therefore to reduce the "steepness" of the anticipated fall. Similarly, present purchases tend to raise prices immediately, and thus obviate too rapid an appreciation in the near future.

If the judgment of the speculator is correct, his operations tend to steady prices and to prevent violent fluctuations. In this respect he renders a valuable economic service, and the community benefits as a whole. Violent fluctuations in prices are generally harmful, for although they may provide the few with great opportunities, they bring loss and possible ruin to the many. And what is even more important, they create that atmosphere of uncertainty which is the greatest obstacle to sound and progressive trading.

On the other hand, the operations of the unskilled dealer, or of the pure gambler who operates in ignorance and without care, are socially harmful, inasmuch as they accentuate changes in prices and may originate violent fluctuations. But the fact that a dealer is likely to lose considerably if his judgment proves wrong is in itself a deterrent, and results eventually in the elimination of the unskilful operator, with beneficial effects on the efficiency of the market as a whole.

Thus speculators cannot succeed unless they are thoroughly conversant with production and also with consumption. Their specialised information is therefore of great assistance to producers. It makes possible a steadiness of production and of

employment, and tends to co-ordinate the supply of goods and the demand for them. Such organised markets in various countries permit also of a more economic distribution of necessary commodities between the various nations. Scarcity in one place is scarcely possible if generous supplies are available elsewhere. For the professional speculator not only buys *when* prices are relatively low and sells when prices are relatively high, but he also buys *where* prices are relatively low in order to sell where prices are relatively high, thus tending to eliminate differences in price as between one place and another. (Speculation is a struggle of intelligence against chance,) and in so far as the speculator minimises the uncertainty which must exist in regard to the prices and supplies of necessary commodities, he performs a valuable service to his fellow men.

Dealings in Futures.

Speculation is centred chiefly on the stock markets and in the produce-exchanges in this and other countries. Separate produce exchanges exist in respect of each important raw material, and here is made available the most accurate information it is possible to obtain concerning prices, supplies, demand and the many influences which may affect the market. The organisation is exceedingly specialised and highly technical. The arrangements are such that by various systems of dealing, the chief of which is that of *futures*, producers are enabled to relieve themselves of much of the risk of market fluctuations. Such risks are not only *transferred*; to some extent they are *eliminated* by the off-setting of risks in one direction by risks in another. This is effected by *hedging contracts*, arrangements under which any losses or gains made in one direction are counterbalanced by gains or losses which automatically arise in another. Such transactions are not gambling but are in the nature of insurance. The manufacturer who purchases raw materials covers himself so that he neither loses nor gains by a change in prices. By being thus absolved from the risks of fluctuating prices, he can concentrate on his main work. The risks fall on the shoulders of dealers who specialise in the forecasting of demand and supply, and who, by their expert information, are able to smooth out price fluctuations.

The dealers do not touch the raw material, but transact business with "vouchers" which promise delivery of certain specified qualities and quantities of the raw material at a fixed future date. The vouchers are bought and sold by the operators, according to their anticipation and estimate of the probable course of market conditions. They have no intention of making or of accepting delivery; but delivery must, of course, be made and accepted by the ultimate contracting parties.

The produce exchanges are modelled on the basis of the stock markets, and transactions thereon are settled by the mechanism of clearing houses. The work of the dealers is essentially speculative ; their function is to make a profit out of their estimation of the future, and in so far as they act only on expert judgment their services are of great utility to producer and consumer alike. On the other hand, the extreme sensitiveness of the markets and the extensive character of the operations make possible the harmful results of artificial price movements and of monopolistic control of the market in a particular commodity.

Insurance.

Closely allied with speculation is insurance, the principle whereby the risks incidental to all business are distributed over the members of the community at large. Dealings in futures are really a form of insurance against the uncertainty of future supplies of necessary commodities. Between the first and last dealers who hold any particular future voucher there are frequently large numbers of operators, each of whom has bought at one price and sold at another. The differences between first and last prices are thus distributed in minute amounts over many persons, and if loss eventually ensues the proportion borne by each dealer is very small. So with insurance. Many people insure against fire, but very few buildings are actually burnt down ; the companies are thus enabled to pay the amount of losses insured without difficulty out of the many premiums received. The actual losses are thus borne in small amounts by the numerous insurers throughout the community who keep on paying premiums but never suffer losses, and actuarial science, based on the accurate records of past years, makes possible the careful estimation of probable losses and the ascertainment of the amounts which should be set aside each year to provide against the contingencies insured.

It is probably true to say that without insurance, business could scarcely have reached its present enormous proportions. The risks attendant on most enterprises in present-day communities are too enormous to be borne entirely by the entrepreneur ; he cannot be expected to shoulder the whole responsibility for fire and accident, floods and burglary, sickness and injury of his workmen, and for losses of goods in transit on sea and on land. The risks of initiating production and in anticipating demand are in themselves a sufficient burden for the employer, and the security which insurance offers in other directions enables him to plan and organise with some degree of security against unforeseen contingencies. His faculties and energies are thus unhampered by uncertainty and unwillingness to undertake further risk, whilst the community at large benefits from his greater freedom of movement.

The range of risks covered by insurance policies tends continually to increase. Among the fairly recent types which are of particular economic importance are the following :—

WORKMEN'S COMPENSATION INSURANCE. This enables an employer to safeguard himself in respect of all accidents which may befall workmen engaged under his direction.

LOSS OF PROFITS INSURANCE enables business men to protect themselves against loss from the cessation of business caused by the destruction or damage of business premises by fire, flood or other catastrophe.

FIDELITY GUARANTEE INSURANCE provides a means of protection against loss through embezzlement, etc., on the part of employees.

MARINE INSURANCE affords protection against loss or damage to shipping or cargo as a result of accident or peril on the high seas.

UNEMPLOYMENT AND HEALTH INSURANCE. Although these schemes are subject to many objections and have not yet reached full maturity, they are nevertheless of inestimable benefit in so far as they raise the general standard of the population, both morally and intellectually. They tend to prevent a man from sinking so low as to become a burden to society. In this country the State schemes of unemployment and health insurance provide the workman with some means of subsistence in the event of his unemployment or sickness, Widows' and Orphans' Pensions provide for dependants in the event of the death of the bread-winner, whilst Old Age Pensions are paid to all workers who attain the age of 65.

The economic justification of social insurance legislation, as, indeed, of all forms of insurance, is that it helps to remove insecurity, that bugbear of the worker in modern industry—whether due to unemployment, sickness, accident or old age—which is recognised as being undesirable from a strictly economic as well as a humanitarian point of view. It destroys initiative and independence, and, in the case of unemployment, creates an attitude of opposition to the introduction of new and better methods. The development of the device of social insurance is intended to remove these disadvantages, but, unfortunately, experience has proved that it is open to considerable abuse, and that it may sadly burden productive forces if pressed beyond the limits of the community's capacity to meet the necessary expenditure.

CHAPTER 13

SUPPLY AND DEMAND; THE DETERMINATION OF PRICE AND VALUE

In an earlier chapter we have shown how the price which a consumer is willing to pay for a commodity is determined by the marginal utility to him of the last unit purchased. Again, in the chapter on markets, it was explained how the market price of a commodity is determined by the competition between the buyers and sellers of that commodity. It is now necessary to analyse in greater detail the basis on which commodities and services are exchanged.

Originally exchange consisted in the transfer of one commodity in exchange for another. This system, known as *barter*, still persists in some primitive communities, but in all highly-organised communities its inconveniences have given rise to the intervention of a third commodity—money—in terms of which the value of all other commodities can be easily expressed and instantly determined. Value so expressed in terms of money is called *price*; price therefore is one aspect of value—it is value in terms of the particular thing chosen as money. Our present object is to investigate how the prices of commodities are determined in the modern price-system.

The Law of Indifference which we have already enunciated states that in one market at any one time there can be only one price for the same commodity. That price must be the one at which the quantity of goods offered is equal to the quantity of the same goods demanded. Fluctuation there may be, but this price is ultimately that at which the competitive buying and selling elements tend to agree, and the one which satisfies the greatest number of buyers and sellers. This price is in fact determined by the competing forces of demand and of supply; it marks the position of equilibrium which must arise between the demand for goods and their supply when consumers and producers are brought together. It is the function of the department of economic activity known as Exchange to achieve this equilibrium, to co-ordinate demand and supply, and to link up Consumption and Production. It goes even further, inasmuch as it determines the price which the producer ultimately receives for his product, and therefore provides the return which it is the function of Distributive activities to allocate among the various factors contributing to the production of a

commodity. Every producer is a consumer also. He works in order to provide himself, by the sale of his products, with the power to purchase the products of others. By Exchange he is enabled to claim the reward for his effort in the form of a price for his products. This price, as we have stated, is expressed in money—which has been well described as an order for commodities drawn on the community generally.

Demand and Supply.

The only tangible measure of a man's desire for anything is the price he is willing to pay for it. Thus we say that *demand* for goods is desire for those goods backed by purchasing ability and willingness to use it. This effective desire is measured in terms of money by price.

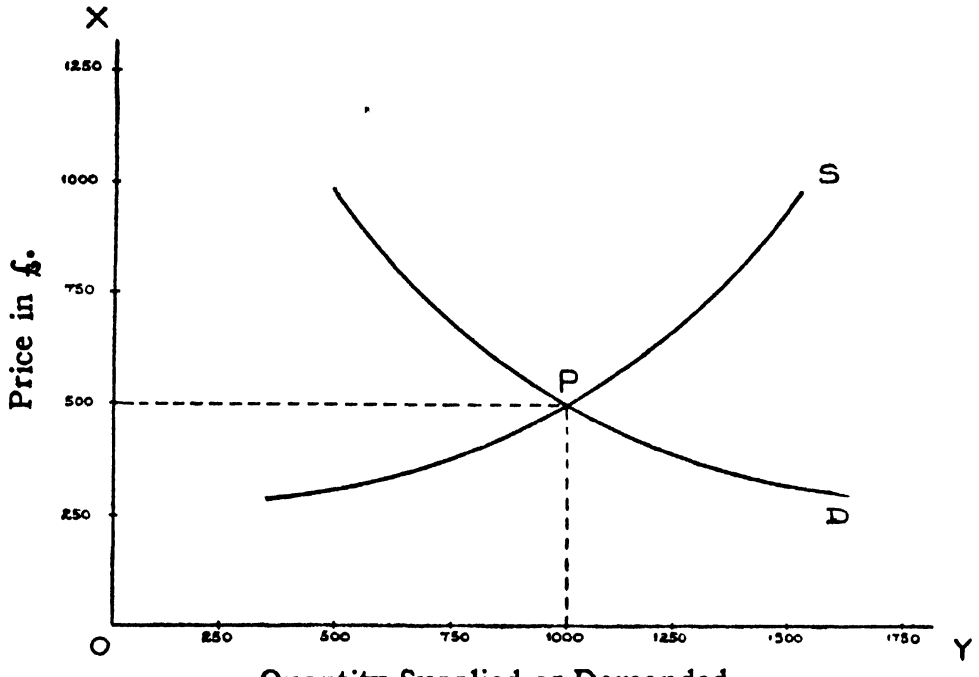
The supply of goods at any moment is the quantity offered for sale on the market at that particular moment. It is to be distinguished from the *stock* of any commodity, for supply is only that portion of the stock which is offered for sale. In the case of perishable articles stock and supply tend to approximate, for such articles cannot be kept back from the market except for a comparatively short period. On the other hand, the supply of commodities of a lasting nature, such as the metals and precious stones, is usually but a small proportion of the total amount available.

The terms elasticity and inelasticity already applied to demand (see *ante*, page 47) are applicable also to supply. The supply of an article may be described as *elastic* when it tends to change readily with movements in the price of that article, and may be termed *inelastic* when changes in price have little effect on the amount offered. Elasticity of supply clearly implies the existence of a stock, or of a *potential* supply in the form of the means of increasing the production of the article concerned within a short period. Conversely, inelasticity of supply implies the absence of a stock, or its withholding from the market, and also the inability of producers to increase output within a short period.

The Laws of Supply and Demand.

Price, as we have seen, is determined by the relative forces of supply and demand—the competition between buyers and sellers of a commodity or service. Buyers wish to purchase at the lowest price, while sellers seek to obtain the highest price. The result is that if one seller offers an article at a lower price than that at which other sellers offer an identical article, all buyers will purchase from him so far as his supply will allow. When his supply is exhausted the supply price may rise, but most probably other sellers would also reduce their prices in order to sell their goods. Therefore, at any given time and

place supply price tends, under competition, to be the same for all supplies of the same commodity. In the same way aggregate demand price, that is, the price offered by individuals in the mass, tends to equality in consequence of competition between buyers and buyers in the same market at the same time. Thus with free competition between buyers and buyers and sellers and sellers there can only be one price in a given place at a given time for the same article, and this price will be that at which demand price coincides with supply price. In general, demand price will fall as the amount offered increases relative to the demand; and supply price will rise as the amount demanded increases relative to the supply. Alternatively, we may say that, in accordance with the Law of Demand, rising prices tend to reduce demand, while falling prices tend to increase it; and, in accordance with the Law of Supply, rising prices tend to increase supply while falling prices tend to reduce it. This may be represented in the following diagram :—



S=Supply curve showing the tendency of rising prices to increase supply and falling prices to reduce it.

D=Demand curve showing the tendency of rising prices to reduce demand and falling prices to increase it.

[The reverse of the above does not follow: an increase in supply or a decrease in demand will cause price to fall and a decrease in supply or an increase in demand will cause price to rise.]

P=Point of equilibrium showing the determination of price at the intersection of the supply and demand curves.

At any moment the price will be that which buyers will pay for a certain quantity of the commodity and which sellers will accept for the same quantity. Any price above or below means a disparity between the demand and the supply; i.e., there is no equilibrium. This may perhaps sound unnecessarily confusing, but it becomes clear when we consider a hypothetical example.

Let us assume that buyers in the aggregate are willing to purchase 1,000 motor cars at a price of £500 each, or 2,000 when the price is £300, but that if the price is £700 they will buy 600 only. Sellers on the other hand will supply, say, 500 cars when the price is £300, 1,000 when the price is £500, and 1,800 when the price is £700. The point at which demand price and supply price coincide is therefore £500, at which 1,000 cars are demanded and 1,000 are supplied. This price is said to be the *market price.*

Demand.	Price.	Supply.
	£	
350	1,000	4,000
400	900	3,000
500	800	2,300
600	700	1,800
800	600	1,400
1,000	500	1,000
1,500	400	700
2,000	300	500
3,000	200	200

In this explanation we must assume the existence of free competition on the part of both buyers and sellers. But perfectly free competition can scarcely be said to exist in the case of most commodities. Monopolies in whole or in part, on the side either of demand or of supply, may result in a price which is lower or higher respectively than would be the price under perfectly free competition.

The influence of monopolies on price will be considered more fully in a later chapter, but for the present we may assume that competition is sufficiently general to enable the forces of supply and demand to interact freely. A monopoly does not *prevent* the operation of these laws, it merely controls either supply or demand, and subject to this limitation the laws still operate, viz., a rise in price will increase supply and decrease demand and a fall in price will increase demand and decrease supply.

Market Price.

The market price is the price ruling in the market at any moment, and represents an equilibrium point between demand and supply. This price may of course vary from day to day according to changes in demand and supply. At one time demand may be low because of the absence or inactivity of purchasers; at another time supply may be considerably in excess of demand by reason of the arrival of plentiful supplies from elsewhere. Under such conditions the market price will fall by reason of the competition of sellers. Conversely, it will rise if demand is in excess of supply at any particular time. Some commodities

such as fish soon perish ; if they are not quickly sold their utility rapidly falls. So that if the demand is small and the supply is large at any given moment, the market price will be low ; and if demand is large and supply small, the price will be high.

The prices of goods of a less perishable nature will not fluctuate so markedly, but even in such cases there may be appreciable seasonal price variations, and this supplies the reason why retail shops hold summer and winter sales. If they have a larger stock of straw hats and tennis racquets than they require owing to the fickleness of an English summer, then the July sales bring sweeping reductions in hats and racquets. Business firms cannot afford to keep their capital locked up in goods which sell but slowly ; they must buy goods for the next season, and to do this they need ready capital. So they sell their goods, quite genuinely in many cases, at considerably below cost price. Speaking generally, however, movements in the prices of durable and non-seasonal goods will be found to be less violent than those in the prices of perishable and seasonal goods.

Normal Price.

Although the market price of any commodity may thus vary considerably, we can nevertheless discern a fairly constant price in the case of most articles if we consider a sufficiently long period. The market price of butter, for example, may vary considerably from day to day or from week to week, but an analysis of such variation over a long period will disclose a more or less constant price above and below which the market price tends to fluctuate.

This price to which the market price tends to return is called the *Normal* or *Long-period Price*, in contradistinction to the *Market Price*, which is the price prevailing at any moment and is sometimes called the *Short-period* or *Sub-normal Price*. As a general rule the *Normal Price of goods which are reproducible will tend, under free competitive conditions, to equal the marginal cost of production*. If the market price of a commodity remains above its cost of production, then new producers will be attracted to the industry and old producers will be impelled to increase their volume of production. This will increase supply and so cause market price to fall again. If the market price falls below cost of production, then the position will be reversed : production will decrease ; some manufacturers will cease to produce and others will work short time. These conditions will bring about a reduction of supply and so cause price to rise again.

Thus if a commodity is readily reproducible, its price cannot, under free competition, remain for long much above or much below the cost of production. The more readily the supply of an article can be increased, or the more easily that supply can be diminished, the more closely will the market price of the

article conform to the cost of production. If, however, a long period of time must elapse before an increased demand can react upon supply, then for this length of time market price may be considerably above the cost of production.

The effect of cost of production on market price varies as the supply of the commodity is adjusted to the demand easily or with difficulty. As a matter of fact, there is hardly a single commodity the supply of which is perfectly responsive to the demand. The supply of some things, however, can be very quickly increased, as, for example, the supply of such articles as machine tools, the market price of which approximates closely to the cost of production.

Thus we may conclude that, as a general rule, price is determined for short periods by the amount which a consumer is willing to give relative to the supplies available, and measures the marginal utility of those supplies to the consumer. In the long run, however, under free competition price is determined by cost of production, and market price tends to fluctuate around the normal price which is so determined.

Over a short period, the influence of demand is the more important, and the *cost of reproduction* has a greater influence than the cost of production. For example, a house that cost £1,600 to build in 1920 may now cost only £1,000. If therefore an exactly similar house can now be built for £1,000, no one will pay more than £1,000 for such a house built in 1920, irrespective of the fact that it originally cost £1,600.

Goods the Supply of which Cannot be Increased.

In the case of those things the stock of which is fixed, such as a painting by Rembrandt or a Grecian sculpture, the influence of demand on price is all-important both for short and long periods. The supply is fixed and is not subject to any great adjustment. Its influence is therefore practically negligible. Rare postage stamps also depend for their value on their scarcity and the fact that they cannot be reproduced. Their supply is extremely limited and their stock is permanently fixed. Demand, however, is not fixed; it may vary considerably from time to time.

When people say, therefore, that the price of non-reproducible goods is fixed by demand alone they are explaining in not very accurate language the fact that demand is the *variable* element while supply is comparatively fixed, so that changes in price are caused almost entirely by changes in demand.

Goods the Production of which Requires Time.

Midway between those things the supply of which readily reacts to demand and those the supply of which cannot be increased, no matter how much demand increases, are those

commodities the supply of which cannot be said to respond immediately to an increased demand although their supply can eventually be increased. An example of this class is cowhide, the supply of which cannot be increased for an appreciably long time. If there were a sudden substantial increase in the demand for cowhide for upholstery, its price would immediately rise, for any great extension of supply could not be arranged for some time. Of course, if the price of the leather was high enough to justify the possible sacrifice of the meat or its sale at a low price, more cattle could be slaughtered, but the further supply of cattle, on which the supply of cowhide eventually depends, could not be materially increased for a number of years. If the increase in demand persisted the price of cowhide would remain high until supply could be increased to satisfy the increase in demand. For a certain length of time then, the price of cowhide would resemble the price of things permanently fixed in quantity, such as a picture by Rembrandt or a rare postage stamp, and would vary as demand varied.

Another excellent example of this class of things is provided by the case of wireless sets and spare parts. Early in 1922 the possibilities of broadcasting were unknown, to the general public at least. But as soon as the pleasures of wireless became known, a boom set in, and the demand for receiving sets sent their price soaring. The supply was temporarily fixed in quantity, but the demand had increased enormously. The price which a seller himself had paid for the constituent parts did not matter in the least: the essential fact was that additional supplies of such parts were unobtainable for a time and their price was determined, not by the cost of production, but by demand, i.e., their marginal utility to the consumer. Eventually, however, the supply of crystals and other parts of wireless sets increased to such an extent that the demand was more than satisfied, and competition amongst producers brought the price down rapidly, so that in some cases it was below the cost of production. Since this period the demand for wireless sets has somewhat abated, though it is still much above what it was before the broadcasting boom, and producers have adjusted their supplies to demand. Thus we may see that so long as free competition exists amongst producers, so long will the price of wireless sets tend to be determined by their cost of production.

Products Requiring a Large Fixed Capital.

Frequently the inability of the supply of a commodity to adjust itself to the demand is due to the fact that a large fixed capital is necessary for its production, so that increased supplies cannot be obtained until the necessary additional capital has been diverted to the industry and the requisite appliances put into full working order. Examples are cotton yarn and woollen cloth.

In such cases the effect of an increased demand would be to send up market price, but supply could not be increased in proportion for some time. In the first place, no one will sink capital in the building of spinning or weaving mills unless he is reasonably assured that the demand will be maintained. Possibly, therefore, the price might remain high for a considerable time. Existing mills would, of course, endeavour to produce to greater capacity, but this might not be enough to satisfy the increased demand, and for a time, at least, the market price would remain above the cost of production.

But if the demand continued, more mills would be built, the supply of yarn would be increased and its price would fall. Conversely, where the amount of fixed capital is large, the market price might remain for a time actually below the cost of production, because the mills would continue to run at a slight loss rather than close down altogether, with a consequent risk of much difficulty in restarting when conditions proved more favourable.

Perishable or Seasonal Goods.

There are many perishable or seasonal commodities, the supply of which can quickly be increased to meet an increased demand, but the supply of which cannot easily be reduced if the demand falls, because producers cannot hope to gain by withholding supplies in anticipation of a future rise in prices. For example, straw hats cannot easily be held over from the end of one season until the next summer for, not only do they represent locked-up capital and take up considerable storage accommodation, but their pristine freshness of appearance tends to disappear and their style to become unfashionable. The price of straw hats at the end of the season may therefore fall below cost of production. To compensate for this the price at the time when sales are easy must be sufficient to make good the loss to the producer at other periods, and in fact we find that the average price of straw hats over a period of, say, three years, corresponds closely to their cost of production.

Similar conditions prevail in regard to the prices of fish and fruit. The prices of such perishable commodities frequently vary considerably during the same week or even on the same day. An average price can, however, be discerned which is just sufficient to reward the producer, otherwise his activities must and would cease.

Analysis of the Cost of Production.

In the preceding paragraphs reference has constantly been made to cost of production, and it is desirable at this stage to pause slightly in order to explain and to analyse the meaning of the term. The distinction between cost of production and

expense of production has been drawn earlier in this book (see *ante*, page 128); the former connotes the real effort and sacrifice involved in production, and is accordingly sometimes referred to as the *real cost of production*, while the latter is the measurement of this effort in terms of money. As a general rule the term "cost of production" is used by economists to mean *expense* of production, and although it would appear desirable always to use the more precise term "expense of production" when monetary expense is meant the usual practice is adopted in this chapter to avoid confusing the student who may be acquainted with other works on the subject.

Costs or Expenses of Production comprise all those charges which have to be incurred by a producer before his product can be marketed. They are usually divisible into two broad groups: (1) *Prime Costs*; and (2) *Supplementary Costs*. The former are those charges which vary directly as the output, and include such items as wages, raw materials, fuel, carriage and power. Such costs can be said to be represented directly in the commodity produced, and every increase in the quantity of the articles turned out generally involves a corresponding increase in prime cost.

On the other hand, supplementary costs are those establishment charges incurred in connection with fixed capital which do not vary appreciably with changes in output. Examples are the rent of a factory, the rates paid thereon and on surrounding land, interest on debentures, management salaries, depreciation of machinery and premises, lighting, and fire insurance. These expenses will vary little whether the factory is working full time or not, and, generally speaking, they continue to be incurred whether goods are being turned out or not. But prime costs stop when the factory stops.

It is not always possible to determine accurately what proportion of supplementary costs to add to the prime expenses of production of each single article, in order to determine its *total cost* of production. The selling price of every article must, nevertheless, be determined after making due allowance for a proportion of such expenses, and accordingly it is usual to add a certain percentage, known as *oncost*, to the prime expenses of production of all goods, in order to form a basis for determining their selling prices.

Obviously, the price received by a producer must remunerate him in the long run for his total cost, i.e., in respect of his prime and supplementary costs, but in the following cases the price received may be insufficient to cover all expenses:—

1. When Trade is Depressed.—When business is very slack and consumers are few, market prices may fall below the manufacturer's total cost of production. The employer may then adopt one of several courses. He may, of course, cease to produce altogether, close down his factory, discharge

his workmen and sell his buildings and machinery for what they will bring. But such a course is unlikely. It is rarely that market price remains for long below cost of production, and, in any case, where machinery and buildings are specialised for a particular purpose (as is the case with cotton-spinning mills) their sale at a time of depression would realise a sum much below their replacement cost. If the producer does not sell the plant and buildings he must meet certain establishment charges whether he continues to produce or not. It may be to his advantage, therefore, to continue producing as long as the market price covers the prime cost. He will at least cover the running expenses of production, with perhaps a little left over to pay part of the supplementary costs. This is in fact the course most manufacturers follow in periods of depression.

It is clear, however, that producers cannot indefinitely continue to sell at a price below cost of production, and if price does not for a long time cover total costs then some manufacturers will go out of business, the supply will fall and the price will rise again.

2. When Fixed Capital is Specialised.—Some industries require a considerable outlay on plant, machinery and buildings before production can commence. The capital then becomes specialised and only with difficulty can it be converted to other uses. Sometimes it so happens that capital is sunk in an enterprise which after a time offers no hope whatsoever of yielding an adequate return. There is a misdirection of productive effort which may be due to error on the part of the employer or to a change in business conditions. Under such circumstances the manufacturer may be content to carry on, rather than incur the heavy loss of selling his fixed capital, so long as he can just cover his total costs. Sometimes such a business may be continued for a time if prime cost only is covered, rather than be closed down at a complete loss in respect of much of the investment in fixed capital.

3. When Products are Dumped Abroad.—It sometimes happens that a large organisation which is supplying a home market cannot produce to the full extent necessary to enable it to reap all the advantages of increasing returns in large scale production, because such production would so increase supplies as to send down prices. Accordingly output is increased, but the excess is "dumped" on foreign markets at a price just sufficient to cover prime cost, or even below prime cost. The manufacturer can thus maintain his price on the home market, although he has produced (in greater quantity) at less cost per unit; by such careful manipulation his profits may be greatly increased.

4. In the Face of Foreign Competition.—The dumping of cheap goods referred to above may compel a producer in the country where the goods are dumped to sell below his prime costs if he is to sell at all. Similar conditions may result from the normal import of goods, or the extraordinary import of commodities in payment of war indemnities or of reparations, as happened after the War in the case of Germany, which unloaded vast quantities of cheap goods in this and in other countries. If such conditions are temporary, the home producer may endeavour to keep going by selling below total costs in the hope of eventually coming into his own, but he cannot do so indefinitely, and, in the face of such permanent competition, he may eventually be driven from the market altogether unless he can adopt cheaper methods of production or manufacture other articles not subject to such competition.

What are Marginal Costs of Production?

Just as on the side of consumption, marginal utility is the utility of the unit it is just worth the consumer's while to buy, so, on the side of production, *marginal cost* is the cost of that part of the supply which it is just worth the producer's while to put on the market.

The term "marginal cost" is used in two different senses. Sometimes it is applied to *the average cost per unit of output of the marginal firm*, i.e., the firm which, in colloquial terms, is just "keeping its head above water". In the business world there are great differences in efficiency between firms supplying the same market; some are highly efficient and prosperous, while others can only just manage to pay their way. The latter are described as "marginal firms": they produce at the highest cost per unit. The price obtained by such a firm for its products just enables it to continue producing without loss; its selling price just covers expenses of production.

In its second sense, marginal cost is applied to mean the *cost of production per unit of the marginal output of an "average" or "mature" firm* in any industry. An average firm is one managed with average ability and having reasonable access to the usual economies of production. If such a firm is producing a commodity which is subject to diminishing returns, the cost of production of the last unit just worth while producing will be the marginal cost of production. For example, a farmer will apply capital and labour to a plot of land in such amounts that the marginal dose will yield a return which will just balance its cost.

In the case of an industry in which increasing returns operate the meaning of *marginal cost* in this second sense is not so clear. If the manufacturer operating under increasing returns is turning out 1000 boots per week, it would appear that his cost per unit

would be constantly reduced with every increase in his output. It is found, however, that, in the case of an industry subject to increasing returns, there is an " optimum " point of production ; i.e., a point at which any further increase in output or in the size of the firm is not justified by the additional return obtained. The marginal cost is that at which expansion ceases and may be taken as the average cost of production per unit of the *representative* firm in the industry concerned. (See page 317.)

In the long run, the supply price of a commodity must be such as will cover the marginal cost, i.e., the cost per unit of the marginal output of the average or representative firm producing that commodity. " The supply price of a commodity for any given output of an industry is the complete cost of production per unit of output of the mature firm which is marginal for such an output of the industry ".[1] (Chapman)

But again the supply price must just cover the unit cost of production of the marginal firm, i.e., that which is producing under the least favourable conditions, for, if price falls for a considerable period, and cost of production does not fall in proportion, this marginal firm will be producing at a loss and will accordingly be forced out of production by stress of competition. Its place is taken by a more efficient firm, and marginal cost falls. This is constantly happening in practice ; the marginal firms are those the liquidation or bankruptcy of which is announced in the *London Gazette*, or rather these *were* the marginal firms. On their disappearance some other firms become the marginal firms.

Thus we see that the marginal cost of production of the *average* firm, and the cost of production of the *marginal* firm, tend to equality, for under free competition, the marginal supply price of all sellers in the same market must be equal. Therefore whichever of the two conceptions of marginal cost is adopted, the ultimate effect on price will be the same.

The Influence of the Laws of Returns on Price.

In the long run, as we have shown, price is determined by marginal cost of production. This will vary with changes in supply according to whether the commodity is produced under increasing, constant or diminishing returns.

1. If the Commodity is Subject to Increasing Returns, extra supplies can be obtained at a less than proportionate cost of production. Therefore if demand increases supplies will be forthcoming at less cost, and price in the long run will tend to *fall*. If price does not fall, producers will be attracted by the prospect of making extra profits and increased supplies will eventually lower price. Conversely, if demand falls the smaller supply will cost more per unit than was previously the case, and accord-

[1] Chapman, *Outlines of Political Economy*, p. 163.

ingly price in the long run will tend to *rise*. Prices therefore vary inversely as the amount supplied.

2. IF THE COMMODITY IS SUBJECT TO CONSTANT RETURNS, changes in supply, caused by a variation in demand, will *not affect price*, because all units are obtained at a constant cost, whether production is high or low.

3. IF THE COMMODITY IS SUBJECT TO DIMINISHING RETURNS, extra supplies can be obtained only at a greater than proportionate cost per unit, hence if demand increases, price in the long run will rise. Conversely, if demand falls off, the smaller supply can be obtained at a less than proportionate cost per unit and price will accordingly tend to *fall*. Prices therefore vary directly as the amount supplied.

Summary of Conclusions: The Marginal Utility Theory of Value.

The conclusions which we have already reached may now be briefly summarised. We have seen that perfectly free competition rarely exists. Neither supply nor demand is always controllable. Subject to modifications and to any conscious control of demand and/or supply, we may state that a rise in price will cause an increase in supply and a decrease in demand, and conversely, that a fall in price will increase demand and decrease supply.

Value *at any time* is determined by the interaction of demand and supply. Demand is governed by the marginal utility of the commodity to consumers in the aggregate. Consumers spend their money so as to obtain equi-marginal utility from all their purchases. Price therefore measures the marginal utility of the amount available. If supply increases, marginal utility and hence price fall; if supply falls, marginal utility and price rise. Marginal utility is low if the supply is very large or unrestricted. Increasing supplies of various commodities affect their prices in different ways. The marginal utility of some commodities falls more rapidly than that of others with an increased supply; that is, the demand for some things is more elastic than the demand for others.

The demand for most things is readily responsive to price changes; the supply of most things is not usually so responsive. *At any moment* the supply is fixed, and demand as governed by marginal utility exercises the greater influence on price. But in the long run supply can be varied to meet the demands of consumers. If price rises, supply will be increased; if price falls, supply will be restricted. In the long run and under free competition, these forces will bring about a price approximating to cost of production. The cost of production varies with different firms, but the price in the long run must cover the cost of produc-

ing under the least favourable conditions; it must cover the marginal cost. Producers aim at producing up to the marginal cost of production. They endeavour to obtain equi-marginal productivity or returns from each of the factors they bring together, in accordance with the principle of substitution. A price above marginal cost will attract new supplies, a price below it will cause supply to diminish. Thus marginal cost of production in the long run determines normal price or, as J. S. Mill states, "the *natural value*, to which the market value, after every variation, always tends to return".[1] The influence of cost of production on price depends on the ease or difficulty with which supply can be adjusted to demand. This influence is strong if supply can be adjusted quickly and easily, and price in such circumstances approximates closely to cost of production. It is less marked and takes longer to operate in the case of commodities which require a large fixed capital and lengthy elaborate processes for their production. In the case of perishable articles, supply may be easily increased, but it cannot be reduced by withholding stocks if demand falls. Demand in such circumstances is the main determinant of price.

The Marginal Utility Theory of Value is therefore that the price of anything *at any moment* is determined by demand relative to supply, i.e., by the marginal utility of the amount available to the consumer. In the case of reproducible goods, and under free competition, normal price, or value in *the long run*, approximates to marginal cost of production, and prices are always tending to equilibrium at that point where marginal utility as measured in money is equal to marginal expenses of production.

The Time Element in the Theory of Value.

It is obvious from a consideration of the Theory of Value that the concept, Time, plays an important part in economic theories. It is of special importance in relation to the problem of value. If society were static, that is, if the time element were eliminated, price would represent the real cost of production; but society is dynamic—habits, tastes and fashions are continually changing, while methods and volumes of production vary frequently. Thus, in the "short" period, values are affected by influences different from those which predominate in the "long" period.

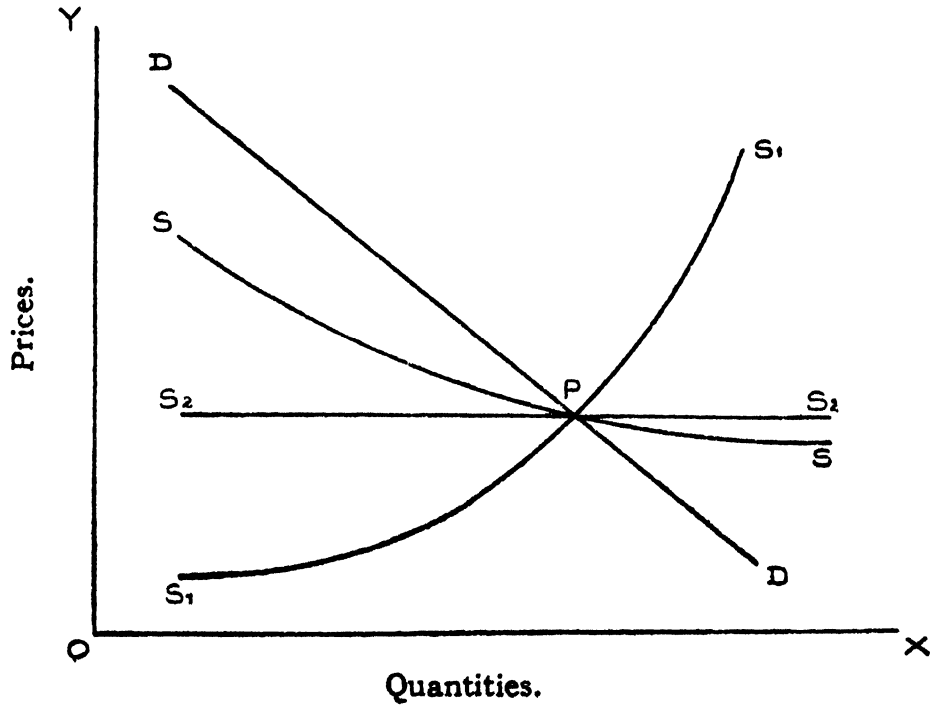
The term *normal*, too, must be considered in relation to the period of time involved. The normal period in the case of fish is shorter than the normal period in the case of pianos. Hence, in building up economic theory, clear distinctions must be drawn between the immediate and the ultimate effects of the play of economic forces.

[1] *Principles*, Book III, VI. I.

Along O X are measured quantities of any commodity demanded or supplied at a given price. Along O Y are measured prices, i.e., values in terms of money. The demand curve D D measures the price which a consumer will give for successive increasing quantities of a commodity. Obviously this curve falls with the addition of each increment, and is in fact analogous to the marginal utility curve given previously in Chapter 4. The supply curves, S S, $S_1 S_1$, and $S_2 S_2$, measure the prices at which producers will sell in the long run, and, in accordance with the influence of the laws of returns on cost of production (see *ante*, pp. 129-31), the curves will fall, remain level, or rise according to whether the commodity is produced under increasing, constant or diminishing returns. S S represents the supply price for various quantities produced under increasing returns: it falls slightly as costs fall per unit. $S_1 S_1$ represents the supply price for various quantities produced under diminishing returns: it rises as costs per unit increase with expanding output. $S_2 S_2$ represents the supply price for commodities produced under constant returns, and is accordingly level throughout. The point of intersection of the curves will be that at which marginal utility and marginal expenses of production tend to balance, and this point will determine the *normal* value of the commodity.

It should be noted that the conditions represented by this diagram are largely hypothetical; the curves are "long-period" curves; if demand increases suddenly price will naturally be forced upwards, whether the commodity is produced under increasing, constant or diminishing returns. But in the long run the position of equilibrium will be that at which the curves intersect.

Diagram Illustrating the Determination of Value.



CHAPTER 14

OTHER THEORIES OF VALUE: JOINT AND COMPOSITE DEMAND AND SUPPLY

THE Marginal Utility Theory of Value is accepted at the present day as the most accurate and scientific explanation of the determination of normal or long-period value, but several other important theories which have been expounded from time to time still find support in certain quarters.

The other important theories of value—the *Labour Theory* and the *Cost of Production Theory*—approach the problem entirely from the side of supply, and endeavour to show that, in the long run, the value of an article is determined by the efforts required to place it on the market.

The Labour Theory of Value.

The best known of the other theories of value is the Labour Theory of Value associated chiefly with the teachings of Karl Marx, and expounded also by Adam Smith and Ricardo. Marx held that labour was the sole source of value, and therefore that the reward of labour should be the *total* product of industry. This theory of value represents an independent approach to the question of value; it is, in fact, an attempt to find an *absolute* measure of the value of commodities and thus differs from the orthodox or marginal utility theory, which seeks to explain the value of one thing in terms of other things, i.e., it seeks to show that the value of a commodity is measured by what the consumer will pay for it.

Stated briefly the labour theory of value is that, in the long run, the value of anything is determined by the amount of labour embodied in it. Ricardo speaks of labour as "the foundation of all value, and the relative quantity of labour" (i.e., applied to produce commodities) "as almost exclusively determining the relative value of commodities". The exponents of this theory are in agreement with other economists that the market value of a thing depends on demand and supply, but they maintain that the normal value of anything is determined by the amount of labour expended in its production. Karl Marx defined commodities as congelations of labour, and regarded value as being really "crystallised labour". The theory has plausibility. To those who point to the part played by capital in the production

of a commodity the Marxian exponents of this theory reply that capital itself is only crystallised labour. They maintain that in the first place capital itself was merely a form of stored-up labour, and argue that this stored-up labour, represented by capital goods in the form of tools, machinery, etc., when used in conjunction with labour produced further capital. Although capital eventually became a distinct factor, they continue, this capital really belonged to the labourers by whom it was produced. In their view the present owners of capital possess it only because they or their predecessors have withheld from the labourer part of the product of his labour. Ricardo and Adam Smith were prepared to allow capital a greater influence in production than the Marxian school, but their idea of the theory was similar in essence to that of Marx.

The theory stated in this form is a plausible one, but its plausibility is superficial only. The first difficulty concerns the meaning of the term *labour*. Is it intended to cover only manual labour, or would it include also the services of the entrepreneur ? Is the important productive factor of organisation to be counted as labour, and, if so, by what standard is it to be compared with the labour of an engineman or packer ? How is the labour of a portrait painter, whose week's work may be worth £200, to be compared with the week's labour of a bricklayer ? By what standard shall the different *qualities* of labour be estimated and compared ? Apart from these difficulties, would the labour of a man who makes an unwanted article, for instance, a castle in the middle of a desert, be counted as labour in the same way as labour spent in making an article in very great demand ?

The exponents of the theory were fully alive to these difficulties and made a number of attempts to define more clearly the basis on which depended their conception of value. But the various explanations have served only to increase the difficulties. Marx, for example, endeavoured to express the value of goods in terms of " socially necessary labour ", but what does he mean by this ? Who is to determine what labour *is* socially necessary labour ? And again, the kind of labour socially necessary at one period may not be so at another. The invention of machinery has caused the unemployment of many hand workers. Are they still to pursue their hand labour or is their labour not now socially necessary ? Suppose again that much labour has been spent on some work which is eventually abandoned, as was the case with the first attempts at cutting a canal through the Panama isthmus. Would the value of the unfinished and useless canal be represented by the amount of labour expended on it ? Obviously, it would not. We may say, then, that a commodity does not have value because labour is put into it, but that labour is put into it because it is expected to have a value (*cf.* an article which is never sold).

In other ways also the Labour Theory of Value fails to provide a correct explanation of value.

First, it does not clearly define the meaning of labour. How is mental labour to be compared with manual labour? How are various qualities of labour to be measured for comparative purposes? How can *qualitative* differences be reduced to *quantitative* differences? Secondly, it ignores the possibility of misdirected labour, such as that involved in the construction of a factory which is afterwards found useless for the purpose for which it was intended, and has to be left derelict. Thirdly, the theory does not explain how the value of things may often change after they are made; as a result, for instance, of changes in fashion. Finally, it does not explain scarcity value, such as that of famous pictures and statues.

Although it seems reasonable that the labourer's reward should not depend on changes in fashion, yet it is extremely difficult to see the practicability of the suggestion that the value of anything should be expressed in terms of labour. The statue of Hermes by Praxiteles is of tremendous value at the present time. But if Praxiteles were alive to-day would a statue sculptured by him be valued at perhaps 300 days' labour, and so be equal in value to 30 tables each costing 10 days' labour?

Thus we are forced to the conclusion that, although the labour theory of value may appeal to our sense of fairness, inasmuch as it seems just that the value of anything should approximate to the sacrifice and effort involved in its production, yet labour cannot be regarded as the sole factor which determines value, although it must be recognised as a very important one. The theory supplies us with no standard of measurement, no means of comparing the values of different things. Only by bringing an article into the market and endeavouring to exchange it for other articles can we obtain an estimate of its value, and as we have seen, that value is in the end what the consumer is willing to pay.

The Cost of Production Theory of Value.

Like the labour theory, the Cost of Production Theory is an attempt to explain value from the side of supply alone. Unlike the labour theory, however, it makes specific allowance for the services of capital, land and organisation in the production of commodities, and is thus stated by Mill[1]: "The cost of production, together with the ordinary profit, may, therefore, be called the *necessary* price or value, of all things made by labour and capital".

In our consideration of normal price we saw that, under free competitive conditions, if the price of anything rises above its cost of production more producers are attracted because greater profits are made, supply accordingly increases and price falls. Conversely, if price falls below cost of production, supply is reduced and price rises again. The theory is based on the observance of

[1] *Principles*, Book III. III. i.

this relation, and, on the face of it, has more to recommend it than the labour theory. But much of its deficiency as an explanation of value is due to the fact that it assumes the existence of free competition to be a normal condition, whereas it is well known that free competition is largely a hypothetical conception, and that many influences may intervene to prevent its operation. The theory allows for the necessity and value in production of agents other than labour, but it does not explain how the values of these other agents are to be determined. In this respect the same objection applies as in the case of the labour theory : we cannot have an *absolute* explanation of value unless we have an *absolute* measure of the value of all the factors which we have seen are necessary to production—land, labour, capital and organisation. Suppose, for example, that we regard the costs of production intended by this theory to be *real costs*, i.e., as costs measured in terms of effort and sacrifice—so many units of capital, so many units of labour, so many units of land and so many units of organisation. On what basis are we to correlate the units of these several factors ? It does not help us much to say that the value of a table is represented by 5 units of labour *plus* 8 units of capital *plus* 3 units of land *plus* 2 units of organisation, unless we have some common denominator in terms of which the various units may be expressed. If such costs are to be *evaluated*, then the theory assumes that the value of a commodity is determined by the sum of the values of the efforts required to produce it. Thus will one value be said to determine another, and this, in turn, must be determined by still other values. Therefore as an independent attempt to explain the *absolute* value of any thing in terms of real cost, this theory is not very helpful, as it merely reasons in a circle and does not arrive at a basic standard of comparison.

There are several other objections to be met, as follow :—

1. *It does not allow for Misdirected Capital and Labour.* How does cost of production influence the value of an aeroplane which refuses to fly, or of a patented article which is superseded in utility by another article before arrangements are complete for placing it on the market, or of a specially produced article which the consumer will not accept ?

2. *It does not Allow for Changes in Value after a Thing is Produced* ; e.g., the value of straw hats will fall considerably after midsummer, particularly if the summer has been wet. How is the value of goods at bargain sales determined, or of goods which are dumped in one country by producers in another ?

3. *It does not Explain Scarcity Value*—the value of things which cannot be reproduced, such as pictures by Turner and early editions of Shakespeare's plays. Value in such cases has no relation to cost or expense of production.

4. *The Expense of Production in some Cases cannot be Determined*, as, for example, in the case of by-products, or of articles which are produced together. How does cost of production help us to compare the value of a leg of mutton and the value of a shoulder of mutton ? Or what is the value of mutton compared with that of wool ?

Clearly we cannot estimate the separate cost of production of any of these articles. Or again, what is the cost of running and making available an excursion train ? Is it the total or prime cost ? The railway lines and stations have to be kept in repair whether excursion trains are run on Bank Holidays or not. Is the value of a special excursion merely fixed so as just to cover the additional expenses incurred in running it ?

Thus it becomes obvious that in many cases we simply cannot calculate cost of production. The producer solves the difficulty by charging as much as he can for his goods or services. As a general rule he estimates carefully what consumers will give and fixes his prices according to his estimate, altering it subsequently if demand is much below or much in excess of his anticipations. He gets the highest price possible, and is concerned with his cost of production only in so far as he determines not to sell below this cost if he can possibly avoid it. It is true that under free competition and in the long run this price will in most cases approximate to the marginal cost of production, because producers will enter or leave the industry until equilibrium is achieved, but frequently price remains for a long period much above or much below the cost of production, and the theory does not explain how value is determined in such circumstances.

Why the Marginal Utility Theory is Accepted.

The foregoing examination of the labour and the cost of production theories of value does not prove these theories to be worthless. It shows, however, that they possess serious defects ; neither is what it claims to be—a complete explanation of normal value. When machinery played but a small part in production the labour theory was a fairly exact explanation of normal value. The worth of a man's products was then chiefly determined by the number of hours or days it took to make them. The cost of production theory was really an attempt to adapt the labour theory to modern conditions by making an allowance for the important part played by capital in all industry. But in spite of their defects these theories are of considerable use to us. The labour theory emphasises the absurdity of the exaggerated value which we attach to such rare objects as diamonds, which may be picked up from the ground, compared with the value we place on such vital necessaries as bread and clothing, the production of

which involves considerable labour. Again, the cost of production theory demonstrates that the value of reproducible goods tends under free competition and in the long run to equal their cost of production.

The marginal utility theory is superior to the other theories in that it provides us with an adequate explanation of the value of a thing both at a given moment and in the long run. It shows that there is no absolute or fixed value of anything, because value is an expression of one thing in terms of another, and varies as supply and demand vary. The marginal utility theory offers the only satisfactory explanation of the value of rare, soiled, incomplete or damaged articles, the price of which has no reference to cost of production, and of such things as water and sunshine, which although of inestimable value-in-use, possess little or no value-in-exchange. The marginal utility of all such articles to the consumer determines the price, if any, that he will give for them.

JOINT AND COMPOSITE DEMAND AND SUPPLY

Joint Demand.

Two or more commodities are said to be jointly demanded when the demand for each is derived from the ultimate demand for the final commodity into the production of which they enter. As the utility of raw materials and of the means of production arises from the direct demand for those products which they help to produce, the demand for the raw materials and the means of production is *indirect* and is *derived* from the ultimate demand. The demand for a certain kind of clay, that for straw, and for the services of a brickworks are all derived from the demand for bricks, which are the ultimate product and the result of the co-ordination of the channels of usefulness of the raw materials and the means of production.

If for any reason there is an increase in the demand for the ultimate product with a consequent rise in its price, then such changed conditions will be reflected in the demand for the constituent products and consequently also in *their* price. In the case given, if the clay, straw, and brickworks possessed no other utility than in the manufacture of bricks, and if their supply were equally limited or equally extensible, then the price of each constituent would fluctuate directly in proportion to movements in the market price of bricks. Such an assumption, however, in the case of a product derived from commodities jointly demanded, is unwarranted, as the conditions of supply of each constituent are likely to differ widely. It is conceivable that the supply of clay cannot easily be increased owing to its natural limitation, while the increased demand for straw will be adequately met by the diversion of straw from other purposes (such as its use as fodder). The producer of straw will naturally prefer to sell his straw to the brickmaker, as the price paid owing

to the increase in demand for bricks will be higher than the price current for straw for other purposes. Again, the supply of brick-works will be more or less adjustable to the increased demand for bricks, either by the erection of new ovens or by the conversion of lime kilns.

It is clear, therefore, that such inequality in the possibilities of increased supply of the constituent products is the cause of unequal changes in their price. That constituent will increase most in price which is most difficult to obtain in greater quantities, and it will therefore absorb a greater proportion of the increased price of the ultimate product. Conversely, there will be no change in the cost of a constituent the supply of which can be easily increased without extra expense, but the increase in the price of the ultimate product will be shared by the other constituents, the supply of which is not so easily adjusted to the increased demand.

It must be understood that the conditions of joint demand have not a permanent effect on value as changes in economic needs tend in time to bring about their own adjustment. The increased demand for bricks would in the long run bring forth the requisite supply so that price would again be reduced. If the supply could not be sufficiently increased to bring down the price of bricks, then consumers of bricks, acting in accordance with the principle of substitution, would tend to use stone, concrete, or some other material for their needs, so that the demand for bricks would again be lessened and price reduced.

Joint Supply and Joint Cost.

Joint products are two or more commodities the production of which is joined in a common source of supply, and which are therefore said to have a *joint supply*. Examples of such are exceedingly common: beef and hides have a common origin in the carcases of cattle; cotton fibre and cotton seed are derived from the cotton plant; the manufacture of coal gas necessarily entails the production of coke and certain other tar by-products. The production of by-products always means that the conditions of joint supply are present, and the frequent occurrence of such conditions in production and industry causes the determination of value under such conditions to be of considerable importance in a comprehensive theory of value.

Two important points must be borne in mind in considering the effects of the conditions of joint supply on cost. The first is that the various commodities derived from the common origin are produced in a certain fixed proportion one to the other; the quantity of beef obtained from a carcase is necessarily limited, as also is the supply of hides therefrom. As a result beef and hides are produced in a proportion which cannot be varied. (The possibility of small changes in the proportion of meat to

hides caused by the breeding of better meat-carrying cattle need not here be considered, as the result of such is felt only within comparatively small limits.) The second point that must be remembered is that although the joint products are produced in an unvariable proportion, the separate demands for the products are not so connected, and the proportion between the demands for each is liable to unlimited changes from alterations in their conditions of demand.

The result of these peculiar conditions governing joint supply is that *the total of the prices obtained for the individual joint products must be sufficient to cover their joint expenses of production.* But the relative prices of the respective products are more difficult of estimation. If the demand for beef is increased for any reason (such as a scarcity of mutton owing to prevalence of disease among sheep) then more beef will be available for the market, as stock breeders will increase the supply (given the necessary time) in order to share in the increased price of beef. As a corollary more hides will be available, but the increase in demand for beef causes no change in the demand for hides. Consequently the increased supply of hides will necessitate a lowering of their price in order to get rid of the stock. The increase in the price of beef must therefore be sufficient to compensate for the fall in the price of hides, and it must also be sufficient to cover any increase in the expense of production of cattle caused by the operation of the Law of Diminishing Returns.

Speaking generally, it can therefore be said that the producers of joint products will attempt to sell them at a total price sufficient to yield a profit on both. If difficulty is experienced in disposing of the increased stock of one joint product, A, caused by an increase in demand for the other product, B, then the price of A will have to be lowered in order to increase the demand for it, and this decrease in price must be at least compensated for in the increased price of product B. It is clear, therefore, that since the joint products are produced in a certain proportion their respective prices must be such as will bring about their consumption in a similar proportion, so long as the total price obtained covers the total cost of production.

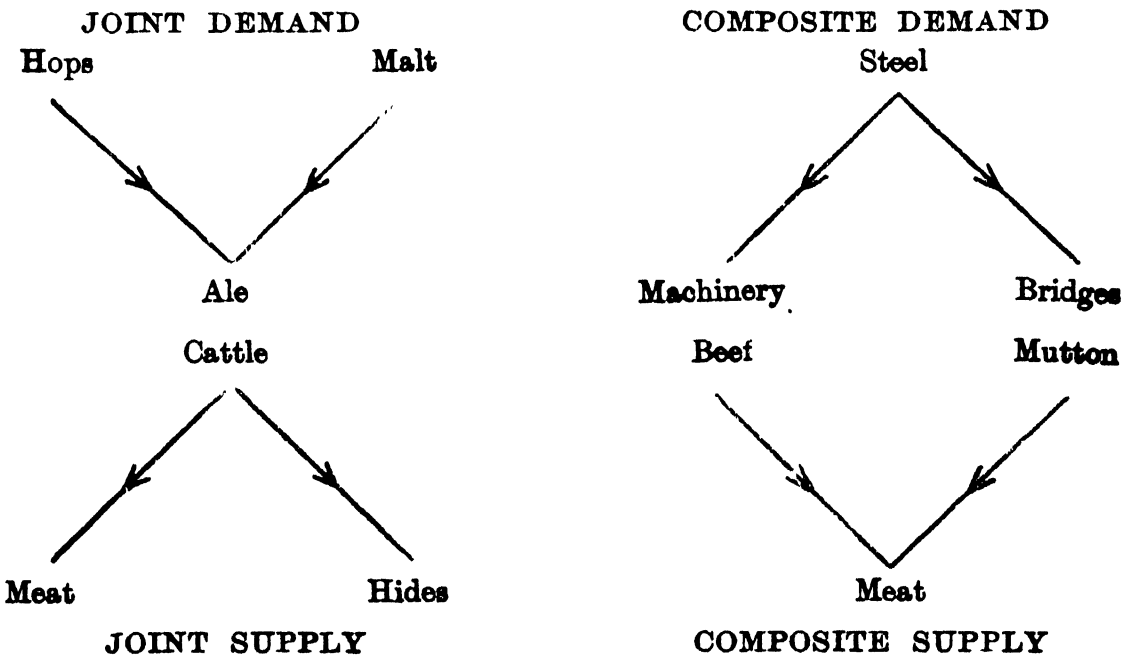
Composite Demand and Composite Supply.

Most raw materials can be used in the production of entirely different final products. Barley can be used in the making of bread or of beer; rubber has an enormous number of uses—for tyres, shoes, pipe-stems, fountain-pens, tennis balls, and for road-paving; similarly most things have two or more uses to which they can be diverted. In such cases the ultimate demand for the commodity is said to be *composite*, and the corresponding derived demands are *competitive demands* relatively to one another.

For example, if the demand for barley for malting purposes is increased (owing perhaps to the repeal of Prohibition laws in a certain country), then the supply of barley will tend to gravitate towards malting purposes, and its use as a food will be correspondingly decreased. But although such different uses compete for the supply of a commodity, it must be remembered that from another point of view they co-operate one with the other. The co-operation exists as the competing demands for the commodity are compounded into the *total* demand for it for all purposes, and such total or aggregate demand must be so correlated as to absorb the total supply.

Analogous to the conditions of composite demand are those of *composite supply*. In accordance with the principle of substitution (see *ante*, page 53) a want may be satisfied by two or more commodities or services which serve substantially the same purpose. If the price of butter is high owing to a shortage of supply, then many will use margarine for the purposes for which they formerly used butter, and in the same way a manufacturer may substitute machinery for the labour of a certain number of men. These various ways of accomplishing a certain end or of satisfying a certain demand can be said to be competitive supplies relatively to each other, but as in the case of composite demand they also co-operate in the sense that they are compounded into the total supply that satisfies the existing demand.

Diagrammatic Illustration of Joint Demand and Supply and Composite Demand and Supply.



Joint Demand: Hops and malt are in joint demand for making ale and beer.
Joint Supply: Meat and hides (among other things) are obtained from cattle.
Composite Demand: Steel is in demand for the making of machinery, bridges, and a great number of other objects.
Composite Supply: The demand of the population for meat is satisfied by the supply of beef, mutton, and many other varieties.

Multiple Products.

The manufacture of multiple products is becoming more and more important in modern industry. To-day, many producers are engaged in producing, not a single commodity the cost of which can be readily ascertained, but a wide range of products. An engineer may turn out several kinds of machines and perform general repair work. In such a case it is practically impossible to ascertain the total cost of each particular job; hence the prices charged are what the market will bear, subject to the proviso that in the long run the total revenue derived by charging such prices must be sufficient to yield a normal rate of profit. Such conditions are typical of most retail selling.

Alternate Supply.

Needless to say, even when these conditions exist, the producer or trader attempts to keep track of his various items of expense and revenue with a view to discovering which of his lines of goods yield him the greatest profit, and which, if any, are resulting in a loss: he will obviously not continue to manufacture or sell any article which he discovers to belong to the latter category. Accordingly, if a given portion of his plant or a certain machine can produce more than one type or form of product, he will apply that plant or machine in the manufacture of that product which yields the greater net return in the existing market conditions. Thus a loom may be applied for the production of fine or coarse cloth, and the principle of substitution will determine the purpose to which the loom is put. In such circumstances, the products concerned are said to be in *alternate supply*: they are alternate products of the same factors of production.

CHAPTER 15

MONOPOLIES AND MONOPOLY PRICES

THE theory of value which we have discussed in preceding chapters applies to conditions where free competition may be assumed, where there is no natural or artificial interference with supply or demand, and price is fixed by the unhindered adjustment of economic forces. But, as we have seen, perfectly free competition is rarely found in the modern industrial organisation, and it frequently happens that either supply or demand is subject to natural or artificial restriction. In such cases a partial or complete *monopoly* is said to exist, and power is placed in the hands of an individual or group of individuals to exercise an artificial control of demand or of supply. There is no general agreement amongst economists as to the exact meaning of the term monopoly. Broadly, the term is used to cover any effective price control, whether of supply or demand, of services or of goods; narrowly, it is used to mean a combination of manufacturers or merchants to control the supply price of commodities or services.

There is, of course, an element of monopoly existent wherever competition is restricted to any extent whatsoever, but for our present purposes, the meaning of monopoly will be confined to the *effective control of the whole or the greater portion of the supply of a commodity or service.*

Absolute Monopoly is Rare.

Absolute monopoly, however, is as rare as perfectly free competition, and only in very exceptional circumstances can examples be found of a complete regulation of the demand for or of the supply of any commodity. Furthermore, monopolies of demand are even more rare and exceptional than monopolies of supply. The term monopoly is, in fact, generally used to connote monopoly of supply, and, unless it is otherwise indicated, it will be used in this sense in the following paragraphs.

Possibly the nearest approach to absolute monopoly occurs in the case of the so-called *legal* and *social* monopolies (see page 153 *ante*), such as patented and copyright articles, gas, water and electricity supplies and the postal services. Even in these cases, however, substitutes may exist to some extent, while such monopolies are usually restricted to certain well-defined areas. For example, gas or oil may be used for lighting

and heating purposes in place of electricity, and there are few patented articles which have not some fairly satisfactory substitute. Natural monopolies, also, are usually restricted in their operation to a particular area, although we have an almost perfect example of a complete natural monopoly in the case of Chile nitrate, which is so much in demand as a fertiliser that the limited supply creates a monopoly sufficiently strong to control the world price of natural nitrate. Another monopoly controlling over 50 per cent. of the supply is the South African diamond combine, which controls over 60 per cent. of the world's supply of diamonds. Again, most of the world's supply of coffee comes from Brazil, but the Brazil coffee growers are able to control prices only to a very limited extent because coffee can be and is grown elsewhere (as, for instance, in Nigeria), so that any considerable rise in the price of this commodity would obviously stimulate its production elsewhere.

Monopolies of Services.

A monopoly may exist not only in the supply of commodities but also in the supply of services. In fact, some of the most powerful monopolies are of the latter kind, as, for example, the monopolistic control of medical services by the British Medical Association. The practice of medicine and surgery is legally restricted to registered practitioners who have passed certain tests of technical knowledge and have satisfied certain prescribed conditions, and to this extent the medical services of this country may be said to be in the hands of a monopoly—fortunately, one which recognises the traditions of the profession and its obligations to the community as well as to its own members.

In the same way a strong *trade union* may be regarded as a monopoly of a certain class of labour. Trade unions are associations of wage-earners for the purpose of maintaining and improving wages, the standard of living and conditions of work. In so far then as trade unions limit the number of entrants to the trade and oppose the use by employers of non-union labour, and in so far also as they insist on standard rates of wages, they exercise monopoly power and thus exert the same effect on the price of labour as does a powerful combination on the price of its material products. The power of trade unions, however, varies considerably. It is often thought that the miners' union in this country is a very strong combination, so far as wages and prices of coal are concerned, but a little consideration shows this view to be largely erroneous—at least in the very important direction of the power of this union to raise wages, viz., the price of mining labour. The restriction on its powers in this respect is due to the fact that wages are the largest element in the price of coal, and any rise in wages would so force up the price of coal as to stimulate its import from abroad. The control

of wages by other trade unions is similarly restricted, so that trade unions are, in effect, only limited monopolies.

Classification of Monopolies.

We may therefore divide monopolies of producers into two broad classes: (*a*) combinations of sellers of services, and (*b*) combinations of sellers of goods, both of which may vary in strength from the loosest form of trade association formed to protect the interests of its members, to the "complete merger" as we see it exemplified in the huge oil and steel trusts of America, and in the great thread and tobacco combines in Britain.

The characteristics of the Trust are dealt with in Chapter 11, *ante*, to which reference should be made at this point, but between this form of complete merger and the loosest trade associations exist many kinds of combinations, varying in power as well as in size.

The following classification of combinations is that suggested by Mr H. W. Macrosty,[1] and is based on the degree of control which is exercised by the various types :—

1. Associations for the Regulation of the Conditions of Sale.—The principal objects of such associations are usually to obtain uniformity in such matters as terms of delivery, rates of discount, length of credit and charges for transport. These associations are to be found in nearly every trade in the country and they may be either local or national in scope.

2. Price Associations.—These are formed to control the selling price of the product of the firms or individuals in agreement. The price need not be definitely fixed, but a minimum price may be agreed upon. Agreements of this kind are not legally enforceable, and may consequently be broken at any time by any of the members of the association, particularly in periods of slack trade. Such associations, therefore, are by no means permanent or very effective. Examples of this type are the various Shipping Conferences, viz., the combinations of shipowners associated with a particular sea route, such as the China Conference and the South African Conference. (See *post*, page 228.)

3. Associations for the Reduction of Output.—Combination frequently arises from the fact that the aggregate output of all the firms in a particular industry is too large for the market to absorb, and, unless the output is reduced, serious loss may result to manufacturers from the excess of supply over demand. Associations are frequently formed, therefore, in order to reduce output as a whole. For example, it was found just after the Great War that the output of rubber in Malaya had increased

[1] See Ashley's *British Industries*, p. 196.

to such an extent that supply was in excess of demand and so prices fell considerably. Consequently, British rubber planters in the Federated Malay States and the Straits Settlements combined to restrict output and, for a time, their efforts were successful in reducing the supply of rubber and forcing up its price. Similar restriction schemes, which owe their implementation to the world collapse in wholesale prices, have been applied in the case of other commodities, notably coffee and tin.

4. Associations for the Division of Territory.—These are somewhat similar in their objects to the class just mentioned, and take the form of agreements between the constituent firms of the association to restrict sales operations in each case to a particular territory. The best-known example of this kind of association is the agreement between the Imperial Tobacco Company and the American Tobacco Trust to restrict the operations of each to certain specified territories.

5. Associations for the Regulation of Output.—In these cases the output of each of the constituent firms is usually based on its average share of the total output over a certain period of years. If this quota is exceeded by a firm a fine is paid by it to the association. Sometimes part of this fine is paid by the association to those firms who have not reached their quota.

6. Sales Associations.—These Mr Macrosty describes as the "highest organisation of terminable associations". In this class is the *kartell*, which has been described in a previous chapter. Its principal characteristic is that the constituent firms retain their individuality as well as control over their internal and external management, but that the selling functions of the whole organisation are undertaken completely by a central sales agency. This selling agency is usually a separate legal entity with a small capital held exclusively and in certain agreed proportions by the constituent firms. Its functions are to dispose of the product, to allocate the total output among the various firms, and also to fix prices. The kartell is by no means as common in England as in Germany, but the best example in this country is the Central Selling Agency, Ltd., of Glasgow, which markets the products of J. & P. Coats (the best example of the trust in Great Britain), of Listers (silk thread), and of the English Sewing Cotton Co., Ltd.

The above classification given by Mr Macrosty concerns itself mainly with the *objects* for which combinations are formed, i.e., the causes of combination in industry. In all these cases, however, the ultimate object is the control of price, either to increase profit, or to create a profit where otherwise there would be a loss. For another classification according to the *form* of combination rather than its purpose, the reader is referred back to Chapter 11.

Employers' Associations.

There is also another form of association of producers which frequently exercises monopoly power, namely, the association of employers in one or more industries. In some respects such associations may be regarded as employers' trade unions, and are to be distinguished from those combinations of producers which are dealt with above, for, as a general rule, the main object of these associations is not to make a conscious attempt to obtain a monopoly of the supply of goods or services, but to exercise supervision over the interests of employers generally, either in a particular trade, or in a particular area. To some extent, however, a strong employers' association in an industry controls the demand price for labour in that industry (i.e., it is a *buyer's* monopoly, as is indicated hereafter), and we must not ignore the monopoly power which such associations possess, although they are not usually regarded as monopolies. Furthermore, a consideration of the constitution and objects of such loose combinations is necessary as they frequently develop into associations for the purpose of controlling output and price. (See below, "Combinations in England", etc.). Combinations of this latter description may be partial or total monopolies, but the majority of employers' associations are formed to provide employers with a united front in bargaining with powerful trade unions, and so, like trade unions, they exercise monopoly power.

Combinations in England, Germany and America.

The forms of combination, as we have seen, vary considerably, and instances of almost every type, ranging from the loose tacit "honourable understandings" or "gentlemen's agreements" to the trust or complete merger, are to be found in all those countries in which the combination movement has attained a considerable development. It remains true, however, that certain definite features characterise the movement as it has developed in different countries, particularly in the case of the three great industrial nations of England, Germany and America, and consequently a brief survey of the experience of these countries is not without interest.

ENGLAND.—In this country all terminable associations for the regulation of prices and other conditions of production, being in restraint of trade, are repugnant to the law. Hence, such agreements are not binding but are operative only as long as the parties wish to observe them ; any penalties which may have been fixed in case of breach are not enforceable, and on the other hand, any party who has paid such a penalty cannot sue for its return. The effect of this legal position has been to prevent the development in this country of a closely-knit kartell movement similar to that which has taken place in Germany. Innumerable

associations have been formed and have prospered during periods of good trade, but when depression has set in, they have been dissolved.

The most prevalent type of combination in Britain is the *association*, a loose form which in some cases is purely an agreement among producers for the fixing of prices and of output. Arrangements of this kind prevail in almost every industry in this country, even in those in which a close form of association would be difficult. Since the War many of these loose associations have grown stronger, and it is possible that they may develop eventually into kartells. The development of large-scale amalgamations in this country was checked by the non-success of the first two—the Salt Union and the United Alkali Company —but towards the close of last century the success of J. & P. Coats and the big developments which had taken place in America gave a fillip to the movement, which has now attained considerable proportions. In some cases, the amalgamations take the form of combinations large enough to dominate a whole industry; in other cases, large individual firms have become strong enough to exercise a considerable control over the market.

Permanent consolidations of both the "horizontal" and "vertical" types are common in the coal, iron and steel, and shipbuilding industries, well-known examples of wide-reaching vertical and horizontal combinations on a large scale being Armstrong, Whitworth & Co., and Dorman Long-Bolckow Vaughan.

Permanent consolidations of the horizontal type are of great importance in numerous branches of industry. In the spinning branches of the textile industries fine cotton spinning is dominated by the Fine Cotton Spinners' Association; sewing thread by J. & P. Coats, Ltd., and the English Sewing Cotton Co., Ltd., working in close association. Similarly, the dyeing and printing branches of the cotton and woollen industries are dominated by a small number of powerful consolidations—bleaching, by the Bleachers' Association; dyeing, by the Bradford Dyers' Association, the British Cotton and Wool Dyers' Association and other minor combinations, and calico printing, by the Calico Printers' Association.

The British heavy chemical trade also is a vast consolidation —Imperial Chemical Industries, Ltd.—an amalgamation of the United Alkali Company, Ltd., Brunner, Mond & Co., Ltd., the British Dyestuffs Corporation and Levinsteins. Similarly, the control of output and prices in the tobacco, wallpaper, cement, and numerous other trades is concentrated in relatively few hands.

In a number of instances, too, both individual firms and combinations of British manufacturers have become parties to international agreements, the best-known example being that effected in 1902 between the Imperial Tobacco Company and the American Tobacco Trust. By this agreement the American

combination abandoned its attack on the English market, while the Imperial Tobacco Company agreed, on the other hand, not to sell or manufacture tobacco in the United States or its dependencies, or in Cuba. A company, known as the British-American Tobacco Company, was then formed to exploit the tobacco business of the world outside of Great Britain and America.

In this country, as we have stated, the best example of a kartell is the Central Selling Agency, Ltd., of Glasgow, which, in addition to marketing the products of the firms in the Coats' combine, sells also certain allied but non-competing products, such as Lister's silk thread.

GERMANY.—In Germany the industrial combination is fully recognised by the law, the view being held that unduly low prices, as well as unduly high prices, should not exist in any branch of industry, as they are injurious not only to the individual firm but also to the community as a whole. The right to inflict and recover penalties for breach of contract entered into between members of any form of combination was legally recognised in 1902. The combination movement began in the early seventies of last century, and has generally taken the form of syndicates or agreements for a term of years to fix prices, to fix output (pools), or to take over the selling organisation (kartells).

The great development and activity of the kartells aroused considerable hostility and suspicion, but a public inquiry held in 1902-3 did not lead to any legislative measures. Three years later, in 1905-6, an official inquiry disclosed the existence of nearly four hundred combinations of different kinds, chiefly in the coal, iron and steel, textile, brick and glass industries. The most notable of all the kartells is the Rhenish-Westphalian Coal Syndicate, founded in 1893 as a sales association, and renewed in 1898 and 1905. The syndicate has had to face many difficulties, but its position was strengthened when the sale of the output of the State mines was entrusted to it in 1912, and it now controls a very large part of the German coal supply.

AMERICA.—The combination movement in America is characterised by huge amalgamations, the trust originating in 1882 with the Standard Oil Co., and being continued in the Whisky Trust and Sugar Trust of 1887. During this early period, unfair methods of competition were used against competitors in those districts in which the trusts had no monopoly, prices being artificially raised elsewhere, and by alliances with the railways the trusts obtained special rates or rebates which were denied to their competitors. This railway discrimination was declared illegal in 1887, and the trusts were dissolved under the Sherman

Act in 1891-2. This legislation was unsuccessful, however. The Whisky and Sugar Trusts were re-organised, and in 1899 the Standard Oil Company, which since 1891 had been held together only by a harmony of interests, took advantage of the laws of New Jersey to form a great merger.

From time to time public uneasiness at the development of the combination movement has led to public investigations, but, as we shall see later (see *post*, pages 231-2) legislative action has not been successful in preventing the United States from becoming "the home of trusts". A very striking amalgamation took place in 1901, when the United States Steel Corporation was formed, controlling more than one-half of the steel-making capacity of the country.

Conscious Monopoly and Natural Growth.

A distinction is sometimes drawn between (*a*) those combinations which are the result of a conscious attempt to obtain monopolistic advantages, and (*b*) those which are "natural growths", i.e., which have resulted from the absorption of weaker firms by more efficient firms.

It is a remarkable fact that the latter type of combination is much the more successful. The firm of Messrs J. & P. Coats, a natural growth, was at one time making huge profits, although selling at a price which did not allow of any profit being made by competitors selling at the same price. Again, the Ford Motor Company, another natural growth, has been much more successful than General Motors Limited, which is an amalgamation of existing firms and was not a natural growth. Perhaps the most important reason for the failure of deliberately monopolistic combinations lies in the over-capitalisation which is so frequent in such cases. As in the case of the United States Steel Trust, the promoters purchase the combining firms at the lowest possible price, and sell out to the new company at a price which measures the *capitalisation of expected profits* and not the price paid for the concerns. The difference, of course, represents the promoters' profit, and the process is termed "watering" the capital. The over-capitalisation may be attributable also in some cases to the excessive prices which sometimes have to be paid to firms in order to induce them to enter the trust. (See also *ante*, page 157.)

Conditions Favourable to Combination.

We have already noticed that in the so-called "social" industries monopoly is inevitable on technical grounds, and that in other cases the fundamental economic cause of combination has been the desire to avoid cut-throat competition. There

are, however, certain subsidiary conditions which have in many cases favoured the tendency towards combination.

1. Tariffs and other fiscal devices have given certain industries a measure of local protection, thus securing them from foreign competition. In both America and Germany a protective policy has favoured combination. In this country, on the other hand, the adoption of Free Trade principles, combined with the fact that England manufactures largely for export and the world market, necessitating adaptability and resource, has tended to preserve individual initiative.

2. Where there are few firms in an industry and a large amount of capital is required in order to set up in the industry, combination is made easier of attainment and the combine is less likely to be attacked by new competitors.

3. Where conditions of natural scarcity exist, control tends to concentrate in a few hands. Monopolies have been established in Germany in the case of potash, in America in the case of anthracite and oil, in Chile in the case of nitrate, and in South Africa in the case of diamonds.

4. Where the product can be readily standardised, combination is facilitated. The truth of this statement is borne out by the fact that in Germany and America, where the extractive and preliminary processes of industry occupy a pre-eminent position, the combination movement advanced more rapidly than in England, mainly engaged in those finishing processes which offer more opportunity for individuality and less scope for mass production.

5. Wherever an industry is strongly localised there is a tendency towards concentration.

6. Any conditions which promote co-operation among previous competitors facilitate combination. It is well recognised that the necessity for common action among competing firms during the period of the late war greatly favoured the growth of price-rings and agreements.

Cases in which Combination is Unlikely.

Marshall [1] suggests that there are three classes of producers who are not tempted to restrictive combination: (*a*) those who produce for their own consumption; (*b*) those who produce things for sale in a large open market in such small quantities that current prices will not be affected by anything which they may do or abstain from doing; and (*c*) the owners of absolute monopolies. Producers in each of these classes have their own special difficulties and problems, but none of them has to take any special steps to defend his market from the encroachment and attack of competitors.

[1] *Industry and Trade*, III. i. 2.

THE THEORY OF MONOPOLY PRICE

The general result of the various combinations which we have discussed above is to control the supply of a commodity or service, either in whole or in part, and to prevent price being determined solely by the free competitive forces of supply and of demand. Under modern conditions the tendency is for such control to be constantly extended, particularly as industry becomes more complex and greater capital is required. Thus we find combinations of capital in the joint-stock company, in the trust and kartell, in the ring and combine, and in the employers' association; combinations of labour in the trade union, and of consumers in the retail co-operative society. All of these organisations are based on the idea of gaining greater advantage by the exercise of monopolistic power.

But the possession of monopoly does not necessarily imply an attempt to exact as high a price as possible for a commodity or service. In the first place, the industrial combinations usually aim at increased profits by better co-ordinated and more efficient production. This they achieve by (1) large-scale organisation and concentration of production at the best equipped plants, which are worked at high pressure; (2) eliminating wasteful competition in advertising and salesmanship; and (3) standardising the product or service and thus increasing the general productivity of their organisation. Secondly, although the monopolist will, in theory at any rate, endeavour to control supply so as to obtain the greatest net return, this does not necessarily mean (as we shall see below) that he must charge as high a price as he can possibly obtain. Thirdly, the charging of a very high price would in most cases encourage the entry of new producers or stimulate the invention and consumption of substitutes, while it might lead to State interference with the monopoly.

It follows, therefore, that the control of prices even in the case of a very powerful monopoly is considerably limited. A monopolist may, of course, charge whatever price he pleases, but as a general rule too high a price will ultimately work to his disadvantage. The question therefore arises: At what price is the monopolist to sell in order to obtain the greatest net revenue, under all the conditions (including those of demand) which he knows to exist?

In the first place we know that monopoly price, like any other price, is determined by the relation of supply to demand, and that demand for a monopoly product, like the demand for any other product, is fixed by the marginal utility of the commodity to the consumer. Furthermore, it is clear that in the long run the value of a monopoly product, like that of any other product, must at least cover its marginal expense of production. But at this point a difference exists: whereas under free com-

petition normal price tends to equal marginal expense of production, the monopolist need only regard this expense as a *minimum* below which the price of his product must not fall. By reducing supply he may force price considerably above the minimum, although as a rule demand would then decrease and his turnover would be reduced. On the other hand, by increasing supply he may bring down the price until it is scarcely more than would be obtained under free competition. Alternatively, he may fix a definite price for the product, and leave the quantity of supply to be determined by the marginal utility of the commodity to consumers. He may thus fix the quantity supplied, or he may fix the price he desires to obtain, but he cannot fix both, and whichever method is adopted, *the supply tends ultimately to be adjusted at that point which will bring in the largest net revenue.* The aim of the monopolist is to make the margin between his total receipts and his total expenses of production as great as possible. "The *prima facie* interest of the owner of a monopoly is clearly to adjust the supply to the demand, not in such a way that the price at which he can sell his commodity shall just cover its expenses of production, but in such a way as to afford him the greatest possible total net revenue".[1]

In determining this point of maximum net revenue, a number of important factors must be taken into consideration by the monopolist. In the first place, he must carefully *estimate the demand* for the product. If the product is a necessary for which no substitutes are available, demand will be *inelastic*, and changes in price will not greatly affect the amount demanded by consumers. Thus price may be raised considerably above expense of production and an appreciable monopoly revenue may be obtained. In such circumstances, however, it will not be to the monopolist's advantage to charge too high a price, for not only would he thereby encourage competitors, but he would also run the risk of State interference with his business. In few communities would a monopolist controlling supplies of a necessary commodity be permitted for long to exploit the community for his own benefit. Wherever such cases exist, there are usually good grounds for State control, as monopolies in respect of necessaries are conducive to speculation and overcapitalisation, while they are antagonistic to the vital interests of consumers, and are generally detrimental to social and economic life.

On the other hand, if the product is a luxury or if substitutes are available, demand will usually be *elastic*, and changes in price may appreciably affect the quantity taken by the public. In such a case the monopolist will need to proceed with caution, and by a careful study of market conditions endeavour to adjust supply so that he obtains the maximum net revenue. Alterna-

[1] Marshall, *Principles*, V. xiv. 2.

tively, as has been stated, he may fix the price, and leave supply to be adjusted by the marginal utility of the commodity to purchasers.

Secondly, the monopolist must carefully *estimate his expenses of production* for different quantities of his product. If he produces under conditions of increasing return (or decreasing cost), expense of production per unit will fall as output increases: thus it may pay him to reduce his price, with the object of obtaining a greater net revenue on a larger turnover. In other words, he may find that a smaller profit per unit with a considerable demand may yield a greater total profit than a large profit per unit with a limited demand. On the other hand, if the product is obtained under conditions of diminishing return (or increasing cost), it may pay the monopolist to limit his output and obtain a large profit per unit on a comparatively restricted sale. Even in the case of the monopoly of a commodity produced under diminishing returns, provided the demand is sufficiently elastic, a larger output might conceivably be more profitable than a small one, if, in spite of the fall in price which accompanies the increased supply, there is still a greater aggregate profit. Again, if the product is obtained under conditions of constant return, the expenses of production will not influence the supply offered by the monopolist except to fix the minimum expense below which he will not sell.

Thus we may conclude that neither selling at the highest price nor selling the greatest possible quantity of goods will necessarily yield the largest monopoly revenue. The former may so reduce demand as to check profits, or it may encourage competition and the invention of substitutes or give rise to Government interference. An attempt to sell too great a quantity may lead to the production of part of the supply at such high costs as to negative the likely gain, or, again, supply may exceed demand, and so bring down the price below the minimum expense of production. The latter point is illustrated by the fact that when very large catches of fish are landed, it sometimes pays the trawler owners (who may be said to possess a local monopoly) to destroy some portion of the supply in order to force up price. It was also illustrated in the one-time almost complete Dutch monopoly of the trade of the Spice Islands: in years when the crop was plentiful part of the harvest was destroyed in order to maintain prices and monopoly revenue. A more modern example has already been mentioned, viz., the restriction imposed by the Rubber Growers' Association on the annual output of British-owned East Indian rubber companies, in an endeavour to diminish supply and so maintain the price of the raw material. A similar policy has also been pursued to a limited extent by Brazilian coffee-growers.

Generally speaking, the monopolist who produces under increasing returns finds it to his advantage to supply a large

quantity at a low price. Thus he protects his own interests, not only by ensuring a large revenue but also by securing favourable public opinion, and by minimising the likelihood of competition and of State interference.

Finally, we may note that the exercise of monopolistic power is controlled in many ways other than those which we have indicated. Apart from the restraint imposed by public opinion and the fear of competition, is the fact that in some cases a combination of consumers may arrange to limit demand for the product and so restrict monopoly gain. Furthermore, it is not possible for a local authority or government which has monopolistic control of a commodity or service to exercise its power to the full extent. In such cases, not only would public opinion be averse to the making of monopoly gains by a public body, but it would also be contrary to the principles of State activity that such conditions should prevail. The question of the public control of monopolies is discussed hereafter.

Necessary Conditions of a Monopoly of Supply.

We are now in a position to review the conditions which must be fulfilled before a seller's monopoly can be established and maintained. In the first place, the monopolist must be able to control the supply of the commodity which is actually available for consumers, or he must be able to fix the price. As has been shown, the monopolist cannot fix both supply and price, but must determine one of these and leave the adjustment to the forces of demand. Secondly, the success of a monopoly implies ability to adjust supply or price to changes in demand without difficulty or delay, otherwise the monopolist may be involved in loss both of his profits and of his monopolistic control. For example, if demand falls and supply is not restricted, price may fall below expenses of production, and thus wipe out both the monopoly revenue and the normal profits of the producer. Thirdly, some control of substitutes is necessary if a monopoly is to continue, or, alternatively, a product which is as good as any available substitute must be supplied at a reasonable competitive price.

It follows, therefore, that a monopoly of supply will fail as a monopoly if the product is capable of substitution, or if demand is subject to considerable variation and supply cannot easily be adjusted to the fluctuations.

Practical Examples.

A consideration of concrete examples may help to make clear our consideration of the fixation of monopoly price. Mr Henry Ford at one time had a partial monopoly of a certain type of light car. His exercise of monopoly power was restricted, however, by the possible competition of substitutes (i.e., other light and cheap cars) and so his power to raise prices

was definitely limited. At the same time it is obvious that the sales of Ford cars would have been large even if the price had been raised, say by one-third. The cars, however, sold at a very low price for two reasons: (1) the commodity is produced under increasing returns; (2) the demand for light cars of this type is *highly elastic*. Thus, in practice, Mr Ford found it most profitable (apart from any moral considerations which might have influenced him) not to exercise the limited amount of monopoly power which he possessed.

The case of diamonds is quite different. The demand for diamonds, although they are luxuries, is after a certain point *highly inelastic*. The supply of diamonds is obtained almost exclusively from South Africa, and the entire output of the South African mines is marketed by the London Diamond Syndicate (a kartell selling agency). The only danger of competition, other than that which already exists, lies in the discovery of new deposits, but, even when these have come to light, the Government (fearful for its revenue) has stepped in and has rigidly controlled the new supplies. Thus the London Diamond Syndicate is in a particularly strong position for the exercise of monopoly power, and the supply of diamonds released each year is deliberately limited to an amount which will yield the greatest monopoly advantage. There is no fear of interference with prices by other Governments, because diamonds are not a fundamental necessity of existence. They are prized because of their scarcity and the social distinction which their possession confers, this, in turn, resulting largely from their scarcity.

Tabular Illustration of the Determination of Monopoly Price.

For purposes of illustration we may consider the imaginary figures given in the following table. These may be assumed to relate to a product which is manufactured under conditions of increasing returns and in respect of which the demand is elastic; i.e., expense per unit falls as output increases and demand price falls as supply increases.

Output.	Expense per Unit.	Total Expense of Production.	Demand (or Sale) Price per Unit.	Total Receipts.	Monopoly Revenue (i.e., total receipts less total expenses).
	s.	£	s.	£	£
2000	16	1600	18	1800	200
3000	15	2250	17·5	2625	375
4000	14	2800	16	3200	400
5000	13·5	3375	15	3750	375
6000	13	3900	14	4200	300
7000	12·5	4375	13	4550	175

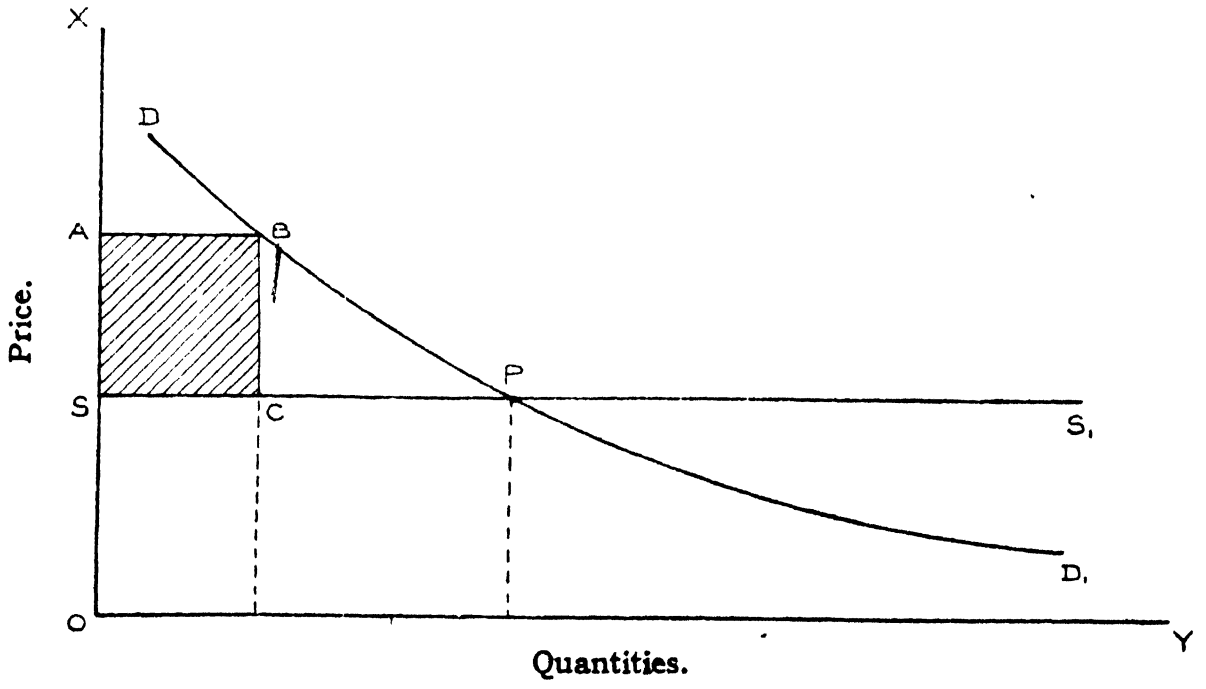
The supply will be fixed at that point where monopoly revenue is greatest, i.e., where there is the greatest margin between total receipts and total expenses of production. This point is obtained when output is 4,000 units, and monopoly revenue is £400. After this point, increased supplies give a lower aggregate return.

Other tables can be constructed on a similar basis to illustrate the fixing of monopoly price under conditions of constant and diminishing returns.

Diagrammatic Illustration of the Determination of Monopoly Price.

The theory of monopoly prices lends itself particularly well to illustration by means of diagrams, and it is thought that most readers will more fully appreciate the foregoing explanations after perusing the following paragraphs. For the purpose of these illustrations it is assumed that the monopolist has complete control of supply and that he is guided by self-interest alone, that no substitutes are available and that the fear of Governmental interference is absent. These assumptions are highly abstract, but the determination of monopoly price in practice tends, within limits, to follow the theory fairly closely.

1. Constant Returns.—For the sake of clarity, we may assume, in the first place, that the product is obtained under constant returns. The demand and supply curves would then appear as follow :—

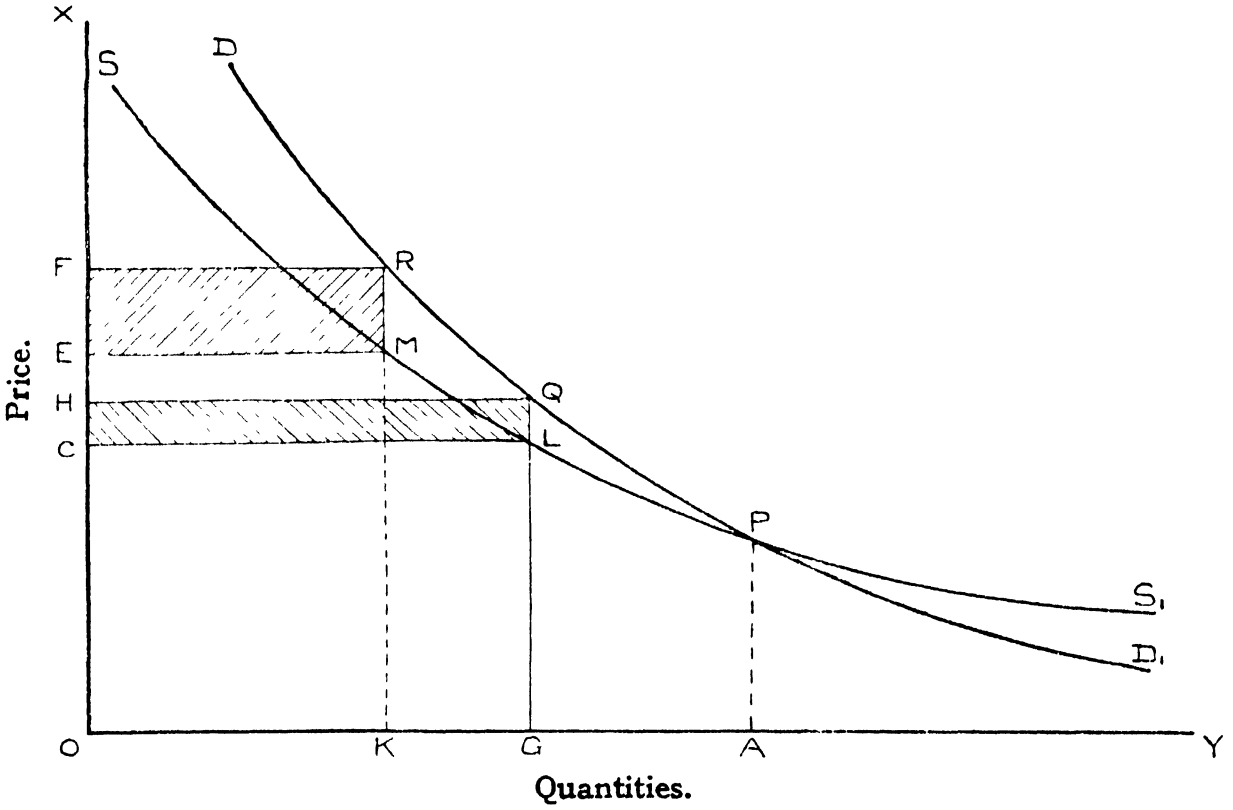


Quantities of the product are measured along OY, and price per unit along OX. DD_1 is the demand curve, which falls as the

quantity supplied increases. SS_1 is the supply curve, which is constant for all quantities of output.

The monopolist, so far as he is able, will fix the price at a point which will yield the maximum aggregate net profit, i.e., he will so manipulate supply in relation to demand (i.e., the point B) as to make the shaded area ABCS as large as possible.

2. Increasing Returns.

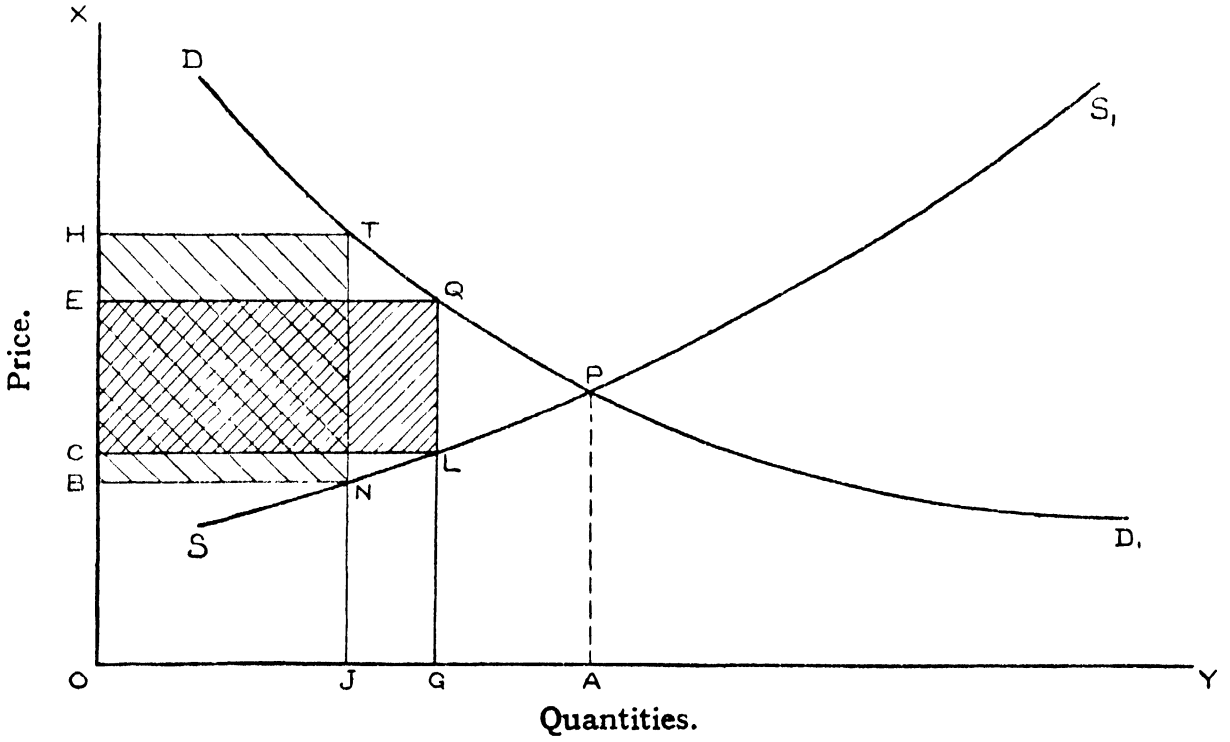


In this case, DD_1 is the demand curve which falls with each increase in the quantity supplied, while SS_1 is the supply curve under increasing returns and falls gradually as the output increases.

Under conditions of free competition, the price of the product will be PA, which just covers expense of production including a normal profit. The object of the monopolist is, however, to control supply so as to obtain as great a monopoly revenue as possible over and above this normal profit: otherwise, of course, he would be in no better position than any other producer.

We may suppose, therefore, that supply is restricted to OG, and that consumers will then pay QG per unit. The unit cost of production is, however, only LG, so that the monopoly profit is represented by the shaded rectangle QLCH (i.e., the difference, LQ, between price and expense of production per unit, multiplied by the total output in units). For a still smaller output OK, the demand price is RK, the unit cost of production is MK and the monopoly profit is represented by the shaded rectangle RMEF. Thus the larger the rectangle, the larger the monopoly revenue. It is, therefore, to the monopolist's advantage when this rectangle is as large as possible, for then he receives his greatest surplus profit.

3. Diminishing Returns.



In this diagram, the curve DD_1 again represents the fall in demand with every increase in supply, while SS_1 represents the rise in expense of production as the output increases. Under free competition, price will be fixed at the point P, where the curves intersect, and at this point price will approximate to expense of production including normal profits.

When, however, the supply is limited by the monopolist to OG, the demand price is QG, the cost of production is LG and the monopoly revenue is QLCE. When the supply is OJ, the demand price is TJ, the cost of production is NJ and the monopoly revenue is TNBH. Here, again, the object of the monopolist is to make the surplus represented by the shaded rectangle as great as possible.

It is clear from the diagram that under conditions of diminishing return a much greater monopoly revenue may be obtained by restricting output and selling at an increased price.

In the same way as the monopolist of a certain commodity is able to raise price by restricting supply, so can a strong trade union raise wages by restricting the supply of labour. This it is able to do by restricting entry into the trade by means of insistence upon apprenticeship, opposition to dilution, and the fixing of minimum wage rates. The power of a trade union, however, to force up wage rates is usually very limited. New inventions which revolutionise industrial processes make apprenticeship almost impossible in many trades, and, if a union demands a higher wage than the industry can stand, unemployment will certainly result and non-union labour will be employed.

Thus, the effect of monopoly on price is almost exactly the same theoretically in all cases, whether we are considering the

effective control of the supply of labour by trades unions, of commodities by an oil or tobacco trust, or whether the limitation is one imposed by nature, as in the case of potash and camphor, or by artificial agreement, as in the case of the attempted control of rubber, or whether, again, it is partly natural and partly artificial, as in the case of diamonds. The theoretical study of the effect on price of any one of these helps us to understand the influence on price of others.

Monopoly not necessarily Detrimental to Consumers.

It is clear from the explanation in the foregoing paragraphs that the existence of a monopoly is not necessarily detrimental to the interests of consumers. As we have seen, monopoly price is not necessarily the highest price, and it may, in fact, be lower than would be a competitive price for the same article. This may result because of the greater efficiency and economy of the large organisation, and because its expenses of production under increasing returns may enable it to sell at a lower price than would be possible if a number of small competing firms were supplying the market. Again, monopoly prices tend to be fixed at reasonable and steady levels in order to maintain a favourable public opinion and obviate State interference, whereas competitive prices are not subject to similar restraints and may fluctuate considerably from time to time. Furthermore, where a monopolistic organisation controls the retail prices charged for its products, it sometimes exercises a desirable effect by eliminating the unduly wide gap between wholesale and retail prices which under competition frequently exists.

Finally, the far-sighted monopolist knows that it will be ultimately to his advantage to please his customers both in regard to the product and to its price. His interest lies in extending sales and in making known his product to as large a circle of consumers as is possible. Thus, in the hope of eventual gain, he may reduce prices and improve his product even at the cost of immediate net revenue, and his inducement to do so is particularly strong if, as is most frequently the case, the product is obtained under conditions of increasing returns.

Price Discrimination.

It has been assumed throughout the foregoing discussion that only one price is charged by the monopolist for supplies of his product to all purchasers. But a characteristic feature of monopolistic policy is the frequency with which different prices are charged for different portions of the supply of the same commodity or service. Such *price discrimination* may be in respect of different persons, different trades, or different areas in the same community.

Personal discriminations are necessarily difficult to impose, and may arouse such opposition as ultimately to endanger the monopolist's position. Nevertheless, such discriminations do actually exist, and on economic grounds little objection can be made to the monopolist's charging " different prices to different consumers according to the supposed intensity of their desires, or simply according to their ostensible wealth and the supposed marginal utility of their money " (Nicholson). The monopolist may sell little of his product in a poor district or to the poorer classes generally unless he reduces the price below that which he is able to obtain in a fashionable quarter or from the wealthier classes generally. He may also find it to his advantage to reduce his usual charge to people who have access to substitutes or who have little real need for the commodity which he offers. Thus we find examples of such discriminations in the differential charges made by medical men and dentists to persons of different social position and of varying incomes, and also in the differential prices charged by publishers for the same novel. In this last case, however, the commodity is not quite identical in each case.

Instances of *trade* and *local* discriminations are even more common. They involve the favouring of one trade at the expense of others, or the selling of a product in one district or country on more favourable terms than are charged in other areas. Such differential charges may be made in order to favour more powerful customers, or in order to destroy competition in a particular area, or in order to maintain sales in a district where strong competition exists. In the United States particularly, these methods have been carried to extremes, and State interference has been necessitated in an attempt to prevent the exploitation of the public. In that country great monopolistic organisations have adopted the policy of selling at low prices in some districts in order to capture markets and ultimately force competitors either to give up producing or to combine with the stronger organisation and so give it a greater degree of monopolistic power. This power is then applied to control price in various ways ; for example, by means of the *boycott*, i.e., refusing to supply certain goods to the retailer until he agrees to comply with prescribed conditions ; the *tying agreement*, i.e., where supplies are promised only on condition that no competing products are sold within a given period, and the *fixation of retail prices*, i.e., supplying retailers on condition that scheduled prices only are charged for the monopolised products.

All such devices necessarily restrict freedom of competition and impose conditions on the retailer and the public, with results which are recognised as detrimental to the community generally. The extent to which monopolistic concerns in the United States were thus enabled to manipulate prices resulted in the passing in 1914 of the famous Clayton Anti-Trust Act, forbidding such methods, which are considered to be in restraint of trade.

Railway and Shipping Charges.

Some of the most interesting and involved problems of monopoly power and price discrimination occur in connection with the charges made by railways and shipping lines for the carriage of passengers and goods. In certain districts railways have an almost complete monopoly of traffic, while in other areas there exists the most intense (and sometimes destructive) competition between competing lines, or between railways and road, river, canal or sea. In some cases, therefore, railway charges may be adjusted on almost purely monopolistic principles, whereas in others the problem of the determination of rates is exceedingly complex. "There is no other field of economics in which problems of conditional monopoly are so numerous, so large and so various" (Marshall). Similar considerations apply in the case of sea-borne traffic: whereas over certain routes or in respect of certain traffic an almost complete monopoly may be maintained by large shipping combinations, in other cases the keenest competition may exist.

The supply of railway services is subject to certain marked peculiarities which are intimately related to the problem of the determination of rates for traffic. In the first place, railway facilities are generally, though by no means always, of a monopolistic character. Comparatively rarely is one district served by two or more railways of equal efficiency and general convenience. Nevertheless, the competition of road, river, canal and sea tends constantly to reduce the monopoly of the railway. Secondly, railway construction involves not only Government sanction, but also such a large investment of fixed capital, while the maintenance of the services necessitates such high standing charges, that competitive undertakings are difficult to commence when once a route is established as a going concern. Thirdly, the problem is complicated by the fact that the same line may carry passengers of every class and goods of every value, quality and description, while there may be very marked differences in the nature of the traffic carried by branches of the same system in different districts. In the fourth place, it must be noted that whereas in its early stages a railway system is an "increasing return business", i.e., every addition to the quantity of traffic adds more to the revenue of the railway than to its costs, yet a time may be ultimately reached when traffic outgrows equipment, and diminishing returns set in until the necessary additional plant can be provided.

Finally, the rates charged by a railway for goods traffic must be fixed only after careful estimation of "terminal" charges, i.e., the costs which have to be incurred by the railway itself or by the persons utilising its services, for the collection and delivery of goods carried. If such charges are borne by the railway, they necessarily add to its costs; if they are borne by

the public, they add to the expense of railway services and may induce business men to adopt less costly means of transport, such as road motor services which collect and deliver actually at business premises.

The general principle is that a railway *charges what the traffic will bear.* It will not charge less than the specific cost of performing any particular service, but subject to that consideration it will charge what the traffic can be made to pay; in other words, the upper limit will be determined by the elasticity of demand. This principle is known as the *Value of Service Principle.* Commodities are divided into classes according to their freight-bearing capacity; for example, diamonds can obviously stand a higher cost of transportation than coal, for in the former case cost of transport is but a minute proportion of the selling price, whereas, in the case of a bulky commodity like coal, transport cost is a very important item.

In every country railway rates are controlled in greater or less degree by the State; in this country they are controlled by a Railway Rates Tribunal, set up under the Railways Act, 1921. For purposes of fixing the charges, this Tribunal classifies goods into twenty-six groups, in respect of which maximum rates are fixed, although the companies have power to charge lower rates if they so desire.

To some extent railway rates also vary according to the *Cost of Service Principle.* This means that the rates are determined by such considerations as the speed of transit required; the quantity of the particular type of goods carried; the convenience of handling the goods and the risk of breakage involved in their carriage.

An important consequence of the Value of Service Principle is that not only may rates vary for different commodities over the same distance, or for the same commodity over different distances, but also that different rates may be charged for the same commodity over the same distance according to whether the route is competitive or non-competitive.

Great difficulty arises in regard to the rates charged for the same traffic in different areas. For example, comparatively high rates may be charged for the same service in areas where little competition exists, or where relatively little traffic is carried, while very low rates may be charged between two points where two or more lines are in competition, or where the railway is subject to the competition of other forms of transport. Again, the through rates between two points may be less than the rates between one of those points and an intermediate place on one of the lines, for while competition exists between the two points, there may be no competition for traffic to intermediate places. Finally, rates on a branch line with comparatively little traffic may be higher for the same service than rates on a main line with considerable traffic. In all such cases the differential rates

may be quite justified from the point of view of the railway company, but they frequently result in considerable hardship. For example, market gardeners on a main line may be charged lower rates than similar producers for the same market on a branch line, though the distance in the latter case may be less. Similarly, traders in one area may have a much better and much cheaper service to a large marketing centre than traders in another area, possibly because of the existence in the former district of competing transport services.

Such price discriminations have been so marked in some cases that State interference has been necessary. A " notable instance of this was the complaint made " (to a Committee of the Board of Agriculture, 1906) " by British agriculturists generally, that the railways carried imported produce from Southampton and other ports, at much lower rates than they themselves were charged when sending their produce to London and other markets ".[1]

Government control of rates has been made necessary also because of unfair and corrupt discriminations, i.e., cases where railways have favoured certain powerful organisations or wealthy and important customers or certain districts by granting them reductions in the normal transport charges. " Some discriminations are paternal sacrifices for the benefit of weak industries, from which the railways hope to reap their reward in due time. Some are strategical movements for the capture of traffic, which otherwise would not come to them ; and these occasionally have in the background an evil purpose of destroying competitive routes in order to strengthen a monopoly ".[2] Thus we find that in most countries railway rates are subject to a certain measure of State control, designed to obviate unfair discrimination, and to secure for each district, so far as is possible, " the natural advantages of its location ".

In regard to shipping charges, the tendency in recent years—particularly so far as Britain is concerned—is for the shipping lines serving particular routes to combine into " Conferences " for the control of cargo rates charged for different classes of traffic, and for the regulation of conditions of carriage. Such great combinations are enabled to exercise a high degree of monopolistic power, permitting them to restrict competition in their respective " spheres of influence ", to discriminate in favour of certain classes of traffic, and to charge those rates which, under all the circumstances, will yield the highest net gain for the services rendered.

As in the case of railways, the shipping conferences are subject to a certain degree of competition, chiefly from *tramps*, i.e., smaller independent vessels which accept any kind of cargo and are bound to no particular route. To meet this com-

[1] Marshall, *Industry and Trade*, III. v. 2.
[2] *Ibid.*, III. v. 4.

petition the conferences make use of their monopolistic powers to bind shippers to support the conference lines only, in return for a regular and adequate service, by the device known as the *deferred rebate* (i.e., a rebate on the total freight paid by the shipper) which is returned at the end of a period if the shipper's support has been unbroken.

It has sometimes been maintained that such powers are used to the prejudice of traders, and in this and in other countries the powers of the shipping conferences have consequently been the subject of inquiry by specially appointed commissions. From the evidence given there would appear to be little doubt that the conferences have generally resulted in the supply of a regular, speedy and efficient service on the most important sea routes at rates which are claimed to be steady and reasonable, but that their attempts to bind shippers and to eliminate competition for sea-borne traffic may, if uncontrolled, ultimately prejudice consumers generally and possibly affect national and imperial interests.

Dumping.

Dumping usually implies the selling of goods in a foreign market at a lower price than in the home market, or at a price which is below expense of production. It is a device frequently resorted to by monopolistic undertakings, and may be adopted either to capture foreign markets, or to dispose of the surplus of goods produced as a result of an incorrect estimation of demand, or in order to obtain the benefits of increasing returns.

Thus, in regard to the last form of dumping, a manufacturer who wishes to obtain the benefits of production on a large scale may be prepared to dispose of that portion of his product not required for the home market at *any* price so long as it covers prime cost of production per unit of the product. Naturally, the difference between the home and foreign price must be less than the cost of return freight *plus* the amount of any tariff which may be imposed on the goods, otherwise they would be bought in the foreign market and re-exported to the home market. Dumping of this kind may thus enable a monopolist to maximise his profits, but it is a form of international price discrimination which results in the foreign consumer being favoured at the expense of the home consumer.

Dumping in order to capture foreign markets was resorted to on a large scale in pre-war days, particularly by Germany in the open markets of Britain and in other countries where no prohibitive tariffs exist. The principle is to maintain low prices until the foreign producers are driven out of competition, and thereafter to raise prices in order to restore profits. Such methods are necessarily disadvantageous to the foreign country: they result in fluctuations in prices, in dis-

location of trade, and may cause unfair hardship to both its producers and consumers. For these reasons the Government of the United States has resorted to legislation in order to prohibit such methods so far as that country is concerned. They may also be restricted, if not altogether stopped, by the imposition of heavy import duties on the commodities dumped, but such measures have necessarily to be applied with great caution, as they may react ultimately to the disadvantage of home consumers by depriving them of cheap foreign goods.

The dumping of surplus products caused by a faulty estimation of the home demand is also frequently resorted to by large organisations. By so doing they obviate a fall in the home price of their product and thus maintain their monopoly revenue. The remarks made above in regard to the price which is charged necessarily apply here also, and dumping of this kind is open to the objections already mentioned, viz., the disturbance of trade and the discrimination in favour of foreign consumers.

Dumping can also be carried on in the home market. At one time, for example, there was keen competition between the Westphalian and the Silesian coalfields for the Berlin market, with the result that coal was cheaper in Berlin, midway between the two coalfields, than in the coalfields themselves, even after the heavy freightage had been paid. Such cases are, however, rare, and dumping is more usually adopted in international trade. (See also *post*, Chapter 28.)

Buyers' Monopolies.

Monopolistic combinations among buyers of any service or commodity are comparatively rare, for two reasons. In the first place, a buyer is usually in a position to purchase from a number of sellers, and thus to bargain for a price which he considers satisfactory. Secondly, if the supply of a commodity is subject to monopolistic control, a purchaser who requires the commodity must pay the price demanded or go without. Thus we find that such combinations as do exist among purchasers have generally been formed in order to lessen the disadvantage of the individual buyer when faced with a combination of sellers.

The result of a strong buyers' monopoly is to compel sellers to accept the buyers' terms for the product or service. Thus for a short period price may be forced below expense of production, although it will ultimately be restored by the ensuing shortage in supply caused by the withdrawal of labour and capital from the industry. On the other hand, a buyers' monopoly may fail altogether if the product can be applied to other purposes (cf. the effect of substitutes on a sellers' monopoly), and it is generally ineffective in regard to a necessary raw material or food, for in such cases supplies must be purchased in any event.

Possibly the best examples of buyers' monopolies are to be found in the case of combinations of employers of certain types of labour, for as a rule the labourers must submit to the terms offered by the association of buyers of their services. Even in these cases, however, trade unionists now assert that labour *buys* the employers' services, and it would certainly appear as if the greater power now rests in the hands of the associated trades unions of this and other countries. Nevertheless, it is best to regard trade unions as monopolies of the supply of labour, particularly in view of the various measures adopted by such unions to regulate and restrict the supply of workers in various trades and in view of their endeavours to fix the prices which must be paid for various kinds of labour. Retail co-operative societies provide another instance of buyers' combination, but these are usually only local in scope and can hardly be regarded as examples of monopoly. They are frequently effective, however, in preventing the exploitation of consumers by a selling monopoly.

Taxes on Monopolies.

For a consideration of this important matter the reader is referred to Chapter 33.

PUBLIC CONTROL OF MONOPOLY

From the brief examination of the theory of monopoly price made in this chapter, it will be clear that, in spite of numerous "circumstantial safeguards",[1] any monopolistic power in the hands of producers may easily be used detrimentally to the public interest. Accordingly, a brief inquiry must be made into the main forms of safeguards which have been adopted at different times and in different countries with the object of protecting the public interest.

Repressive Legislation.

By repressive legislation is meant the attempt on the part of the State to prevent the emergence of monopoly and to preserve competition as the natural order of industry. The most striking examples of such legislative action are the American anti-trust laws.

In 1890, the Sherman Anti-Trust Act prohibited under severe penalties "every contract or combination in restraint of inter-

[1] These are—(*a*) The possibility of substitutes, or, as it is often called, "collateral competition". (*b*) Potential competition. (*c*) Competition among combinations. (*d*) Co-operative competition. This is especially important in this country, where the co-operative movement has made most headway. (*e*) Foreign competition. (*f*) The "social conscience" of producers. (*g*) Fear of public opinion and legislation.

state and foreign commerce and every monopolisation or attempt to monopolise such commerce ".

In 1914, the Clayton Anti-Trust Act extended the Sherman Act, and prohibited certain practices which had become powerful weapons in the hands of the trusts, such as price discriminations, tying contracts, interlocking directorates, and the holding by one company of stock in another company. While the curbing of such unfair methods of competition seems a desirable policy to adopt, competent critics agree that the general result of repressive legislation has been one of failure. The Acts have been whittled down by Court decisions, and by the prohibition of, and penalties imposed on, all agreements in restraint of trade, the fusion of firms into great amalgamations has been encouraged.

State Regulation of Monopoly Prices and Profits.

State control of prices, profit limitation, public competition, taxation of " excess profits ", and other similar devices have all been adopted at different times, and in different circumstances, but are limited in their application. In any case, numerous difficulties are inevitably involved, the most important of which may be stated to be those of devising suitable regulative machinery and of deciding what are " reasonable " and what are " unreasonable " prices or profits.

Publicity and Public Supervision.

A third view which may be taken is that " light is the sovereign antiseptic and the best of all policemen ". This was the view expressed in the Majority Report of the Committee on Trusts appointed under the Ministry of Reconstruction in 1918. The most important recommendation was that which proposed to give the Board of Trade investigatory powers into the activities of combinations. These powers were exercised for two years under the Anti-Profiteering Act, but the investigations were undertaken by separate Committees. What seems to be required is the establishment of a State Bureau of Investigation which will gradually accumulate a knowledge of combinatory activity in all its forms.

" Greater publicity would serve three useful purposes. By making known the profits of business concerns, it would stimulate the flow of enterprise and capital into industries in which the demand was greater than the supply ; by bringing the operations and effects of combination into the light, it would relieve many unfounded suspicions on the part of the public ; and by ensuring that extortion should be publicly pilloried, it would do much to prevent its being practised ".[1]

[1] *A Study of Trade Organisations and Combinations in the United Kingdom*, prepared for the Committee on Trusts by John Hilton.

The Food Council, set up in 1926, with powers to enquire into wholesale and retail prices of both home-produced and imported foodstuffs, is an example of a tribunal designed to give publicity to movements in prices, and the influences controlling them.

Nationalisation of Monopolies.

We have already seen that those industries which are by nature monopolistic, i.e., those in which competition is either impossible or undesirable on technical grounds, are generally both owned and managed either by the State or by municipal authorities.

Whether it is desirable gradually to extend the application of the principle of nationalisation to all those industries in which competition has been displaced by combination, as was recommended in the Minority Report of the Committee on Trusts referred to above, is a highly controversial problem which is more fully discussed in a later chapter. At this point, it is sufficient to mention that nationalisation is only one of many possible courses of action which the State may pursue in order to curb the powers of monopolistic consolidations.

Rationalisation.

Since the Great War there has been a decided change in the public and industrial attitude towards the growth and formation of large concerns. It is being gradually realised that the powerful combine of the vertical or horizontal type is essential to the maintenance of industrial leadership, to the effective application of standardisation and scientific management, to the protection of producers against the ever-growing risks of the modern competitive system, and to the distribution of the risk of loss of capital over as large a number of shareholders as possible. Hence, the establishment of large-scale industrial units has been recognised to be specially desirable for the effective rationalisation of those basic industries, in this country and abroad, which have been so sadly hit by the recent world-wide depression.

THE DISTRIBUTION OF WEALTH

CHAPTER 16

THE NATURE OF DISTRIBUTION

THREE of the four great divisions of Economic science have now been considered. Under the heading of Consumption we have attempted to analyse the human wants which give rise to economic activity and to show how those wants are satisfied. In the department of Production we directed our attention to the manner in which the four essential agents or factors co-operate to produce the wealth necessary to satisfy human wants. The study of Exchange has enabled us to understand the basis upon which the wealth which results from production is transferred from producer to producer and from producer to consumer. One great problem remains. How are those who supply the land, the labour, the capital and the organisation necessary in all productive work to be remunerated for their contributions ?

In a primitive community all four factors may be supplied from the same source, and thus the question of the apportionment of the product does not arise. The peasant farmer using his own labour and capital in the cultivation of his own farm is entitled to all the surplus produce of his holding after meeting certain small expenses, but we have seen that in a modern community the landowner, labourer, capitalist and entrepreneur all perform distinct and equally important rôles and must be adequately remunerated for their respective contributions, otherwise such contributions will not be forthcoming. Productive activity results in the creation of wealth, and naturally all those who have assisted in the creation of that wealth expect to be rewarded by a share of it. It is the province of the department of Economics known as Distribution to investigate the principles upon which this wealth is distributed, apportioned or shared among the four great classes which combine in its production. Here we are called upon to determine the terms upon which the landowner, labourer, capitalist and employer agree to lend out their wealth and to hire out their services for productive uses.

The term " Distribution " thus used as the name of an important department of economic science and of economic activity must be clearly distinguished from the more usual business and commercial meaning of the word—that of physically moving

commodities from producer to consumer through wholesale and retail agencies. Distributive services involved in such a movement of goods are an essential part of production, and have already been considered in that section of our investigation. At present, however, our enquiry concerns the principles on which the respective shares of the product of industry fall to the several factors in return for the services rendered by them in the creation of that product.

Relation of Production and Distribution.

It is sometimes stated that the department of Distribution is the most interesting and at the same time the most difficult branch of the science of Economics. It is of interest because each of us belongs to one or other of the great classes of producers, and must necessarily be concerned with the principles which determine our share of the world's goods. The subject is of extreme difficulty because it must examine the frequently antagonistic claims made by the several classes of producers to the wealth which results from their combined efforts. While in Production harmonious co-operation is essential if an adequate and satisfactory product is to accrue, the distribution of the resulting increment of wealth necessarily entails a certain friction. The relative share of one class can be increased only at the expense of the share of another class or of other classes. Inequalities and disputes are consequently unavoidable, and while it is no part of the economist's task as a scientist to justify or condemn on moral or ethical grounds the existing or proposed distribution of wealth, he must nevertheless be ready to consider the many conflicting claims in pursuing his investigation into the principles on which that distribution is based.

We must remember also a fact of even greater importance—that distribution cannot be entirely separated from production. It is true that the general standard of living of the community must be determined and limited by the total amount of wealth produced ; but the *relative* standards of living of different groups in the community will depend on whether the total wealth produced is evenly or unevenly distributed as between those groups.

Now the amount of welfare, or satisfaction, derived from economic wealth is greatly influenced by the evenness or unevenness of this distribution. At present, wealth in most modern industrial communities is most unevenly distributed, with the result that there are wide differences between the standards of living enjoyed by different classes. The rich can satisfy their most extravagant whims and fancies ; the poor cannot satisfy even their vital needs. It will be apparent that such unequal distribution is not likely to yield as much welfare as would result from a more even division of the product of industry.

Moreover, since, as we have seen, production is guided by

effective demand, and not merely by need untranslated into demand, the distribution of wealth reacts upon the character and direction of production. If the lower classes are too poor to translate their needs or wants into effective demand (i.e., to purchase the goods they need), production will largely be directed to satisfy the effective demands of the wealthier classes, who can afford to pay for what they require. It is for this reason that we find in modern states a growing sphere of communal provision, i.e., increasing provision by the State of educational, housing and public health facilities. In making such provision the State recognises that demand may frequently be a blind guide so far as real need is concerned. Similar reasons underlie the modern tendency to use the instrument of taxation as a means of reducing the gap between rich and poor. These are all attempts to relate wealth more closely to some conception of welfare.

What is to be Distributed?

In a previous paragraph we have referred to the division of the "product of industry". This is a comprehensive term which requires further definition. If we revert again to our oft-quoted condition of elementary industry we find that each worker receives the whole or some part of the actual commodity in the production of which he has laboured. The peasant farmer employing two workers may remunerate them in kind: each week's work may bring its reward in the form of vegetables, wheat, milk or butter. But rarely indeed does any such condition exist in modern industry. The worker may require for his personal use little or none of the commodity in the production of which his days are spent. The diamond polisher may never in a lifetime have the desire or the means to possess a single small brilliant. The bootmaker could conveniently utilise for himself and his family only a very small part of his annual output. With the march of progress the *Natural Economy*—wherein each worker consumes his own produce—has been replaced by a *Money Economy*, where the worker is paid not in kind but in money—with tokens of various forms which are in the nature of orders upon the community for any goods which that community can supply. The intervention of money and of the system of exchange thus considerably complicates the problem of distribution, and in advanced communities the existence of a *Credit Economy*, involving the settlement of the majority of debts by means of set-off and cancellation without any need for the transference of metallic money, adds still further to the intricacy of the arrangement and tends continually to widen the gap between the producer and the actual commodity for which he is responsible.

Thus in our study of Distribution we cannot contemplate the sharing of the product of the labour of one individual or of one

class of individuals. We must take a much wider view, and may regard the contribution of each productive unit as being added to a vast reservoir of wealth into which flows continually the result of the efforts of all classes in the community. The reservoir represents the *National* or *Social Wealth* of the community, which from day to day is being added to by its economically active citizens, and, on the other hand, is being continually drained of some or of all its surplus by four great streams which in total represent the *national dividend* or *social income* and individually form the incomes accruing respectively to the four great classes in society —landowner, labourer, capitalist and entrepreneur. Clearly the social income annually withdrawn from the social fund cannot permanently exceed the additional wealth created during each year, for no community can continue indefinitely to live upon its capital. Thus the total values of the four great streams flowing respectively to land, labour, capital and enterprise cannot remain long in excess of the wealth being produced as a result of the continued efforts of the four factors.

The amount to be distributed among the factors of production during any given period, which may for convenience be regarded as one year, is therefore the aggregate value in terms of money of all goods produced and of all services rendered by the agents of production during that period. In other words we may say that the amount to be distributed is the *net value* created by production in the community within the relevant period. "The labour and capital of the country, acting on its natural resources, produce annually a certain *net* aggregate of commodities, material and immaterial, including services of all kinds. This is the true net annual income, or revenue, of the country ".[1] It is clearly impossible to obtain any other than a rough estimate of this national income in the case of any particular country, for so many factors have to be considered and so many services are rendered—such as those of housewives—which are not evaluated in any way. From time to time, however, estimates have been made in this and other countries by reference to wage statistics and income tax returns. For example, Professor Bowley estimated the British national income in 1913 to be in the neighbourhood of £2,165 millions, while that for 1924 was calculated by Professor Bowley and Sir Josiah Stamp to be roughly £4,000 millions, thus indicating that, after allowing for an increase of about 80 per cent. in the price level, the nation was earning about the same in 1924 as it was before the Great War.

The Division of the Joint Product.

From the total of the annual social income flow the several shares accruing to Land, Capital, Labour and Enterprise respectively in the form of Rent, Interest, Wages and Profits (see the

[1] Marshall, *Principles*, VI. I. 10.

diagram on page 67, *ante*), and in analysing the system of Distribution it is convenient and usual to consider separately the principles underlying the determination of each of these shares. Although such shares accrue to the landowner, the capitalist, the labourer and the entrepreneur in the form of money or its equivalent, that money is merely representative of the *real reward*—a portion of the total commodities produced —and its amount necessarily varies considerably in the same country from time to time, and also at the same time in different countries, according to the relative productivity of the industrial organisation. If trade is good and production is in full swing the share of each factor is likely to be increased. On the other hand, a period of depression or the occurrence of a great calamity is in the long run as disastrous to one class as it is to another. In this connection may be mentioned the fallacy underlying the idea that the destruction of property by disaster or war is good for the community *because it makes work*. It is quite conceivable that some individuals may benefit, but the community as a whole must be poorer if part of its accumulated wealth is destroyed and if its members must labour again to replace that which is lost, for to that extent they cannot labour to produce wealth in other forms. The total of the national income represents not only the reward which flows to land, capital, labour and enterprise: it is also the total available in the hands of all members of the community for purchasing goods and services. It represents the value of the total demand of the community for the products of its people. Thus if part of the national income ceases because of the loss of the capital by which it is created, the demand for goods and services must be reduced, and the community as a whole must suffer.

It should be emphasised that in discussing the distribution of the national dividend we are concerned primarily with its apportionment to the several *factors* of production, and not with its distribution among individuals. Although we may refer generally to the landowner as receiving rent, to the labourer as receiving wages, and so forth, it is clearly impossible to analyse the problem of distribution in so far as it applies to each man, woman and child, but it is possible to aggregate the individuals in a community into appropriate classes corresponding to the four factors of production. Again, we have already seen that one individual may supply some or all of the factors, and to him therefore must accrue more than one class of share of the product. Further, although we consider how the shares of the product accruing to land and to capital, as agents in production, are determined, we do not thereby justify the income which accrues to the landlord or capitalist unless we can justify also the possession of land and of capital by those individuals.

The Share of the State.

As civilisation progresses, the work and importance of the machinery of State constantly increase, while the influence of that machinery on production becomes ever more profound. In all countries an appreciable part of all individual income is taken by the government for the discharge of its manifold functions, while in many countries the State itself conducts productive enterprises on an extensive scale. In so far as the State actually undertakes productive work its position is not greatly to be distinguished from that of great corporations: the inhabitants who provide the necessary capital must ultimately gain or lose according to the success or failure which attends the undertakings. But much State revenue is applied for purposes which are not directly productive, while some of its expenditure—such as that on war—is clearly unproductive. The importance of the share of the national income which accrues to the government is therefore considerable, and is regarded by most economists as sufficiently important to receive independent treatment. This plan is adopted in later chapters of this book. As, however, the greater proportion of State revenue is collected from the incomes which have already accrued to its members, it is not regarded as a fifth share of the product of industry which must be distinguished in analysing the system of distribution.

Private Income and Private Property.

Although, as has been stated, the economist does not seek to investigate the principles upon which *individual* incomes are determined, he must nevertheless recognise the existence of private ownership and the fact that the shares of produced wealth which accrue to the factors of production are subdivided into private incomes and ultimately become part of individual wealth. He must recognise also that changes in the laws of property and in the protection of individual rights exert a considerable influence on production and so react on distribution. If such laws are unjust or if such protection is inadequate, the incentive to produce is diminished, whereas a high degree of security and a strict recognition of private rights in property tend, other things being equal, to a constant growth in productive enterprise.

The whole system of Distribution does, in fact, rest upon the principle that wealth can be privately owned. Just as production would not be instituted if the producer could foresee no chance of securing and holding the reward for his efforts, so there would be no problem of the distribution of the product of industry if the respective shares could not be retained and held in private ownership.

Summary of the Problem of Distribution.

The scope of our present enquiry is clearly a very wide one, and necessarily embraces many difficult problems. Marshall has stated that no *simple* solution of the problem of distribution can be true. We may, however, summarise our investigation under three main heads :—

1. *How much is there to be distributed*? This has been briefly answered in the foregoing paragraphs.
2. *To whom or to which factors are the shares to be apportioned?* We have seen that the four factors of production are supplied by four great groups—the landowner, the capitalist, the labourer and the organiser—and that the individuals in these groups are rewarded for their services in production by the respective shares—rent, interest, wages and profits.
3. *What determines the share of each group, and of individuals in that group?*

The difficulties of distribution arise in connection with the last division of our investigation. How are the services of the landlord and labourer evaluated ? What deciding force arranges the proportion of each factor which is utilised in production ? In our consideration of Production we have seen that the entrepreneur utilises each factor up to its marginal utility so as to achieve maximum efficiency. The community as a whole employs the four factors in the same way, and their value is determined, other things being equal, like the value of all other things, by the marginal need of industry generally for each factor, i.e., by the need of consumers in the aggregate, who by means of demand direct the current of production. " It (i.e., the National Income or Dividend) is distributed among them (i.e., the agents of production), speaking generally, in proportion to the need which people have for their several services—i.e., not the *total* need, but the *marginal* need. By this is meant the need at that point, at which people are indifferent whether they purchase a little more of the services (or the fruits of the services) of one agent, or devote their further resources to purchasing the services (or the fruits of the services) of other agents ".[1]

The determining factor is therefore the principle of marginal utility as applied to the demand for the several agents. Each agent is utilised in production as far as it is profitable so to utilise it. Always and everywhere the principle of substitution is in operation, and changes in the proportion of the various factors are constantly being made in order to achieve a maximum output. Capital, in the form of new and improved machinery, is constantly being substituted for labour ; improved organisation may bring equal or improved results with the same or a less

[1] Marshall, *Principles*, VI. II. 6.

than proportionate outlay on the other three factors. There is a constant competition between the various factors for use in production, and while employers in the aggregate may be said to determine the relative proportions of land, labour and capital which are employed in production, the proportion and value of the services of the employer are fixed also by the fundamental law of value, of demand in relation to supply. The *marginal efficiency* or *marginal productivity* of each factor determines its value to the community, and that value fixes the proportion of the product of industry which finally flows to each agent.

It is necessary to add that although the Theory of Value may be thus applied to determine the *prices* paid for the services of the several factors of production, it cannot be so applied in its entirety, as it can in the case of ordinary commodities. On the side of demand there is a complete analogy—value at any moment is determined by the marginal need of the consumer for the services of the agent. The effect of changes in supply on value at any time is also identical, i.e., an increased supply of any factor lowers its marginal utility (or marginal productivity), but a difference exists in regard to the effect of price on the supply of any one of the agents. Land, labour, capital and organisation, unlike motor cars and loaves of bread, have no easily determinable *expense* of production, although we may discern an approximate *cost* of production in the case of capital, labour and organisation. The suppliers of the various factors have no exact expense basis upon which they can determine whether the price offered for their services will adequately repay their expense of production, and consequently the process of adjusting supply to demand is necessarily a far more complicated matter than in the case of ordinary commodities and one which does not lend itself easily to exact analysis.

We may note finally that although the respective shares of each factor are theoretically determined in accordance with the general law here enunciated, nevertheless many causes may operate to prevent its full working. Combinations of labourers or of employers, control on the part of the State, custom and prejudice, charity or injustice, one or more of these and of other similar influences may intervene to prevent the unrestricted working of economic forces and so alter the shares of the product of the several factors. In the long run the economic laws of supply and demand operate, but it may be to the advantage of the community or of a section of the community to restrict or otherwise control their operation. The rate of wages in any trade is determined economically by the general law of value—of supply in relation to demand. As yet the central problem of distribution, i.e., the determination of profits, interest and wages is still a matter of private contract. But in admitting this we do not necessarily advocate the principle of *laissez-faire*, as did the Manchester school of economists in the last century. To-day

no economist of repute would deny that the fixing of a minimum wage, particularly in relation to the sweated trades, is a justifiable interference with the free play of economic forces. But such interference does not proceed by any definite economic plan: it is based chiefly on moral and ethical considerations. Consequently, although Governments in certain cases fix the standard of wages and the minimum conditions under which they shall be earned, modify the distribution of wealth by taxation and afford public relief in various ways, actually such intervention strengthens competition by ensuring greater equality. Thus under the Trade Board organisation set up in this country by the State, the actual fixing of wages is still left to bargaining between employer and employed, but the hands of the workers are strengthened because it enables them to bargain *collectively* for improved wages and working conditions.

CHAPTER 17

RENT AND ITS DETERMINATION

THE term " Rent " as used by the economist is applied to the payment which is made for the use of the primary factor in all production—land or natural resources, including any capital which may have been so sunk in the soil as to obey the economic laws concerning land and to be no longer distinguishable as capital. From another point of view, Rent may be defined as the income which accrues from the ownership of land and of other free gifts of nature.

Like many other economic terms, the term " Rent " requires careful definition because of the many conceptions—popular and scientific—which it conveys. In its popular sense the term is variously applied to the payment for the use of a house, including the ground on which it stands ; to the periodical payment made by the tenant to the landlord in respect of the occupation of a farm or of an estate ; to the revenue received by the State or by the owner of a forest, a fishery or mine in return for the right to extract therefrom timber, fish and minerals. But in some of these applications of the term other elements besides pure rent are covered, such as interest on capital invested in houses, buildings, machinery, mine sinking and exploration, and also allowances for profits and for the depreciation of fixed capital. In the payment for the tenancy of a house there is generally a far larger proportion of such elements as interest and depreciation than of pure rent for the site. The payment for the latter may in fact be made separately in the form of " ground rent ", in which case the whole of the payment to the houseowner consists of income on the capital invested therein, such income including not only interest but also depreciation allowances, remuneration for risk, and possibly also a certain proportion of profits for enterprise and management. Similarly, the rent paid for a farm in an old country consists largely of interest on capital expended in past years by the owners, and of allowances for depreciation on the farm buildings, for drainage, and for hedging.

In view of this ambiguity it is sometimes desirable to distinguish the payment for the use of land and other natural resources as " *economic* rent " (sometimes called *normal* rent), but it may generally be assumed that in a treatise on Economics the term *rent* is used in its strictly scientific sense as defined above.

Peculiarities of Land as a Factor in Production.

In an earlier chapter it has been stated that the term " land " is now generally used in Economics to denote *all* the natural agents employed by man in production. The earlier economists employed the term in a more restricted sense, and in seeking to analyse the nature of rent, they confined their attention chiefly to agricultural land, or to use the more precise words of Ricardo —" to the natural and indestructible powers of the soil ".

This method makes easier the explanation of the theory of rent as applied to all natural agents, and is accordingly followed below. It must be understood, however, that the principles which will be enunciated apply equally to the other natural agents as they do to land in the narrower sense of the term.

The nature of land as a factor of production has been previously considered, but the following points require attention before the theory of rent is approached.

1. LIMITATION OF QUANTITY.—In the first place, it is to be noted that land differs from the other factors of production in that it is limited in quantity, permanent in form, and incapable of increase in amount. An increase in demand cannot, therefore, affect the total quantity of land in existence, although it may lead to an increase in that area of land which is applied in production, or to a more intensive cultivation of the area already being used, by the application of fertilisers and improved methods.

These considerations compelled the older economists to find an explanation of the principles governing the determination of rent—i.e., the value of the services performed by land—other than cost of production. Ricardo and his followers were able to show to their own satisfaction that the wages of labour were determined by the " cost of production ", i.e., by the minimum level of subsistence, of the labourer ; and that interest on capital represented the " cost of production " of capital or the payment which had to be made to induce people to abstain from consumption and to save. Ricardo could not however apply such reasoning to land, because of its permanent form and the fact that it cannot be said to be produced by man.

2. DIFFERENCES IN FERTILITY.—As we shall see later the Ricardian school found a basis for their theory of rent in the fact that different areas of land vary considerably in quality or fertility. Such variation may of course be due as much to differences in the composition of the soil as to differences in topographical and climatic conditions. The soil of France is famed for its fertility, while the Red Basin of China (Szechwan) is able to undergo an unparalleled intensity of cultivation without much apparent exhaustion.

Such areas may be contrasted with the infertile moors of Yorkshire, with the boggy marshes of Ireland or with the arid wastes of the Sahara and Kalahari. Again, the south side of a mountain range in the northern hemisphere is generally more productive than the north side, as witness the cultivation of vines on the southern (but not on the northern) slopes of the mountains of Switzerland and of Northern Italy. Further, we may find instances of soils which are so admirably suited for the growth of certain kinds of fruit as to yield their owners a very remunerative return to work and capital. Examples are the lowlands of Kent and of the Fen district, admirably suited both from the standpoint of fertility and location for the production of hops and wheat respectively.

Innumerable examples could be quoted to emphasise the fact that whereas some areas of land will yield a large return to a cultivator yet others will not repay even a small degree of trouble and expense. This factor of fertility is clearly of the first importance in determining the monetary estimate placed on the value of land by its owner and by the tenant.

3. The Influence of Location.—It is patent that, other things being equal, a farmer would prefer to cultivate a level plain rather than a hillside, and that he can more remuneratively produce grain or vegetables for a town market on land which is near that town rather than on land which is situate at a distance. In the latter case the trouble and expense of transporting the produce, and possibly also the trouble and expense of obtaining and of transporting the farmer's food and implements, all add to the cost as well as to the expenses of production. For these reasons the more advantageously situated land will, other things being equal, command the higher price.

The reservation " other things being equal " is important, for it is conceivable that, from the point of view of transport and communication, land at a distance may be more easily reached than land close at hand. It is really a question of *accessibility*, and means of transport and communication tend continually to make distant areas more quickly and easily accessible. Land situated alongside a railway line is more favourably placed from this point of view than land which, though nearer the market, is yet far away from any lines of communication, and the value of the former is necessarily the greater.

It should be clear, therefore, that differences in the fertility and location of land must greatly influence the value placed on the land by the cultivator and also by the owner. Upon this fact is based the theory of rent which is now generally accepted. Under some circumstances fertility may be the chief determinant

of the value of land; in others, location may be the foremost factor. In a small, thickly inhabited country like England, where all parts are in close communication, differences of fertility are of the greater importance in determining the rent of land applied for agricultural purposes. On the other hand, the vast distances which separate different areas in a great country such as the United States emphasise the importance of location, to such an extent that a better situation may frequently outweigh a less degree of fertility. For these reasons differences of fertility were stressed by English economists, while the question of location has been given its due share of importance by economists in the newer countries.

The Determination of Rent.

We are now in a position to consider the Theory of Rent which is associated with the name of David Ricardo, although it had been enunciated in a crude form before it was propounded by him, and has since been further extended and improved.

Following the line of argument adopted by Ricardo, we may assume that an uncultivated tract of land is settled by a small colony of men. So long as there is plenty of good land available which anyone can appropriate to his use, no payment will be made for any of the land and no rent can therefore arise. Only the best available land will be used, and the monetary return from the sale of produce will tend just to cover the expenses of cultivation, including normal wages and minimum profits. The return cannot be greater than the minimum, for the competition among the cultivators will always tend to restrict any increase in the price of the product and to keep down the level of the return.

We may next assume that, as population increases, all the best land is taken up, and that, methods of cultivation remaining the same, eventually the influx of new settlers or the continued increase in the numbers of the inhabitants of the tract causes an increased demand for produce, and compels some of the settlers to resort to the inferior land. To the same expenditure of capital and labour, and with the same methods of cultivation, this land yields a lower quantity of produce than the best areas. For purposes of illustration, we may assume that in return for a certain outlay of energy and capital the best land will yield 30 bushels an acre while the second best land will yield 28 bushels only for the same outlay and effort. Now the produce of all the land must sell at the same price, and that price must cover the cost of production on the poorer land, which otherwise cannot continue in cultivation. Accordingly it is a matter of indifference to a new cultivator whether he appropriates and cultivates the second grade land, obtaining a net product of 28 bushels per acre, or whether he hires some of the best land from one of the

early settlers, and pays him the difference of 2 bushels per acre per annum, again obtaining for himself a net product of 28 bushels per acre.

In this way competition tends to equalise the net return obtained by all the cultivators, and any surplus goes to the owner of the land. The owner cannot get more than this difference, otherwise the settlers would prefer to cultivate the inferior land. On the other hand, he is not likely to receive less, because the competition of new cultivators for the land will force up the price they are willing to pay until the whole of the difference between the two grades of land is taken by the landowner. This surplus, differential gain, or residue from the use of the better class land, is *economic rent*, and is measured in terms of actual produce, although for greater convenience it may be expressed in terms of money.

The Margin of Cultivation.

We may pursue the foregoing example further, and assume that population continually increases until eventually all the second grade land is absorbed and new cultivators have to resort to land of the third grade, yielding only 26 bushels per acre for the same expenditure of capital and effort. Under such conditions the land of best quality will yield its owner a rent equivalent to 4 bushels per acre per annum, while the second grade land will in turn become rent-yielding and give an annual return of 2 bushels per acre. Similar results follow the bringing into cultivation of each successive inferior grade of land.

Now the lowest grade of land which is under cultivation at any given time in order to satisfy the aggregate demand for the produce of the soil is said to be on the *margin of cultivation* or to be *marginal land*. In the example we have considered, the margin tends continually to descend to more inferior land with each increase in the population of the tract, and as the margin falls so do the expenses of production per unit of output and the price of the produce tend constantly to increase. So also do the rents of the better grades of land continually rise, for the rent of each superior area is measured by the surplus of its annual produce over the annual produce of an equal area of the most inferior land under cultivation for the supply of the same market. Alternatively, we may say that the rent of each higher grade of land is measured by the *surplus of its annual produce over the amount of the farmer's expenses of production including profits*, for as we have shown, such expenses are assumed to be equal on the various grades of land, and on the lowest grade of land are approximately equivalent to the total net produce.

The Assumption of Competition.

Competition is not, of course, always and everywhere as effective between landlord and tenant or between competing tenants as we have assumed in the foregoing analysis. In many cases, landlords through apathy, fear of public opinion or sentiment, fail to exact the last penny of rent from the tenant. In other cases, the poor, unintelligent or lazy tenant fails to cultivate his land to the highest pitch of efficiency and is therefore unable to transfer to the landlord the surplus which should be his. In agriculture, the forces of competition operate far less strongly than they do in many other branches of productive activity, with the result that the rent received by the landlord rarely represents the true surplus to which he is really entitled. Indeed, in new countries, competition between tenants for possession of land may not exist, and in such cases, far from paying rent for his land, the tenant may receive a bounty from the Government for placing the land under cultivation.

Rent of Situation or Accessibility.

It has been explained previously that land may be of greater value to the cultivator, not only because of its greater fertility, but also by reason of its greater accessibility. In certain circumstances the advantages of situation may be such as to outweigh completely any disadvantages in respect of fertility, while the most fertile land may be so inaccessible as to make its cultivation impracticable. Accordingly we find that land in a more accessible position yields a *rent of situation* as compared with land which is less accessible, quite apart from any question of relative fertility. In respect of land in the neighbourhood of large towns (i.e., good markets), the factor of accessibility is of great importance, and tends to decrease gradually until the " great open spaces " are reached ; as costs of transport and communication increase so does the advantage due to situation become continually less and finally it disappears altogether. The land on the margin is then that land which, on account of low fertility or relative inaccessibility or both, yields its cultivator a return which is only just sufficient to repay his expenses of production, including normal profits.

No-Rent Land.

The foregoing reasoning depends on the fact that the *land on the margin yields no rent*, for the whole of its annual produce is swallowed up by the expenses of production including a minimum profit for the cultivator. In order to expound the theory, it is assumed that not all the land available for the supply of the market is taken up, and accordingly it may be correctly surmised that the lowest grade land under cultivation

will yield little or no rent. Such conditions are approximately true of new countries, such as Canada and Australia, but even there the area of cultivable land which is not taken up becomes constantly less.

Nevertheless, although in an old country rent may be paid for practically all land, the theory is not thereby disproved. In the first place, the marginal land which is the basis for the determination of the rent paid in an old country such as Britain may actually exist in Canada, in the United States or in Australia. So long as it is cultivated in order to supply the same market, and so long as its cultivators are in competition with British cultivators, then, if its expenses of production per unit of output (including transport costs) are the highest, such expenses will determine the market price of the produce, and will form the *margin* or basis from which other rents are measured. The least fertile land in an old country will thus yield a rent if its productivity is higher than that of marginal land in a new country, so long as they both supply produce for the same market.

Secondly, it may be argued that no-rent land does actually exist even in an old country, but that its low productivity is obscured. The tenant of a farm must take the good land with the bad, and although he may pay rent for the whole farm, it does not follow that each part of the land yields a return sufficient to cover its proportion of rent. The cultivation of some portions may be quite unprofitable—they may be no-rent areas—but their lack of yield may be more than counterbalanced by the fertility of other areas. In other words, the rent of a farm may nominally apply to the whole area, but it may in fact be yielded by the more productive tracts only. No-rent land may thus exist in the oldest country, but its existence may be concealed.

Thirdly, we may consider that the payment made for the lowest grade land in an old country with a dense population is not strictly rent, but chiefly interest on the capital which in past years has been sunk in the land. This payment in respect of interest may apply in some measure to all the land in an old country, but on the worst land the whole of the amount paid may consist of interest on capital, and may contain no element of *true* rent. Thus no-rent land may again be said to exist in such circumstances.

Finally, we may consider the case in an old country where all the land is taken up, and where the population is large and probably increasing. Under such conditions, the demand for food increases, its price rises and there is a tendency for all the land to be intensively cultivated. The constant growth of population causes a constant increase in the demand for land, but as all the land is in use the demand cannot be satisfied. Intensive cultivation accordingly increases, and the land as a whole tends to command a *scarcity rent* or annual value which is determined by the conditions of supply and demand the same

way as any other value. If all the land were of exactly the same quality and possessed the same geographical advantages, every portion would command the same rent as any other portion of equal extent. But such conditions will not exist. Some portions of the land will be superior to others in fertility, advantage of situation, or both. The scarcity rent will approximate to the excess of the value of the produce obtained from the worst land available over the expenses of production (including minimum profits) on that land. The rent of superior land will be measured upwards from this basis, and in all cases will include two elements —(1) an amount equivalent to the scarcity rent, and (2) an amount equal to the differential advantage of the land over the worst land under cultivation. Thus although "no-rent" land may not actually exist in an old country, the lowest rents paid may be regarded as the minimum which forms the basis of the rentals paid for superior land.

Economic Rent a Differential Gain.

We can now appreciate that economic rent is a *differential gain* which accrues to the owner of land by reason of the relative advantages (of fertility or of situation, or both) which that land possesses over the least productive land supplying the same market. The amount of rent paid will be the total amount of this differential gain represented by the excess of the annual produce of the land over that of the marginal land supplying the same market and cultivated under similar conditions. Clearly the conditions under which land is cultivated vary considerably, and where variations exist due allowance must be made for them.

Rent and the Price of Agricultural Produce.

As a differential gain due to inherent natural properties of the land, rent can accrue to the landowner and to no one else, assuming that the spirit of competition exists and that no law, custom or sentiment intervenes to prevent the operation of economic forces and to restrain the landowner from obtaining that which is due to him. The tenant cannot retain this rent because economically it belongs to the landowner. If, for any reason, it remained with the cultivator, the competition of other cultivators to obtain that land would force up the rent they would offer and eventually restore the surplus to the landowner. Only for charitable or similar non-economic reasons can the rent remain with the tenant. Secondly, the consumer of the produce of the soil cannot benefit by the surplus produce of the land in the price which he pays, *because rent does not enter as a determining factor into the price of agricultural produce.*

The truth of this most important statement is evident on a little consideration. We know that all produce of the same

kind must be sold at the same price, and that this price must be sufficient to remunerate the capital, labour and organisation applied to the worst land under cultivation, otherwise that land would cease to be cultivated. But the worst land under cultivation pays no economic rent, for its produce is only just sufficient to cover the expenses of production including normal profits. Therefore rent is not one of the determining factors of the price of agricultural produce, and in fact, if no rent at all were paid for any land, prices would be no lower than they are. In other words, the consumer would not benefit if rent were not paid, or if the total amount of rent were handed back by the landowner to the cultivator.

Of course, in saying that rent does not enter into price, we do not overlook the fact that rent does enter into price in the sense that rent is paid by the cultivator of superior land *out of the price* which he gets for his product. But it does not enter into price in the sense that it determines that price, or that it is one of the elements of *cost* which determine the supply price of anything.

An increase in rents will not raise the price of wheat, nor can it induce a greater supply of land for productive uses. This is a peculiarity of land as a factor in production, for, as we shall see later, an increase in wages and in interest will, other things being equal, induce a greater supply of labour and of capital.

From the foregoing it follows that the *high price of agricultural produce is the cause and not the result of high rent.* Rent, as we have seen, does not enter into the price of the produce, so that the level of rent cannot influence price. On the other hand, a higher price received for agricultural produce makes it possible to bring into cultivation land with higher expenses of production per unit of the product. In other words, high prices force down the margin of cultivation, and the lower the margin the higher the rents obtained for the superior areas. Conversely, a fall in the price of agricultural products will cause rent also to fall, for the marginal producers will be forced out of production and with the raising of the margin the differential gain of the superior land is lessened.

In this explanation it is, of course, assumed that no improved methods of production or of consumption become available. It is necessary also to remember that the foregoing statements are true *in the long run.* Changes in the prices of the product are not immediately and automatically followed by changes in rent, for whereas prices may vary from day to day in accordance with conditions prevailing on the market, rents are generally fixed by contract for a more or less lengthy period, and cannot be altered until that period expires. Any gain or loss which accrues in the meantime will fall to the tenant, but the mere fact that the temporary increment or decrement is not passed on to the landowner does not disprove the fact that such an increment or

decrement has actually accrued. In the long run, the force of competition will cause the actual money rent (after deduction of necessary interest on capital, etc.) to approximate to the pure economic rent.

The Intensive Form of the Theory of Rent.

Hitherto for the sake of clearness we have adhered to what is termed the *extensive* form of the theory of rent, i.e., its application in respect of successive areas of land of varying degrees of fertility or accessibility. But corresponding to the extensive and intensive forms of the Law of Diminishing Return, both of which were considered in Chapter 6, there are also extensive and intensive forms of the theory of rent. It will no doubt have been noticed by the reader that there is a close relationship between the law of rent as here enunciated and the law of diminishing return which has previously been explained. So far as extensive cultivation is concerned, we have seen that the rents of the best areas rise as lower grade land is brought into cultivation, while the rent obtained from each successive grade falls as the margin of cultivation is approached. In other words, the rents of superior areas rise as cultivation is extended to land which yields a constantly diminishing return to capital and labour.

In regard to the intensive form of the theory of rent we may refer to the explanation given in Chapter 6, page 80 *ante*, of the static conception of the Law of Diminishing Returns. There it was shown that when an outlay of £1,000 is reached, the last "dose" of £50 spent on capital and labour is just remunerative: the value of the additional produce just covers the expenses required to raise it, including a normal rate of profit for the farmer. The earlier doses give a greater return than the last one, but the price of the whole of the produce is determined by the marginal or final dose. If this "dose" is to be applied year after year, the price of the product must cover the marginal outlay, and consequently a surplus must arise year after year in respect of the doses prior to that on the margin. This surplus is a differential gain, and is *economic rent* under conditions of intensive cultivation. The point at which the farmer's outlay ceases fixes the minimum return which he requires to make, and any excess over this in respect of any portions of his outlay belongs economically to the landlord. Alternatively we may say that if a farmer applies as much capital and labour to his land as he profitably can, his rent is what remains after deducting from his total annual produce the return which accrues from the expenditure of his last dose multiplied by the number of doses. (See the diagram below.)

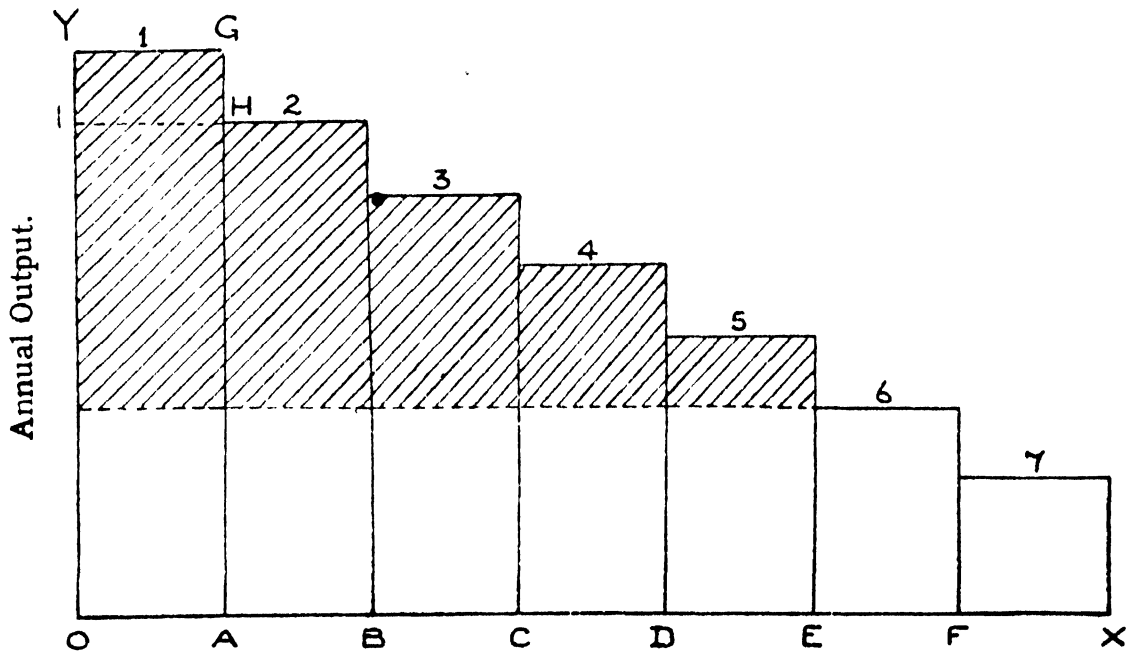
As was stressed in Chapter 6, the conception of successive doses is purely theoretical, and is used merely for purposes of explanation. The last dose is not necessarily the last in point of time, but the farmer stops his expenditure of capital and

labour at the limit of profitable return, which he determines by his knowledge and as the result of his experience.

It should be noted that rent may emerge in the intensive form even when plenty of land is available and cultivation is proceeding from the superior to the inferior lands, for as price rises not only will inferior land be brought under cultivation but the occupiers of the superior land also will be enabled to apply more capital and labour to their land and be induced to make greater efforts to increase their output. Thus will the rent of the superior areas tend to rise from the operation of two causes, and the tendency will be for both the superior land, which is worked intensively, and the inferior land which is worked extensively, to prove equally remunerative to farmers of equal skill and industry, for any added advantage which results from work on the superior land will flow to the landowner as economic rent.

Conversely, also, a fall in price will (*a*) cause land to be worked less intensively, and (*b*) cause marginal land to become submarginal. Consequently, the rent (*a*) accruing from pre-marginal doses, in the case of intensive cultivation, and (*b*) of the more fertile land, in the case of extensive cultivation, will tend to fall.

Diagrammatic Illustration of the Theory of Rent.



Equal Areas of Land (*Extensive* form) or Equal Combined Doses of Labour and Capital (*Intensive* form).

1. Extensive Form.

Along OX are marked off equal spaces representing equal areas of land of varying degrees of fertility or accessibility, the annual output from each area, obtained *by the same methods from equal expenditures of capital and labour*, being represented by the rectangles on the respective spaces. The best land OA gives an

output represented by rectangle 1 (YOAG), the second best land AB yields an output represented by rectangle 2, and so on.

Following the argument adopted by Ricardo, and referred to above, we may suppose that in the first place land OA is cultivated, and, as plenty of land is available to all, no rent will be paid. Pressure of population, however, forces cultivation to the second grade land AB, which yields a smaller annual output represented by rectangle 2. The expenses of production on both areas are equal, and the whole of the produce is sold for the same price. Again, the price of the output of AB must cover the expenses of production, otherwise AB would not be cultivated. Hence a surplus accrues from the cultivation of OA, equal to the difference between its output and that of AB. This surplus is represented by rectangle YGHI, and is the economic rent which accrues to the landowner.

As population increases we may assume that cultivation is carried to land of the sixth grade, EF. Its produce, represented by rectangle 6, will just cover the expenses of production, and EF is on the *extensive* margin of cultivation. All superior lands now yield a rent, represented by the shaded area of each rectangle. Land of the seventh grade will not be cultivated unless the price of the product is so forced up by demand as to make profitable the cultivation of land with such a low yield (i.e. high expense *per unit* of output), but if such land does come under cultivation then will the sixth grade land begin to yield a rent to its owner, while the rents of the superior areas will be correspondingly increased.

2. Intensive Form.

The same diagram may be used to illustrate the intensive form of the theory of rent in relation to the Law of Diminishing Return. The equal spaces OA, AB, etc., may now be taken to represent equal combined doses of labour and capital applied to the *same* area of land, while the rectangles will represent the quantities of produce obtained as a result of the application of each successive dose. The first dose OA yields an output indicated by rectangle 1; the second dose yields an output indicated by rectangle 2, and so forth. Again, the sixth dose may be assumed to be that at which the farmer ceases his outlay, and at this point the dose of capital and labour just pays for itself. As before, the surplus obtained from the application of each prior dose is represented by the shaded portion of each rectangle, and this surplus will tend to pass to the landowner in consequence of the operation of competitive forces. The price of the whole product is measured by the *marginal* dose EF, and the whole of the shaded area represents the rent of the whole of the land.

Rent and the Value of Land.

The value of land is clearly determined by the rent which it yields. The higher the net income from the land the greater the value placed upon the land by the owner and by the community. The actual value will depend upon the relation of the annual rent to the prevailing rate of interest. If the rate of interest stands at 5 per cent. per annum, a plot of land which yields a net rent of £5 a year will be worth approximately £100. If the rate of interest falls while the rent remains constant, the value of the land will rise proportionately : in other words, the price of land, assuming rent to remain constant, varies inversely with the rate of interest.

The value of land thus depends essentially upon its rental ; it may, in fact, be regarded as the capitalised value of the rent, and any anticipated future changes in the yield of rent from the land will be reflected in the present value for which it can be sold.

It is to be noted, however, that in an old progressive country such as Great Britain, the value of land may be higher than would be calculated on the basis of the prevailing rate of interest, for two reasons. In the first place the ownership of land carries with it certain social distinction and advantages, so that its value may be higher than what may be called its "intrinsic" worth. Secondly, in a wealthy and progressive community rents tend to rise by reason of the pressure of population on the land, whereas interest tends to fall as wealth increases and capital becomes abundant. (See *post*, Chapter 19.)

The Rise and Fall of Rents.

As rents depend essentially on the market price of the produce, they are necessarily influenced by any factors which affect that market price through their influences on demand and supply, or both.

1. Improved Transport.—Improvements in the methods of transporting the product to the markets of the world tend to lessen the disadvantages of inaccessibility, especially of distant sources of supply. Fertile areas at a distance are enabled more easily to place their produce on markets in older countries, and to compete successfully with home grown produce. Thus, while the rents of these newly opened-up areas will tend to rise, inferior areas *at home* go out of cultivation, the margin of cultivation tends to rise, and agricultural rents accordingly tend to *fall*. In other words, the margin of *fertility* at home tends to rise, while the margin of *accessibility* tends to fall, i.e., it is extended. This influence was especially marked in England during the latter part of the last century, when improved means of transport per-

mitted the placing of foreign grown agricultural produce on the English markets at a price which forced out of production the least efficient of our cultivators, and consequently resulted in a fall in the rents of agricultural land. It is clear, however, that if the fall in prices sufficiently stimulates demand, the cultivation of the inferior soils may still be continued and no fall in rents may result.

2. Improved Methods of Cultivation.—If we assume that conditions of demand remain approximately the same, then improved methods of cultivation will have the effect of forcing down rents generally, because they make possible the same or an increased output at a lower cost per unit of output, and consequently make unnecessary the use of the lowest grade lands, i.e., cause marginal land to become sub-marginal. Under such conditions the whole supply tends to be raised on the superior lands, and as the margin of cultivation rises so do agricultural rents tend to *fall*. Rent, as we have shown, arises from the law of diminishing return, and, other things being equal, any causes which tend to retard the operation of that law have the effect of lowering rents. Naturally, however, if demand is increased by the fall in price the level of rents may be eventually restored.

It is, however, impossible to dogmatise as to the effect of improved methods of cultivation upon rents. The conditions of cultivation are so varied, and the influence of improvements in re-arranging the grading of land is extremely complicated and obscure. Improvement in cultivation may benefit a certain grade of land only, as in the case of the invention of a new fertiliser which though of great benefit to poor land, may not effect any increase in the crops of more fertile land. It has been suggested that improved methods of cultivation *tend* to benefit poor land more than land which is more fertile. If land is already fruitful there will not be the same inducement to evolve improvements as there is in the case of a barren soil which attracts the efforts of man's inventive genius in order to make it bear fruit. If we accept this view, then it is true to say that improvements in the methods of cultivation *tend* to level the productiveness of soil of different grades, in which case the surplus of what were more fertile lands is now reduced and rent consequently tends to fall. The irregularity of the application of improvements causes varying effects on rent, and all that we can do is to indicate broad tendencies.

3. An Increase in Population.—As population increases rent tends to *rise*. In the first place the increase in population creates a greater demand for agricultural produce, which

is obtained from lower grade land or by more intensive cultivation. Hence the lowering of the margin tends to raise rents all round. Secondly, the pressure of population on the land itself tends to force up the value of the land, and eventually it may yield a minimum scarcity rent as previously explained. Thirdly, the growth of towns encourages the use of land for purposes other than the production of food, and its value rises accordingly.

4. THE ADVANCE OF CIVILISATION.—The results are largely similar to those which attend the growth of population—rent tends to rise—but in addition we may note that the growth of wealth and the improved standard of life tend to the use of new and more expensive varieties of food and clothing, and to a demand for a greater quantity of all kinds of food and of raw materials, such as wool, cotton and flax. Thus the land under cultivation yields a more valuable return, inferior lands are brought into cultivation and rents tend to rise.

British Agriculture and the Law of Rent.

The history of agricultural rents in Britain during the last hundred years has afforded striking proof of the operation of the law of rent. During the Napoleonic wars the shortage of foreign supplies of corn and the duties on imported corn forced up prices in this country, and led cultivators to resort to inferior land which had hitherto been below the margin. The fall in the margin of cultivation raised rents, agriculturalists prospered and incurred heavy expenditure on improvements in anticipation of a continuance of the prosperous conditions. The return of peace in 1815, however, was followed by a decline in prices, and, in spite of the protection of the Corn Laws, agriculture suffered from acute depression and rents generally were lowered.

The period of depression continued until the fifties and sixties, when the Crimean War, the American Civil War and the Franco-Prussian War caused a reduction in the world's supply of foodstuffs, thus forcing up prices and benefiting the British farmer in particular, as imports of corn into this country naturally declined. Again cultivation was extended to the sub-marginal areas, and rents were forced up in accordance with the law already enunciated.

The period of peace which followed in the seventies was accompanied by a recurrence of depressed conditions in British agriculture. Extensive wheat supplies from the prairies of the United States and of Canada were opened up owing to the improvement in transport and the building of railways. Such imports of corn led to lower prices, and lower prices forced out of cultivation the inferior or sub-marginal areas which had been resorted to in the more prosperous period. Thus there was a

reduction in the cultivated area in this country, a falling off in rents, and depressed conditions in agriculture generally.

The depressed conditions continued until the Great War, during which British agriculture enjoyed a short period of great prosperity, due to the same causes that operated in the previous periods already discussed. The shortage of foreign supplies and the increased demand for food for the allied armies forced up prices, and led to a more extensive and also a more intensive cultivation of the home soil. In spite of government interference and control, rents tended to rise and agriculturalists experienced a year or two of marked prosperity. The close of the war and the inflow of foreign produce was followed by the usual conditions of depression. At the time of writing British farming is in an exceedingly bad state, and there seems little ground for hope that the farmers in many districts will ever be able to recover their heavy commitments on improvements and their outlay in the purchase of their holdings. Many farmers who benefited from the prosperous period were induced to purchase their farms at values which were based on the real rents then being returned, but with the collapse in prices and the fall in rents, the values have naturally had to be adjusted to much lower levels and consequently reveal heavy losses in most cases on the prices actually paid by the tenants.

Nevertheless, every effort to restore agricultural prosperity is being made by the central and local authorities and by other interested parties. Small holdings, purchased by the State throughout the country, are being let to farmers at reasonable rentals, and legislation has been passed to facilitate the financing of farming operations (Agricultural Credits Act, 1928), and to afford relief from the burden of local rates (Local Government Act, 1929). Furthermore, private and public organisations are conducting and encouraging research into technical, financial and other problems connected with the industry.

The Rent of Urban Land or Building Sites.

The rent of building land is determined in accordance with the principles which have been already explained as governing rent of *accessibility*. Such rent depends almost entirely upon the relative advantages of situation of the various sites, and may be regarded as being measured upwards from no-rent waste land which is useless for building purposes. Rent in the suburbs of a large town is much higher than that in the surrounding agricultural areas, and there is a gradual increase as the centre of the town is approached.

A number of factors may enter to make the increase especially steep, and to give astonishing values to central sites in certain great cities, particularly in London and in New York. In the first place the supply of available land in such towns is strictly

limited, while business considerations and the dictates of fashion induce the keenest competition for sites which have advantages from the commercial or fashionable point of view. Business sites in fashionable areas are exceedingly valuable because of the high standard of custom the businesses may attract, and the high prices which the traders may consequently obtain. In the City of London building sites are of great value because people will pay high rents for the convenience and advantage of being at the very pivot of the business world.

In such cases the economic rent is high because it is known that valuable advantages must accrue from the situation. A shopkeeper in a fashionable street is charged a high rent because it is known that he can charge high prices or obtain a very large turnover. The high prices are not due to the high rents. They would be charged whether high rents were paid or not, for the shopkeepers would be foolish not to take advantage of the fact that some people will gladly pay high prices for the privilege of exclusive shopping in a fashionable centre. Landlords know that such prices can be charged, and endeavour to obtain as much as possible of the benefit for themselves by charging high rentals. The competition among the shopkeepers tends to place the whole of the surplus due to advantage of situation in the landlord's pocket. Thus the rent accrues to the landowner and to no one else.

The rent of a building site is therefore a payment for differential advantages of situation, and is determined on the same principles as the fertility rent of agricultural land. In the same way we may apply the conceptions of scarcity and desirability to explain the high rents which prevail at well-known inland health resorts and at famous seaside pleasure towns.

The Rent of Mines, Quarries, Fisheries, and Water Privileges.

The working of *mines and quarries* differs from the cultivation of land in that the removal of material from the former gradually exhausts the stock, whereas the natural resources of land are practically inexhaustible provided the land is given proper care and attention. The gross rent paid for mines and quarries therefore consists in part of instalment payments for the material extracted and partly of a differential payment analogous to rent in respect of advantages of position and convenience of working. The differential element is *economic rent*, being measured upwards from the least accessible and least convenient mine or quarry, the expense of production of which, being on the margin, determines the price of the product and also the rent of the superior mines and quarries. Thus the rent of mines is similar to agricultural rent in that it is measured from the marginal unit, and also inasmuch as the margin may be lowered *extensively* by the

working of less convenient or inferior mines, and *intensively* by the application of more costly methods in the superior mines. The great difference, however, lies in the ultimate exhaustion of the natural resources of the mine.

The existence of distinct elements in the rental for mines is indicated clearly by the kind of payment made to the mine-owner, consisting of (*a*) an agreed annual rent, known as "*dead rent*", which is determined on the same principles as agricultural rent; and (*b*) a fluctuating "*royalty*", payable at an agreed rate on each ton (or other quantity) of mineral extracted from the mine or quarry. As such a royalty is ordinarily fixed for a long period ahead on a surveyor's estimate of the resources of the mine and on an estimate of the probable annual output of the mine during the period, it is necessarily much of a gamble. But in so far as it is based on an estimate by the landowner of the surplus or residue which the colliery proprietor will receive, it partakes of the nature of rent.

The rent of *fisheries* is frequently compounded of factors similar to those applicable in the case of mines, but in certain cases the payment may be a pure economic rent, based on the fact that with proper care the fisheries may yield a perpetual return in the same way as agricultural land, and being measured upwards from those fisheries which by reason of low productivity or inaccessibility, are regarded as marginal.

By the term *water privileges* is meant the right to utilise supplies of water for power, for irrigation, or for domestic and other uses in cities and towns. The advantages of water for such purposes will depend on its situation and accessibility, on its volume and convenience of application, and on its quality for drinking and manufacturing purposes. It is clearly possible to conceive many gradations of such privileges, from those supplies which by reason of distance or inconvenience will be used only if no payment is demanded to those valuable and powerful supplies the use of which may command high compensation. The payment for the superior supplies is thus an *economic rent* due to differential advantages, such rent being measured upwards from the inferior privileges which yield no rent to their owners.

The Theory of Rent applied to Profits, Wages and Interest.

We have seen that the theory of rent can be applied in the determination of the return to natural resources other than actual agricultural land. Modern economists have still further extended the conception of rent to explain the incomes which accrue under certain circumstances to the other factors of production—enterprise, labour, and capital. In other words, they have shown that an element analogous to economic rent

can be found under certain conditions in profits, wages, and interest. We shall proceed to consider each of these in turn.

1. PERSONAL RENT—PROFITS.—The degree of organising ability among entrepreneurs varies considerably. At one extreme is the employer who just manages to drag along and to make sufficient to cover his expenses and a minimum profit. Such an employer is a *marginal* employer, and his firm is described as a *marginal* firm. At the other end of the scale is the capable organiser whose efforts are attended with generous results. Between these two extremes are employers of every degree of ability and experience. Now, the price of the product must normally be sufficient to cover the expenses of production of the least capable employer, so that the more capable employers, who by reason of their greater abilities can produce at a lower expense of production, obtain a *surplus*, which is analogous to economic rent and is determined in the same way. The natural gifts of the more capable employers enable them to obtain a differential advantage in production, and their supermarginal earnings are in the nature of a true rent. The extra earnings which accrue as a result of differential advantages due to *ability* are thus strictly analogous to rents of fertility in the case of land. In the same way rent of accessibility in the case of land is analogous to the returns which accrue to certain employers who are enabled to obtain differential advantages in production by reason of the accident of birth or business influence, or of their scarcity in relation to the demand for their services. The profits of such employers are true " rents of situation " or position, or " scarcity rents ", as the case may be.

2. PERSONAL RENT — WAGES. — Similar considerations apply in the case of employees in the same grade. Differences in efficiency and in productivity may give certain employees differential advantages over less efficient workers. The more skilful workers tend to command an extra wage determined by the relative degree of their skill and application compared with those of the marginal worker, and their earnings will be measured upwards from the earnings of this marginal employee. Again, just as we may find a payment analogous to rent accruing to an employer who is enabled to obtain an advantage in production because of business influence or by reason of the scarcity of employers of his particular ability or qualification, so also may differential payments accrue to an employee who is similarly situated. There is in such cases a differential payment analogous to rent of accessibility or scarcity in the case of land.

Thus we may say that there is a rent element in both

profits and wages, and that this element depends on the natural or acquired gifts of the employer or worker concerned. Where the differential payment is due to differences of ability, it may be suitably and correctly described as a *rent of ability*. If the payment arises by reason of the scarcity of such workers in relation to the demand or by reason of advantageous situation in regard to business, we may refer to it as a *rent of availability*.

In this connection it is to be noted that the training of persons for certain positions and occupations involves the outlay of considerable capital. A long period of apprenticeship and a heavy premium may be necessary, or many years must be spent in working for a small salary in order that the necessary experience may be gained. It is quite possible that anyone so trained and experienced may command an appreciable *rent of ability* in comparison with less qualified workers, but in considering the payment for such services due allowance must be made for *interest* on the capital invested in the training of the worker. His remuneration will in fact be compounded of two elements—*rent of ability* and *interest* on invested capital, but, generally speaking, the annual value of the latter would be very small in comparison with the former.

3. Quasi-Rent—Interest.—The term "quasi-rent" is applied to the temporary or short period earnings of agents of production, the supply of which cannot *immediately* be increased to meet an enhanced demand, although the supply *can* be increased in a period which is sufficiently long to permit of an adjustment in supply being organised and carried into effect. Capital may be sunk in a certain type of machinery, the manufacture of which takes a considerable period. The supply of such machinery may be regarded for a *short period* as being fixed in the same way as the supply of land as a whole is fixed. If an extra demand arises for the products of such machines, the price of the product must rise, and will remain high until new machines can be built to provide an increased supply. During such a period the machines in existence earn a surplus, and obsolete types which may have been discarded are brought back into production. The surplus earned by the superior machines is analogous to rent, but the analogy is not quite complete.

In the first place the qualification *in the long run* is stressed in regard to economic rent, whereas we are now concerned with short periods. Secondly, the supply of the agents yielding quasi-rents *can* eventually be increased, whereas the supply of the agent—land—which yields true economic rent, cannot be increased. Hence the term

quasi-rent is applied to distinguish from true rent the differential short period gains now being considered.

An illustration of the existence of quasi-rents arose during the late war in connection with shipping. The activities of the submarine and the demand for ships for war purposes resulted in a great shortage of tonnage. The supply could not be increased immediately—the planning and building of ships takes time—and consequently old vessels of all types were brought back into active service and inferior vessels were used for superior traffic. Freights advanced to a very high level, and the earnings of all classes of ships increased considerably, the owners receiving a surplus or quasi-rent far in excess of the ordinary return to capital and enterprise employed in the shipping industry. Such conditions persisted until two years after the war, since which time shipping has experienced a very depressed period, due to the stagnation in international trade and the fact that the many new ships which had been built accentuated the excess of supply over demand. Consequently the earnings fell rapidly, the inferior ships were withdrawn, and with the raising of the "margin" the quasi-rents of the owners dwindled and finally disappeared.

The level of freights, i.e., *prices*, thus determined the margin, and the margin determined the rents of the superior vessels. This is exactly analogous to economic rent of land, which, as we have shown, does not fix prices but is itself determined by the price of the product.

Summary of Conclusions regarding Rent.

Thus we may conclude that in many cases a rent element forms part of the return to enterprise, labour and capital as well as to land. In all cases the rent is measured upwards from a marginal unit of land, of labour, of enterprise or of capital as the case may be, and the rent consists of the payment to the superior factor in respect of its differential advantage or increased productivity as compared with the marginal unit. This payment does not enter into cost of production, for cost of production is determined by the expenses of the marginal unit, which obtains no differential payment. Nor does it form any part of *price*, for price is determined by the marginal expense of production.

But although such rent forms no part of price, *normal* returns to labour, capital and enterprise do affect the price of the product, because they affect the *supply* of the various factors for productive use. *In the long run*, changes in wages, in profits and in interest cause changes in the supply of labour, of enterprise and of capital. On the other hand, changes in rent cannot increase or decrease the supply of natural resources. Thus,

in the long run, wages, interest and normal profits influence and form part of price, whereas pure rent does not enter into price.

The grasp of these facts and of the theory of rent is of the greatest importance for a correct and complete understanding of Distribution, and in the following pages it will be necessary to keep well in mind the conclusions summarised in the foregoing paragraphs.

The Economic Justification of Rent.

The system of rent for land has met the full blast of Socialistic denunciation, and proposals have been made for the abolition of rent by the nationalisation of land and by imposition of the Single Tax. The proposal for nationalisation can be better justified in the case of land than it can in the case of other factors of production. Clearly, as things stand at present, we have to face a slow but certain rise in rents as land gradually becomes more scarce, and it is pointed out with justification by Socialists that this rise in rents is in no way due to the efforts of landowners. On the other hand, the recipients of rent, i.e., the owners of land, are as justly entitled to their income as are the recipients of interest, for in the vast majority of cases they have invested their money in land as an income-yielding security. To deprive them of that income would be quite as unfair as to abolish the payment of interest on a Government security. It would be a direct negation of the rights of private property. The owner of land which is relatively scarce or fertile is fully entitled to draw a " fertility " or " scarcity " rent in the same way as the possessor of a collection of rare pictures is entitled to any income he can obtain by exhibiting them, or, to give another example, in the same way as a person possessing rare abilities is entitled to draw his " rent " of ability."

CHAPTER 18

WAGES AND THEORIES OF WAGES

We have previously referred to Distribution as the most difficult department of economic science. Much of this difficulty centres around the problem of the nature and determination of the wages of labour, and is due chiefly to the fact that labour—the result of effort—is inseparable from the labourer—the producer of that effort. Although labour may in some respects be likened to a commodity which is bought and sold, and for which a price is paid, the analogy must not be carried too far. There can be no question of the workman withholding his labour indefinitely from the market in the hope that its price will improve: he must either work or starve, and even if his efforts in withholding his labour prove successful in the long run, the result is frequently out of proportion to the sacrifice involved. Furthermore, labour which is so withheld from the market is incapable of being recovered by the worker, and in this respect may be likened to an extremely perishable commodity. Consequently, the human element enters more definitely into consideration at this stage than in any other section of our enquiry, and in any discussion of wages and of the problems of wages, allowance has constantly to be made for non-economic motives and for variations in the nature and character of the human factor.

The present section of our investigation may be regarded also as the most important which we have to consider, inasmuch as it concerns by far the most numerous class in the community, and that class which, at least from its own point of view, has the greatest cause for dissatisfaction with the present system of industrial organisation and control.

The latter aspect of the problem will be considered in the two succeeding chapters. At present we must direct our attention to the economic principles according to which are determined (1) the *general wages* in the community, i.e., the share of the product of industry or of the national dividend which is received by labour in the aggregate; and (2) the *relative wages* of different groups of workers in the community.

THE PROBLEM OF GENERAL WAGES.

As we have indicated, the problem of general wages concerns the principles on which are determined the share of the national

income which accrues to labour or to the labour-force of the community. In this labour-force are included all those, by whatever name they are distinguished, who receive a remuneration in return for personal effort, whether that remuneration be described as wages, salary, fee or honorarium, and whether it be paid weekly, monthly, quarterly or annually. We must, therefore, include both skilled and unskilled workers, whether manual or mental, and also highly-paid managers and organisers, including the entrepreneur himself in so far as any of his gross profits can be regarded as wages of superintendence or management. In our enquiry concerning the principles underlying general wages we do not differentiate between the various classes of labourers, although we must necessarily recognise their existence. At this stage we seek to investigate the factors which determine the aggregate share of the product which falls to all labourers, considered as a whole, and also to determine to what extent, if at all, this share can be increased.

The term "general rate of wages" is sometimes used in the present connection, but it must be clearly understood that no such rate exists in actual fact. Each of a hundred and more groups of workers within the community has its own special problems and its own rates of remuneration, dependent upon the conditions of demand and supply within the particular industry. In no community can we recognise a general rate which is applicable to all workers, although we may seek an approximate average wage per head of the labouring population. For our present purpose, we may regard the general *rate* of wages as consisting of an average of this kind. By adopting this conception, we can understand without difficulty that a rise in general wages may take place if the earnings of labour as a whole are raised while commodity prices remain constant and the number of labourers remains unchanged. Similarly, when we come to discuss "relative" wages we shall be concerned, not with individual incomes, but with the *average* incomes of wage earners in the various occupations which are to be found in a modern community.

Peculiarities of Labour Relative to Demand and Supply.

Although in many respects labour may be described as a commodity which is bought and sold at a price (i.e., a wage), there are a number of peculiarities attaching to its demand and supply for which due allowance must be made in formulating any general doctrine of wages. Substantially following Marshall, we may briefly summarise these characteristics as follows :—

1. *A man's labour is part of himself.* The ownership and possession of capital and of land may be transferred in return for a price, but although a man may sell his work,

he retains the property in himself, and must deliver his work in person. Therefore the mobility of labour depends on the mobility of the labourer, and this, as has been explained in an earlier chapter, frequently interferes with the adjustment of supply to demand.

2. *Labour-power is perishable.* It is lost for ever with the passing of time, and unless it is applied where and when it is required it cannot be regained. As has already been stated, the worker cannot withhold his labour in the hope of obtaining a better market, and it may accordingly be likened to a very perishable commodity.

3. *The worker is generally at a disadvantage in bargaining as compared with the employer.* This depends chiefly on the fact that labour-power is perishable. The worker must labour in order to live, and cannot long afford to hold out against his employer, who is generally in a better position both financially and psychologically. These disadvantages are greatest in the lower grades of labour, but they tend to decrease with the growth in the strength and organisation of labour combinations, whereby collective bargaining is substituted for individual bargaining.

4. *New supplies of labour are but slowly obtained.* So far as general labour is concerned *additional* supplies can come only from the gradual increase in the numbers of the population. Clearly, the rearing and training of a worker takes a considerable time and cannot be greatly hastened by human effort. If a demand arises for additional supplies in any industry that demand may normally be met in two ways: (1) by an increase in the labour reared and trained for that industry, and (2) by a movement of workers from other trades. The first of these depends on the estimation of parents as to the profitableness of placing children in the trade concerned, and, in any case, takes a considerable period to become operative. The second depends on the mobility of labour from one trade to another, a question which has been considered in an earlier chapter.

On the other hand, the reduction of available supplies of labour is a painful and slow process, particularly where the degree of immobility is high. The general conclusion is, therefore, that only with difficulty can the supply of labour adjust itself to changes in demand. The existence of a large body of unemployed such as is to be found in this country at present necessarily has a considerable influence upon general conditions, but we cannot here estimate the importance on the supply of labour of what must be regarded as an abnormal state of affairs.

Theories of General Wages.

From time to time various attempts have been made to explain how the share of the national dividend which falls to labour is determined, but it cannot be said that any one explanation is adequate or free from criticism. Nevertheless, a brief examination of the various theories of wages will enable us to obtain certain clear ideas concerning the relation of the share of labour to those of the other factors of production, while a consideration of earlier theories will assist us to comprehend more readily the explanation of wages which is most widely held by modern economists. The most important of these theories of wages are respectively: (1) *The Subsistence Theory*, frequently described as *the Iron* or *Brazen Law of Wages*; (2) *The Wages Fund Theory*; (3) *The Residual Claimant Theory*; (4) *The Marginal Productivity Theory*.

The Subsistence Theory, or the Iron Law of Wages.

The Subsistence Theory of Wages was first formulated in its original crude form by the French Physiocratic School of Economists of the eighteenth century, but it owes its description as the *Iron* or *Brazen Law* to Lassalle, the German Socialist, by whom it was further developed and used as a basis for socialistic propaganda.

The theory depends largely on the assumption that labour or labour-power is in fact a commodity, bought and sold between employers and workers at a price which, in the long run, approximates to its *cost of production*, in the same way as the value of other commodities tends to be determined by their cost of production. The cost of production of the labourer was taken to be the *subsistence level*—that amount which is just sufficient to maintain him and his family. The exponents of the theory held that wages must approximate to this level or cost of production, for if a higher rate were paid, then labourers would tend to increase in numbers and, by increasing the competition for employment, force down the level of wages. On the other hand, it was assumed that a rate of wages below the subsistence level would cause starvation or disease among some labourers or their children, resulting eventually in a shortage in the supply of labour and in a consequent rise in the remuneration offered to the worker.

Although the theory is now discredited, it was undoubtedly applicable in the long run to the terrible conditions which existed in France at the time when the doctrine was first propounded by the Physiocrats, and even to-day it is approximately true with regard to the native populations of such countries as Egypt and India, where the peasant has been long accustomed to a bare subsistence, and where any addition to his wealth (such as that which followed the British occupation of the

countries mentioned) usually results in an increase in his family and in no improvement in the conditions of the individual.

The Malthusian Doctrine of Population.

Towards the end of the eighteenth and the beginning of the nineteenth century the theory found considerable support in this and in other countries. In 1798 Malthus had written his famous " Essay on the Principles of Population ", and his views did much to strengthen the general belief in what is sometimes described as the " dismal " theory. Malthus emphasised the strength of man's innate desire for marriage and for a family, and held that this desire would generally be satisfied before any others. Arguing from this basis he endeavoured to show that population tends to increase at a faster rate than the means of subsistence. He maintained that while the former tends to increase in a *geometrical* ratio (e.g., to double once in twenty-five years), the latter increases only in an *arithmetical* ratio (i.e., by a constant addition in equal successive periods). He concluded, therefore, that sooner or later population must outgrow the means of subsistence represented by the minimum amount of food, clothing and shelter needed to sustain life, unless *this growth is checked by the people themselves* (e.g., by the " prudential checks " of abstaining from marriage and limiting the number of children) *or as the result of such positive checks as famine, war, disease, flood, or pestilence.* Consequently, according to Malthus, the natural increase in population will tend to keep the people at the level of minimum subsistence.

Although there is an element of truth in this rather gloomy doctrine, it is open to a number of objections. In the first place, there does not seem to be any ground for the conclusion that the increase in population and subsistence can be reduced to mathematical proportions. Secondly, the history of the period subsequent to the time of Malthus does not bear out his doctrine. Population in this country has increased rapidly, but it cannot be said that the people, as a whole, are poorer. Undoubtedly, the country generally and its inhabitants individually are much more wealthy to-day than they were a century ago. During the nineteenth century man's wants increased enormously in variety and in extent, the standard of living was raised considerably, and the luxuries of one generation tended to become the comforts and then the necessaries of succeeding generations.

The Problem of Population.

Nevertheless, the problem of population still remains, and will ultimately have to be consciously faced. The truth underlying the doctrine of Malthus is that the growth in the volume of production depends on the success which attends the efforts of society to overcome the all-pervading tendency to diminishing

returns. Unless these efforts are successful, society must either restrict its own growth or be content with a lower standard of life. From an economic standpoint, each area has an *optimum density of population*, i.e., the maximum population which that area can adequately support. This does not imply, as in the Malthusian doctrine, that the population can increase to the minimum level of subsistence, but that it should increase only to the point which ensures a standard of living adequate to the efficiency of the community.

In spite of a continuous increase in population, the standard of living of the masses tends always to rise. This is explained, first, by the fact that hitherto the increase in population has been more than counterbalanced by the vast increase in productivity, and, secondly, by the fact that, as a result of the rise in the standard of life of the masses, the extent of the increase in population, although large, is less than would otherwise undoubtedly have followed the greater volume of production.

The improvement in the standard of living operates to prevent the growth of population through deliberate restriction in the number of the family, i.e., through a low birth-rate. Every advance of society, and particularly the spread of education, brings a greater insistence on a high standard of living, and thus the size of the average family decreases as the average family income increases. In other words, the rate of increase of population varies inversely as the power of maintenance.

Fortunately, the efforts of society to increase production and overcome the tendency to diminishing returns have hitherto been attended by conspicuous success. The discovery of new foods and of new food-producing areas, the application of new sources of power, developments in agricultural methods, improvements in transport, communication, exchange, and general organisation, have all co-operated to substitute increasing for diminishing returns and to lessen the pressure of population on the means of subsistence. At times, especially during the great productive advance of the nineteenth century, man's ingenuity has appeared to be supreme, and the problem has faded into the background; at other times, especially after great wars, the means of subsistence have become seriously disorganised, and the standard of living has been endangered.

In recent years emigration to new countries has been frequently advocated as a means of relieving the pressure of population, but, while it may afford immediate relief, it is but a temporary solution of the problem. There will be less and less scope for emigration as the population of the world increases, while the reduction of population through emigration, by lightening the pressure on the means of subsistence, may soon be counterbalanced by an increase in the birth-rate or by a fall in the death-rate.

The Standard of Comfort.

The idea of subsistence as conceived at first by the Physiocrats and then by Malthus had to be considerably modified with the progress of society. In the early part of the nineteenth century those economists who adhered to the general basis of the subsistence theory of wages substituted the conception of the "*standard of comfort*" for that of the level of subsistence, and maintained that the wages of any class of workers would tend to be determined by the standard of comfort usual among workers of that class: the wages would approximate to this minimum "living wage" necessary for that class.

But even with this modification the theory is open to much criticism. The conception of the subsistence level or the "living wage" varies considerably as between workers in similar trades, and it is therefore difficult to decide on any basis as determining the wages of any class of labour. In the second place, the theory offers no explanation of the inequality of wages in the same trade in different localities and in different trades in the same community. Some trades pay wages which are above the supposed level of subsistence or of the standard of comfort, while in certain *sweated* trades the rates of remuneration are scarcely sufficient to support life. The theory is also disproved by statistics of population, for as society has progressed the working classes have attached increasing importance to commanding a larger share of life's comforts and amenities and have accordingly applied much of their increased wages in improving their standard of living instead of in the support of larger families. Consequently, although population has increased in the progressive European countries, that increase has not been by any means commensurate with the addition to the wages of the working classes in such countries.

Finally, we may note that the theory takes no account of demand. It is a cost of production theory and endeavours to explain wages from the side of supply only, whereas our investigation of the theory of value has made it clear that both demand and supply must be considered in the determination of the normal value of anything, whether it be labour or any other purchasable commodity.

In spite of its defects and the fact that it has now been superseded by more enlightened doctrines, the iron law of wages is still used as a basis for some socialistic arguments, and also lies at the root of the system of poor relief in this and other countries. Further, it enables us to appreciate clearly that there is a minimum below which normal general wages cannot fall if the supply of labour is to be maintained, and the recognition of this important fact has enabled modern economists to propound a theory of wages which is more in accordance with actual industrial conditions.

The Wages Fund Theory.

The Wages Fund Theory marked an advance on the Subsistence Theory in that it endeavoured to allow for the influence of the factor of demand as well as of supply. It owes its full development to John Stuart Mill (*Principles of Political Economy*, 1848), and for a long period was accepted by English economists as the orthodox theory of general wages, in succession to the partly discredited Subsistence Theory.

Mill maintained that a fixed proportion of the capital of the country is devoted to the payment of wages. This he described as the *Wages Fund*, which constitutes in monetary value the total *demand for labour*. Wages at any particular time are determined by the ratio between the amount of this Wages Fund and the total *supply of labour*, consisting of all those labourers who desire work in order to earn a living. In other words, wages depend upon the proportion between the number of the labouring population and the amount of circulating capital applied to the purchase of labour. If the wages fund remains constant, while the working population increases, then the rate of general wages must fall; similarly, any change in the proportion between the number of labourers and the amount of the wages fund will be followed by a change in the level of general wages. It was maintained also that the shares of the wages fund which accrued to individual workers would be determined by competition between the workers, and, further, that wages in one trade could be increased only at the expense of wages in another trade or in other trades.

It followed from this theory that a rise in the general level of wages could result from either (1) an increase in the wages fund, which could be brought about by an increase in saving; or (2) a fall in the number of labourers competing for employment. In this connection the upholders of the theory adhered to the doctrine of Malthus, and contended that as a general rule population would increase at a faster rate than saving, while any increase in wages which might arise would lead eventually to a larger labouring population and a fall in general wages.

It followed, therefore, that a rise in the level of general wages is impossible if this theory is accepted unless the workers be induced to restrict their numbers by delaying marriage and by limiting their families. The wage fund economists were, in fact, so impressed by these considerations, that they urged the workers to restrict the numbers of their children so that the *standard of comfort* and also the general rate of wages could be raised. Further, its exponents held that if such a rise took place without any proportionate change in the total of the wages fund or in the numbers of the workers, then that rise could be secured only at the expense of interest or of profits. Eventually,

therefore, some capital and enterprise would be withdrawn from industry, the demand for labour would decrease, and wages would fall again to their former level. The practical result of the conception is, therefore, that the rate of general wages cannot be raised except by a decrease in the number of workers.

Criticism of the Wages Fund Theory.

Although the Wages Fund Theory is still accepted by some economists, it is open to numerous objections. We may briefly summarise these as follows :—

1. *In practical effect the theory is merely the statement of a self-evident fact*—that the general rate of wages is found by dividing the total sum paid to labour generally by the number of labourers. It does not tell us how the "fund" arises or how its amount can be estimated.

2. *The assumption that wages can increase only at the expense of profits cannot be accepted.* The law of increasing returns and the greater efficiency of labour in consequence of higher wages may result in an increase of the total product sufficient to raise both wages and profits. In this connection the theory confuses wages with *labour cost*, i.e., it does not differentiate between the price paid by the entrepreneur for the labourer's services, and the cost of the labour to the entrepreneur as measured in its contribution to the final product. (See also *post*, page 284.)

3. *An increase in wages at the expense of profits does not immediately drive capital out of an industry, and so cause a decrease in the demand for labour.* Capital is not as mobile as is assumed by the Wage Fund theorists, neither are profits as inelastic as is suggested. Capitalists expect fluctuation in the returns which they receive, and are not prone to regard every change in wages as a reason for changing their investments and activities.

4. *A rise in wages does not necessarily result in an increased population*, and in a subsequent fall in the wage level. As has been indicated previously in discussing the subsistence theory, statistics show a tendency for population to increase at a slower rate than wages, especially in Western countries.

5. *The theory does not explain the inequality of wages in different trades.* The exponents of the theory held that a rise in wages in one trade could not persist for a long period, because workers would be attracted from other industries and the increased competition would ultimately bring about a fall in the rate of wages. While there is some truth in the contention, it must nevertheless be recognised that

such inequalities do exist and do persist. Labour is very far from being perfectly mobile and adaptable, while its flow from one industry to another is frequently prevented by trades union regulations and restrictive apprenticeship conditions.

6. *The total amount of remuneratory capital is not fixed independently of the number and quality of the labourers.* As we have seen in the discussion of production, employers will increase the proportion of capital applied to the hiring of labour if such a course is warranted by the greater relative efficiency of the workers. The quantity of capital paid in wages depends not only on the number of the workers but also on their efficiency.

7. *The rate of general wages is not necessarily dependent on the total amount of capital available.* Wages are usually highest in new countries, where capital is actually less plentiful than in old countries. Further, it can no more be maintained that wages depend on capital than it can be stated that interest and profits are dependent on labour. This conclusion is not supported by the analysis given in other chapters of the determination of profits and interest.

The difficulties surrounding the theory caused Mill to qualify his original statement of it in several respects, and eventually to abandon it altogether. Nevertheless, in spite of the discredit into which the doctrine of the Wages Fund has fallen, some of the false conclusions which depend on the unproved statement are still accepted by many people, and are applied in furtherance of their opinions and ideas on the wage problem generally. It is argued, for example, that if the capital available for the payment of wages is limited, an increase of wages in one industry can be obtained only at the expense of another industry or of other industries, and, therefore, that trade unionism is not only futile but even harmful. Others who accept the same principle maintain that the workers should co-operate to increase the demand for labour (and thereby raise wages) by diminishing their output, and by restricting apprenticeship and the employment of women and boys. This argument is based on a fallacy similar to that underlying the "*work-fund*" idea, held by many workers, that the amount of work is limited, and that the more one worker does the less is there for others to do.

Clearly, however, such contentions ignore the essential facts that the wages earned by one man are spent in purchasing the products of other workers, and that the constructive work of one worker, by adding to the national dividend, actually increases the opportunities for the employment of other workers. If, through the adoption of such "ca' canny" principles, the workers diminish their output of machines, for example, then

will unemployment tend to be caused in those industries wherein the machines are utilised. It is held in many quarters that the alleged adoption of these methods by bricklayers and builders' labourers after the War has worked in the long run to the detriment of the labourers themselves, for the workers, as a class, have suffered more from the housing shortage than any other section of the community

The Residual Claimant Theory of Wages.

Possibly the main objection to the Wages Fund Theory is that it does not allow for variation in the efficiency or productivity of labour: it does not distinguish the *price* paid for labour, i.e., wages, from its *cost* to the employer in terms of the value it creates in production. Gradually, economists were compelled to recognise that the earlier theories were too pessimistic. As industry extended and specialisation increased it became obvious that a highly-paid worker is frequently more profitable to his employer than a low-paid worker on the same job: *the better worker is paid more because he is worth more*, i.e., because his efficiency or productivity is greater than that of the lower-paid labourer. "For competition tends to make the earnings got by two individuals of unequal efficiency in any given time, say, a day or a year, not equal, but unequal; and, in like manner, it tends not to equalise, but to render unequal the average weekly wage in two districts in which the average standards of efficiency are unequal".[1]

It was therefore concluded that wages are determined by the productivity of the labourer, and are proportionate to that productivity. This conception was first embodied in what is now known as the *Residual Claimant Theory*, the first of the productivity theories of wages which have been gradually refined into the modern doctrine which we shall discuss below.

The exponents of the Residual Claimant Theory regarded the worker as the residual claimant to the product of industry. Thus Jevons stated that: "The wages of a working man are ultimately coincident with what he produces, after the deduction of rent, taxes, and the interest on capital". This view was expounded also by the American economist, Professor Walker, who maintained that wages "equal the whole product, *minus* rent, interest and profits", and further held that under conditions of full and free competition, the greater the efficiency of the worker, the greater the share of the product which labour can claim.

The advantage of the theory lies in its recognition of the fact that, in the long run, labour must benefit from its contribution to production, and particularly in so far as the product is increased by reason of the greater efficiency of the worker. The more the worker produces, the more he earns. In other

[1] Marshall, *Principles*, VI. III. 2.

words, we may say that the theory recognised labour's claim to that portion of the national dividend which is due to its exertions in conjunction with land, capital and enterprise.

The theory appears to offer a reasonable and just explanation of the level of general wages, and is certainly more encouraging than the pessimistic conclusions which had previously been reached. But although it enables us to understand why the wages of workmen in one country are higher than those of workmen in another, it does not fully explain changes in the rates of wages in the same country from time to time (neglecting, for the moment, consideration of changes in the price levels). Furthermore, it is clearly inadequate in so far as it takes no account of the relative scarcity or abundance of labour in relation to the demand for it, and in other respects also is inapplicable to actual conditions. Nevertheless, the Residual Theory served a useful purpose in emphasising the importance of the productivity or efficiency of labour. The recognition of this factor and its conjunction with the earlier idea of a minimum subsistence level of wages have made possible the development of the modern doctrine of wages which is now generally accepted.

The Marginal Productivity or Efficiency Theory of Wages.

The modern theory of wages is an application to labour of the fundamental theory of value which has been explained earlier in this volume, and maintains that wages depend upon the relation between the demand for labour and its supply, subject to certain reservations necessitated by those peculiarities of labour which have already been noticed.

ON THE SIDE OF SUPPLY, a refined version of the Subsistence Theory is applied to show that there is a *minimum* below which general wages cannot remain for a long period. This minimum is described as the *standard of life* of the worker, i.e., the amount of the necessaries, comforts and luxuries of life which he is accustomed to enjoy and upon which he will insist, under conditions of free competition. It is maintained that no worker will indefinitely accept a less wage than will enable him to maintain this standard of life for himself and his family. On the one hand, some workers may deliberately postpone or even forego marriage and endeavour to maintain the standard of life for themselves alone, eventually forcing up the level of wages by lessening the supply of labour. On the other hand, it is held that the competitive instinct will induce the worker to refuse to accept a rate lower than the standard, and lead him either to seek a better market in another district or in another trade, or so to qualify himself and increase his efficiency as to command the necessary standard of wages, or, finally, to combine with his fellow-workers and compel employers to pay an adequate rate of remuneration. The standard wage which the worker thus

seeks to maintain by reference to the social need of his group is sometimes described as a "social wage".

There is clearly a distinction between the conception of the *standard of life* and that of the *standard of comfort* introduced by the followers of Malthus. It is assumed by modern economists that the energy and competitive instinct of the worker will cause him to insist upon the current standard of life, and, therefore, that this standard will *directly* affect wages. According to the earlier theorists, however, the standard of comfort affects wages only *indirectly*, i.e., merely in so far as the number of the population tends to increase or decrease until the requisite standard is reached. There is, nevertheless, much that is common to the two conceptions: the difference between them is not radical but merely one of degree.

Therefore, on the side of the supply of labour, there is a minimum below which wages cannot fall, and that minimum is the standard of life of the worker. The standard of life in the case of labour replaces the *expense* of production in the case of ordinary commodities, but it will be appreciated that the standard of life is in many respects analogous to the *cost* of production of a commodity, because the standard of life is a measurement of the sacrifice made by the worker in order to bring up a family, i.e., *in order to increase the future supply of workers*. This influence of the standard of life in determining the number of the working classes increases as the standard rises. Among the professional classes there is a marked tendency to delay marriage and limit the number of children so that the customary standard of life may be maintained. But when the standard is very low we find that hopelessness and carelessness as to the future tend to make the average family comparatively large.

ON THE SIDE OF DEMAND, the theory of the determination of wages in no wise differs from the general law of value: *demand for labour, according to the modern conception, is based on the final or marginal utility of labour to the entrepreneur*. There is clearly a limit to the number of workmen who can be profitably employed; after a certain point the utility of additional workmen gradually diminishes like the utility of additional increments of anything else which man desires, and we can conceive that the last man an employer is willing to take on marks the marginal utility of workers to the employer. But how is this utility estimated? Clearly by the *productivity* of each successive worker—the amount which each worker adds to the net product. We can imagine that in a certain firm the first 100 workers prove very productive, so far as the result of their employment can be measured in terms of the product. Possibly also the engagement of the next 100, or of the next 200, may be very remunerative to the employer; but ultimately a point is reached where the employer is doubtful as to whether it will pay him to employ

another worker or not, and at this point, where the contributions of the worker to the final product may be assumed to be almost equal to the wages paid, we have the *marginal worker*. Now, when we are considering a great body of workers, we may regard each worker as being equal in capacity and interchangeable with any other worker in the same grade, and, therefore, the same wage must be paid throughout that grade. This wage will be that which the employer pays to the last man he takes on: so far as demand is concerned the wages of the marginal worker determine the wages paid to all the labourers.

In the chapters on Production we have referred to the *Principle of Substitution* which is applied by the entrepreneur in determining the relative proportion of land, labour and capital which he will employ in production. The entrepreneur aims at a maximum profit by arranging the most economically efficient combination of the factors under his control. This principle is most important in connection with the determination of the marginal worker, and it is clear that the marginal productivity of labour depends, not only on its own productivity, but also on its productivity *relative* to that of land and capital. If the employer finds that a machine is ultimately more productive than ten men, he will use the machine and do without the men. All employers in the same trade will tend to do likewise, so that the demand for that kind of labour will fall, and wages also will find a lower level. Thus, when we speak of the marginal productivity of labour we mean its marginal productivity as ascertained by the employer after carefully selecting between and combining the various factors at his disposal.

The Marginal Productivity theory, therefore, applies to labour the fundamental principles which govern values generally. We may compare wages at any moment with market price, and wages over a long period with normal value. Then we may conclude *that wages at any moment are determined by the marginal productivity of labour to the entrepreneur, while normal wages must be sufficient to cover the standard of life of the workers in the grade concerned. In the long run, the level of wages tends to that point at which the marginal productivity of the worker is equal to the supply price of the worker as determined by his standard of life.* Marginal productivity thus corresponds to marginal utility in the general law of value, and the standard of life is a conception comparable with cost of production in the case of ordinary commodities. The employer seeks to pay his workers an *economic* wage, determined by reference to their marginal productivity under existing conditions; the worker seeks to maintain a *social* wage, determined by reference to social considerations and particularly the standard of living of the group to which he belongs.

If the standard of life of the workers in a certain grade is

threatened by a reduction in wages, the workers in that grade will be induced to combine to ensure that wages will be paid which are at least equal to this standard. On his part the employer does everything possible to increase the productivity and efficiency of his workpeople, and to make that productivity at least equal to the wage corresponding to the standard of life. Further, the price which the employer will demand for his product must be sufficient to enable him to pay this wage to his workpeople, and ultimately the demand for labour is derived from the demand for the commodities which labour produces. Production, however, is carried on long in advance of demand, and wages have to be paid long before the product is ready for marketing. Hence it is not possible for the employer to determine, when actually hiring his workers, what their marginal productivity is likely to be. He has to work on an estimate of the ultimate selling price of the product, and that estimate determines how much he can afford to pay his labour force. For this reason wages, at any moment under conditions of perfect competition, may be said to represent the *discounted marginal product of labour*, and this discount increases as the industrial process becomes more complicated, and a greater period must elapse before the product can be placed on the market.

Although the theory is subject to a number of criticisms, it undoubtedly gives a reasonable explanation of wages generally, and also enables us to explain variations in wages in different countries. It may even be applied to explain variations in wages in different trades and in different grades of labour. It shows us that the share of the National Dividend which accrues to labour is determined by its productivity relative to the other factors of production. It shows also that real wages (see *post*, page 282) may be higher in one country than another because the marginal productivity of labour is higher and its marginal worth, i.e., its remuneration, is consequently greater. In the long run, wages are higher in England than in India, for example, first, because the standard of life is far higher in the former country; secondly, because the productivity of labour in India is low, owing to its low efficiency; and, thirdly, because of its plentifulness in proportion to natural resources. Wages in Belgium are lower than in England because, in the former country, the supply of labour is high relative to the country's natural resources, and consequently its marginal productivity is relatively low. Again, wages are higher in one industry than in another because the marginal productivity of the workers in one as measured in terms of the product is greater than the productivity of the workers in the other industry. For similar reasons an overseer or works manager is paid at a higher rate than a machine tender or stoker; his greater marginal productivity is reflected in his "market price",

while his higher standard of life is reflected in his "supply price".

The theory also explains the effect on wages of the abundance or scarcity of labour at any time. Clearly the greater the supply in relation to demand the lower the rate of wages, because less has to be paid for the marginal worker. This statement enables us to understand why the introduction of native labour into a country or of women and children into an industry tends to depress general wages: if their services are sufficiently productive they are taken on and they become the "marginal workers" whose wage determines the general rate paid for that grade of work.

Criticisms of the Marginal Productivity Theory of Wages.

The principal objection to the theory is its assumption of perfect competition, and of the perfect mobility of the worker—economic conceptions which exist rarely (if at all) in actual life. Although conditions are changing rapidly, there is little doubt that the employing class generally is in a better competitive position than the great body of workers. The worker must labour if he would live, but as a general rule the employer is not in such urgent need of a worker's services as the worker is of employment. Consequently, so far as wages are concerned, the power of holding out is much stronger among employers than among labourers: there is a distinct limit to the risks the worker may run in bargaining with his employer concerning his remuneration. So it may frequently happen that, through fear, ignorance, objection to change, or other causes, the worker may not seek his best market, and the employer may not be compelled to pay all that he can and should pay, as determined by the marginal productivity of his workers. Further, the employer, being a business man in business for profit and not for pleasure, may generally be expected to take as much as he can safely obtain, and even if the efficiency of labour were so increased as to result in a considerable addition to the net product, it would rarely happen that the workers would benefit to the full extent of that addition.

The second great objection to the theory concerns the meaning of the term "productivity", which has been subjected to much examination and criticism. We have referred to it as the additional contribution of the worker to the net product, but it is clearly very difficult to assess or even to estimate that addition. Is it to be measured in terms of actual output or in terms of the market value of the product? If the former is taken it is difficult to see how the rate of wages is determined. On the other hand, market value is an even more uncertain basis. Not only may such value fluctuate considerably after the goods have been produced, but the fluctuations may have

no reference to cost or to expense of production. Our analysis of gross profits will show that the reward of industry may be considerably increased by monopoly or chance gains which can be attributed neither to the worker nor to the entrepreneur. Are wages to be influenced, and if so, in what way, by such additions to the value of the product ? Is the worker to benefit from such accretions of value in spite of the fact that they can be attributed neither to his productivity nor to his efficiency ?

The difficulties are many, and various suggestions have been brought forward in an endeavour to overcome them. For these reasons the Marginal Productivity Theory may be regarded as being still incomplete. Possibly the future will bring some refinement which will enable most of the difficulties to be removed. At present, however, it does not seem possible that one theory of wages can hope to cover the multitude of conditions and the countless influences which may affect general wages : it can merely point to general tendencies and indicate their relative importance. Indeed, many economists prefer to state broadly that there are two limits to wages—a maximum determined by the productivity of the worker, and a minimum determined by the standard of life of the worker's grade : between these two limits wages will fluctuate according to the relative bargaining strength of employers and workers. Wages cannot remain for long below the lower limit because workers will combine to obtain a rate at least equivalent to the standard of life, and, if that rate is not granted, their numbers will be reduced until the requisite wage is obtained. On the other hand, competition among employers will *tend* to hand over to the worker the whole of the addition to the net product which results from his efforts, less rent, interest and a minimum rate of profits. It is possible that for a short period combinations of labour may compel the employer to pay more than is justified by this addition to the net product, but, in the long run, employers would discontinue their operations rather than continue to pay such rates.

It will be seen that this statement is similar to the Marginal Productivity Theory previously explained, but that it is not quite so complete in its analysis.

THE PROBLEM OF RELATIVE WAGES.

The foregoing analysis sought to explain the factors which determine the general rate of wages within a community, but although the Marginal Productivity Theory gives us some explanation of the variation in wages which are found to exist between different occupations and countries, and at different periods, it does not completely explain such differences, many of which are due to influences other than the demand for and supply of labour. Accordingly, certain other factors need to be considered.

Nominal Wages and Real Wages.

A distinction which is of importance in connection with the problem of relative wages is that which must be drawn between nominal wages and real wages.

NOMINAL WAGES OR NOMINAL EARNINGS refer to the amount of the wage as measured in terms of money. In this country we may say that a man's earnings are £5 a week, but unless we have some indication of the general level of the prices of commodities, we cannot appreciate the real value of those earnings.

REAL WAGES OR REAL EARNINGS refer to the "net advantages" of the worker's remuneration, i.e., the amount of the necessaries, comforts and luxuries of life which the worker can command in return for his services. Hence, in considering the real value of a worker's earnings, we must have regard not only to the money value of his wages, but also to a number of additional factors.

Factors Determining Real Wages.

1. THE PURCHASING POWER OF MONEY.—This varies with the general level of prices, and is indicated by index numbers of commodity prices (see *post*, Chap. 24). It will no doubt be accepted without explanation that £5 in 1914 would go much further than in 1927, when expended on the purchase of the same commodities; i.e., £5 in 1914 would buy much more of the same things than would £5 in 1927. Prices advanced so much in this period that the value of money fell considerably, and so we find that even where workers had obtained appreciable advances in their rates of pay, the *real worth* of their earnings was often less than in pre-war days.

Money wages may be higher in new countries than in the European countries, but the cost of living is generally higher, and so the difference in real wages is not so marked. Hence, in comparing real wages in two regions, attention must be given to the prevailing level of prices in the regions concerned. Generally speaking, the ordinary index numbers will be used for this purpose, but even then allowances may be necessary in order to include only such commodities as are usually purchased by the workers concerned.

2. THE FORM OF PAYMENT.—Although most wages are paid in money, the monetary payment does not always represent the whole of the return for services rendered. For example, the agricultural labourer frequently obtains an additional reward in the form of cheap (or even free) butter, milk, eggs, and other foods, or in the form of a cottage let free or at a merely nominal rent. Similarly, the miner

obtains cheap coal and the fisherman cheap or free fish. Allowance must also be made for the pensions which are payable in the case of such workers as bank officials, civil servants and teachers.

3. The Regularity of the Employment.—In comparing real earnings due allowance must be made for differences in the permanence and regularity of the work. Some occupations are seasonal, as, for example, those of harvesters and builders. Others are irregular and uncertain, as, for example, those of fishermen, slaters and joiners, whose work may be interrupted by bad weather.

4. The Possibility of Extra Earnings.—Some workers can add to their earnings by undertaking other duties either in conjunction with their ordinary day's work or in their spare time. Thus bank officials may add considerably to their earnings by conducting insurance business, while teachers may increase their salaries by undertaking spare-time lectureships and private tuition. In other occupations no such opportunities may exist. The advantages of an occupation in this respect may be considerably enhanced if the worker's wife and family are enabled to add to the family income by undertaking work in the same occupation, as is the case in the great textile industries.

5. The Length of the Working Day.—In comparing real earnings allowance must obviously be made for differences in the number of hours worked per day, and in the number of days worked per year. This arises, for example, when we compare the farm labourer, working from 6 a.m. to 6 p.m. and with few holidays, with a school teacher, working from 9 a.m. to 4 p.m. and with substantial holidays.

6. The Nature of the Employment.—This is of importance in two ways. In the first place, some occupations (e.g., heavy metal casting) are by their nature so exhausting that the duration of the working life is reduced, while others (e.g., metal grinding and lead-working) are dangerous, and result in periods of incapacity which shorten the aggregate earning period. Real wages in such occupations are obviously not directly comparable with rates in easy and healthy occupations, unless allowance is made for the lower *total* earnings throughout life.

In the same way the cleanliness, pleasantness, and social standing of an occupation have to be considered in estimating the real value of the wage received. Adam Smith suggested the well-known comparison of the butcher and baker; the former is paid more because of the distaste with which his trade is generally regarded.

7. PROSPECTS OF SUCCESS.—The prospects of promotion and of higher wages in the future may induce a man to work hard in the present for a low wage. But in comparing that low wage with the higher wage of another man in the same trade, due allowance must be made for the present value attached to the anticipated increased earnings in the future.

It is clear, therefore, that if we are to compare the relative rates of wages in different occupations, we must determine, first of all, whether we are considering nominal or real wages, for although the former may be equal in two industries or in two countries, *real* wages may differ considerably. "The labourer is rich or poor, is well or ill rewarded, in proportion to the real, not to the nominal, value of his wages".[1] In fact, nominal wages in one industry may be higher than those in another, and yet real wages may be considerably less.

Nominal and Real Cost of Labour.

The foregoing distinctions are made from the point of view of the labourer. On similar lines the employer has to differentiate clearly between the *nominal cost* of his worker, as measured in terms of the wages paid (whether in money or in kind), and the *real cost* of the worker in terms of his productivity or efficiency. For example, two gardeners may be employed at the same wage of £3 a week—their nominal cost is equal. But, whereas one may dig up only 40 square yards of ground in one day of eight hours, the other may dig up 80 square yards in the same time. Clearly, the real cost of the second gardener is one-half that of the first. The same differences in efficiency are found throughout the sphere of industry. Their causes and effects have already been considered in Chapter 8, *ante*.

The Economy of High Wages.—In the case of the two gardeners instanced above, it is clear that if the employer were compelled to do so, he could afford to pay the better workman a wage up to £6 a week, so long as he found it profitable to pay the less capable worker £3 a week, for the additional payment would be made up by the greater efficiency of the worker. Similar conditions exist in all branches of production: wages may be high, but labour cost may be low.

"*Low Wages are Dear Wages*".—This statement follows from the foregoing explanation. A low rate of remuneration is usually an indication of a low degree of productivity, and is not necessarily economical to the employer. If the rate of wages is insufficient to enable the worker and his family to maintain a reasonable or customary standard of living, the efficiency of the work tends to diminish. Hence, employers recognise that an increase in the rate of wages within certain limits is accompanied

[1] Adam Smith, *Wealth of Nations*, Book I. v.

by greater efficiency, which will more than compensate the employer for the additional expense. This explains the conception of "efficiency wages". By increasing wages to the efficiency point the employer obtains his output at a lower *real cost* per unit, in spite of the high *nominal cost* of each worker. To some extent, too, demand is steadied because the workers' purchasing capacity is maintained at a high level.

"*Long Hours mean Inefficiency*".—Similar conclusions may be reached in regard to the number of hours worked by the labourer. Long hours inevitably result in a loss of efficiency if they are continued indefinitely, and here again employers recognise that, *up to a point*, a reduction of hours is accompanied by greater productivity on the part of the worker. In other words, the worker can, in the long run, turn out an equal, and possibly a greater, output when working the shorter hours than when engaged for the longer period. Obviously, there is in all cases a point of maximum efficiency beyond which it would not pay an employer to make further reductions in the working period, but this point can be determined only by practical experiment.

The economy of high wages is specially important when machinery is employed to any great extent, and generally speaking, the greater the use of machinery, the greater the efficiency of high wages. This is attributable, in the first place, to the fact that the handling of expensive and delicate machinery by inefficient and possibly careless workers may involve the employer in considerable loss. Secondly, firms employing a small proportion of labour relative to capital in the form of machines and appliances are more ready to pay good prices for their labour than firms employing a larger proportion of labour relative to capital, because the care and efficient use of that capital is of greater importance in the case of the first type of firm, and an addition to their wages bill represents a smaller proportional addition to total expenses of production than an equal increase in the case of the firms employing relatively large quantities of labour.

Causes of Differences in Relative Wages.

With a clear conception of the distinctions noted in the foregoing paragraphs, we may proceed to survey briefly the fundamental causes which determine the differences in wages as between the various occupations within a community. The Marginal Productivity Theory has done much to solve the problem, but it does not offer a complete solution of the fact that different kinds of labour have different values as measured by their real earnings, or of the existence of many workers in some occupations and of few in others. Why, for example, are there relatively few engine drivers as compared with agricultural labourers, and why are their earnings considerably

higher? Why should there be a comparatively small number of doctors and of lawyers, earning high fees, and a comparatively large number of ordinary clerks and shop assistants, with low rates of remuneration? These and similar difficult questions cannot be answered by any simple theory or analysis, but we can trace some important influences in the general conditions of the demand for and supply of labour in each occupation.

ON THE SIDE OF DEMAND we note at once the fundamental fact that the demand for labour of any kind is determined ultimately by the demand of consumers for the products or services of that labour. There is a greater demand for some services and for some products than for other services and products: more dock labourers and agricultural workers are required by the community than doctors and lawyers; more bakers of bread are required than sculptors in marble and bronze. In itself, however, this fact does not take us far, for it is patent that the reward of labour is considerably lower in those occupations for which there is a greater demand, than in those for which the demand is less intense. It is clear that greater abilities, natural or acquired, are necessary for the sparsely supplied employments and that such abilities are recognised in the higher rates of remuneration, but why do not greater numbers of workers qualify and improve themselves in order to move into the better paid occupations? Clearly, the explanation is to be found mainly on the side of supply.

We may note, however, that *fluctuations* in demand may considerably influence the values of different kinds of labour. Such fluctuations may result from changes in the tastes, fashions and incomes of consumers of the services or products of the labour, or from changes in methods of production, resulting in demands for different varieties of labour, of appliances and of raw materials. But, in all cases, the effect of a change in demand for certain classes of labour relative to other classes will necessarily result in fluctuations in the "prices" paid for the former classes of work.

THE PROBLEM OF THE SUPPLY of different classes of labour is extremely complex, and we must be content with tracing certain broad influences which determine the supply of workers in the various grades. In the first place, we must note that the supply of labour for any occupation depends, not only on its current rate of nominal wages, but also on what may be called its *general attractiveness* to the worker as compared with other occupations. This matter was exhaustively considered by Adam Smith about one hundred and fifty years ago, but the important conclusions he then reached regarding the differences in the attractiveness of various employments are still applicable and may be thus summarised:—

1. *The Agreeableness or Disagreeableness of the Work.*—This factor has been considered above in connection with real wages. Workers employed on specially disagreeable tasks have frequently to be paid additional remuneration.

2. *The Ease or Difficulty of Learning the Business*, in relation to expense as well as ability. The greater the trouble and expense, the lower the supply of labour unless an inducement sufficient to compensate for the expenditure of capital and energy is likely to be forthcoming.

3. *The Regularity and Security of the Employment.*—This also has been referred to previously. The work of the bricklayer is less certain and regular than that of the joiner, who can work indoors in bad weather, while the former must remain idle. Hence the supply of bricklayers will decrease unless the remuneration offered will recompense them for these anticipated periods of enforced idleness.

4. *The Possibilities of Success or Failure.*—Workers are naturally attracted to occupations which offer prospects of high material rewards in the future, and the higher the chances of success, the greater the supply, other things being equal. On the other hand, the likelihood of failure is one of the surest deterrents to the attraction of any labour other than that of a very low grade.

5. *The Degree of Trust Reposed in the Worker.*—The worker who can be relied upon to fill positions of trust and responsibility is comparatively rare. Frequently, such confidence can be earned only after years of experience and training, but the social esteem of the eventual position is worth striving for, apart from the fair wage which is usually earned.

It will be appreciated that these factors suggested by Adam Smith have been largely covered in our discussion of real wages. In fact, the distinction between *real* and *nominal* wages is largely due to allowances for the relative attractiveness of different occupations and to their comparative *disutility* to the worker. In other words, a worker in one trade may be prepared to accept a lower nominal wage than a worker in a similar trade because of the greater net advantages, or the less degree of disutility, of his daily work.

On the estimation of these net advantages and disadvantages of various occupations depends very largely the supply of labour which is forthcoming for each class of work, and also the earnings which the various classes of labour will receive for services rendered. "If all workers were free, at the beginning of their working life, to choose any occupation, we should expect, apart from changes in demand, to find average individual earnings in different occupations over a year, or other sufficiently long

period of time, roughly proportionate to current estimates of the relative attractiveness of the different occupations. Such estimates are, of course, liable to error. Individuals are apt to miscalculate chances, and in particular their own chances of securing the exceptional prizes of an occupation on the one hand, and of escaping unemployment, sickness and accident on the other. In any case, however, differences in the attractiveness of different occupations are sufficient to account for considerable differences in the value of different kinds of work ".[1]

Alternatively we may say that if competition were perfect, and if labour were free to choose its outlet and to move from one occupation to another without let or hindrance, then the extra *disutilities* of certain occupations would be balanced by extra earnings, while lower rewards would be received by workers in those occupations where the advantages were high. Under such ideal conditions, therefore, the differences in relative earnings would be largely accounted for by differences in the relative advantages or utilities of the employments.

Hindrances to Free Movement and Choice of Occupation

As we have seen in other departments of our enquiry, however, perfect competition and free mobility of labour cannot be assumed. In the first place, *combinations of labourers and of employers*, in the form of Trades Unions and of Employers' Associations, modify very considerably the free play of economic forces in regard to the supply and remuneration of labour in various occupations. These influences will be discussed in a following chapter, but in relation to our present subject we may note that a strong trade union may force wage rates for certain classes of labour above the marginal worth of that labour. By imposing strict regulations on the admission of apprentices, the use of boy labour and the movement of labour from one occupation to another, trade unions may, in certain circumstances, enable the labour concerned to control the market to such an extent as to be able to demand monopoly wages.

The *immobility of labour* is also of considerable importance in its influence on relative wages, and reference may be made to the remarks hereon in Chapter 7, *ante*. Cost of transporting the labourer himself, his family and belongings, together with the difficulty of obtaining house accommodation, are important factors in preventing the worker from securing a strictly competitive rate of pay. This is particularly noticeable whenever there is a temporary glut of labour in any particular market, as may arise, for example, when the demand for labour, which has been trained and specialised in certain work, falls off owing to depression in the industry concerned. The existence of *non-*

[1] Hugh Dalton, *The Inequality of Incomes*, p. 255.

competing groups of workers, i.e., different grades between which movement is difficult or very slow, also tends to the persistence of inequalities in the wage levels as between the various groups.

Again, we may refer to the influence of *custom and of tradition* in fixing the fees paid in certain skilled professional occupations, such as those of medicine and of the law. In such cases the rates of remuneration are based on old-established practice and tradition, and are not adjusted by competitive forces in accordance with the net advantages of the occupations or with the relation between the demand for such services and their supply. In these occupations high remuneration may frequently be commanded, at least for short periods, by comparatively inefficient workers.

Finally, we come to the question of *choice of occupation*. Only in a comparatively small proportion of cases will this choice be in the hands of the worker himself. In the first place, the number of occupations open to members of the lower classes is definitely restricted. There are certain definite occupations which correspond roughly with the various grades of society. In consequence of poverty, lack of education, difficulty in obtaining information, and absence of vision, the workers may be unable to apply themselves in any but certain branches of work, and from generation to generation the tendency is for certain classes of workers to remain in the same grade of occupation. The agricultural labourer will rarely work his way into a more liberally paid calling, while the mill-hand is so adapted to the conditions and environment of the textile industries as to find movement difficult, if not impossible. These general principles are still more emphasised with regard to the more liberal professions, where the necessary proficiency can be acquired only after many years of expensive and difficult training. The "costs of entry" into the professions of medicine and of the law are relatively high, and the doors to such occupations are closed to all except those who have fair means and the necessary opportunity.

These considerations are of special importance in their influence on the choice of careers for children made by parents in the various grades of society. Among the poorer classes, little choice is possible, and few are capable or willing to endure the great sacrifices necessary to train children for the more remunerative occupations, in spite of their great attractiveness. One reason for this is, of course, that the parents themselves do not obtain the reward, and few are sufficiently unselfish to sow that others, even their children, may reap. Another reason is that frequently the poorer classes, even though they may obtain the means and be given the opportunity, have neither the education nor the vision to estimate the advantages of bringing up their children for a higher grade of work.

In the second place, we find that entry to certain occupations, and particularly those of a higher grade, is rendered extremely difficult by the efforts of persons already "in possession" to limit the increase in numbers by restrictions of various kind, such as the imposition of heavy fees, the demand for high qualifications, and the insistence on a certain standard of general education and of social fitness. Even among the artisan classes, regulations concerning apprenticeship and learners tend to limit the incursion of new blood and prevent supply from overtaking demand.

Thus, for these and similar reasons the supply of labour in the lower grade occupations is generally quite adequate to demand, and the value of such labour, i.e., the rate of wages, is consequently low. Demand for such labour is high, but it is not so high in relation to supply as to warrant an increase in *demand price*. In certain low grade unskilled occupations, such as local or dock labouring, the competition for employment is intensified by the fact that they provide a kind of "dumping ground" for the poorest class of labour in the community, including young and old, casuals and vagrants, men who have drifted downwards from much better positions, and others of doubtful character who are compelled to accept whatever work is offering. The supply of workers for such occupations is always in excess of demand, and the level of unemployment is ordinarily high. These facts, and the resultant low rate of wages, illustrate the fact that it is much easier for the worker to sink lower in the scale of occupations than to move upwards into a better grade.

On the other hand, remuneration in the more highly-skilled occupations and in the liberal professions is comparatively high because of the factors, natural and artificial, which tend to make entry into those occupations difficult and expensive. Supply in many of such cases is scarcely equal to the demand; consequently the rates of remuneration are high, and tend to increase as the period of training lengthens and the expense increases. This tendency is accentuated if the work is of a particularly high order and necessitates exceptional natural abilities, for in such cases a rent of ability may be obtained in addition to the high wages which result from the natural shortage in the supply.

The Wages of Male and Female Labour.

A consideration of the factors which we have just discussed affords an explanation of the higher wages paid for male labour as compared with that for female labour, even where the work itself is almost identical. Owing to physical limitations and legal and other restrictions women are prevented from entering many occupations, with the result that the supply of female labour tends to be concentrated upon a narrow field. Moreover, since women as a rule do not intend to embark upon a permanent

industrial career they are seldom willing to undergo the long and expensive training which is necessary to secure a highly-paid post. Competition is accordingly extremely keen in the comparatively few occupations open to women, and is further intensified by the competition of elderly or weak men, and of young boys and girls.

Again, the social responsibilities of women workers are less than those of male workers. Whereas a man's wages are based on the fact that a man has to support a family, a woman is regarded as having to support herself alone. There are women in industry who work only for pocket money and are dependent on fathers and husbands for the necessaries of life. Such women naturally lower the standard wage for all women workers, and indeed, for male workers as well. All these factors, together with the weak organisation of women in industry, tend to produce a low level of wages for female labour.

CHAPTER 19

INTEREST AND ITS DETERMINATION

INTEREST is the payment made for the use in production of the third factor—capital; it represents the share of the capitalist in the product of industry.

In approaching the theory of interest, as in other departments of our inquiry, we have to pause at the outset in order to obtain a clear and correct idea of the subject of our investigation. In Economics the term "interest" (sometimes distinguished as *economic interest*) applies only to the payment for *capital*, i.e., for the use of wealth for productive purposes. The first difficulty therefore arises in consequence of the general use of the term to denote the payment made for the loan of *money*. It must be remembered, however, that money is simply the means for obtaining capital. Interest is in fact paid for the use in production of capital in its infinite variety—in the form of machinery, raw material, buildings and ships. So long as these considerations are not forgotten it is not incorrect to regard interest as the payment for the use of monetary capital, monetary capital being the agency through which capital in general can be obtained and controlled, and therefore representing a command over material capital in whatever form it is desired.

The second difficulty arises from the fact that the term "interest" is applied in the same community at the same time to payments which differ considerably in amount. It is well known that rates of interest may vary within very wide limits. At one extreme is the Bank of England, borrowing enormous sums of money in the form of deposits from its customers without paying any interest whatsoever. At the other end of the scale are moneylenders and pawnbrokers, charging perhaps 50% per annum (and possibly more) on their loans. Between these extremes we find banks borrowing from their customers in some cases without paying any interest, and in no case paying more than, say, 4% per annum; the State borrowing for long periods at 4½%, and municipalities and industrial firms of standing obtaining loans from the public for 5% or 6%. If, then, interest is being paid in all these cases for the loan of monetary capital, and if, as may be fairly assumed, all such capital is interchangeable, we are naturally disposed to enquire why such differing rates can exist in the same community at the same time.

Should not competition among borrowers and between lenders tend to force all rates of interest to a level of equality ?

The Elements of Gross Interest.

The solution of this difficulty is to be found in the fact that the term "interest", when applied to the payments mentioned, is being used to cover various elements in addition to *net* or *pure* or *economic* interest. Such payments are best distinguished as *gross interest*, which may be regarded as an inclusive return to the investment of capital, comprising some or all of the following four elements :—

1. NET INTEREST, i.e., the return for the use of capital only.

2. INSURANCE AGAINST RISK, i.e., an additional payment demanded by the lender as an insurance against the possible loss of the capital. The risks covered may be those which arise from business contingencies or those which may result from personal defects of the borrower, such as dishonesty or incapacity.

3. REMUNERATION FOR INCONVENIENCE. — The ideal investment is one in which money of large or small amount may be placed, and from which such money may be withdrawn at the will of the investor. Inconvenient investments are those which may be repaid at any moment and the money suddenly returned to the lender, who may not easily find a fresh use for it ; or those in which the capital is locked up for a long period and from which it cannot easily be withdrawn. The greater the inconvenience, the higher the payment which must be made to the investor in order to attract his capital.

4. REMUNERATION FOR SERVICES.—Certain classes of loaning are characterised by the appreciable amount of labour involved in the form of book-keeping and correspondence. This applies particularly to those businesses conducting small loaning operations, such as pawnbroking and small moneylending, where much work is involved in keeping records, accepting small periodical instalments and prosecuting enquiries as to the respectability and standing of the borrower. In such cases the lender expects to be adequately compensated for the trouble which he incurs, otherwise he would obviously seek a return on his capital by investing it in some less troublesome direction. Consequently, if borrowers will have such services, they must be prepared to pay for them, and the payment is included in the gross interest charged. This payment is sometimes stated to be in respect of the *labour of managing* the investment.

There are not many cases where it can be said that pure economic interest only is paid, but the yield on British Government Stock (such as Consols and the War Loans) is no doubt the nearest approximation. Alternatively, some economists define net interest as that which is fixed on *trustee investments*, i.e., those in which trustees may invest money without running any risk of personal liability. The slight variations between the interest on different government loans may be attributed to the factor of convenience: the longer period $4\frac{1}{2}$ per cent. Conversion Loan, issued in 1924, giving a guaranteed yield of $4\frac{3}{4}$ per cent. on the conversion price for a long period of years, is to be preferred to the shorter dated 5 per cent. War Loan by an investor who wishes to be saved the inconvenience of finding a high yielding security for the investment of his funds at the end of a comparatively short period of time, i.e., when the 5 per cent. loan matures.

If the prevailing rate of interest on first class government stock works out at approximately 5 per cent., we may regard any higher payment for the use of capital as gross interest, i.e., as including certain of the other elements in addition to pure interest. As a general rule the most important factor is the question of risk—both the risk of not obtaining an adequate yield and the risk of loss of capital—and a perusal of the financial columns of a newspaper will generally afford some illuminating examples. The rates of interest paid for the same kind of investment in industrial concerns of similar class tend to the same level. Approximately the same yield will be obtained respectively from debentures, from ordinary shares and from preference shares of industrial firms of the same class. The rates of interest will be higher on ordinary shares than on preference shares, and higher on the latter than on debentures, the difference in each case being due to the difference in security, i.e., to differences in the degree of risk. For example, at the time of writing the preference shares of a first class industrial organisation, such as Courtaulds Ltd. or the British American Tobacco Company, should yield about $5\frac{1}{4}$ per cent. per annum, whereas the ordinary shares of similar concerns should yield the investor about $6\frac{3}{4}$ per cent. per annum (i.e., on the market or quoted price and *not* on the nominal value). The difference of $1\frac{1}{2}$ per cent. is almost entirely insurance against the greater risk in the case of ordinary shares, which rank after preference shares in their rights to profits and capital. The play of competition tends to equate the rates of gross interest for firms of equal repute and of equal financial strength. So important is this factor that it is possible to judge the market estimation of the strength of a concern by a simple comparison of the yields on its various classes of shares with the yields on similar shares of other industrial undertakings.

The Problem of Interest.

In considering the question of interest on capital as an element in distribution, we are confronted by three main problems: (1) Should interest be paid? (2) Why is interest paid? (3) How is the rate of interest determined?

The question as to whether interest should be paid is partly a moral one and involves other than economic considerations, so only a brief reference is necessary to the problem which has been much debated for many centuries, and in respect of which there is no unanimity even to-day. For a very long period the prevailing view was that any exaction of interest from a borrower was unjustifiable, and in ancient and mediæval times the Church supported this idea by forbidding usury or the lending of money at interest. This attitude was based in the first place on the fact that in those periods there was little employment of capital for productive use, and consequently there was little evidence of the gain which accrued from its employment. Secondly, the actual nature of moneylending operations was sufficient to bring them into disfavour: on the one hand were persons in distress who were compelled by circumstances to seek assistance, and on the other hand were the wealthy and generally oppressive moneylenders. The fact that the latter frequently belonged to a non-Christian nation (such as the Jews) helps also to explain much of the harshness and bitterness with which they were regarded, but there is little doubt that the unpopularity of moneylenders generally, and the unpopularity of the business which they conducted, were well-merited by reason of the exorbitant rates which they exacted. These were, as a rule, quite out of proportion to the real value of the economic service rendered, and were in many cases so high as to bring ruin to the borrower.

The development of industry and commerce, and the constantly growing need for capital as an instrument of production, brought a gradual change in the opinions of men regarding the payment of interest. The great objection to usury and moneylending was based chiefly on the fact that it was so frequently resorted to in consequence of want, distress, or prodigality, and in such circumstances that the lender could impose oppressive terms on the borrower, and frequently obtain a baneful influence over him. In time, however, it came to be recognised that a properly conducted business transaction for the loan of money for business purposes was of advantage to both parties, and, in fact, usually more beneficial in the long run to the borrower than to the lender. And while, on the one hand, borrowers for business purposes could give adequate security and thus lessen the risk of the transactions, on the other hand, lenders came to recognise that their business would increase if reasonable rates were charged. Thus we find that interest was

charged and paid for loans for commercial purposes in spite of the law and the Church, and in spite of popular opinion, and eventually it became recognised in all progressive states that the loaning of capital and the payment of interest were necessary transactions in the business world.

Socialist Views on the Legitimacy of Interest.

But although the older objections to the payment of interest on loans of capital have tended to disappear with the march of progress, socialist writers in more recent times have attacked interest from other points of view. In fact, writers such as Karl Marx and Rodbertus have gone so far as to characterise the taking of interest as robbery and theft. They base this view on the idea that the concentration of capital in the hands of capitalists is the result of a cumulative process of *spoliation* or *exploitation*. Capital, they maintain, is the result of saving out of the proceeds of the labour of others—chiefly wage-earners—and all great fortunes have been accumulated by the illegitimate appropriation of the product—the "surplus value"—of this labour. Consequently, they hold that if capital is the result of spoliation, interest thereon cannot be justified and is in fact a form of theft.

In connection with this view we may refer to the explanation given in Chapter 16, on the Nature of Distribution, that we are concerned with the reward which accrues to capital as a factor in production, and not with the justice or injustice of the individual control of that factor. The economist maintains that capital will yield interest as a result of being productively used whether it is owned by individuals, by corporations, or by the State itself. Even if all the capital in the country were owned by the State, interest would still accrue as a result of the productive employment of that capital. Therefore the ownership of capital cannot affect the fact that it earns a return in the form of interest, and consequently the socialist objection to the control of capital is not a valid objection to the payment of interest for the use of capital in production.

In spite of the objections of socialists and their endeavour to institute a change, the system of private property exists and is maintained in most countries, and, as we have already noted, is attended by very material advantages. If we are prepared to recognise that capital is an essential factor in production, then it appears reasonable to infer that nothing should be done which would tend to interfere with the adequate supply of that factor. The inducement to possess capital depends essentially on the recognition of private ownership and, as we shall see later, on the possibility of obtaining an income from accumulated capital in return for its use. Therefore, so long as private ownership is recognised, it is clear that some

reward in the form of interest must be paid if the services of capital in production are to be continued and encouraged, and it must be left to competitive forces to ensure that the rate of remuneration of capital is not in excess of the economic service which it renders.

Not only is interest inevitable and its payment justified, but also the rate of interest performs an important function in the economic system in that it *discriminates as to the demand* for capital. The rates paid in different industries indicate the intensity of demand for capital in those industries. Hence differences in the rate of interest, by attracting capital to those channels where it can be most profitably employed, ensure its efficient use, and the development of those branches of industry which aim at satisfying the most urgent needs of society.

Although the payment of interest is now general and is usually regarded as justifiable, nevertheless many civilised societies find it necessary to restrict moneylending operations in order to prevent the undue oppression of the needy and the prodigal. In our own country, for example, the courts are empowered by legislation to set aside contracts for the payment of interest on loans, if the evidence shows that in view of all the facts the arrangement is harsh and unconscionable.

Why Interest is Paid—A Reward for Service.

It is now generally agreed that interest is a payment made for the use of capital; it is a reward for services rendered in production by the third of the essential factors. People pay interest because they receive a necessary service in return and because this service would not be forthcoming unless a reward were paid for it. By payment of interest they obtain a command over wealth and over all the utilities and satisfactions which that wealth can command. Interest is not merely a payment for the loan of money: it is a payment for the temporary control of *capital in general*—of all the physical and material things for which that money can be exchanged. Interest is in fact a payment for the use of the *goods* of others. "If it were just as convenient to supply the capital goods in the first instance, the business man would rather have it so. And if capital could be so lent and borrowed, men could not have fallen into certain of their present wrong views of interest".[1]

But interest is not paid for the mere object of being able to control goods. The time has passed when loans were made chiefly to assist the spendthrift, the needy, and the distressed. To-day most capital is borrowed in order to assist the production of further capital. The borrower is content to pay for the service because he anticipates that the return which will accrue from the use of the capital will more than compensate for the charge

[1] Ely and Wicker, *Elementary Principles of Economics*, p. 342.

made by the lender. "Interest is paid for the use of capital because the capital is productive; it enables its user to produce more than he could without it, and out of his additional product interest is paid".[1]

On his part the lender of capital expects to receive a payment because, in the first place, he knows that the use of his capital by the borrower should result in an accession of wealth, and he expects to share in that increase, for if his capital were not loaned he could himself apply it for productive purposes and benefit thereby. Secondly, a lender expects to be compensated for being deprived of a part of his wealth and of the immediate satisfaction for which he could, if necessary, exchange that wealth. In the third place, a capitalist must have some inducement to save up wealth for future use: he must have some incentive to sacrifice the present enjoyment of his wealth for the sake of an anticipated future enjoyment. Interest is, therefore, a payment which society must make in order to induce people to accumulate wealth and to loan that wealth for the use of others.

THEORIES OF INTEREST.

We are now in a position to consider in greater detail the economic bases which underlie the payment of interest on capital. We have seen that in ancient and mediæval times much controversy centred around the payment of interest, but that eventually it was tolerated and finally approved as commerce developed. But the disappearance of the old controversy did not solve the problem as to the economic *cause* of interest, and several theories were put forward by economists from time to time in an endeavour to explain the nature and amount of interest on capital. Further, although we have considered the general aspects of the demand for and the supply of capital, we have yet to analyse the economic principles which determine that demand and supply, and therefore the rate of interest. This we can do by considering the important theories of interest which have been advanced from time to time.

The Productivity Theory of Interest.

The older economists considered that capital is productive of interest in just the same way as land is productive of crops. They held that interest exists because it is the nature of capital to produce a value in addition to its own value, and that this addition to value is interest, the amount of which depends entirely on the *productivity* of the capital concerned. Productivity in this sense is not to be understood in the sense applicable to capital invested in a herd of cows or in a flock of sheep, which increase naturally in numbers and in value.

[1] Clay, *Economics for the General Reader*, p. 344.

The meaning intended was that productivity which results *when labour is assisted by capital.* A net enables a fisherman greatly to increase his productiveness, while a farm labourer can produce far more with the motor plough and mechanical reaper than with the hand plough and the scythe.

The productivity theory possessed the advantages of simplicity and apparent truth, and for a long period it was accepted as an adequate explanation of economic interest. But although it offers a reasonable explanation of the demand for capital, in so far as demand will necessarily increase if productivity increases, it is open to many objections, most of which need not be considered here. We may note, however, that if productiveness were the prime determinant of interest, then interest (i.e., *pure* interest) on capital should vary with that productiveness, whereas we know that net interest in the same community tends to equality, and tends also to fall as society progresses and capital becomes more efficient and more remunerative to its users. Again, if capital enables the labourer to increase his output, can the extra productivity be ascribed to capital—to the material objects used by the labourer—or to the labourer himself? Furthermore, the productivity theory of interest offers no explanation of the payment made for consumption loans, such as those obtained and used by a spendthrift, for capital in such cases cannot be regarded as productive.

The Abstinence Theory of Interest.

The Productivity Theory attempts to explain interest chiefly from the side of demand; it is an attempt to show *why interest is paid* by those persons who desire to obtain the control of capital. But as was pointed out in the foregoing paragraph, it does not go far enough. It is of no more use as an explanation of interest than the statement that "wages are paid because labour is productive" is an explanation of wages. Later economists endeavoured in the Abstinence Theory to show why interest *must be paid* to owners of capital if supplies of capital are to be forthcoming.

The exponents of this theory maintain that interest is the reward for abstinence or *waiting*, i.e., for abstaining from the immediate consumption of capital and saving that capital for future use or enjoyment. The term "abstinence" in this connection must not be understood to imply suffering or hardship—clearly no great sacrifice is involved when a wealthy man saves part of his income—it means merely that one consumes less than one has power to consume, i.e., that expenditure is less than income. Interest, it is said, is a payment made in order to induce that surplus of production over consumption which is necessary if the supply of capital is to be maintained.

The Abstinence Theory has been much criticised because it

is based on the assumption that a purely negative act or a simple abstention can produce something (see page 118, *ante*), and also because it fails to give attention to the important factor of productivity, which, although not the sole determinant of interest, cannot be altogether neglected.

Again, though the accumulation and supply of capital are materially influenced by the prevailing rate of interest, we must note that a large part of the supply of capital is accumulated independently of interest. People with very large incomes must save unless they are prepared to spend recklessly or to give away much of their surplus, and in such cases capital will be saved and may be lent to others even though there is but little or no inducement in the way of an anticipated return.

But in spite of its incompleteness, the theory is important in so far as it indicates why interest *must* be paid if a sufficient supply of capital is to be forthcoming, and the conception of abstinence or waiting, like that of productivity, must, therefore, be regarded as one of the determinants of the rate of interest accruing to capital. As society progresses the demand for capital constantly increases, but its supply is by no means capable of unlimited expansion, and the amount of capital which would be forthcoming from those fortunate persons who have so much that they find it easier to save than to spend is but a small part of all the capital that is demanded. Hence some inducement must be offered so that the necessary capital may be saved and accumulated.

The amount of interest that is offered by borrowers will depend on the *productivity* of capital, and we may conceive that in order to bring forth a sufficient supply of capital, gradually increasing rates of interest are offered. For every given amount of capital supplied, there will be some part derived from investors who would save in return for a very low yield or who would save even if no return at all were forthcoming. But as demand increases, the rate of interest must be sufficient to induce the most unwilling contributors of the supply to bring their capital on the market. Such contributors may be described as "marginal investors"—they are on the margin of doubt as to whether the satisfaction represented by the rate of interest offered is a sufficient compensation for the effort of abstinence involved in sacrificing immediate consumption. To obtain the necessary supply of capital, marginal investors must be satisfied by the rate paid. Consequently, the rate of interest tends to be determined at the point where it just repays the sacrifice involved in making the marginal investment, for the rate paid to the marginal investor determines the rate paid for all the capital on the same market. At this point also the rate of interest must approximate to the marginal productivity of the capital applied in production, for those who require capital will give no more than this.

The Austrian Theory of Interest.

The foregoing analysis shows that the rate of interest is ultimately governed on the side of supply by the marginal investor. It is the rate at which he considers he is sufficiently compensated for his abstinence or waiting. But the reasoning supplies no explanation of the basis upon which the investor estimates the value of his abstinence. The Austrian, or Agio, Theory of Interest, associated with the name of Professor von Bohm-Bawerk, a leader of the Austrian or Psychological school of economists, is an endeavour to penetrate to the root of interest, and to discover how the marginal investor estimates the value of his abstention from consumption.

The Austrian Theory maintains that the payment of interest arises from the fact that man prefers present satisfaction to future satisfaction. Human desire, which is the basis of demand, is stronger for things which can be immediately enjoyed than for things in the future, when satisfaction is more remote and less certain. Future goods are less valuable than present goods, in the same way as we maintain that " a bird in the hand is worth two in the bush ". Interest is the payment which man requires in order to equate future with present values : it is the *price of time*, its cause and its measure is *impatience to enjoy* (Irving Fisher). If a man is offered the choice of £100 now or a similar certain payment in twelve months' time, he would almost certainly choose the present payment. But if he were offered £105 in twelve months as against £100 now he might choose the future payment. His decision would depend on whether the " waiting " would be recompensed by the extra payment of £5. This amount would be, in fact, a compensation for the *postponement of satisfaction*, and the estimation by the investor of the value of this postponement determines the rate of interest.

The theory here explained is sometimes described as the *Agio Theory*, from the fact that the interest or agio measures the difference between the value of present and of future goods of like kind and like amount. Interest is the rate at which future satisfaction is discounted in the present. An excellent illustration of this statement is the discounting of first-class bills, to which no appreciable risk applies. The rate of discount in such cases is a close measurement of the degree to which the present control of capital is preferred to its control at some time in the future.

The supply of capital thus depends on the general estimation of the difference between present and future goods. This estimation varies greatly according to the nature of the individual —whether he be provident or extravagant, prudent or reckless —and also according to the wealth of the individual. Generally speaking, the poorer a man the greater his estimation of present

values in relation to future values. If in a certain community this general estimation of the present as compared with the future is low, then a low rate of interest will be sufficient to attract such capital as is demanded. If through general improvidence or recklessness, the estimation of present goods is high, then a high rate of interest must be offered to induce any saving. And for any given amount of capital required, the rate of interest must be sufficient to attract the marginal investor; in other words, the estimation of the marginal investor determines the rate which must be offered for the whole of a given supply of capital.

It must be understood, however, that there is no simple relationship between the prevailing rate of interest and the supply of capital. In most cases it is true that the higher the rate of interest offered the greater will be the supply of capital which is forthcoming, but when the object of saving is to provide a given income for the future, then obviously the higher the rate of interest the less the amount which need be saved. Nevertheless, the first tendency is undoubtedly the stronger in practice, and the general principle is therefore that the rate of interest and the supply of capital vary directly with each other.

The Austrian theory is now regarded as a fairly true explanation of the reason for interest, but it is defective in that it emphasises too greatly the supply side and attaches too little importance to the influence of demand. Interest is paid not merely because the lender must be induced to lend, but because the borrower is willing and able to pay for the accommodation. The theory does, however, explain fully the basis upon which the marginal investor estimates the value of his abstinence, and by combining it with the Productivity Theory, we can arrive at a reasonably complete theory of interest.

How the Rate of Interest is Determined.

It will considerably simplify our examination of interest if we regard the supply of capital for productive or other uses as a service that must be paid for. The value of that service is usually expressed in terms of a percentage per annum on the amount lent, and, as in the case of all other values, the rate of interest or the price of capital is determined by the relation between the demand for capital and its supply.

THE DEMAND FOR CAPITAL comes from all those who can employ that capital with advantage, or with anticipated advantage, to themselves—from traders and manufacturers, private individuals and business people, from local authorities and from the State itself. As in the case of other commodities and services, the intensity of the demand for capital depends

on its utility to the borrower, and is subject in the long run to the operation of the law of diminishing utility. The greater the supply of capital available, the less will the borrower be prepared to pay for its use. A rise in the rate, therefore, *reduces* the effective demand, while conversely, a fall in the rate tends to *increase* the effective demand, so long as an advantage can result from the use of capital.

THE SUPPLY OF CAPITAL is derived from those who have accumulated capital as a result of the surplus of past production over consumption, and, as has been explained already in Chapter 9, the amount of the supply depends on two factors : (*a*) the power to save, and (*b*) the will to save. Generally speaking, an adequate supply of capital will not be forthcoming unless an adequate inducement is offered, and that inducement exists in the rate of interest which is offered for the use of capital.

The rate of interest thus depends on demand and supply. If supply is limited and demand strong, the rate will increase. Conversely an excess of loanable capital in relation to demand results in competition among capitalists to utilise their wealth and causes a fall in the price which is offered and accepted. These factors are in operation from day to day on the money markets of the world, and instances of the close dependence of interest rates on the supply of loanable capital can be gleaned without difficulty from a perusal of the Money Article in the daily press. In periods of trade activity the demand for capital is intensified, and rates of interest generally tend to *harden*, i.e., to rise. Conversely, interest rates are usually at a low level in depressed times when capital cannot find employment, and supply is in excess of demand.

Summary of Conclusions regarding Interest.

Capital is a necessary factor in production, and by its use production is increased and a " surplus value " is created. Among producers there is therefore a *demand* for capital, and they are willing to pay for it because its use is profitable to them. Capital is also required for " unproductive consumption ", and people who require this service are not only willing to pay for it, but also *must* pay for it, otherwise the lenders would confine their loans to producers only.

Under the present social system most capital is privately owned, and so long as private property exists capitalists will expect to share in the advantage which results from the service rendered by the capital borrowed from them. The stock of capital depends essentially upon the power to save and the will to save, but accumulation, i.e., the *supply* of capital, is materially influenced by the share of the produce of industry which capitalists

may expect, i.e., by the rate of interest which those who use capital in production are prepared to offer.

The rate of interest is the price of capital, and is determined like other values by the relation of demand to supply. The demand for capital, like the demand for other things, is subject to the law of diminishing utility, and the greater the stock which anyone has the less the utility he derives from additional supplies. Thus, in the long run, demand for capital for productive uses is determined by its *marginal productivity*, i.e., by its marginal utility to the entrepreneur as measured in terms of the product. We cannot say how much of the product is due to those who lend capital but we can measure the *difference* made in the productive output by the use of a little more or a little less capital. On the other hand, supply in the long run is determined by the estimation by investors of the value of present as against future goods, and the supply price of capital tends to be the measure of the estimate of the marginal investor, i.e., the investor who is just induced to bring forth his contribution in order to make up the necessary supply. Just as the price of anything in the long run must be enough to compensate the marginal producer, so must the normal price of capital be sufficient to compensate the marginal investor.

Thus there is an equation of the demand for and the supply of capital as there is of other commodities and services. Ultimately, the rate of interest is fixed at the point where demand and supply are balanced, and at which the widest use of capital is made possible under the prevailing conditions. At this point the marginal productivity of capital, as measured in money, tends to equal the monetary estimation of present as against future goods in the mind of the marginal investor.

Reasons for the Existence of Differing Rates of Interest.

The foregoing explanation refers to the determination of pure interest, and has no bearing on the determination of the other elements which constitute *gross* interest. Pure interest—the price of capital—is determined, like all other prices, by the operation of the fundamental law of value. According to this law there should be only one price for all capital in the same market, and as a general statement this is true. Any portion of capital is just as useful to a borrower as another, while the use to which capital is put is, generally speaking, a matter of indifference to the lender or investor. In England pure interest is approximately that paid by the State on those of its loans which are most convenient to the borrower, and, as we have stated previously, the excess or deficiency of any existing rate above this may be attributed to one or more of the other elements mentioned above.

In discussing markets we stated that the market for capital is the nearest approximation to a perfect market; it is in fact world-wide, and there may be said to exist only one price for the commodity—capital. That price is the rate paid in the most progressive States—such as Britain—for loans of undoubted security, and rates in other countries tend to be measured by such a standard, any excess or deficiency being accounted for by the presence of the other elements mentioned. Thus rates in uncivilised countries and in backward communities are much higher than the minimum, because the elements of risk and of inconvenience are much greater. The newer the country the less is the stability of economic institutions and of economic relations, and the greater the possibilities of revolutionary changes in the existing business and social order. All such factors must very materially influence a marginal investor in determining the rate which he will consider adequate to induce him to invest his capital and to cover his risk of loss.

Differences in rates of interest have been attributed also to the natural hesitation or disinclination of an investor to place his capital in foreign investments. It is a well-known fact that English investors are far more ready to invest their savings in foreign stocks than are the investors of any other nation. In fact, the success with which London has been able to maintain her reputation as an international financial centre when strongly challenged by New York during the recent difficult period may be attributed chiefly to the greater willingness of British, as compared with American capitalists, to invest abroad. Again, an investor requires a much higher rate to induce him to invest in a backward or revolutionary country than in a progressive and stable country, since the attractiveness to investment is far greater in the case of some foreign states than in the case of others.

The attitude of investors is therefore a very important factor to be taken into account by those responsible for raising capital for industrial and other purposes. Indeed the psychological influence is probably more important at any moment than any other factor as a determinant of the rates which are offered and paid to tempt the investing public.

Interest and Profits.

In a later chapter we shall discuss profits—the share of the product of industry which accrues to the entrepreneur. Interest and profits must be clearly differentiated, but we need not complicate the issue at the present stage by explaining the difference. It is, however, necessary to understand that the existence of a proportion of profits in the return on invested capital—i.e. dividends—is frequently the reason for differences in rates of so-called interest. In the analysis of gross interest

no element termed profits was included, because the nature of profits is in no sense similar to that of interest. But in comparing the return from two investments it is necessary to decide whether that return represents interest to a capitalist or profit to an entrepreneur. The distinction will become clearer after the question of profit has been considered, but we may note here that the ordinary shareholder in a business firm is an entrepreneur rather than a capitalist—he is a kind of sleeping partner of the entrepreneur and bears much of the risk of the undertaking. Consequently the returns to ordinary shares vary considerably in the same way as profits, and to a much greater extent than rates of interest. Furthermore, like the entrepreneur, the shareholder may get no return or he may lose all his capital; on the other hand, he may receive a substantial reward in the form of bonuses and dividends.

Dividends on Preference Shares and Debentures.

In these cases the element of interest predominates, but the return rarely consists of pure interest on capital. The return on debentures is usually pure interest with the addition in most cases of a proportion for insurance against risk, the latter increasing with the decrease in the financial soundness of the concern. The return on preference shares is normally higher than on debentures; in the first place because the security is lower (debentures rank before preference shares in the liquidation of a company), and secondly, because preference "interest" frequently contains a proportion of profit in addition to interest and insurance.

Pure Interest and Discount.

The distinction between interest and discount is explained elsewhere in this book in the discussion of the money market, but it is advisable to emphasise again that in the foregoing paragraphs we have sought to determine the economic basis for *interest on capital*, i.e., goods, as distinguished from *discount*, or interest on loan money which is immediately available to discharge obligations. By carefully keeping in mind this distinction we can appreciate without much difficulty why discount rates in particular money markets may fluctuate within wide limits, and also vary greatly as between one market and another, while the rate of pure interest remains practically unchanged. The reason is to be found in the changing relations of demand and supply of loanable money that is *immediately available* in the various markets. The supply of such money depends on the state of the banking reserves and on the conditions of credit *in each market*; consequently, changes in discount rates may be frequent and considerable in any one market if the determining factors change appreciably. For these reasons we may find

a wide margin between ruling discount rates on the London and New York markets while the relative pure interest rates are practically stable. The discount rate may be likened to " market price " and the interest rate to " normal price ".

But, even granted this distinction between " discount " and pure interest, it still appears that the average anticipated rate of discount must in the long run approximate closely to the rate of pure interest on long-term capital, for any wide divergence would result in a flow of funds from one to the other.

The Effect of Progress on the Rate of Interest.

On first consideration it would appear that the rate of interest would tend to increase with the constantly increasing demands for capital which inevitably result from the social and economic progress of the community. But all evidence points in the opposite direction. In spite of the continuous demand for capital for industrial and commercial purposes; in spite of the widening use of capital in unproductive consumption for the satisfaction of ambition and the desire for leisure, comfort and endless new wants; and in spite of the periodic destruction of much capital by war, disorder and natural calamity, wealth in all its forms tends continually to increase. The constant improvements in productive methods and the ever-growing efficiency of industrial organisation increase the volume of production, and this, in conjunction with a greater appreciation of the advantages of saving, creates a surplus which is more than enough to compensate for the extra wastage of capital from the operation of other causes.

Thus in all advanced communities the rate of interest tends continually to fall, and the reward for saving tends apparently towards a minimum. This tendency is accentuated by the greater desire to invest capital than formerly existed. Whereas the accumulation of wealth in former times resulted in the hoarding of money, chiefly in the form of gold, the spread of knowledge has brought home to the multitude the advantages of saving and investment, and has thus considerably extended the sources of productive capital. In other words, the marginal utility of capital, and hence its demand price, has fallen with the increased supplies of capital which are available under modern conditions. The rate of interest cannot fall to zero, however, because if no return to invested capital is forthcoming people will spend their surplus on immediately consumable goods and leisure instead of saving.

These facts concerning the fall in interest apply equally to gross interest as well as to *net* interest, for while the fall in the latter must generally occasion a fall in the whole of which it forms a part, there is a tendency also for the other elements in gross interest to fall, and particularly the proportion attributable

to risk. The greater security of society as a whole, and the greater protection of the investor, tend to lessen the possibilities of loss and thus to decrease the margin demanded by the investor to cover himself against such possibilities.

Clearly, the tendency for the rate of interest to fall must have important ultimate effects on distribution. On the one hand, it tends to reduce the aggregate amount of wealth in the hands of the moneyed classes, and lower the income they receive from invested capital. In so far as these classes will endeavour to maintain their capital and income at former levels, falling interest rates will encourage saving, although this will be rendered more difficult by the reduction in incomes. On the other hand, the reduction in the cost of capital used in industry leaves a greater margin for distribution to the other factors, labour and organisation, while to the extent that cheaper capital lowers production costs, prices will fall and the community as a whole will benefit. Labour, in particular, thus obtains a greater share of the national dividend.

Interest and Rent.

It will be evident from the foregoing that interest differs essentially from rent, for while the latter tends to rise with the progress of society, interest tends to fall. This is due to the important fact, already noticed, that capital tends to increase, whereas land is limited and yields a higher rent as it becomes scarcer and as it is cultivated more intensively. Consequently, the return to land as a whole tends to increase with the progress of society and the increase in human wants.

In other directions also marked differences may be noted. In the first place the rate of pure interest tends to equality, whereas rents differ considerably according to differential advantages of fertility and of situation. Secondly, the amount of rent is determined by the existence of no-rent land, whereas it cannot be assumed that certain portions of capital bear no interest.

Although, as we have emphasised, interest is paid for the use of capital goods, the loans are actually made in terms of monetary capital, and to the lender any one portion of such capital is just as good as any other portion. It is conceivable that a millionaire may be willing to lend part of his capital free of interest, but such capital is just as useful in production as that of a marginal investor, whereas no-rent land earns no remuneration because it yields no surplus over the amount of produce raised thereon. Consequently, if we are to assume free competition, we must conclude that the whole of the supply of capital earns an equal rate of net interest, and, if this is not the case, the absence of interest is to be attributed either to accident or to miscalculation.

Interest and Changes in the Value of Money.

A further important result follows from the fact that loans of capital are always expressed in terms of money, and that the return or income on the capital is also so expressed.

In a later chapter it will be shown that the prices of commodities as measured in money are subject to change. One hundred pounds in money would purchase in 1919 only one-half of the commodities that could be purchased in 1913 with the same sum, i.e., prices had risen and the value of money had fallen. Clearly, therefore, a capitalist who anticipates such a fall in the value of money will require a greater inducement to save than if he could assume that prices would remain steady or move to his advantage, i.e., fall. Thus the supply of capital tends to fall if prices tend to rise, *unless interest also rises and recompenses the capitalist for the greater "price of time"*.

Generally speaking, interest rates will rise if prices tend to rise, because there will be a demand for capital from producers anxious to extend their operations in order to benefit from the increased prices. The tendency of prices to rise thus results in the greater estimation of present goods as compared with future goods, in accordance with the Austrian Theory previously explained, and so tends to raise the rate of interest.

This close relationship between the general level of prices and the rate of interest will be more fully understood when the question of the Mechanism of Exchange, discussed in later chapters, has been considered.

CHAPTER 20

THE DETERMINATION OF PROFITS

So far our enquiry into the system of Distribution has shown us how three of the factors of production are rewarded for their contribution to industry. We have seen three important shares taken from the product, in the form of rent, wages and interest. One last claimant remains—the entrepreneur or organiser—who is responsible for bringing together the other three agents and who undertakes most of the risk of loss attaching to the enterprise. The share of the entrepreneur is designated *profits*, a comprehensive term which it is necessary to analyse with care, in the same way as we have analysed certain of the other terms hitherto considered. For the present we may regard profits as the share of the product of industry flowing to the owners of a business, and consisting of the excess of receipts over expenses.

The functions of the capitalist and of the entrepreneur were not clearly differentiated by the older economists, and they did not therefore regard profits as a distinct share of the product of industry. They nevertheless recognised that some element, in addition to net interest on capital, was included in the gross profits which accrued to the employer responsible for the direction of the enterprise in which his capital was sunk. This element they called " wages of superintendence and of management ", regarding it merely as a form of wage payment to the employer in return for his special form of labour in managing and in organising the concern.

Profits the Reward of the Entrepreneur.

It was left to the American economist, F. A. Walker, clearly to distinguish between the functions of the entrepreneur and of the capitalist in modern industry. He showed that the possession of capital is by no means the only qualification for employing labour and for instituting production. In his view the entrepreneur need supply none of the capital, although he very frequently contributes a considerable proportion of the capital invested in the enterprise for which he is responsible. On the other hand, Professor Walker pointed out that the contribution of the entrepreneur to production, in the form of technical skill and administrative ability, the assumption of responsibility and the general institution and control of the

industrial machine, is to be clearly distinguished from labour of any kind. Further, he maintained that the reward which accrues to the entrepreneur in the form of the balance of the product, after the payment of rent, interest and wages, is determined quite differently from wages. He regarded profits as being of the same genus as economic rent, and showed that the rate of profit was determined in much the same way as the rent of land.

In the development of the theory it is, first of all, pointed out that success in business is due either to the exceptional abilities or to the exceptional opportunities of the entrepreneur, and more frequently to the former. But the range of ability among entrepreneurs, as among any other class in society, is very wide. In the highest ranks success is remarkable, and the rewards are magnificent. But at the other end of the scale are the unfortunate employers who earn only a bare subsistence, and are enabled just to meet expenses and to keep their heads above water.

At this point, where success is scarcely better than failure, profits are at a minimum ; we may, in fact, regard such business men as the no-profits or *marginal* class of entrepreneurs, and from this low point upwards we measure profits. As the ability, foresight and courage of the entrepreneur increase, so does his reward in the form of profits become greater, and at any particular point the amount of profit is proportionate to the superiority of the abilities of the more capable employer over those of the employer at the margin. Profits are, in fact, the additional wealth created as a result of the superior abilities of the entrepreneur : they are a true *rent of ability*.

" Profits form no Part of Price ".

In accordance with the general law of value, there can be only one price for equal portions of the same product in the same market at any one time, and, in the long run, that price is fixed by the expenses of production of the marginal employer. If price were lower than this, the marginal employer (whose receipts just cover expenses) would be driven out of production ; if price were higher, the marginal or no-profits employer would obtain a profit and a lower grade employer could begin or resume productive operations. Thus the same price is obtained for their products by the superior employers as by the no-profits class, and consequently the profits of the former can form no part of that price. Such profits arise because the superior entrepreneurs, by reason of their greater abilities, can produce at a lower expense of production than the marginal employers, and the rate of profit is proportionate to the differential advantages enjoyed by each superior employer over the employer at the margin. If the demand for the product is so great that

its price rises and a very low grade employer is enabled to continue producing, then the differential gain or profit of the superior classes of employers will be considerable. And with every increase in price the gain of the superior employers tends also to increase, for not only is the margin lowered, but also those employers are enabled to have recourse to the greater advantages of production on a large scale.

The Analogy of Profits to Rent.

The foregoing explanation should have impressed the reader with the close analogy between the determination of profits and of rent. As rent arises from differential advantages of fertility or situation, so do profits arise from differential advantages of ability or opportunity. And as the amount of rent is measured upwards from the marginal or no-rent land, so profits are measured upwards from the marginal or no-profit class of entrepreneurs. Accordingly, if Professor Walker's analysis is accepted, no part of profit can enter to determine the price of the product, for that price is determined by the cost of production of that part of the supply which is obtained from the marginal producers. As we shall see later, however, modern economists do not accept this theory without some modification.

Profits and Wages.

Socialists in various countries have sought to prove that profits are simply *a deduction from the produce of the worker's labour*. For example, Karl Marx endeavoured to show, in effect, that profits arise because less is paid to the labourer than the real value of his work. The argument depends essentially on the acceptance of the labour theory of value already noticed (see *ante*, Chapter 14), but is much too complicated to be considered here. It is, however, necessary to note that if the foregoing theory of profits is accepted, then profits cannot arise at the expense of wages: they cannot be regarded as being the result of the exploitation or spoliation of the working class.

To understand this we have but to consider that, if free competition is to be assumed, then the rates of wages for the same grade of labour in the same industry must tend to approximately the same level. Other things being equal, the superior employer will pay the same rates as the no-profits employer. Presumably the latter will pay as little as possible, and the superior employer can scarcely pay less. On the other hand, the superior employer, if he is assumed to act always in his own interest, will not pay *more* for the same grade of labour than has to be paid by his less fortunate competitor. His profits arise, not because he pays his labourers less than they get elsewhere, and not because he pays them less than is demanded under the

existing competitive conditions, but because his superior abilities and better judgment enable him to employ labour and the other agents of production to better advantage than his inferior rivals. And this does not mean that the labourers have to work longer or harder for the same rate of wages: it means simply that more efficient organisation permits a greater net return for the same outlay and creates a surplus which would not otherwise exist.

Profits a Residuum.

If the foregoing analysis is correct, it is clear that profits are a residual share of the product of industry. They are what remains to the entrepreneur after paying (*a*) rent on any land or natural resources used in the undertaking; (*b*) interest on the whole of the capital utilised therein, and (*c*) wages to the labour-force of the enterprise. In such expenses must be included rent, interest or wages in respect of any land, capital or labour (e.g., in the form of management) supplied by the entrepreneur himself. The balance, if any, is the reward of the function of enterprise. If the employer is of superior ability, and if business has been good and his anticipations correct, his share will be considerable. If business has been slack—as may be the case with the most capable employers—then any losses incurred must, in the long run, be balanced by the profits made in more successful years. But the great point to be remembered is that if any surplus does remain, it belongs to the employer, and to him alone. It is his reward for instituting production, and for accepting the risk which is incidental to that production.

The actual conditions of practical business show that this conception of profits is at least a close approximation to the truth. The entrepreneur or organiser of a large concern can determine fairly accurately in advance what rates he must pay for land, capital and labour for any given output which he may wish to achieve. But his rate of profit is always uncertain: it must reflect the result of his organisation and his judgment. The services of land, capital and labour must be remunerated whether profits are made or not; their prices are pre-determined and regular, and are generally paid in cash before the results of the year's working have been or can be ascertained. "That it is the owners of business who take the chief risks is clear when we remember that they *have paid* for the labour, capital and land before the commodity is finished, often before its price can be known, and if the commodity when made is not wanted and cannot be sold, they cannot recover the wages, interest and rent expended in the production of it".[1]

The fact that this residue may reach such a munificent proportion in the case of employers of exceptional capabilities and

[1] Clay, *Economics for the General Reader*, p. 337.

reasonably good opportunities is the mainspring of modern industry, and the force which impels entrepreneurs to great effort. Without this incentive to the business organiser, much land, labour and capital would remain idle, or at least be employed to much less advantage. The greater the efficiency of the various factors and of the industrial machine as a whole, the more the employer will benefit in the amount of his profit. But the greater efficiency of the industrial machine must unquestionably be an advantage to the community as a whole, and in this respect the interests of the entrepreneur and of the community coincide. Thus we may conclude that, within limits, it is to the advantage of society that handsome profits should be made by experienced and capable men — bankers, traders or manufacturers — for society as a whole tends to benefit from the greater efficiency and productivity of industry which is subject to their direction.

Modern Refinements of the Theory.

The majority of modern economists accept the essentials of the doctrine explained in the preceding paragraphs—that profits are of the nature of rent, and determined in a similar manner. In recent years, however, a number of refinements have been introduced in order to bring the theory more into accord with modern economic conditions. These have been postponed until the present stage in order that the reader may obtain a clear conception of the basis of the theory of profits, but they must now be considered. The first problem has already been indicated, and concerns the precise meaning of the word *profits*.

The Constituents of Gross Profits.

The term " profits " in its usual meaning is applied to *gross profits*, i.e., the excess of the receipts of a business after payment of all expenses. It is clear, however, that the method of ascertaining profits varies considerably as between one business and another, due chiefly to differences in the nature of the " expenses " which are or are not deducted before the residual profits are determined. Certain of these expenses may be a part or the whole of the rewards due to factors other than enterprise, and it is obvious that if they are not deducted before the gross profits are determined, allowance must be made for them in estimating the *pure* or *net profit* which flows to the entrepreneur in accordance with the foregoing theoretical analysis. Among the various elements which may be included in gross profits are the following :—

1. Rewards due to Land and Capital.—As we have seen, there are many businesses wherein the whole or part of the land and/or capital is supplied by the owners or

entrepreneurs. In computing the *net* profits of any such businesses, allowance must be made from *gross* profits for interest on any capital and for rent of any land owned by the employer himself.

2. Depreciation and Maintenance Charges.—If a business is to continue and to prosper, its fixed capital in the form of buildings and machinery must be kept in an efficient state of repair. This involves not only the making of necessary repairs as they arise, but also the provision for replacements and renewals of worn out and obsolete parts. Further, new processes and new machinery must be adopted when necessary if the business is to keep pace with competitors. Consequently, adequate provision should be made to cover these items, and, properly, they should be allowed for as expenses of the business *before* gross profits are ascertained.

3. Extra-Personal Gains.—Modern economists recognise that part or possibly all of the profit which accrues to some businesses is due, not to the superior abilities of the employer, but to non-personal causes. For example, a business may be in possession of monopoly advantages over its competitors which enable it to obtain certain *monopoly gains*, over and above ordinary profits. Again, the occurrence of an unexpected event or the conjunction of certain unforeseen circumstances may place a business in a position to reap additional rewards, described by some economists as *conjunctural* or *chance* gains, which may, to a certain extent, be identified with quasi-rent. The sudden outbreak of war may greatly benefit a firm with a large stock of rifles on hand, while the death of a great personage may bring unlooked-for gains to a firm carrying a large stock of black cloth. As such gains do not usually result from any special foresight, ability or enterprise, but are quite unexpected, they cannot strictly be regarded as pure profits.

4. The Entrepreneur's Reward.—The balance of gross profit which remains after making the foregoing allowances may be regarded as the reward due to the entrepreneur for the performance of his functions. Even here, however, a further sub-division is necessary, since the entrepreneur may not himself perform all the entrepreneurial functions, and may delegate part of them to another person or persons, each of whom will gain a reward appropriate to the specialised function which he undertakes. Hence the entrepreneur's reward may be said to consist of three elements :

(*a*) *Wages of Management*, i.e., the reward which must be given for his managerial services in co-ordinating,

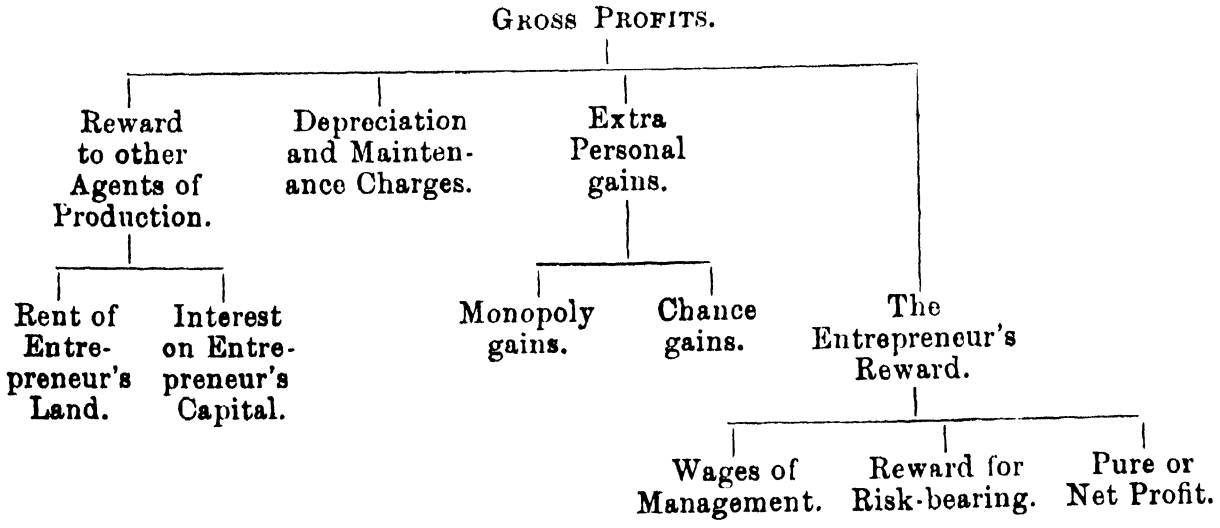
organising and directing the concern. If such services are delegated to a salaried manager, adequate remuneration must be paid to command services of the necessary degree of efficiency. But the work thus done either by the entrepreneur himself or by a salaried manager in *running* the business is to be distinguished from the enterprise and organising ability required to set the concern in motion and preserve its momentum. No salaried official can assume this responsibility.

(*b*) *The Reward for Risk-bearing*, i.e., the amount which must be allotted to the entrepreneur for assuming the risk which is inseparable from all business under the system of production in anticipation of demand ; and

(*c*) *Pure or Net Profit*, i.e., the reward which accrues to the entrepreneur by reason of the fact that his abilities are superior to those of the marginal employer whose output is necessary to meet the existing demand. Pure or net profit is thus a purely personal *differential* gain or *surplus*, and is well described as a *rent of ability*.

By some prominent economists the reward for risk-bearing is regarded as a part of pure or net profit. They maintain that the assumption of risks, such as those of producing in anticipation of demand, of marketing and of purchasing, is inseparable from enterprise and is essentially a function of the entrepreneur; the greater his courage and willingness to undertake risks, the larger the rewards which are eventually his.

Diagram showing Analysis of Gross Profits.



What is the Marginal Entrepreneur ?

The second refinement of the original theory of profits concerns the conception of the marginal or " no-profits " employer, and

the argument of the original exponents of the theory that profits form no part of the expenses of production. It is considered by some modern economists that the theory in this respect goes too far, and that normal supply price must be assumed to contain a certain element of *normal* profit, for otherwise there would be no inducement for the inferior grade entrepreneurs to continue their activities. Marshall was responsible for the conception of the *Representative Firm*, which has had a fairly long life and a fair degree of success, which is managed with normal ability and which has access to the normal economies of production. Side by side with the representative or *average* firm will be some firms which are exceptionally efficient and others which are exceptionally inferior, but it is maintained that prices will tend to adjust themselves to the expenses of production of the average firm and not to the expenses of the least capable producer. The average firm is assumed to make a reasonable though not an excessive rate of profit over a period, and that rate may be described as the *normal profit* for the industry concerned. This profit will form part of the marginal cost of production which determines the price of the product, but any profit made by a superior entrepreneur in excess of this minimum forms a personal rent and will not enter into normal supply price. On the other hand, the least capable producers may make no profit at all, and may even be involved in loss, but if these conditions continue, they must in the long run be forced out of production.

It is obvious, however, from the analysis of the entrepreneur's reward which we have given, that those entrepreneurs who make no profit will continue to produce so long as they receive at least as great a return for their services of managing and risk-bearing as they would receive by accepting employment elsewhere. The satisfaction which arises from the prestige of their positions as independent producers, also, would probably induce them to continue in business even though they make no profit.

The conception of true profit as a rent of ability remains, however. Pure profit is a surplus and is measured upwards from the marginal entrepreneur who earns no profit. His return includes wages of management and payment for risk, both of which are elements of cost of production. It is the price charged by the marginal producer which determines the price of the whole supply. If the superior employers can sell at that price and yet make a margin of profit, then the surplus which they make is the reward for their superior powers of organisation and enterprise, and is a pure rent of ability. The return made by the marginal entrepreneur cannot, however, be so regarded, because it is not a *surplus*, but a part of the normal expenses of production and therefore a constituent of normal supply price.

Differences in the Entrepreneur's Reward.

We should expect that the entrepreneur would take his capital, foresight and managerial ability into those industries in which he is likely to reap the greatest reward, and the return for the entrepreneurial functions would then tend to be equal in all industries. How then can we account for the fact that the entrepreneur's reward differs as between industries and also as between two producers in one industry ?

On reflection, it would appear that a higher *gross* return must be anticipated in some industries than in others, for otherwise entrepreneurs would have little inducement to enter industries which involve greater risk and are more difficult to manage successfully than others. We should also expect the reward to be greater in a new industry than in one which is well established, for several reasons. The former must offer a greater inducement to the employer otherwise he will be disinclined to undertake the greater risks of enterprise in a new direction. New businesses are generally more difficult to direct successfully than those which have been established for some time ; they may have to undertake much pioneer work, to fight much competition, and to develop trade on new lines in the face of custom, habit, and possible prejudice.

Therefore we may say that, *as between different industries*, the return obtained by the entrepreneur will vary with the degree to which his various functions—and especially that of risk-bearing—are called into play. Further, we may conclude that the gross return should tend to equality in trades which are different in nature but involve approximately equal risk, discomfort and exertion on the part of the employer, and necessitate an approximately equal outlay on his training. On the other hand, the reward obtained by entrepreneurs *in the same industry* will vary according to the differential advantages which they possess, since it may be assumed that the degree of risk and the work of management will be the same for all businesses of the one type. But the more able entrepreneurs will reap a surplus of net profit varying according to their respective abilities.

The Tendency of Profits to Fall.

In the discussion of interest on capital it was pointed out that the rate of interest shows a tendency to fall with the march of progress. A similar tendency may be assumed in regard to the rate of profits. As knowledge increases and becomes diffused throughout the community ; as invention spreads and an increasing number of employers are enabled to obtain access to new inventions and new processes ; as the organisation of business becomes more complete and partakes continually more of the nature of routine, and as the number of men of ability in any

community becomes ever more plentiful with the increasing advantages for obtaining mental and other equipment, so do the opportunities to make exceptional gains tend to become less frequent, and profits as a whole tend to lower levels. In proof of this we have but to compare the average standard of intelligence as it exists to-day with that of a century or half a century ago. There is a constant increase in the number of men of high commercial ability, and a constant decrease in the chances of the few instituting and continuing great enterprises without soon experiencing the vigorous competition of other aspirants for success in the same sphere.

To some extent, however, this tendency is offset by the rise of new industries, supplying new wants. For example, in quite recent years we have witnessed considerable development in such industries as motor transport, advertising, wireless, gramophones, artificial silk, and aviation, all of which have afforded new outlets for the abilities and energy of the entrepreneur and have entailed a fair degree of risk, with the possibilities of considerable profit or of considerable loss.

In respect of the tendency of its rate to fall, profit resembles interest, but is to be distinguished from rent of land. And the resemblance and difference are traceable to the same root cause. Interest and profits tend to fall because capital and ability tend to increase, and in accordance with the universal law of value, *price* falls with the increase in supply. On the other hand, rent tends to rise because natural resources are fixed in quantity, and consequently supply cannot keep pace with the increased demand which follows the growth of population and the advancement of civilisation.

Profits in Practical Life.

In attempting to apply the foregoing theory of profits to the earnings of a business concern it is important to distinguish clearly the economic conception of pure profits from the ordinary commercial application of the term. The net profit of a business will but rarely consist of pure profit alone, and will almost always include some or all of the other elements which have already been considered.

As a rule, the profits of a private concern employing the capital of its owners will, in addition to pure profit, contain earnings of management, reward for risk, and frequently also interest on the capital of the owners. In the case of a joint-stock company the net profits are usually ascertained after deduction of such items as depreciation, insurance premiums, interest on capital, and earnings of management (directors' fees and managers' salaries). In such concerns the reward of enterprise and the remuneration for undertaking risk consist of the net profits available for distribution among the ordinary

and deferred ordinary shareholders, and in some cases also of a sliding scale of commission on net profit sometimes paid to directors over and above their usual fees.

When once the company has been floated, the entrepreneur as an individual does not exist, although his functions may be discharged by a small number of persons, who hold the bulk of the ordinary capital and possibly all the deferred capital of the concern, and, as a board of directors, control its policy and management. In such cases the directors are real entrepreneurs ; their reward in the form of profit will be determined in the long run chiefly by their efficiency and good management of the business.

By some writers directors' fees are regarded as pure profit on the grounds that if the company is badly managed such fees will have to be reduced, or, alternatively, new directors appointed to undertake control. Frequently, however, the management and direction of a joint-stock company are entrusted to paid officials and the remuneration is classified as wages of management. The burden of risk is then borne chiefly by the holders of the ordinary share capital ; they benefit most in times of prosperity and stand to lose most in periods of depression. Thus the dividends on ordinary shares in industrial concerns may be regarded as consisting of a proportion of net interest on capital, a reward to the shareholders for their enterprise in risking their capital and a net surplus of pure profit.

These facts should serve to bring out the distinction between " dividends " on ordinary shares and interest on such forms of capital loans as debentures and preference shares. Dividends are subject to the success or non-success of the business ; they are not determinable until all expenses of the business have been met, and, although it is to be assumed that no shareholder would invest capital in an undertaking unless he were fairly hopeful of receiving a certain average rate of interest, there is no certainty that any return will be forthcoming in respect of any particular year, while there always exists the possibility of a partial or even total loss of the capital.

On the other hand, the rate of interest on debentures, for example, is determinable by the investor in advance, while the payment of such interest must be allowed for by the company before its net profits are ascertained. In a sound concern there is a reasonable certainty that interest will be duly paid, and unless this certainty exists it is unlikely that capital will be attracted to the investment. Interest is, therefore, the price for the loan of capital, profits are the reward for enterprise. The lender has a legal right to demand the return of his capital, subject to the conditions of his contract, but the investor possesses no such right, although he may obtain the return of all or of part of his capital by selling his interest in the concern in the open market.

CHAPTER 21

THE PROBLEMS OF LABOUR AND CAPITAL

FROM what has already been stated in earlier chapters it will be apparent that in the sphere of production the interests of Labour and of Capital are largely identical. It is to the advantage of both that the national dividend, i.e., the stream of wealth out of which, and out of which alone, profits, interest on capital, and wages can be paid, shall be as large as possible. Unfortunately, however, it cannot be said that the same harmony exists in the sphere of distribution. Here, the natural tendency is for each of the agents of production to endeavour to increase its share of the aggregate product by the exercise of its bargaining strength. Along with certain other factors which we shall examine later, this conflict of interests between Capital and Labour over the distribution of the revenue of industry constitutes one of the principal elements in the problem of " Labour Unrest ".

Labour Unrest and Its Causes.

Even before the War Labour Unrest was one of the most serious problems confronting this country. In 1913, 11,491,000 working days were lost through strikes and lock-outs. The situation was steadily growing worse when, during four years of war, the contending forces united against a common foe, and save for a few minor recrudescences of unrest, the old antagonisms were held in check by the consciousness of a national danger. Since the end of the War in 1918, however, the conflict has been renewed with redoubled force, at what cost is revealed by the following figures showing an alarming wastage of industrial power, while even more serious is the loss of productivity which necessarily results from a general atmosphere of distrust and ill-will.

Year.	*Number of Working Days Lost.*
1919	34,970,000
1920	26,570,000
1921	85,870,000
1922	19,850,000
1923	10,670,000
1924	6,420,000
1925	7,950 000
1926	162,230,000
1927	1,170,000
1928	1,390,000
1929	8,280,000

When the causes of labour disputes are analysed it is found that wages questions take the foremost place, although trade union principles and the "employment of certain workers" have also been prominent. This is indicated by the following table, reproduced from the Labour Year Book, 1924, and relating to the years 1919-22 :—

Causes of Labour Disputes, 1919–22.

Chief Cause.	*Number of Disputes in*			
	1919.	1920.	1921.	1922.
Wages	695	1010	445	313
Hours	118	22	9	6
Working arrangements	57	56	10	15
Employment of certain workers	149	225	56	40
Trade Union principles	21	67	3	11

Thus, it seems reasonable to assert that the chief cause of industrial unrest is *the desire of the workers for a higher standard of living.* This may be attained in one of two ways; either the real wages of the workers may be raised as a result of an increase in the national dividend, or, by the use of its bargaining strength, Labour may be able to secure for itself a larger share in the revenue of industry. Naturally, it is this second alternative which is most favoured by the workers, and, when we consider the glaring inequalities in the distribution of wealth which exist in advanced industrial countries, it must be admitted that there is considerable justification for the aspirations of the labouring class. In illustration, we may quote the following figures given by Sir Leo Chiozza Money,[1] who in 1904 estimated that the national income of this country was shared in the following proportions :—

	Number of Persons.	*Income. £ Millions.*
Riches :		
Persons with incomes of £700 per annum and upwards, and their families	1,250,000	585
Comfort :		
Persons with incomes of £160–£700 per annum, and their families	3,750,000	245
Poverty :		
Persons with incomes less than £160 per annum, and their families	38,000,00	880
	43,000,000	1,710

From this analysis, which is accepted as substantially correct by other eminent statisticians, it will be seen that in 1904 *one-third* of the national income was enjoyed by *one thirty-fifth* part of the population. The conclusion is that there exists "a great multitude of poor, veneered with a thin layer of the comfortable and rich".

A second cause of labour unrest is the *desire of the workers for a greater measure of economic security.* It is impossible to over-

[1] *Riches and Poverty.*

estimate the seriousness of the psychological reaction upon the worker of being continually at the mercy of adverse circumstances. Self-reliance is undermined, ca' canny [1] principles are encouraged, and a hostility to new methods of production is engendered. Hence, it is coming to be generally realised that on economic as well as on humanitarian grounds something must be done to render the economic position of the manual workers less insecure, and modern labour feeling in the matter is reflected in the growing intensity of the demand for " work or maintenance ".

Closely associated in some respects with the two causes of unrest mentioned above is *the demand of the workers for some direct participation in the conduct of industry.* It is important to realise that a profound change has come over the psychology of the workers during the last decade, and to-day the problems of Capital and Labour are not confined to differences of opinion regarding wage-rates. Two new principles are being asserted: first, that the workers have a vested interest in the industry in which they are employed, and secondly, that in view of that interest they have also a right to participate in the actual government of the business or industry.

In connection with each of these elements in the industrial conflict certain special problems arise which call for our consideration, but the wider questions of the reorganisation of economic society on a socialistic basis, arising directly out of Labour's demand for " control ", is reserved for fuller discussion in the next chapter.

We may note here, however, that Socialism is a vague term comprising a great variety of different shades of opinion, but the essential feature of the new industrial order which is proposed is the abolition of private property *in the means of production.*

The STATE SOCIALIST advocates the nationalisation of industry and would place the right to control production and distribution in the hands of the State *as representative of the whole body of consumers.*

The GUILD SOCIALIST, in reaction against the older state socialist proposals, emphasises the need for industrial self-government and would place the chief power in the hands of *guilds of producers* representing each industry, but the *ownership* of the means of production, as distinct from the *control* of the work of production, would be vested in the State. In this way Guild Socialism stands midway between State Socialism and *Syndicalism.*

The SYNDICALIST would reorganise economic society by placing the entire control of industry into the hands of the workers, as producers. The suggested method is that the workers in each industry should become members of one large powerful

[1] *Ca' canny* is a Scotch term for "going slow", and refers to the Trade Union policy of restricting output per worker in order to make work for others. Such a belief is based on the work-fund fallacy, for which see page 274, *ante.*

trade union, which would overthrow the capitalist by direct action such as the general strike. The movement has made most progress in France, but is not strong in this country.

PROBLEMS OF WAGES AND OF WORKING CONDITIONS

It is obvious that the chief cause of labour unrest, i.e., the desire of the workers for a higher standard of living, centres mainly around questions of wages and general working conditions, and, accordingly, it is to these that we must now direct our attention.

Methods of Remuneration.

Naturally, the first essential towards a solution of the wages problem is to devise a method of payment which will meet with the approval both of workers and employers, and from time to time numerous systems of remunerating labour have been adopted in an endeavour to devise an equitable and mutually satisfactory arrangement.

The most frequent and important method of remunerating the worker is that of *time earnings*, whereby a fixed sum is paid for a certain period of time worked, whether an hour, day, week or year. In many respects, however, this system has been found unsuitable for the conditions of modern industry, and various other methods have been applied from time to time. The principal of these is the method of *piecework*, under which the worker is paid a certain sum per unit or piece of work completed by him. A brief consideration of the respective advantages and disadvantages of these two systems will enable us to appreciate more easily the various alternatives to the two principal methods, which have been suggested and adopted by employers in different parts of the world.

Time Earnings.

Although the system of time earnings is not applicable with equal success to all employments, its advantages as compared with other methods of remunerating labour cause it to be most widely used in modern society. In the first place, it is probably the oldest known method of paying the worker, and that which is most easily understood by all classes. Secondly, it is certain and regular from the standpoint of both employer and workman, and under ordinary conditions no difficulties can arise in regard to its amount or date of payment. In cases of sickness or incapacity for short periods, the worker who is paid monthly or annually does not usually suffer any loss of remuneration, and similar conditions apply in cases where there is a temporary shortage of work due to breakdown of machinery, absence of raw material or of supplies, or to bad weather. Quite apart

from such general benefits, the system of time wages has important advantages in so far as the efficiency of the work and the quality of the product are concerned. Time wages are not only preferable but are almost inevitable in trades involving the use of delicate and expensive instruments or machinery, or in occupations necessitating unremitting care and attention if a product of the requisite delicacy and perfection of workmanship is to be obtained. In such cases piece rates are obviously unsuitable, for hurried or "scamped" labour may result in considerable loss, both in connection with the product and with the appliances utilised. Finally, the time system of wage payment is the only possible method in the case of certain occupations where the amount of work done cannot be measured or accurately compared with any available standard. Examples are to be found in most forms of supervisory and managerial work, and in most classes of repair work, such as ship or motor repairing and plumbing.

The great disadvantage of the time system is that it offers no special inducement to the worker to give of his best, and consequently tends to encourage slackness. This is particularly noticeable when it is difficult or impossible to judge how much work should be performed in a given time, and in such cases the only safeguard is to incur additional expense on foremen and overseers. For similar reasons, the time system makes it difficult to compare the relative merits of different workers, and to discriminate between superior and inferior labour. Consequently, the quick and accurate worker cannot hope to benefit from his greater speed and efficiency as compared with a worker of lower standard unless a careful supervision of all the workmen is maintained. In many occupations, such as farming, building and general repair work, an adequate system of supervision for this purpose is all but impossible. Resulting also from these conditions is the difficulty of estimating the real cost of labour, as compared with its nominal cost (see *ante*, page 284).

Finally, we may note that time payments afford the employer little protection in so far as he cannot ensure a reasonable service for the reward offered: on his part the worker has no security that the results of his labour in a given time will come up to the employer's expectation.

Piece Earnings.

In modern times the system of payment per unit of output has achieved considerable importance, and it is apparently extending in many directions. The essential feature of the piece-work method is that the worker shall be paid at an agreed rate per unit of his product. Clearly the great advantage of the system lies in its incentive to effort and its stimulus to output. The

superior worker is induced to give of his best by the prospect of a higher rate of remuneration than the low-grade employee, a factor which is of great importance when the *quantity* of the work is a primary consideration. There is consequently a fair discrimination between the various classes of workers, and extra effort or greater efficiency obtains a reward in direct proportion to the results achieved. The employer benefits not only from the greater output per employee, but also by the fact that his capital assets, such as machinery, tools and buildings, are being used more productively. Further, the system operates to his advantage because it permits of a definite calculation of the cost of labour per unit of output in relation to the total expense of production, and also because it enables him to discriminate to some extent between superior and less efficient workers, and so, by a rearrangement of his staff, to develop his organisation on the most productive and efficient lines.

In spite of its advantages, the piece-work system suffers from a number of serious defects. The most obvious of these is the encouragement of defective or "scamped" work. The interest of the employee lies in increasing his output so as to obtain as high a wage as possible, and this may frequently be obtained at the expense of good workmanship and perfection of the product. In such cases the efficiency of the worker cannot be judged solely by the quantity of his work, and consequently the piece-work system is unsuitable in cases where the quality (and not the quantity) of the product is the foremost consideration, *unless satisfactory arrangements can be made for a careful inspection of the product.* Under such conditions piece-work arrangements may prove highly satisfactory both to employer and workman, and are so applied with great success in practical business. It must be noted, however, that constant work at high pressure in order to earn as much as possible may prove detrimental to the worker's general health and may also shorten the duration of his working life. In most modern applications of the system modifications have been introduced with the object of obviating this serious disadvantage. These will be discussed below.

Further objections to the method of piece-rate payments are, first, that a certain amount of jealousy and competitive rivalry is fostered among the workers. Each labourer endeavours to obtain in wages at least as much as his neighbour, obviously a disadvantage in the case of the naturally inferior workers, for the perfection of the product must suffer while their own health cannot benefit from such undue exertion. Secondly, the worker's earnings tend to be less regular than if a time wage were paid, and he must naturally suffer during periods of partial or complete incapacity, and also during unavoidable stoppages of the work. Then, again, piece wages are not easily applicable

in the case of certain occupations such as those referred to above in which time earnings are most suitable. Finally, may be mentioned the difficulty of determining a suitable basis for the piece-work rate. In this connection have arisen many of the abuses of the system, resulting in considerable friction between employers and workmen, attributable chiefly to the fact that the former have sought to reduce the piece rates originally fixed when it has been found that the earnings of the workers on the piece basis were considerably in excess of their earnings under the previously existing time system of payment. On the one hand, employers have contended that the great increase in weekly earnings is attributable either to an inaccurate basis of the piece rate, or to the fact that under the time system the workers were not giving of their best. As a rule, there is undoubtedly much to be said for this view, but on their part the workers have frequently had to complain of constant adjustments in the piece rates, resulting sometimes in their being almost completely deprived of any benefit for increased effort and being compelled to maintain a high standard of output without any corresponding advantage in the way of increased earnings.

Generally speaking, however, the system of piece rates finds greater favour in the ranks of labour, and its practical application has usually achieved success, particularly in those trades, such as engineering and textile making, where a standardised product and standardised methods make a fair basis of payment easily determinable. In cases where such arrangements cannot easily be applied, *group piece rates* are sometimes paid, i.e., a lump sum payment is made to the whole body of workers in respect of the particular task or contract, and is shared out among the individual workmen on principles which they themselves determine. While the adoption of such rates results in the less efficient workers benefiting by the greater energy and ability of their more efficient fellows, the system is advantageous where all the work cannot be standardised, or where the machinery or raw material is not equal and uniform. Thus, where old and new machines are running side by side, workers on the latter would probably have an advantage unless special rates were fixed for the two classes of workers.

Although the time- and piece-rate methods of payment are clearly quite different in their application in practice, it must be remembered that the principles underlying the determination of wages are the same whichever system is adopted. In fact, the two methods must always be closely related to each other. When a piece rate is fixed, it must inevitably be based on a careful estimate of the time necessary to perform the unit of work concerned. Similarly, a time rate must be based on a reasonable estimate of the work which can be done in a certain time.

Premium Bonus Systems.

As has already been stated, many attempts have been made in recent years to devise methods of industrial remuneration which will be more suited than time and piece-work methods to the requirements of particular occupations, and which will also combine the more obvious advantages of these two systems, and at the same time obviate their principal defects. The most important of these are known collectively as *Premium Bonus Systems*, of which many different forms have been put into operation in this and in other countries, with varying degrees of success.

The Bonus Systems seek to remedy the great defect of the time-rate system in that the worker has no inducement to give of his best, while at the same time they endeavour to overcome the tendency to inferior or scamped work which characterises the simple piece-work system. It is impossible within the limits of our space to consider all of the methods which have been adopted, but in almost all cases there is an agreed standard output for each class of work, and a bonus, calculated in various ways but generally on a piece-work basis, is paid in respect of any output in excess of the standard. In order to prevent the rushing of work and overstrain on the part of the worker, it is usual to arrange the bonus on a gradually diminishing scale so that the incentive to increase the output is gradually reduced. The bonus may be paid to the individual worker in respect of his own output, or collectively to a group of workers in respect of the total output of the group. The latter method is applied in certain engineering trades in this country and at the famous works of Messrs Cadbury at Bournville.

Scientific Management.

The Premium Bonus System is obviously of greatest utility in organisations in which a high degree of specialisation and of division of labour is possible. In America particularly the system has been considerably developed in recent years by the application to the problem of the principles of *Scientific Management.*

This system of industrial administration was first introduced in the United States by Mr Frederick W. Taylor in 1882, the general object being to organise the agents of production on scientific lines in such a way as to secure their maximum productivity. Thus, whenever a task has to be performed, the management chooses the most appropriate men, tools, machinery and methods, and links all together in order to achieve the most economic organisation of the shop as a whole.

The functions of scientific management may be summarised under four main heads :—

1. Its aim is to arrange that work shall be done in the best possible way.

2. The workpeople are trained and selected by a series of tests.

During recent years attention has frequently been called to the wastefulness of our present haphazard methods of selecting industrial workers. Not only is individual efficiency lowered through the " round peg " getting into the " square hole ", but labour turnover (involving a serious unproductive burden on the firm) is substantially increased.

Consequently the necessity for the adoption of more scientific principles is being slowly realised and *vocational selection*, i.e., the selection of workers based on psychological tests has been successfully applied in progressive firms both in the United States and in this country.

3. When these two duties have been performed, it is necessary to establish *certain standards of work* and to discover the most *appropriate methods of payment.*

4. Particular attention is devoted to the organisation of the workshop as a whole, so that it may function efficiently as a well-organised unit. This involves the specialising of various officials, the controlling of the flow of work through the shop and the maintenance of adequate supervision, systematised storekeeping and costing.

The greater productivity which almost invariably results may thus be attributed to better organisation and management, and to the greater individual efficiency of the workers.

Two terms which are frequently found in association with Scientific Management are *Time Study* and *Motion Study.* These express in concise form the lines on which the scientific manager works. Time study involves the study of the time taken to perform each particular operation in an industrial task and, from the data thus obtained, the estimation as closely as possible of the time which should be taken over the task as a whole. Motion study is the study of the movements involved in a task with a view to eliminating such movements as are unnecessary and improving or facilitating those which are necessary.

In this way, a standard time and a standard method are arrived at in respect of each particular task, and finally a standard method of remuneration is devised which is so adapted as to provide the most appropriate stimulus to call forth the maximum effort. In this connection many variations of the Premium Bonus System are in operation. Sometimes a bonus is paid over and above an agreed time rate if the worker achieves the " efficiency rate " in respect of his output ; in other cases, the efficiency rate may be the minimum and a bonus may be paid in respect of any output in excess of this minimum. In the Halsey

System, well known in the United States, the bonus takes the form of a payment equal to half the ordinary time rate per hour for the whole of the time saved ; e.g., if the time allowed for a particular job is 10 hours and the time rate is 10d. per hour, a worker completing the job in 8 hours would receive 80d., plus a bonus of 10d. (2×5d.). In the Rowan System, well known in Scotland, every 10 per cent. saved in time adds 10 per cent. to the hourly earnings of the worker. The formula is as follows :—

$$\frac{\text{(Time Saved)}}{\text{(Time Allowed)}} \times (\text{Time taken} \times \text{Hourly Time rate}) = \text{Bonus.}$$

Thus in the example quoted in connection with the Halsey System, the worker's remuneration would be calculated on the Rowan System as follows :—

$$\left(\frac{2}{10}\right)(8 \times 10\text{d.}) = 16\text{d. Bonus ; } 80\text{d.} + 16\text{d.} = 96\text{d. earned.}$$

The principles underlying these scientific adjustments are sound, and undoubtedly the potentialities of the systems are considerable. In cases where the methods described have been adopted, productivity has been increased and, in the ideal at any rate, there is no implication that any greater effort is required on the part of the workers, the fundamental principle being that of standardisation in fields where such standardisation had not been previously applied. A point generally insisted upon in favour of such methods is that under simple piece-rate systems there is a tendency for employers to " cut " rates, whereas in these schemes this danger is not nearly so great, for if the standard rate is based upon scientific methods, it is the ideal rate and cannot be departed from without detriment to both sides.

An obvious defect of most bonus systems is that they are so complicated as to become to a large extent unintelligible to many workmen, with the result that they may easily develop into sources of friction. Moreover, it cannot be said that Scientific Management is looked upon with favour by organised labour. Both in America and in this country the tendency is for the workers to regard it as a glorified form of " speeding up " and fundamentally opposed to the ideal of industrial democracy. Such criticisms are based entirely on labour's experience of scientific management as it occurs in practice generally ; they do not invalidate the theory of scientific management nor do they show that it cannot be rightly applied. What seems to be required is an adequate recognition of the principles of democracy in industry on the part of advocates of the new system and a fuller conception of, and sympathy with, the sociological and economic aspirations of the workers. If the antagonism of labour is to be overcome, it is essential that no time study be made

and no premium or other bonus system introduced *without the consent of the workers concerned.*

The whole question of Scientific Management *as actually found in practice* in the United States was thoroughly investigated in 1913 by a sub-commission of the Federal Commission on Industrial Relations, consisting of an eminent economist, an employers' representative and a recognised spokesman of organised labour. In the course of the published Report the Commissioners state: "Neither organised nor unorganised labour finds in Scientific Management any adequate protection to their standards of living, any progressive means for industrial education, or any opportunity for industrial democracy by which labour may create for itself a progressively efficient share in efficient management. And, therefore, as unorganised labour is totally unequipped to work for these human rights, it becomes doubly the duty of organised labour to work unceasingly and unswervingly for them, and, if necessary, to combat an industrial development which not only does not contain conditions favourable to their growth, but, in many respects, is hostile soil".[1]

Sliding Scales.

Until the exigencies of the war led to considerable changes in the methods by which wage rates were paid, and, particularly, to the development of premium bonus systems, the earnings of the vast majority of workmen in this country were based either on time or piece rates and were not automatically affected by such extraneous factors as the cost of living or the profits of the industry. There were, however, some important exceptions which we will briefly consider.

SLIDING SCALES ACCORDING TO THE PRICE OF THE PRODUCT.—The wages of the majority of workers in iron and steel manufacture and of some miners have long been based on a sliding scale system, *the rate of wages varying in accordance with the fluctuations in the selling price of the product.*

Before the war the number of iron and steel workers covered by such agreements was about 62,000, and of miners about 2,000. At the present time, every coal sliding scale has been abolished, but the system has been extended in the iron and steel trades, and the Ministry of Labour estimates that some 200,000 workers are now covered. It seems exceedingly improbable that any other industry will adopt this method of adjusting wages, but it is useful to notice the principal defects of the system.

In the first place, prices are not always general throughout an industry; such is the case only in those industries producing staple producers' commodities (such as coal and iron) which

[1] R. F. Hoxie, *Scientific Management and Labour*, pp. 138-139.

are dealt in on fairly well-organised markets. Furthermore, and this is the real case against the sliding scale system, the workers are placed in the humble position of partners entitled to share in the product of the industry, but without any voice in control. It is true that in some cases joint councils of employers and workers have been set up to discuss the general position of the trade, technical efficiency, and the welfare of employees, but the indictment remains substantially correct; thus base-rates tend to remain stationary when the march of invention and increased productivity justify a rise in real wages.

Although, as has been pointed out, the system of sliding scales based on selling price is no longer operative in the coal mining industry, it is interesting to notice that the principle was revived in the settlement which was reached after the coal lock-out of 1921. Wages are now regulated on what has been described as a " collective profit sharing " basis. The agreement provides that " the wages payable in each district shall be expressed in the form of a percentage upon the basis rates prevailing in the district, and shall be periodically adjusted in accordance with the proceeds of the industry as ascertained in such district ". The amount devoted to the payment of wages above " standard wages " (at the district rates prevailing in 1914 plus a certain percentage) is to be 83 per cent. of the surplus of the proceeds remaining after the deduction of (*a*) Cost of standard wages; (*b*) Cost of production other than wages; (*c*) Standard profits equivalent to 17 per cent. of standard wages.

Sliding Scales according to the Cost of Living.—It is generally recognised that the great increase in industrial unrest which took place during the few years immediately preceding the war was largely due to the efforts of the workers to maintain the level of real wages in face of the rising cost of living. At the outbreak of the war, the position was unsatisfactory and unstable, and the race between prices and wages led to an ever-increasing number of industrial disputes.

For a time after the outbreak of war, the struggle was suspended and claims for higher wages were held up, but this could not be for long. Whereas between 1900 and 1913 retail food prices had risen by nearly 15 per cent., in the short space of fifteen months (July, 1914 to October, 1915) the cost of living rose by as much as 30 per cent. Thus, while the steady rise in prices during the period 1900-1913 resulted in irritation and frequent strikes, the rapid rise in the early years of the war, along with the necessity for preserving industrial peace, produced the elaborate sliding-scales *whereby wages are automatically adjusted to the fluctuations in the cost of living.*

At present there are at least eighty cost of living sliding scales in operation in this country, covering some 2,750,000 workers in the following principal industries and services: building,

metal (excluding iron and steel), textiles (excluding cotton), railways, furnishing, civil service, police and tramways. The agreements whereby the scales have been established have in the main been negotiated directly by employers and trade unions, and with three exceptions all the scales provide for the adjustment of wages in accordance with the Ministry of Labour Cost of Living Index Number. The usual arrangement is that the index at a particular date is chosen as the starting-point (as a rule the current figure at the time of the agreement), and adjustments take the form of specified additions to, or subtractions from, time or piece rates for specified increases or decreases in the index number. Revisions are made at certain intervals, or in some cases only when the index number has risen or fallen by a certain amount.

Although there is scarcely a single instance in which the operation of a sliding scale ensures that the full amount of the increase in the cost of living is automatically made up in wages, this comparatively recent method of adjustment has worked with a fair amount of success during a difficult period. On the other hand, however, several objections to cost of living sliding scales have been raised.

(*a*) Imperfection of the index number. The Ministry of Labour's figure is objected to chiefly because it is based on an enquiry carried out in 1904, since which date considerable changes have taken place in the distribution of the expenditure of the working classes.[1] A greater proportion of the workers' income is now spent on clothing, a much greater proportion on the "other items", and less on food and rent.

Apart from this, Civil Servants assert that a cost of living figure designed for the labouring classes is not suitable as a basis for regulating the salaries of "black-coated" workers.

(*b*) The tendency for *real* wages to remain stationary. It is urged that very few improvements in real wages have been secured when such scales are in operation.

(*c*) The tendency for the full benefit of adjustments necessitated by rises in the cost of living to be confined to the lower-paid workers. A characteristic feature of the scales at present in force is that the real wages of higher-paid workers are diminished.

(*d*) Lastly, it is urged that such scales provide merely a "fodder basis" and are degrading since they suggest that only a bare subsistence wage is being paid.

Against all these objections advocates of the system insist that the cost of living sliding scale is merely a piece of machinery for maintaining the purchasing power of money wages, leaving

[1] The items included in the official survey are divided into five main groups of expenditure:—(1) Food, (2) Rent, (3) Clothing, (4) Fuel and Light, (5) Other Items, e.g., soap, soda, tobacco, cigarettes, and newspapers.

the labour organisations free to concentrate on the improvement of real wages. In the term "higher wages" two different propositions are really involved: first, higher *money* wages in order to maintain real wages; and secondly, higher *real* wages in order to raise the standard of living. In the past, Labour has had to expend its energies on achieving both these objects, which have consequently tended to become confused.

It is claimed for the sliding scale that it puts an end to the race between prices and wages, and so enables the workers to concentrate their attention upon raising real wages. Furthermore, it is urged that all the objections mentioned above apply only to the particular scales now in operation and would be obviated if (*a*) a more satisfactory index number were devised; (*b*) every scale provided for full compensation for higher cost of living whatever the basic rate may be; (*c*) no scale were adopted except on the understanding that the claims of the workers to higher *real* wages remained unprejudiced.

Profit Sharing.

Among the many schemes which have been devised during recent years with the object of creating a greater degree of satisfaction in the ranks of the workers, particularly during periods of good trade and labour unrest, that of *profit sharing* takes an important place. This may be defined as an arrangement whereby the employees receive a share, fixed in advance, of the profits of any industrial concern. Various methods have been adopted from time to time, but except in the case of the gas industry, the *cash bonus scheme* is greatly preponderant.[1] Under this system a certain proportion of the net profits of the concern is distributed at regular intervals among the workers, this distribution taking the form of a cash bonus, and being an addition to the ordinary rates of remuneration based on a time or piece rate basis as the case may be.

The most important advantages claimed for the profit-sharing principle are, first, that it minimises social friction and fosters goodwill between employer and employed; secondly, that it binds the workers more closely to the firm; and, finally, that the share in profits provides the workers with an incentive to greater output.

On the other hand, very strong objections have been made to this method of remuneration, the criticisms emanating particularly from the side of labour. It is urged by the workers against the system that :—

1. The primary aim of such schemes is to secure greater output, and that even though the workers do receive a share in profits the benefit to the employer in increased profits is still greater.

[1] Of the 252 profit-sharing schemes in existence at the end of 1925, 104 were adopting the cash bonus device.

2. Such schemes interfere with the solidarity of labour. It is pointed out that not only is the worker's allegiance divided between his firm and his trade union, but also that profit sharing schemes are necessarily introduced piecemeal by individual firms and so tend to render collective bargaining more difficult.

More general arguments against profit sharing are :—

1. Those schemes which have succeeded have been almost invariably introduced by men of outstanding ability and personality, or in industries enjoying an element of monopoly.
2. Profit sharing tends to check the mobility of labour when this may be socially desirable.
3. The reward which is offered to the worker is too long deferred to provide an effective stimulus to output.
4. The process of natural selection and survival of the fittest may be checked, since, unless profit sharing is generally adopted, inefficient firms are able to compete with more efficient profit sharing firms.
5. A steady wage is better for the worker than a fluctuating one.
6. Profit sharing should involve loss sharing. It is argued that if the workers are to share in profits they should share in losses also. This could scarcely be possible, however, unless they were granted a share in control and responsibility. Furthermore, profits are the reward of enterprise, efficient management and risk-bearing, in all of which those who reap the gain should be allowed to share.

Labour Co-partnership.

A system closely allied to profit sharing, and in many respects an extension of the same principle, is that of Labour Co-partnership.

The distinction usually drawn between the two systems is that whereas in the former the workers are excluded from the control of the business, in co-partnership the workers are granted a limited share in control either by being encouraged to acquire share capital in the concern and thus gain the ordinary rights and responsibilities of shareholders, or by being allowed to appoint one or more of their members as their representatives on the Board of Directors. During recent years, however, this customary distinction has become unreal and out of harmony with the facts, since in many profit sharing as well as co-partnership schemes, committees consisting of representatives of the management and of the workers have been set up for the purpose of administering the profit sharing or co-partnership fund ; while such committees frequently exercise wide powers,

in a consultative capacity, in regard to other details of workshop management.

As in the case of profit sharing, the general argument advanced in favour of co-partnership is that it tends to develop harmonious relations between employers and employed. On the other hand, all the objections advanced against profit sharing apply with greater or less force as the case may be.

It is clear that neither system is a panacea for industrial ills, as is sometimes claimed ; such a conclusion is justified neither by the actual results obtained nor by an examination of the principles upon which the schemes are founded.

Perhaps the most noticeable feature of published statistics relating to the progress of the profit sharing and co-partnership movement in this country as a whole is the large proportion of schemes which have ceased to exist. Out of 519 schemes which have existed at one time or another, no fewer than 267 have been abandoned, and in 90 cases the reason for abandonment was the dissatisfaction of either the employers or the workpeople with the results achieved.

The only industry in which profit sharing (or co-partnership) has been adopted on anything approaching a national scale is the gas industry, and it is important to notice that the wide extension of the movement has been largely due to the special conditions under which the industry is carried on, including (*a*) local monopoly ; (*b*) a great and assured demand ; (*c*) a strict regulation of dividends payable under a sliding scale system, according to which the profits are increased in inverse ratio to the price of gas.

It is evident, therefore, that the record of profit sharing and similar schemes has not been one of unqualified success, but undoubtedly the movement is of great value in the opportunity which it provides for the workers to acquire an insight into the problems of industrial management.

Legal Minimum Wages.

Generally speaking, State regulation of wages is looked upon with suspicion not only by employers but also by the workers in this country. Towards the fixing of legal minimum rates, however, labour has not shown the same opposition and, indeed, some sections of the workers have striven to secure a national minimum wage to cover the whole of industry.

Apart from the Coal Mines Minimum Wage Act of 1912, temporary war legislation due to the necessity for State control of the labour supply and the elimination of disputes, and special minimum wage legislation for agriculture, State intervention in the sphere of wages in this country has been confined to the protection of low-paid workers in certain industries under the *Trade Boards* system.

The first Trade Boards Act, that of 1909, carried into effect

a reform which had been advocated for many years, and which was rendered inevitable by the disclosure of the terrible conditions which existed in the *sweated* trades. In 1906, for example, an enquiry into Earnings and Hours of Employment in certain industries carried out by the Board of Trade revealed the fact that in some industries, where the workers were not organised, the wages paid were extremely low, too low, in fact, to enable the worker to maintain a reasonable level of subsistence. The Act of 1909 was essentially experimental, but its main provisions were as follows :—

1. In those trades to which the Act applied, minimum rates of wages were to be fixed by a body, known as a *Trade Board*, composed of representatives of employers and employed in equal numbers, with the addition of some independent persons called " appointed members ", of whom, in the case of a trade in which women were largely employed, at least one was to be a woman.

2. Trade Boards were to be set up in four trades only, in which conditions were known to be extremely bad : (*a*) chain making ; (*b*) paper box making ; (*c*) lace finishing ; (*d*) ready-made and wholesale bespoke tailoring.

3. The Board of Trade was to have power to move for additional Boards in trades in which the prevailing rate of wages was " exceptionally low ". The Board of Trade could issue a Provisional Order for the establishment of a Board, but this had to be confirmed by Parliament.

4. The minimum rates, when fixed and made obligatory, were to be enforceable by the machinery of the criminal law.

The Act worked well, and in 1913 four more trades were brought within its scope, so that, roughly, half a million workers in all were covered. The advent of the war, however, brought about considerable changes. Employment increased, both for men and women, and, as the end of the war approached, fears were entertained that the wages of unorganised workers, particularly of women, might fall rapidly without a corresponding reduction in the cost of living.

In 1917, the Whitley Council on the Relations between Employers and Employed, which in its First Report had recommended the establishment of Joint Standing Industrial Councils in well-organised industries (see *post*, page 352), issued its Second Report, and thereby advocated that, *in those industries in which there existed little or no organisation*, the machinery of the Trade Boards Act should be applied " pending the development of such degree of organisation as would render possible the establishment of a National Council or District Councils ". These recommendations led to the passing of the Trade Boards Act of 1918, which was of much wider scope than the Act of 1909, and which aimed at providing a higher standard of life for the workers.

The passing of the Act of 1918 was followed by a large increase in the number of Boards. Up to December, 1921, sixty-three Boards in all had been set up, covering about 3,000,000 workers. For some time they appear to have functioned very satisfactorily, possibly because during the war and post-war boom the movement of trade board wages was almost uniformly upwards, and complaints were consequently few.

In the year 1920, however, the prevailing depression in trade and industry caused the high wages to press heavily upon manufacturers and traders. Furthermore, the sudden enlargement in the scope of the Boards involved a great increase in administrative work for which the Ministry of Labour was not prepared, while the problem of fixing wages was rendered exceptionally difficult on account of the disappearance of " normal " rates of wages. As a result of these conditions, the standard of administration fell, rates were not strictly enforced, complaints of evasion were frequent, and urgent appeals were made for the modification of the Acts.

This situation led to the appointment in 1921 of the *Cave Committee*, which was requested " to enquire into the working and effects of the Trade Boards Acts, and to report what changes, if any, are required ". At the enquiry which was held many charges were brought against the Trade Board System by the representatives of the employers. The complaints were directed mainly to the facts that the minimum rates fixed by the Boards were too high and failed to make provision for different local conditions; that the rates fixed increased the competition of foreign producers and of home traders not employing labour (e.g., one-man businesses); that the lines of demarcation between different trades, the multiplicity of Boards set up, and the lack of co-ordination between them created unfair competition, friction and confusion in traders' establishments; and, finally, that the length of time required for revision of the rates rendered it impossible to modify wage-rates according to prices and the cost of living, thus causing hardship and loss.

None of these complaints was borne out entirely by the evidence, but they succeeded in impressing the Committee which, while it recognised the valuable work accomplished by the Boards in a number of directions, proposed to limit their functions to a considerable extent. The main recommendations of the Committee were :—

1. That the power of the Minister of Labour to apply the Acts to a trade be confined to cases where he is satisfied (*a*) that the rate of wages prevailing in the trade is unduly low (as in the Act of 1909); *and* (*b*) that no adequate machinery exists for the effective regulation of wages throughout the trade (as in the Act of 1918). In this way it

was proposed to limit the application of the Trade Board principle to sweated workers only.

2. That a Trade Board be authorised to fix general minimum time and piece rates and that such rates should continue to be enforceable by criminal prosecution ; but that for special classes of workers special minimum time and piece rates above the ordinary minimum should be fixed without the interference of the " appointed members ", and that these should be enforceable by civil proceedings only.

3. That in any case in which, in the opinion of the Minister, a primâ facie case exists for applying the Acts to any trade, a public enquiry be held and the report of such enquiry be duly considered.

At the time of writing, no legislation embodying the above regulations has been passed, but in July, 1922, the Minister of Labour announced that no Trades Boards would be set up in future except under the conditions mentioned in the first recommendation of the Committee. The findings of the Committee have, however, been subjected to considerable criticism, particularly from the workers' side. It is urged that the above recommendations have been too much influenced by temporary conditions arising out of an abnormal phase of industry, and that the Act of 1918 should be given a fair trial in more normal conditions.

Whichever view is justified, it is an indisputable fact that the application of the Trade Board principle has served a useful purpose in the industrial system, and that any sacrifice of this principle is to be deplored. Wages in Trade Board industries have been substantially increased, " sweating " has been abolished and the standard of life of the workers has been improved. In many industries wages have been raised appreciably simply by forcing them up to the level justified by marginal productivity. In other cases, marginal productivity has itself been increased, partly through the increased efficiency of labour and partly through improvements introduced by the employer. Thus the Trade Boards tend to divert to low-paid occupations their share in the increase of the wealth of society, and to lessen the relative superiority in this respect of the more strongly organised trades. On the other hand, the enforcement of an effective minimum wage protects good employers against unscrupulous competitors prepared to take advantage of the economic weakness of the workers, and provides an incentive to employers to improve their methods of production and to eliminate waste. In other industries in which the workers are well organised this stimulus has been provided by trade union pressure, but, contrary to the fears entertained in many quarters, minimum wage legislation has not checked the development of trade unions. It has, in fact, greatly improved the organisation of the workers.

National Minimum Wage.

Hitherto, the Government of this country has accepted the general principle that wage fixing is best left to collective bargaining between employers and employed, and has been content with the enforcement of a minimum wage in the " sweated " trades covered by the Trade Board machinery. But although several million workers are provided for in this way, the arrangements fall far short of the legally enforced *national* minimum wage which is advocated in many quarters.

In favour of such a minimum it is contended that it would ensure a minimum standard of existence for the whole of the working population, thus increasing efficiency as well as removing poverty; that it would lead to the closing down of those industries which cannot pay a living wage to the workers engaged in them; and that it would prevent the re-grading and " shuffling " of labour by unscrupulous employers in an attempt to avoid payment of the legal minimum wages fixed by the Trade Boards. Critics of the proposal point, in the first place, to the difficulty of determining the level at which a national minimum should be fixed. If the level were fixed at a low figure the legislation would scarcely achieve its object: if, on the other hand, a high minimum were introduced, many low grade workers would not justify their employment in a competitive system, and would be discharged. It is also objected that there would be difficulty in determining the relationship between the minimum for men and the minimum for women workers, and that the fixing of a minimum would make for inelasticity in the wages system. Wage-rates, it is contended, should be responsive to changes in demand and capable of rapid adjustment to changing conditions, whereas the tendency is for the minimum to become the maximum.

By the introduction of exemptions from and modifications of the minimum, some of these difficulties might be overcome. Thus, some advocates of a national minimum propose that the difficulty of fixing the level of the minimum should be met by making exceptions in the case of certain workers; others would make no such exceptions, and would prefer to maintain any workers thrown out of employment as a public charge.

The success of any such scheme must depend very largely on the manner in which these difficulties are overcome, but, in any case, it must be borne in mind that the minimum which any community can afford to bear is conditioned by the efficiency of that community in wealth-production. This is illustrated by the fact that in Australia, New Zealand and in certain States of America, where experiments in national minimum wage legislation have been made, the legislators are said to have fixed the minimum too low, and thus to have failed to carry their policy to its logical conclusion. But it is very questionable whether these new, developing countries could support the burden of a higher minimum.

Family Endowment.

The primary object of a national minimum wage is to secure a minimum standard of existence for the worker, considered as an individual. The object of family endowment is wider: it aims at securing the existence of the average working-class family. In recent years, the theory of distribution, especially in relation to the remuneration of hired labour, has been much criticised on the ground that "too much attention has been paid to distribution among factors of production, and not enough to distribution among families". It is contended that the family as an economic unit has been neglected, and that society, in consequence, is not making the best use of its resources. The object of family endowment is to ensure that the worker with a family shall receive a greater share of the product of industry than the worker with no family responsibilities, so that the needs of the family—in which any State has a vital interest—shall be more adequately met.

To this end a number of different schemes have been proposed, and some of them have been put into actual operation. Possibly the most important is the system of *industrial pooling by employers*, such as is now operative in France, where it covers over half a million workers. In addition to the ordinary wages paid to the workers, the employer pays a supplementary sum, based on the size of his business, into an equalisation fund, which is administered and distributed for the benefit of married men, and thus prevents discrimination against the employment of men with families. To a large extent, of course, the State is already making strong efforts to protect and foster the existence of working-class families, for these benefit more than any other section of the community by the growth in the sense of public responsibility, now increasingly evidenced in the extension of the principle of social insurance, and in the constant increase of state expenditure on such public services as housing, education, school meals, and infant welfare.

Whatever the type of scheme suggested or adopted, the broad ground on which family endowment is based is that, by regulating distribution more closely in accordance with need, it will increase human welfare, and, indirectly, add to the efficiency of the labour force. It is claimed that the making of direct money allowances, "by concentrating a larger proportion of the resources of the community in the hands of those with young families, would stimulate the demand for necessaries and reduce expenditure on drink, betting", etc.

Clearly, such changes necessarily involve many complicated social problems, and opponents of the principle of family endowment have directed attention to a number of important disadvantages. It is urged, in the first place, that the individual, and not the family, should be regarded as the economic unit for the purposes of wage-payment. Why, it is asked, should

the single man, doing the same work as a married man, receive less for his services, and thus, in effect, have to contribute to the support of another man's children ? Secondly, it is maintained that unless the system is adopted throughout industry, there will be a tendency for single men to shun industries in which allowances are granted, and for married men to flock to them. If the system is adopted in some industries, the married men therein receive a bounty from society as a whole, for it is obvious that the employer who contributes to the allowances must recoup himself by charging an increased price for his products, or by lowering his wage bill. As the latter is unlikely, the community, as a whole, pays the allowances in increased prices for the goods concerned. Other objections are that the system might lead to a big increase in the birth-rate—with the object of increasing the payment due to the family—and that family allowances might check production by removing one of the strongest incentives to effort on the part of the parent.

As yet, family endowment is only in its infancy, and it is impossible to estimate the force of the arguments against it. Its possibilities in the mining industry were explored by the Coal Commission, and family allowances were recommended as a means of mitigating the effects of the proposed reduction in wages. The recommendation has received little support, however, and in September, 1930, the Trades Union Congress expressed definite opposition to the system.

TRADE UNIONS

It has been explained in an earlier chapter that for a number of reasons the individual workman is at a disadvantage in bargaining with his employer. Not only is the employer a combination in himself, " buying services wholesale while the worker sells his labour retail ", but in the art of bargaining the employer's education and training place him in a superior position as compared with the single worker, usually with little knowledge and slender resources. To overcome this difficulty and to protect the interests of the worker modern Trade Unionism came into existence, its essential feature being the *substitution of collective for individual bargaining.*

Trade Union Development and Structure.

Associations of members of a trade existed in very early times. Thus, in the Middle Ages, the " craft gilds ", to which both masters and men were admitted, established certain common rules, and, in spite of a certain exclusiveness, maintained a high standard of work. Such associations, however, belonged to the " small " system of production and differed from the modern trade union in the important respect that the latter is essentially an association of wage-earners and of wage-earners only.

During the eighteenth century the Industrial Revolution

fundamentally changed the structure of industry. Whereas previously every master and journeyman had been apprenticed and there was a considerable likelihood of an apprentice ultimately becoming a master, under the new industrial conditions such prospects became ever more remote. The inevitable tendency was for masters and men to separate into different social classes with opposing interests, for large undertakings require considerable capital and a high degree of knowledge and ability, which very few workmen can supply. Thus, the individual workman could no longer look forward to becoming an employer. Consequently, a new type of labour-organisation was required to meet the changed conditions, and modern trade unionism came into existence.

During the craft gild period, an important part had been played by authoritative regulation in the determination of industrial conditions. Under the famous Statute of Apprentices, 1563, rates of wages, hours of labour and conditions of apprenticeship were fixed by justices of the peace. That kind of machinery definitely broke down towards the end of the eighteenth century, and not unnaturally the period of transition was one of difficulty and confusion. The early trade unions looked back to the old machinery and imagined that it could still be used and enforced to improve their economic position. A new situation had arisen, however, and Parliament expressed the view that in future more reliance would have to be placed on the working of economic forces and on the freedom of competition. It was assumed that the individual could safely be left to pursue his own interest, and accordingly, in 1799, an Act was passed, consolidating previous enactments, and prohibiting all combination with the object of obtaining an advance in wages or of lessening the hours of work. The Combination Laws were repealed in 1824, and from this date up to 1840, Trade Unionism became a revolutionary movement closely associated with Chartism and Owenism. After the failure of these idealistic schemes, however, more practical counsels prevailed, and in the fifties of the nineteenth century the basis of modern Trade Unionism was laid.

At this period, attention was devoted to the organisation of unions on a *craft basis*, i.e., upon the skilled occupation of the worker, and not upon the industry in which the worker is employed. Such *craft unions*—of which examples are the Amalgamated Society of Engineers, the Bank Officers' Guild, and the National Union of Clerks—have certain obvious advantages. They emphasise the professional spirit and so are instrumental in maintaining a high standard of work; they have an educational value in that the members, all being engaged in the same process, can understand and take an intelligent interest in the affairs of the union; lastly, they are strong on the financial and friendly society side. Opposed to these advantages are two great

weaknesses—employers may play off one union against another, and such unions are unable to institute big social changes.

During this constructive period, the idea of maintaining a permanent staff of skilled officials also arose, and political action, although not ignored, did not occupy a prominent place. The position may be summed up in the statement that the facts of the existing situation were recognised and the unions set out to modify these facts in the interests of the workers so far as this could be achieved on moderate and conservative lines.

In the eighties and nineties a more militant policy was pursued and *general unions* organised on a class basis were formed. The period was one of great trade depression, and what is known as the "new unionism" came into prominence. The *New Unionists* did not favour the friendly society basis of the craft unions and the pursuit of the old conciliatory policy. On the other hand, they catered for unskilled labour and for workers passing from one industry to another, and adopted more vigorous methods. They aimed, not at the maintenance of a standard in a trade, but at the nationalisation of industry and the enforcement of a national minimum wage.

After 1911, a still more advanced type of union arose, known as the *industrial union*, the basis of which is that all the workers in one industry (including, of course, numerous crafts and processes) should belong to one large union. The Miners' Federation and the National Union of Railwaymen are important examples of industrial unions, which have certain distinct advantages. They present a united front to employers and facilitate national agreements, while they pave the way for workers' control of industry (if this is to come). Their disadvantages are, first, that they must necessarily fuse very heterogeneous groups, and hence the bonds of union are not as close as they might otherwise be; secondly, the special interests of small groups of special craftsmen may easily be overlooked; and, lastly, industrial unionism cuts across craft unionism.

From the famous definition of a trade union as a "continuous association of wage-earners for the purpose of maintaining or improving the conditions of their employment"[1] it is clear that there is a static and dynamic aspect. The policy is one of maintaining and consolidating the present position and of striving constantly to improve that position in the future.

On the purely industrial side there are over 1,000 separate trade unions in this country, ranging from the large combinations described above to small groups, some of which have a membership of no more than a dozen. During the last decade, and especially during the war, the trade union movement has made enormous strides, the growth in the total membership reaching its climax in 1920. Since that year, owing to the paralysing effects of unemployment, membership has fallen off, but, in

[1] B. and S. Webb, *History of Trade Unionism*, p. 1.

spite of these decreases, the numerical strength of the unions is considerably greater than before the War.

There have been several recent attempts to secure "less unions and more unity", a policy which is being steadily advocated by a large section of the movement. So far, however, attempts to secure federation on a national scale have not been favourably received, although British labour is now represented by several strong centralised organisations. The *Industrial Alliance* of labour in the mining, railway, transport, shipping and engineering industries, covers nearly one and a half million workers. Each year delegates from trade unions representing over three and a half million workers meet as the *Trades Union Congress*, the General Council of which is gradually developing into the central controlling and directing organ of the labour movement on all large issues. In addition, this General Council is brought into the closest touch with the Labour Party, both inside and outside Parliament, by the *National Joint Council*, the chief duties of which are to settle all questions affecting the labour movement as a whole, and to secure a common policy and joint action, whether by legislation or otherwise, on all matters affecting the workers as producers, consumers and citizens. The power of these organisations was clearly demonstrated during the great General Strike of 1926, when the business life of the community was paralysed to such an extent that, on the termination of the strike, the Government was led to institute legislation with the object of restricting that power so far as seemed necessary in the interest of the community generally.

Employers' Associations.

On the *employers' side* there is nothing which brings the movement to a focus in the same way as the Trades Union Congress, the only meetings of such a nature being those of the Manufacturers' Association and the Federation of British Industries, but in almost all trades there is an organisation of employers in the *Employers' Federation*, which is as exhaustive of employers as is the union on the workers' side. Thus, combinations exist on both sides, and in both cases there is a defensive and offensive aspect. Generally, the employers' side aims at maintaining the *status quo*, while the workers' side aims at preventing a state of stagnation from being established.

Trades Unions and Wages.

Undoubtedly, the most important functions of Trade Unionism are those which are exercised in regard to wages, and, indeed, many of the questions which arise in connection with the movement can only be understood by considering them in relation to wages; e.g., attempts to restrict output, to resist the introduction of new machinery and to limit the number of apprentices entering a particular trade.

In considering the influence of trade unions on wages it is important to distinguish between the direct influences (i.e., the effect of the substitution of collective for individual bargaining) and the indirect influences (i.e., the effects of trade union organisation on the general productivity of industry).

The indirect effects may be briefly summarised as follows :—

A. Adverse Effects.

1. Trade unions tend to make effective the hostility of the worker towards improved methods of production likely to lead to a decline in the demand for his service, or to alter the conditions of his employment.

It should be remembered, however, that this policy on the part of the workers has a certain justification, in that although the introduction of labour-saving devices does not cause unemployment in general, the consequences for the particular workers affected are serious enough, since they are, at least temporarily, deprived of their means of livelihood. Furthermore, the introduction of machinery has often been the occasion of an attempt to reduce wages, and, in certain cases, involves considerable danger to the workers, as for example, the introduction into mines of coal-cutting machinery and electrical devices, which was resisted by the miners on the grounds of safety.

2. Trade unions are charged with encouraging their members to restrict the amount of work performed in a given time, in order to make more work for others. This policy of *ca' canny* is based on the same " work-fund " fallacy as that of resisting the introduction of labour-saving devices, and has a detrimental influence on the worker's character and efficiency. It is justified only in those cases where employers have tended to " cut " rates and unduly to speed-up production.

3. Many unions have attempted to create an artificial scarcity in the supply of their labour by restricting the number entering the trade.

As a general policy this is undesirable and likely to cause re-actions, such as the substitution of machinery for labour. In any case, such restrictions cannot raise the general level of wages throughout the country, and any increases in wages which may result are secured at the expense either of the consumer or of workers in other trades.

4. By insisting on a *standard minimum wage* [1] men of

[1] It has been pointed out that before the war these standard rates had a high degree of stability, and the relations between wages in similar occupations varied only within narrow limits. Indeed, there was a pre-war " system " of wages in the sense that the rates for various occupations were well-understood and generally accepted, and a change in any one rate would inevitably lead to a change in other rates. The effect of the war was to destroy this stability. The rapid rise in prices, the high profits in munition making, dilution, Government control of the railways and mines, all interrupted the gradual and continuous adjustment of wages to changing economic

more than average ability are kept down to the general level. This disadvantage, however, is inevitable from the workers' point of view. The central feature of Trade Unionism, as we have seen, is that it substitutes collective for individual bargaining. Collective bargaining is more or less impossible unless there is some standard to form a basis for bargaining; it would be clearly impracticable for a trade union leader to bargain for different rates of wages for different individual workmen.

These difficulties may be overcome to some extent by the devising of suitable methods of remuneration which do not contravene the principle of the standard wage.

B. Beneficial Effects.

1. Trade Union organisation increases the general efficiency of the individual worker.

2. By insisting on standard rates, the standard of living of the workers is protected and a superior class of workers is built up. A low rate of wages, as we have seen in a previous chapter, involves a low standard of living, and a consequent low rate of productivity.

3. The levelling up of wages tends to eliminate the unfit employer.

4. The pressure of rising wages undoubtedly acts as a stimulus to the invention of labour-saving devices and to the adoption of economical methods of production.

In considering the *direct effects* of trade unions on wages it is important to remember that there are forces in operation in the economic system which exert a more powerful influence in determining the remuneration of labour or of any other agent of production than any efforts on the part of either trades unions or employers. These are the forces, already discussed in earlier chapters, which tend to bring about a position in which the agents of production tend to be remunerated according to their marginal worth in industry. If these forces operated with perfect freedom, and competition were not only free but equal, it would be difficult to maintain that trade unions could exercise

conditions which had taken place before the war. The existing machinery of collective bargaining was too cumbrous to cope with these sudden and extensive changes. In the struggle for wage-advances, unskilled labour, being for the first time insufficient to meet the demand, was able to improve its relative position. This dislocation of pre-war wage relations is an important element in the *post-war wages problem*, and lies at the root of much of the dissatisfaction which has resulted in strikes and lock-outs since the war. To-day, the old basis of wage settlements—comparison with allied trades—is largely valueless, since those who have not maintained their pre-war position are dissatisfied, while those who have improved their relative position are unwilling to go back. Again, at the present time wages in the *sheltered industries* (e.g. the railway industry) are relatively higher than in those trades which are exposed to the full blast of foreign competition.

It is urged that what is required is not, indeed, a return to the pre-war level, but a step forward to a new system with the pre-war stability.

any real influence upon wages. Such conditions, however, do not obtain. Tendencies on the part of employers work more quickly than tendencies on the part of the worker. This is inevitable in the nature of the case, as it is part of the business of an employer to know when he can lower wages, but it is not part of the business of an individual workman to know when he should ask for an increase or consent to a decrease. Again, as we have seen, the worker is at a decided disadvantage in bargaining with his employer. For these reasons, it is clear that unorganised workers may be paid below their marginal worth. Through trade unionism, with its skilled officials and efficient organisation, the individual workman is brought into a position of greater equality in these respects, and the greatest function of the trade union is to ensure that the workers are paid up to their marginal worth.

In certain circumstances, the strength of a trade union may be such that the particular class of labour concerned may command monopoly wages which may temporarily rise above the marginal worth of the workers. The power of the trade union to raise wages in this way depends on the elasticity of demand for the product, and the proportion which the wages concerned bear to total cost of production. The power will be greatest where demand for the labour concerned is highly inelastic owing to the existence of a very inelastic demand for its products. On the other hand, the power of the union is limited where demand is elastic and wages form a high proportion of total cost, as, for example, in the case of coal-mining. Increased wages in that industry will add considerably to production costs and be ultimately reflected in the supply price of coal, thus resulting in a considerable falling off in the demand. Again, wages cannot be increased beyond the limit set by the marginal worth of labour except at the expense of profits, but if profits are decreased beyond a normal level, then, in the long run, adequate supplies of capital and organisation will not be forthcoming, and the excess supply of labour will again lower its value. Moreover, in the face of trade union attempts to raise wages unduly, employers will seek for substitutes, new methods and new machinery with the object of reducing the need for the services of the monopolistic workers. Thus the power of the bricklayers' and stonemasons' unions has been considerably diminished by the extended use of concrete, steel, and wood dwellings, while the substitution of oil for coal in many industrial and domestic uses has to that extent lessened the bargaining power of the Miners' Federation.

Trade Unions and Hours.

Statistics show that strikes in favour of the reduction of hours have neither been so numerous nor so successful as those in favour of increases of wages, the reason apparently being that

employers find it difficult to forecast the effect of a shorter working day. During recent years, however, the increased nervous strain caused by the general speeding up of production and the development of a machine system of industry has increased the demand for reduced hours.

Again, the essential monotony of modern industrial life and the greater claims of politics, literature and the arts upon the interests of the workers all increase the tendency " to buy more leisure ". Thus, the case for a shorter day might be justified even if it involved an economic loss, but recent psychological investigations suggest that in numerous instances the case has an economic justification. It has been shown that when hours are shortened, economies are generally effected : overstrain is eliminated, accidents are reduced, and generally the fixed capital is used more economically, so that losses and expenses are diminished.

The Multiple Shift System.

In certain industries the reduction of working hours involves the establishment of a system of *shifts*, i.e., the workers are divided into groups, which work alternately for a certain number of hours per day. Indeed, the late Lord Leverhulme, in his book on the Six-hour Day, makes out a case for the working of *multiple shifts* in all industries. Multiple shifts are, however, most likely to be adopted in those industries in which the cost of production is mainly interest on capital, and not wages. Thus, the highly-capitalised industries, where expensive machinery is used, are most favourable for multiple shifts, for in these cases the cost of production per unit will be decreased if the machinery is worked longer. The machinery will, it is true, wear out more quickly, but this will not be a great disadvantage, as new inventions frequently cause the scrapping of machinery before it has completely worn out. It must be recognised, however, that it would be impossible to introduce simultaneously six-hour shifts in all branches of industry ; it would be difficult, for example, to have six-hour shifts in agriculture and in the building trade.

THE ADVANTAGES OF A SYSTEM OF MULTIPLE SHIFTS may be briefly stated to be : (*a*) Increase of output per person ; (*b*) More leisure for the worker ; (*c*) More opportunities for better education and physical training ; (*d*) Saving of overhead charges ; (*e*) Diminished demand for capital, which would lower the rate of interest.

There are disadvantages, however, both to the employer and to the worker :—

THE DISADVANTAGES TO THE EMPLOYER ARE : (*a*) the lower efficiency of night work ; (*b*) the difficulty of making arrangements for workers to use the same machinery owing to jealousy,

etc.; (*c*) the difficulty of fixing responsibility for broken parts and dirty machinery; (*d*) the additional expense involved in the use of artificial light.

To THE WORKERS THE DISADVANTAGES ARE: (*a*) the derangement of domestic affairs, particularly in the case of women workers; (*b*) the interference of the system with the regularity of the workers' life; (*c*) the social life of the worker is destroyed.

It is wrong to generalise regarding the effect of shortening the working day, because circumstances differ in each industry. It is safe to say, however, that as industrial efficiency is increased, reductions in hours become more and more practicable.

THE SETTLEMENT OF INDUSTRIAL DISPUTES

From all that has been said in the foregoing pages it will be seen that there are innumerable points at which the interests of Capital and Labour are opposed. It is not surprising, therefore, that these differences frequently result in *strikes and lock-outs*,[1] and in this country the strike and the threat to strike are regarded as an essential weapon in the bargaining power of Labour. But after all allowance has been made for the possible advantages of strikes, it is obvious that the less they are needed the better, especially when the strike affects the public interest and is not strictly confined to the opposing interests or to particular classes. Accordingly, various devices have been adopted in different countries with a view to preventing these wastages of industrial power, or at least with the object of preventing strikes and lock-outs from being undertaken except in the last resort, and after full publicity has been given to the grievances complained of or to the benefits expected. The more important of the schemes which have been adopted are briefly reviewed in the following paragraphs.

Conciliation.

In this country the first serious legislative attempt to facilitate the settlement of industrial disputes was made in 1896, when a Conciliation Act was passed. The Act was largely permissive in character and provided for the registration of any Conciliation or Arbitration Board on application to the Board of Trade, which was also given power to enquire into any dispute and appoint conciliators or arbitrators for the purpose of bringing the parties together, or, with the consent of both sides, of adjudicating on the matter in dispute.

These powers have been used to a considerable extent, and such important work was done under the Act that in 1911 the

[1] The strike is, of course, the refusal of workers to continue in their employment unless certain conditions are fulfilled or a certain wage paid. The lock-out, on the other hand, is the refusal of the employer to allow his workmen to continue their duties because they will not accept his terms.

Government was inspired to strengthen the scheme by instituting a joint panel of employers and representatives of labour, known as the Industrial Council, and by appointing a permanent official. This Council has justified its existence and has made useful inquiries into the causes of strikes.

The essential feature of conciliation is that a settlement is reached between the two sides, with or without the mediation of an outside person. In 1913, there were 343 Permanent Boards in existence in this country (including those not originated under the Act), and during the period 1908-13, over 4,000 cases were considered, and of these some 2,500 were settled.

Arbitration.

The essential feature of *voluntary arbitration* is that the disputants consent to submit the question at issue to an outside person who is asked to give a decision, which, however, is not legally binding on the parties.

Arbitration is rarely resorted to except when other means have failed, in which case there may be a Permanent Board or the parties may agree upon an arbitrator or arbitrators, or the Ministry of Labour may appoint one or more persons at the request of the parties.

The most important development during recent years has been the institution of arbitration machinery under the *Industrial Courts Act*, 1919. This Act set up a Standing Industrial Court consisting of independent persons (one of whom is always chairman), of workers' representatives and employers' representatives, all appointed by the Minister of Labour, together with one or more women. For each case the President of the Court nominates such members as he thinks fit. Any dispute may, by consent of both parties, be referred to the court for settlement. The Minister of Labour may refer to the court for advice on any matter connected with trade disputes and, without the consent of either party, may hold an inquiry into any dispute. In both court and inquiry, however, the award is not binding on the parties, although in practice it is generally observed.

Already, considerable use has been made of the Act, and one or two cases of national importance have been adjudicated upon by the Industrial Court, notably the Dockers' dispute of 1920 and the Engineering lock-out of 1922. The great value of such inquiries lies in the publicity they receive ; details of costs, profits and wages are brought into the light of day and public opinion is thereby influenced.

The most sensational attempts to diminish industrial warfare are unquestionably those which have been made in recent years in New Zealand and Australia, where systems of *compulsory arbitration* have been adopted, under which strikes and lock-outs are forbidden. It is impossible to say whether these Australasian schemes will eventually prove successful, although great claims

are made on their behalf. The fundamental difficulty is to secure a settlement which, while it is satisfactory to employers and workers, will not at the same time retard industrial changes. It is pointed out that in Australia and New Zealand the chance that any grave results will follow from mistaken decisions is greatly reduced by the fact that agriculture, the most important industry in those countries, remains outside the scope of the Acts, so that any labour or capital which is discouraged from finding industrial employment has an outlet in connection with the land.

In so highly industrialised a country as England, however, where methods of production are constantly changing, it is possible that the adoption of compulsory arbitration might result in grave calamity.

Whitley Councils.

A fuller discussion of the Whitley Scheme, recommended by the Whitley Committee of 1917, is reserved for the succeeding chapter, but the essential features consist in the setting up of joint standing industrial councils based on :—

1. WORKS COMMITTEES, representative of the management and of the workers employed, instituted in particular works to act in close co-operation with the district and national machinery.
2. DISTRICT COUNCILS, representative of the trade unions and of the employers' association in the industry.

The application of the scheme is purely voluntary and aims at the settlement of disputes before they have reached an acute stage. Its great importance lies in its recognition of the workers' claim to a share in the control of industry.

It will be observed that the distinctive feature of English methods at the present time is the confidence reposed in the disputants to reach a settlement of their differences by mutual discussion. Neither employers nor workers are willing to accept the principle of compulsory arbitration.

THE PROBLEM OF UNEMPLOYMENT

In analysing the causes of labour unrest, we found that insecurity occupied a prominent place. The contingencies which threaten the worker's life are numerous—there are the possibilities of sickness, old age, or death—but the fear of none of these reacts so strongly upon the worker as the risk of unemployment, which has been well described as the " shadow side of progress ".

Throughout the greater part of the nineteenth century the view prevailed that unemployment was largely due to defects in individual character, but towards the end of the century that view became no longer tenable. Specialised industry, necessarily carried on ahead of demand, had become subject to cyclical

depression, and it had to be recognised that unemployment was only one symptom of a deeper disease, and that in unemployment the workers were reaping the baneful harvest sown by the community generally in its organisation of industry and trade. General unemployment is due to society's failure to adjust its economic organisation to changing conditions. As we have seen, the demand for labour is due to the demand for the commodities which that labour produces. But man's need is never satisfied; human wants constantly increase both in extent and variety. Every increase in population is accompanied by a more than proportionate increase in the demand for commodities, and thus in the demand for labour. Employment should, therefore, increase with the growth in the size of population and with the rise in the standard of living, and, in so far as producers are themselves consumers, the demand for labour should, theoretically, always be in excess of the supply. Hence unemployment is a truly remarkable feature of a society where full satisfaction of wants is not achieved, and can only be explained in general terms by the fact that the supply of labour is not properly adjusted to the demand.

Even before the war the problem of normal unemployment had begun to manifest itself, and in recent years the view has gained ground that unemployment is a pressing social problem and a national responsibility.

The Causes of Unemployment.

The problem of unemployment is extremely complex, and does not arise from any one cause but from many distinct though closely related factors in the economic structure of society. The principal of these are :—

1. Seasonal Fluctuations of Particular Trades.—The differences between summer and winter employment in the building trade or in agriculture are familiar instances of seasonal fluctuations. Detailed inquiry shows, however, that fluctuations of this nature are by no means confined to a few well-known instances, but are found almost everywhere. Most trades have their own characteristic periods of fluctuation. Thus, January is the busiest month at the docks; May, June and July in the clothing trades; July and August for the railway service and all occupations at holiday resorts, whilst in December, coal-mining, the post-office service and the gas and electricity works all show their largest volume of employment.

Some of these fluctuations are the direct result of climatic conditions (for example, those in building and agriculture); others appear to depend on fashion alone (for example, those in the printing trade); in others, both climate and fashion have their effects.

2. Permanent Changes in Industrial Structure or Methods.—Under this head may be included the introduction

of new machinery and processes; the substitution of one product for another; the transference of an industry from one district to another, and similar changes, all of which involve a discontinuity of production, with the effect that, in consequence of the immobility and specialisation of labour, some workers will be either permanently or temporarily thrown out of employment.

3. A "RESERVE OF LABOUR".—Irregular variations in the demand of individual employers for workpeople necessitate and produce a standing "reserve of labour" or a "margin of idleness" as an integral part of our industrial system. The most marked example of this chronic under-employment is the case of dock labour, where casual employment is the rule and where, even in the periods of greatest activity, there is a margin of unemployed.

"Broadly speaking, the industrial team of the country, not only in general, but also in particular trades, is numerous enough to carry on all old-established industries when times are good, and when conditions are only moderate or bad there is a varying amount of unemployment which, in the decade before the war, caused the annual averages of unemployment to swing between, say, 2½ per cent. and 7½ per cent. The causes we have already mentioned are sufficient to explain the minimum of 2½ per cent. The need of a reserve of labour to enable the country to expand its trade in good times means that even when conditions are normal this reserve will account for a further 2½ per cent. of unemployed. . . . But we are of opinion that the minimum number of unemployed in insured trades will not, save in years of specially good trade, fall below 400,000 or 500,000 men and women, unless ways are found of modifying the causes to which we have referred. This floating surplus—partly the reserve and partly the wastage of industry—can probably never be entirely dispensable; but it should be easily possible for those, at all events, who form the *bona fide* reserve to be properly taken care of and maintained at the charge of industry".[1]

4. THE CYCLICAL FLUCTUATION OF INDUSTRY.—This factor, which is discussed in Chapter 30, is by far the most important element in the unemployment problem and refers to the roughly simultaneous alternation between good and bad trade which can be observed in nearly all branches of industry. As will be shown in the chapter mentioned, this fluctuation extends far beyond "industry" in any narrow sense, and leaves its mark on almost all economic activity. Moreover, the phenomenon is international in its scope, and a roughly contemporaneous fluctuation can be traced in all highly-industrialised countries. In regard to unemployment, these cyclical fluctuations exert a most marked influence on the "unemployment percentage", which falls when trade is good, but shows a marked increase when depression sets in.

[1] W. T. Layton and others, *Is Unemployment Inevitable?* pp. 6-7.

5. OTHER FACTORS.—Besides the four main factors mentioned above, numerous others have to be considered, among which may be mentioned: (*a*) Deficiencies in industrial training, with the consequent tendency to an over-supply of unskilled labour; (*b*) exceptional dislocation, such as strikes or lock-outs in a principal industry; (*c*) the existence of a class of men who, through personal deficiencies, whether of intelligence, physique or character, are substantially "unemployable"; (*d*) the expulsion from "blind alley" occupations of untrained and unskilled workers who are thrown on the labour market when they come to require an adult wage which the industry will not pay, since an adequate supply of cheap labour is always available, e.g., children leaving school; (*e*) changes in industry due to changes in fashion, foreign competition, or exhaustion of natural resources, as, for example, in the case of a coal-mine or fishery; (*f*) the difficulty experienced by children leaving school in choosing and finding suitable employment; (*g*) the immobility of labour, which prevents transference from depressed to prosperous industries.

The Present Problem of Unemployment.

Since the collapse of the great post-war boom in 1920-21, the problem of unemployment in this country has assumed a most serious aspect, for, with the growth of depression in our leading industries, the number of persons without work in October, 1930, reached well over 2,000,000. Britain is not, however, alone in this difficulty, for other countries—especially Germany and the United States—are similarly placed, their trade having fallen markedly and many millions of their able-bodied workpeople being out of employment.

These facts indicate that the problem of unemployment in this country is partly a world problem due to universal factors, and partly a national one due to certain special conditions. Without doubt, the general causes are, first, the effect of the trade cycle, greatly accentuated by the special circumstances arising after the Great War; and secondly, the world-wide collapse in wholesale commodity prices, which has necessarily restricted trade, curbed enterprise, and led to a serious slowing down of productive effort. As to what lies behind the remarkable decline in prices is still a matter of conjecture, but a root cause, if not *the* root cause, is the fact that the world's gold supplies are proving inadequate to meet its present monetary requirements.

Of the various causes specially applicable to Britain, only the most important need be mentioned. First, there is *the shifting of world trade*, involving the closing or curtailment of many of our markets, due to the fact that, during the Great War, many of our overseas customers had to seek other sources of supply or to set up their own industries for the production of goods previously supplied by us. Secondly, the *protective tariffs* imposed

in many countries have excluded many of our products from their markets. Thirdly, *industrial technique* in this country has fallen far behind that of certain of our leading competitors, who have consequently been able to undersell us in the world's markets. Finally, the *rationalisation of our industries*, following the recognition of the need for drastic reorganisation, has resulted in amalgamation and the introduction of machinery which has inevitably reduced the demand for labour.

Remedial Measures.

From time to time various measures have been taken to relieve and to diminish unemployment, and, although none of these has offered a complete solution of so complex a problem, each has served a useful purpose within a limited sphere.

THE ESTABLISHMENT OF EMPLOYMENT EXCHANGES.—Exchanges were established in 1909 for the purpose of remedying two general defects in the modern industrial organisation—namely, the lack of mobility of labour, and the lack of information as to employment. They aim, first, at organising *improved methods for engaging labour* by the establishment of a common reserve of labour in each industrial centre, from which employers may secure workers as required. Secondly, they aim at *the decasualisation of casual employment* through the registration of the available workers, to whom are allocated successive jobs, under different employers. Thus, at our ports work is given only to registered dock labourers, and the tendency is to keep away the unemployed from other industries. Thirdly, they endeavour to *dovetail one seasonal trade with another*, by transferring labour from industries which are slack to other industries which are in need of labour, the process being set in motion before unemployment occurs. The great difficulty in this connection is the comparative immobility of labour, particularly that having specialised skill, but dovetailing is specially practicable in public constructional work which depends largely on unskilled labour.

Other objects of the exchanges are the guidance, in conjunction with local education authorities, of boys and girls in the choice of careers, so as to divert the stream of juvenile labour away from declining and over-crowded occupations to growing trades; the abolition of the necessity for any person genuinely desiring work to tramp from town to town, and the provision of a direct "test of unemployment", without which any scheme of unemployment insurance cannot safely be undertaken.

THE UNDERTAKING OF LARGE SCHEMES OF DEVELOPMENT either by the Government or by local authorities. The construction of arterial roads, docks, and sewers, the laying out of parks and recreation grounds, and the establishment of water, gas, electricity and tramway undertakings are the principal ways in which employment has been created. Under the Trade

Facilities Acts, the Treasury is guaranteeing the repayment of considerable sums raised as loans for the purpose of carrying out capital undertakings calculated to promote employment.

THE WORKING OF ORGANISED SHORT-TIME.—In the case of skilled workers, the incidence of unemployment may be lightened by resort to short time rather than to dismissal. When an employer is cutting down production, he has three main alternatives: he may dismiss a certain number of workers, and keep the remainder in full employment; or he may retain the whole staff, but conduct a system of rotation, under which some of the workers are employed for, say, five weeks, but are idle for the sixth week; or he may retain the whole staff on short time, week after week.

The first method is usually preferred where the work is unskilled, and where the workers are likely to be in plentiful supply when the demand for labour revives. The second alternative is not favoured by employers, as a rule, on account of the complications involved, but it has been adopted in some quarters in preference to the third method because a man who is definitely unemployed for a week is entitled to unemployment insurance benefit, whereas a worker on short time is not so entitled. The third method is generally applied where the work is highly skilled, and the employer is anxious to retain the services of his men. Furthermore, trade unions prefer this method, so that whenever the men are strongly organised and have a voice in the determination of the firm's labour policy, this method is usually employed.

If opportunities exist for alternative employment, the dismissal plan is better than the short time plan; as, for example, when an individual firm is encountering a bad period, although trade in general is fairly prosperous. But on the whole the advantages lie with the short time method. In the first place, it causes less suffering. If a number of families have to cut down their expenditure by, say, one-sixth, they will forego comparative luxuries. It follows from the law of diminishing utility that the aggregate sacrifice will be less than one-sixth of the original total utility. But if five-sixths of these people retain full-time employment, whilst the other one-sixth are dismissed, the aggregate sacrifice will tend to be greater than in the first case, since that proportion of the money spent by the fully employed on comparative luxuries would have been spent by those dismissed on the necessaries of life. Secondly, short time involves less danger of the worker deteriorating in skill and character. A man who is unemployed tends gradually to drift into the ranks of the unemployable.

TRAINING OF THE UNSKILLED.—The Ministry of Labour has arranged, as an experimental measure, to provide a course of training for a limited number of young unemployed men, who have found difficulty in obtaining employment owing to their

having no skilled trade. For this purpose several training centres have been established, and a number of men are being trained specifically with a view to their employment in the overseas dominions.

Raising the School Leaving Age.—Although this measure was proposed partly as a social reform designed to improve the conditions of the working classes, it should result in a marked reduction in the volume of unemployment, for the stream of new recruits into the labour market will be partially blocked for a year, during which time the loss of labour through death and retirement will need to be adjusted by an absorption of some of the unemployed.

Enforced Retirement of Aged Workers.—Like the preceding proposal, this is largely a measure of social reform and was suggested as a logical corollary to the raising of the school age. The suggestion is that, if workers are pensioned off at a lower age, their labour will be removed from the market and their places will be automatically taken by those at present unemployed, many of whom are comparatively young men who should be more efficient than those removed.

Compulsory National Unemployment Insurance.

The relief of unemployment by national insurance resulted from the growth of a sense of public responsibility, and in 1911 the British Government established the first national system of compulsory contributory insurance by the passage of Part II of the National Health Insurance Act. The Act of 1911 was frankly experimental and applied only to seven selected groups of trades which were considered to be particularly liable to irregularity of employment, although other trades were given "liberty to apply". Contributions were levied and benefits paid throughout the various trades at uniform rates, and the scheme was administered through the employment exchanges to over two million workers.

The immediate success of the scheme proved conclusively that unemployment was an insurable risk and that, in spite of administrative problems, a national compulsory system was feasible. Except for a slight extension in 1916, however, no further step was taken until 1920, when, with the chief exceptions of persons engaged in agriculture and private domestic service, the whole of the industrial population—some 12,000,000 workers—was compulsorily insured.

For a short time after the passing of the Act, trade was still booming, and in November, 1920, the Unemployment Fund had accumulated a reserve of over £22,000,000. Then began the trade slump from the effects of which we are still suffering, and within a few months there were over a million registered unemployed. At the risk of straining the reserves Parliament grafted upon the scheme a system of "uncovenanted" benefits,

added increased benefits for those unemployed who had dependants, and in this way placed upon the Unemployment Fund financial burdens which were never contemplated in the original scheme, and which quickly exhausted the reserve.

The national scheme has been criticised from many angles. On the one hand, there are those who would place the burden on each separate industry; on the other hand, there is the Socialist group, which claims that the maintenance of the unemployed should be a national obligation, financed solely by the State. The actual working of the scheme has been criticised on the grounds that it is extremely costly (a criticism which is not supported by the facts), that benefits are paid to persons not genuinely seeking employment, and that the benefits are too small and bear no relation to the workers' wages.

In favour of the proposal that the existing scheme should be superseded by arrangements under which each industry would be responsible for its own unemployed, it is contended that unemployment is a part of true social cost, and should logically be included in the cost of production of the product of each industry. It is pointed out, for example, that under our present arrangements dock charges are at a lower level than is justified from the strict economic point of view. If they were higher, unemployment among dock labourers would be less. Hence a part of the true social cost of such unemployment is, in effect, borne by other industries, which are subsidising the dock industry. Secondly, it is argued that the placing of the responsibility for unemployment on each industry would give employers a definite incentive to cut down to a minimum the amount of unemployment in their trades, and would give each industry an incentive to solve its own problems, without any interference from the State. Other contentions are that it would be possible to adjust contributions and benefits to earnings, and that insurance by industry would provide a valuable field for experiment in industrial self-government. This is the ground on which the Guild Socialists once advocated the proposal.

Equally important arguments may be advanced against the proposals and in favour of the existing system of national insurance. In the first place, the general principle of insurance by industry is unsound, since the very essence of insurance is the pooling of good and bad risks and the spreading of such risks as widely as possible. If a distinction is to be drawn between different industries, why not distinguish between different establishments in the same industry? Secondly, the incentive to cut down unemployment would be very small, while the main causes of unemployment—the cyclical fluctuations of trade—are quite beyond the control of any single industry. Moreover, the scheme would delay that unification of the social insurance system which appears to be inevitable.

Apart from these disadvantages, there would be grave

difficulties in the practical administration of any scheme of insurance by industry. Of these problems the most important would be the difficulty of defining each industry—a most impossible task. Secondly, there would have to be machinery for the transfer of a person's claims from one industry to another. This would not only involve a great deal of clerical and administrative work, but the difficulty of transfer from one group to another might restrict the mobility of labour. Finally, there would have to be efficient machinery for testing the *bona fides* of applicants. At present, that machinery is the Employment Exchange. Under a system of insurance by industry, presumably there would have to be a separate Exchange for each industry. The resultant cost would be enormous.

Social Insurance.

Recently, opinion among both employers and workers has hardened against unemployment insurance by industry, and the latest tendency is towards the extension and unification of our whole system of social insurance, with the object of enabling the insured worker and his family to maintain a certain standard of living even during periods of stress and strain, thus removing the fear of economic insecurity from the life of the industrial worker.

Social Insurance has been defined as " that part of the total field of insurance in which the risks or hazards covered result from the inability of the workman either to make a wage contract of a kind which will enable him to maintain a satisfactory standard of living for himself and his family or to carry through his part of the contract owing to physical incapacity ".[1] The chief risks concerned are those which arise out of : (a) *temporary inability to make a living*, due to accident, disease, ill-health or unemployment ; (b) *permanent incapacity*, due to disablement or old age ; and (c) *death*, involving burial expenses, unprovided widowhood and orphanhood.

Compulsory social insurance enforces saving, and has the advantages of all enterprises conducted on a large scale in that it results in a reduction of costs. But social insurance differs from saving and from public relief in that it gives the worker an *immediate right to a certain sum*. Thus, it may be alternatively defined as an agreement, which is *legally enforceable*, to pay a certain sum in money, or in goods and services, as compensation against the loss resulting from undesired contingencies which reduce earning capacity or increase expenditure beyond the normal.

In recent years, there has been a great drive towards the extension of the system both in this and in other countries. In our own country, the annual state expenditure in this direction

[1] J. L. Cohen, *Social Insurance Unified*, page 18.

at the present time exceeds £160,000,000, distributed over Unemployment Insurance; Health, Maternity and Disablement Insurance; Workmen's Compensation Insurance; Old Age and Widows' and Orphans' Pensions; and Burial Insurance. In addition to the amount mentioned, vast sums are annually disbursed with the same ultimate object by friendly societies, collecting societies, and the benefit sections of the trade unions, by the State under the Poor Law, and by the State and industrial concerns on pension schemes of various kinds. The extent to which the system of social insurance has developed may be judged from the fact that the total annual expenditure thereon in this country is estimated to be in the neighbourhood of £500,000,000.

In view of the comparatively recent development of the principle of social insurance, it is only to be expected that the system as a whole and its several departments should have been subject from time to time to considerable criticism. Reference has already been made to the objections advanced against unemployment insurance. The system of national health insurance is criticised on the grounds that its administration is wasteful, undemocratic and inefficient, and that it does not provide medical treatment for the worker's family. The main objection to the existing scheme of workmen's compensation insurance is that about two-thirds of the financial loss resulting from accidents is still borne by injured workmen. Critics of the old age pensions scheme point chiefly to the inadequate benefits and the present limit as to means.

Other criticisms are directed to the system of social insurance as a whole. It is pointed out, with much truth, that owing to the piecemeal nature of our social insurance legislation, the present arrangements are chaotic and full of anomalies. In some branches (e.g., unemployment, health) the principle of compulsion is adopted; in others it is not. The rates of benefit show great variations where the worker's need is the same, the variety of administrative machinery is amazing, while there is much overlapping between the various sections. The existing arrangements also stand condemned on the ground that the present provision is inadequate to the recognised need.

These defects have been recognised by several well-known reformers, and schemes have been put forward with the object of unifying and simplifying the present arrangements. It is not possible to deal with these proposals in this book, but it may be stated that, at the time of writing, no steps have been taken to put them into practice.

CHAPTER 22

THE CONTROL OF INDUSTRY

In an elementary text-book of this kind it is obviously impossible to deal adequately with the many controversial questions which are generally associated with the problem of "industrial control", or the modification of the present capitalist control of production. Yet these questions have recently assumed such an important place in everyday economic discussion that a brief consideration of the main issues involved is advisable even in an elementary treatise, particularly as they arise from dissatisfaction on the part of the wage-earning class with that present system of production and distribution which has been analysed in the foregoing chapters.

The Demand for Control.

It is well recognised that during the last decade the discussion of industrial problems has shifted its centre. Up to the period immediately preceding the war reformers were principally occupied with questions concerning *poverty*, and the view was prevalent that the problem of labour could be summed up as a problem of remuneration. To-day, however, their main interest appears to be the *government of industry*, and the view is gaining ground that poverty is merely a symptom of a more deeply rooted malady, which they describe as "Industrial Autocracy", or the rule of the Capitalist.[1] Hence the new demand for "control" on the part of the workers is, in effect, a reaction against what they regard as the Capitalist System of industry.

It must not be thought, however, that this demand is a unified expression of a single impulse; it is, on the other hand, based on a whole mass of reactions, both economic and non-economic, of the workers against the present industrial system, and in the general demand for control we may recognise at least four main elements:—

1. A Demand for Status.—There can be no doubt as to the importance of the moral aspect of subordination to discipline in the present-day labour unrest. In part, this new claim to status is a natural development of the habit of negotiation between organised labour and the employer

[1] One recent writer has even gone so far as to declare that "the social problem is not poverty, but freedom".

or his Association; in part, it is a reaction, accelerated by war-time experience, against the social consequences of modern large scale industry. The essential fact, however, is that the workers are no longer willing to accept the "cog in the machine" status and are no longer content to remain mere sellers of physical effort.

2. A DEMAND FOR SECURITY.—The desire for sure pay and for security against unemployment is the chief motive in most control schemes. Indeed, in the elaborate plan of control suggested for the building industry in the famous but abortive Foster Report [1] in 1919, this was the chief immediate appeal to the workers. A significant passage reads: "We are convinced that the overhanging fear of unemployment must be finally removed before the operative can be expected whole-heartedly to give of his best".

It is conceivable, of course, that both high wages and security might be won without control, but the demand for them provides much of the impetus of the modern movement.

3. A DEMAND FOR THE RIGHT TO MAKE SUGGESTIONS CONCERNING THE CONDUCT OF THE WORK.—At first sight, it might appear that this factor in the control demand is unimportant, but modern labour policy is unmistakably interested in the technical efficiency of industry. There is abundant evidence of this feeling in the detailed suggestions on the technique of industry presented to the Coal Commission of 1919 by the Miners' Federation, and workmanship in this general sense has been an essential part of the propaganda of workers' control ever since the syndicalist agitation of 1911.

4. A DEMAND FOR THE PUBLIC OWNERSHIP AND CONTROL OF INDUSTRY.—There is an increasing disinclination on the part of the workers "to make unlimited profits for private employers"; such a feeling of antagonism to private ownership was frankly expressed by the miners' representatives before the Coal Commission. It is true that a characteristic feature of the control movement is that it is concerned primarily with the *internal* control of production, but, at the same time, the demand for a larger share in the revenue of industry remains, and in this country the two sets of motives are closely related.

Positive and Negative Control.

In order to avoid confusion of thought it is necessary to draw a careful distinction between two senses in which the word "control" is frequently used. On the one hand, we have

[1] A Report of a Sub-Committee of the Joint Industrial Council for the Building Industry, under the chairmanship of Mr Thomas Foster, a master decorator of Burnley. The central feature of the scheme put forward was that the industry should carry its own unemployed.

" negative " control, a control in the sense of *regulation*, and on the other, " positive " control, i.e., control in the sense of *direction*.

It is clear that by an elaborate code of commercial law, factory law, and so forth, the State exercises a " negative control " in numerous ways over the actions of those who are responsible for the conduct of industry, while organised labour by its bargaining strength sets limits to the freedom of the employer " to do as he likes with his own". In the course of time such powers of obstruction and regulation may easily develop into powers which are more positive and constructive—the " frontier of control " [1] is ever changing—but for our present purposes we must exclude from our discussion any such forms of negative interference, and consider the operations of the State or of the workers only in so far as they exercise or propose to exercise directive powers in the conduct of industry.

FEATURES OF CAPITALIST CONTROL

Before we proceed to examine the attempts and proposals which have been made to supplement or to supplant private enterprise in industry, we may briefly review the essential features of what is loosely described as " the existing system ".

The System of Free Enterprise.

In the first place, it is important to bear in mind that the most striking of all economic problems—that of determining how the limited economic resources of the country shall be allocated among an infinite variety of possible uses — is not submitted to any conscious decision at all. Although it is not immediately apparent, the final decision rests with the consumer, whose preferences and aversions, when translated into effective demand, regulate the organisation and utilisation of the productive resources of society. It is true that the immediate agents are the entrepreneurs, in whose hands lie the delicate tasks of gauging the desires of consumers and of producing in anticipation of demand, but the essential fact about modern industry is its government by Value or Price—the " automatic indicator which production follows ".

The merits of such a system are not always apparent, but they are well described in the following passage : " A magnificent scope is offered to individual judgment and initiative and courage. Vested interests are hurled aside out of the path of economic progress. Within the wide limits allowed by the law, and the

[1] The phrase is taken from the title of a book by Mr. Carter L. Goodrich. Questions of wages, hours, and physical conditions of employment have long been the subject of collective bargaining, and, in certain cases, of State intervention. Mr Goodrich takes questions of " discipline and management " as indicating the real crux of the control issue.

stricter bounds set by social opportunity, each man is at liberty to spend both his life and his income as he chooses. Even in bad times the vast majority of the productive resources of society, both human and material, are being utilised, and the faith in which they have been launched into various channels of endeavour is found to have been not misplaced ".[1]

Two conclusions seem to be justified. First, that the existing arrangements have the outstanding merits of adaptability and elasticity, while any experimental forms of industrial organisation can, and, as we shall see, frequently do " try their luck " alongside private enterprise. Secondly, that freedom of enterprise in one form or another must be the basis of any system of specialised production, since the only alternative to the more or less unregulated interaction of economic forces is to allow the State to decide in detail what everyone shall do and what everyone shall receive.

The Assumption of Risk.

The next important feature of capitalist control which must be noticed is the association of control with *risk*. Capitalism says, in effect, that " he who bears the risk shall exercise the control ". Under modern industrial conditions nothing is assured. The shrewdest forecasts may be upset by a multitude of events over which the entrepreneur has little or no control. Strikes may occur, the tastes of consumers may change, an international crisis may cause widespread depression, new processes or new products may drive the entrepreneur from the market, while new taxes or tariffs may deprive him of all his anticipated profit. Nevertheless, such risks are the price of industrial progress, and it seems reasonable to assume (*a*) that better decisions will be made by those who have to bear any resultant loss; and (*b*) that capital for speculative enterprises will not be forthcoming unless the owners of that capital are allowed a reasonable measure of directive power.

These two assumptions lie at the root of our existing arrangements, but many regard as unjustified the claim of the capitalist to exercise control of industry because he assumes the burden of risk. In the first place, it is urged that those who bear the main risks of modern industry delegate their control almost entirely to paid officials, who may not always be efficient. " Joint-stock companies, by limiting the liability of the great majority of capitalists, have weakened their incentive to exercise care in the investment of their capital and in the control of the business in which it is employed. Having limited stakes in a variety of different enterprises, most investors have neither the time, the knowledge, nor the opportunity to exercise any personal skill, energy or initiative in the conduct of these enterprises, which are left for the most part to a salaried management and a

[1] D. H. Robertson, *The Control of Industry*, p. 86.

directorate whose sanction is required for a few major acts of policy. The body of shareholders normally exercise no real economic function after their initial act of investment has been performed, and the variations in the dividends they receive lie outside their effective control. The direct and real government of the business world has passed more and more into the hands of small groups of persons, financiers, entrepreneurs, managers, who wield the vast capital resources of great bodies of almost inert investors ".[1]

It would, nevertheless, be unwise to draw hasty conclusions. In many companies most of the shares are in the hands of an inner ring who control the management and policy ; and in the majority of cases the shareholders are induced to delegate their powers by the knowledge that the directors are themselves financially interested to a substantial degree in the welfare and prosperity of the concern.

The second important qualification which has been put forward is to the effect that much of the risk in modern industry is borne by many who have not the least share in control. Thus, it is contended that the manual workers invest the whole of their personal capital (i.e., their strength and skill) in enterprises in the direction of which they have no voice. In the event of the enterprise proving a failure, it is not only the capitalist who is involved in loss ; the employees also are thrown out of employment and are compelled to rely on their slender resources.

But here, again, close examination reveals the fact that the necessary qualifications are not serious. The most important element in the " normal " unemployment problem is the trade cycle ; and the greatest risk to which the worker is exposed is that of the resulting general depression in business. The causes of these depressions are as yet very little known, but they are so deeply rooted in our economic organisation that it appears beyond the power of employers or even of industries to control them. In this respect, therefore, it would seem that the workers' participation in the government of industry could render little real service.

Thus, the infringements of the general rule that control is associated with risk are not as serious as they at first appear, and the objections which we have mentioned seem to have a very limited application.

The Growth of Class Distinction.

One last feature of Capitalism must be mentioned, and that is the widening of the gulf between those who give and those who receive orders, between employer and employed. The division of labour and joint-stock enterprise—the foremost characteristics of modern industrial organisation—have both tended to accentuate

[1] J. A. Hobson, *Incentives in the New Industrial Order*, pp. 23, 24.

this class distinction. Productivity has certainly been vastly increased—but only at the cost of pleasure and of interest in work; hence has arisen the vital problem of restoring to the workers some sense of economic responsibility without, at the same time, sacrificing industrial efficiency.

Suggested Modifications of the Capitalist System.

The foregoing preliminary observations should now enable us to examine the chief attempts which have been made and the principal suggestions which are being put forward either to supersede Capitalism altogether or to modify its methods of industrial government. In view of what has already been said concerning the various elements which constitute the demand for control, it is not surprising to find that to different sections of opinion this demand should stand for quite different types of industrial structure, but it is possible to distinguish three main theories of control, viz.: (1) Workers' control; (2) Consumers' control; and (3) Joint control.

WORKERS' CONTROL

Productive Co-operation.

As its name suggests, the idea underlying the theory of workers' control is that the direction and conduct of industry shall be vested in the workers themselves in their capacity as producers, and consequently the element which is most strongly emphasised in the demand for control is the claim to status.

This aspect of social reconstruction was stressed by the early French and English Socialists, and the twenties and thirties of the nineteenth century were prolific in schemes for self-governing workshops, the object of which was to scrap the factory system and return once again to the self-sufficing communes. But most of these productive societies have been short-lived, and in this country their number declined from 125 in 1904 to 82 in 1927. The majority of these were in the boot and shoe, printing, clothing, and textile industries, and for 1927 were responsible for total productions valued at only £3,421,000, including materials.

In the great majority of cases these undertakings were initiated by working-men, but a few of them, originally established by employers in the ordinary way as private businesses, have been converted into productive societies by the admission of the employees to a very extensive share in the profit, capital, control, and responsibility. Several of the most famous of profit sharing organisations on the Continent belong to this class.

It is obvious that there are serious obstacles to the progress of any genuine productive society. In the first place, there is the difficulty of obtaining capital and of securing markets, but more important still is the question of management. It has been well stated that " the essential difficulty in the way of co-operation in production is that it attempts to supersede the business man where he is most needed. Its failure is at once a result and a proof of the variety and importance of business leadership. Intelligence, imagination, judgment, courage, powers of organisation and administration—all the qualities needed for success in business management—are possessed in the right combination by few individuals ".[1]

It is not surprising, therefore, that an analysis of statistics shows that very few of the societies have remained true to the early ideals of the movement. The membership of these associations is nowadays by no means confined to the workers employed in them, while a substantial proportion of the capital is owned by the retail distributive societies (who are the chief customers), and these appoint delegates to the management committees. Thus, in 17 societies, with 31·5 per cent. of the total sales, the employees are not represented on the managing committee at all ; in 27 societies, with 25·8 per cent. of the sales, some of the committee-men, but not a majority, are employees ; and in 23 societies, with 42·7 per cent. of the total sales, employees form a majority on the managing committees.

The main position is clear. Productive co-operation has not revolutionised industry and shows no signs of doing so, while it is significant that its failure has been mainly on the side of management and discipline.

Guild Socialism.

In spite of the long record of ill-success attending associations of producers, the idea of workers' control has by no means disappeared. To-day, its strongest and most vigorous exponents are the Guild Socialists who, although insignificant in enrolled membership, exert so powerful an influence among the more militant section of Trade Unionism that their doctrines have found expression in the official policy of two of the most powerful of British trade unions. It is significant that both the Miners' Federation, with its 600,000 members, and the National Union of Railwaymen, with its 313,000, have recently expanded their demand for nationalisation into a demand for State ownership and control with some measure of *joint control and administration by the workmen and the State.*

As in the case of productive co-operation, guild socialism lays special stress upon the status of the worker. The dominant idea is stated to be that " the individual worker must be regarded

[1] F. W. Taussig, *Principles of Economics*, vol. ii., p. 358.

not simply as a 'hand', a decreasingly important adjunct to the industrial machine, but as a man among men, with rights and responsibilities, with a human soul and a desire for self-expression, self-government and personal freedom".[1]

Not unnaturally, the main criticism of the Guild Socialists is levelled against the "wage-system", of which the four main objectionable features are stated to be as follows:—[2]

1. "The wage-system abstracts 'labour' from the labourer, so that the one can be bought and sold without the other".
2. "Consequently, wages are paid to the wage-worker only when it is profitable to the capitalist to employ his labour".
3. "The wage-worker, in return for his wage, surrenders all control over the organisation of production".
4. "The wage-worker, in return for his wage, surrenders all claim upon the product of his labour".

It is claimed by the exponents of Guild Socialism that these characteristics of the wage-system are marks of degraded status, which must be removed if democracy is to be applied to industry as well as to politics.

This, very briefly, is the diagnosis of the malady. What is the suggested remedy? The main idea is that the control of industry shall be placed in the hands of guilds of producers who would co-operate with a democratised State representing the people as consumers. To achieve this, each industry would be reconstituted as a public service under the control of those who actually work in it, whether with hand or brain. The Guild Socialist proposes to avoid the dangers of bureaucracy and of that inefficiency which is usually associated with nationalised effort by the establishment of complete industrial self-government (through an elaborate system of committees), and he claims that the interests of consumers will be adequately safeguarded by the vesting of the final rights of ownership of each industry in the State. Whether the consumer would be effectively protected is a subject of controversy, but the dangers of the establishment of a system comprising monopolistic guilds of producers require little emphasis. In the first place, there would be a great temptation for each guild to use its power for its own ends. Furthermore, each industry would tend to pursue a conservative policy, and then the constant introduction of new industrial processes and the rapid movement of productive resources between different occupations might be seriously checked, with a resultant loss in economic efficiency.

It is impossible within the limits of our space to describe the extremely interesting and instructive experiments which have

[1] G. D. H. Cole, *Self-Government in Industry*, p. 5.
[2] *Ibid.*, pp. 154, 155.

been undertaken in an endeavour to institute guild socialist organisations in this country, but a brief reference may be made to the most important movement initiated in 1920 in connection with the building trade. Originating in London and Manchester, the movement had as its object the construction of working-class houses by local guild committees in conjunction with local authorities. Considerable building work was undertaken by the guilds, and in 1921 the numerous guilds which had sprung up in various parts of the country were amalgamated into the National Building Guild, Limited, which undertook certain centralised work of finance, insurance and supply. The actual making of contracts was left in the hands of the Regional Councils, formed in each area to link up local guild committees which were elected from the building trades' unions and were responsible for the labour supply.

Capital was borrowed from the Co-operative Wholesale Society's Bank, from trade unions, and from individuals, at a fixed rate of interest, and during the currency of the contract wages at the full trade union rates were paid to all workers in sickness and during incapacity from accident, in bad weather and on holidays. This complete removal of the fear of unemployment was possible, however, only in the case of workers actually engaged on guild contracts ; except in the case of a very small permanent staff, the full conception of " continuous pay " (a distinctive feature of Guild Socialist theory) was not and could not be realised by the Building Guild alone.

In spite of a period of apparent success, the activities of the Guild were brought to an end in 1923, when, partly through mismanagement and partly through taking on more work than it could finance, this promising organisation was compelled to go into voluntary liquidation.

Guild enterprise in this country is now confined to local guilds operating on a small scale, a cautious policy being followed in order to avoid another collapse. Such local organisations exist in the building, agricultural, furnishing, clothing, engineering, and piano industries.

In estimating the significance of the achievements of the National Building Guild, it should be borne in mind that the experiment began under peculiarly favourable conditions. Building is usually a small-scale industry requiring little fixed capital and one in which the craft instinct is strong. The co-operative movement assisted in the supply of materials and in guaranteeing the fulfilment of contracts, while the urgent demand for houses provided a sure market.

The founders of the experiment themselves admit that, although the contracts which were completed showed a large saving in cost to the purchaser as well as a high standard of work, the National Building Guild did not establish conclusively that guild organisation can function well and serve the community

efficiently. Even an unqualified success in the building trade would not have proved that a similar organisation would succeed in factory industries. Undoubtedly the most serious obstacle to progress along guild lines, however, is the difficulty of securing adequate capital at a fixed rate of interest, without giving the lenders any powers of control other than the right of withdrawal at three or six months' notice. If associated labour is to hire capital it must develop a form of business organisation that will inspire confidence in the mind of the investor; on the other hand, the guild experiment, if it is to have a reasonable chance of success, must not be attempted on too small a scale. It seems certain, therefore, that the guild movement, if it grows at all, will grow but slowly.

CONSUMERS' CONTROL

The fundamental idea underlying the theory of consumers' control is that although under the existing system all economic activities are directed towards the satisfaction of consumers' demands, yet in one way or another the interests of consumers, particularly of the poorer classes, are endangered and consequently require protection. The main grievances of the consumer may be stated as follows :—

1. *That he may be induced to buy something different from what he intended to buy.* The exponents of Capitalism maintain that in their economic relations consumers may safely be relied upon to pursue their own interest, and that they can be expected to secure full value by playing off competing producers against one another. On the other side it is objected that in modern industry the mighty resources of advertisement are all directed to inducing the purchaser to buy commodities which he would not buy if he relied only on rational self-interest.

It cannot be said that the consumers' grievances under this head reach serious dimensions, but, nevertheless, it must be recognised that they do exist.

2. *That the supply of certain goods which the consumer buys is curtailed and the price raised by the action of monopolistic bodies of producers.* That this grievance may be a very real one will be judged from what has been said in a previous chapter concerning monopolistic organisations. Before the war, in many branches of industry, commerce, transport and finance, free competition had given place to combinations and associations, which were strong enough to exercise considerable control over output and over buying and selling prices. Great manufacturing businesses, insurance companies, banks, railways, and shipping lines were either taking over small businesses or (in order to avoid " cut-

throat" competition) were inducing them to enter into agreements to fix prices on a "fair basis".

During and after the war this tendency was vastly strengthened. The general stimulus to organisation, the Government control which had been necessitated by war requirements, the natural and artificial shortages due to the prevailing abnormal conditions, and the weakness of small firms during the post-war depression, have all accelerated and extended the combination movement. The danger, as we have seen in our earlier investigation of monopolies, is not necessarily that the trust, kartell, or other combine will *raise* prices, but that the monopolist will find it advantageous to sell a smaller quantity of goods at a higher price rather than a larger quantity at a lower price. In this way he cancels the tendency towards full supply, and thus diminishes the aggregate satisfaction of the consuming public.

3. *That the prices of goods are unduly loaded with payments to middlemen.* Among consumers there is a widespread suspicion, more or less well-founded but generally exaggerated, that the price paid by society for marketing functions is out of proportion to the services rendered by the middlemen who discharge such functions.

4. *That although production follows the indicator of demand, many of the real needs of consumers are left unsatisfied, because they cannot be expressed in terms of a money offer.* Either the consumer may be unaware that he needs something or he may realise that he needs something and yet be unable to offer a money price for it.

It is clear on reviewing the foregoing grievances that some of them are partially remedied by the regulatory powers of the State. The first of those mentioned above is to some extent remedied by the Adulteration Acts, the second by a variety of devices, the chief of which are the prohibition of certain "unfair methods of competition" and the undertaking by the State of certain powers of investigation. On the efficacy or lack of efficacy of such alternative devices depends to a certain extent the case for the more thoroughgoing methods of consumers' control, but, as has already been indicated, the general discussion of negative control lies outside our present scope.

The schemes which must be examined, however, are those which, in one way or another, propose to hand over the supreme direction of industry to the representatives of the consuming public. Those to which brief consideration will now be given are (*a*) Consumers' Co-operation; (*b*) Collectivism, i.e., Nationalisation and Municipalisation; and (*c*) Communism.

Consumers' Co-operation.

The essential idea of this method of industrial organisation is that consumers should voluntarily combine to acquire and manage some business on their own behalf. The rapid progress of the movement in this country is in striking contrast with the limited achievements of associations of producers as economic units, and it is significant that whereas in the minds of its English pioneers the movement was only one aspect of the wider vision of the self-governing commune, each successive step in the development of co-operation has tended to weaken the relative strength in its counsels of those in whose breasts the original co-operative faith is cherished. Especially since the establishment of the famous co-operative society of Rochdale weavers in 1844, the movement has crystallised into a much more practical form of industrial organisation the underlying principles of which may be quite simply described.

1. THE CO-OPERATIVE STORE.—The unit is the local co-operative society, the members of which are not only the customers but also the owners of their own retail shop or shops. Membership is open to anyone who is willing to take one or more shares, and carries with it the right to one vote per person in the election of the members of the committee of management and on other matters submitted to general meetings.

The manager of the shop is a full-time salaried official and is responsible to the committee of management, which usually consists of members of the society, who give only a fraction of their time to the work, and who are remunerated by small fees. Recently, however, there has been introduced the experiment of a full-time paid executive, and in a few of the larger societies important developments are being made along these lines. The capital of each society is raised entirely from its members and is paid a fixed rate of interest. The retail prices charged are usually at the level of those ruling in the neighbourhood, and what in an ordinary business would be called the "profits" are devoted partly to the extension of the operations of the society, partly to various social and educational objects, and partly to the payment of a dividend on the purchases of the members. This dividend, in the majority of cases, is re-invested in the business, and it is noteworthy that the greater part of the steadily increasing share capital of the societies has been accumulated in this way.

2. THE WHOLESALE DEPARTMENTS. — Consumers' co-operation has not stopped short at retail trading. The local societies have achieved independence of the capitalist wholesaler by federating to form central wholesale societies

which are controlled by quarterly meetings of delegates of the local societies and are owned and managed on the same general principles as the local societies. The number of delegates to which each society is entitled is definitely fixed, and, as a rule, each delegate casts one vote but has a second vote for the first £6,000 of purchases in the preceding year, and an additional vote for every £12,000 of purchases.

The nature of the representative assemblies which are held, and the striking contrast between these and the shareholders' meetings of a joint-stock company, have been graphically described by Mr and Mrs Sidney Webb in their famous work dealing with the movement.[1] They write—"Instead of, in normal times, the little clique of tame shareholders connected with the directors, and, in times of panic, the unorganised mob of men and women fuming at the passing of the dividend, the visitor to the quarterly delegate meetings of the C.W.S. observes an almost permanent and highly selected representative assembly—the presidents, secretaries and committee men of the local societies, reinforced by delegates chosen by the Women's Guilds or other organised groups of members, and by the most pertinacious and inquisitive of the rank and file of the membership. Each and all feel themselves to be there, not wholly or even mainly, to express their own personal views, but as representatives to voice the wishes and needs of tens of thousands of consuming members".

The contrast with the shareholders' meeting is strengthened when we consider the extent of the information supplied and the nature of the business discussed. Each delegate is provided with a detailed report containing facts and figures portraying the development of the various departments of the C.W.S., and with a separate "business paper" which forms the agenda, while the issues which come under discussion range from the merely formal business of admitting new societies as members, to the expert criticism of the working of the various departments and the consideration of the wider questions of general co-operative policy.

A Real Democracy?

The management of each of the English and Scottish Wholesale Societies is vested in a general committee (consisting of thirty-two members in England and twelve in Scotland) all of whom now receive salaries and give their whole time to the work, and it is justly claimed that these two committees, directing in unison, and sometimes in partnership, business enterprises with an aggregate annual turnover of over a hundred millions sterling, are a lasting proof of the capacity of the workers to undertake

[1] *The Consumers' Co-operative Movement*, pp. 118–20.

some form of industrial self-government. Yet the movement has been subjected to a considerable amount of criticism both from the point of view of industrial democracy and of efficiency.

On the first count, criticism is directed towards those defects which are inevitably associated with large organisations wherein the consumers' interests are paramount. Though in the local societies an effective contact is maintained between management and consumers, in the wider business operations of the wholesale societies the electoral machinery works with greater difficulty and only a small proportion of the co-operative membership takes any intelligent part in the higher control of policy. This tendency of the average co-operator to relapse into apathy and indifference has fostered some of the besetting evils of the movement. It tempts the executive to slackness and makes it possible for bureaucracy, favouritism and corruption to creep in. Thus, it is admitted that the movement "has some of the weaknesses of an honest but somewhat impervious bureaucracy—secretiveness, a dislike of publicity, an impatience of criticism, and, it is commonly alleged, a certain amount of favouritism in appointments and promotions".[1] The complicated administration is wrapped in obscurity and the directors habitually regard themselves as personally deciding the policy of the business. Though they cannot ignore entirely any definite decision of the delegate meetings to which they present their reports, they claim that the right to decide upon executive issues must be vested in themselves, to the exclusion of the affiliated local societies who collectively own the concern.

From the point of view of the democratic control of industry, however, perhaps the most serious criticism of the movement concerns its relations with its employees. Here we see very clearly the conflict between two rival theories of industrial government. The question arises as to whether the final control shall be vested in the workers engaged in the production of the commodities and services which the movement supplies, or, on the other hand, whether the supreme power shall be placed in the hands of the vast army of consumers in whose interest the organisation has come into existence. In practice, consumers' co-operation adopts the latter alternative, and in actual fact its mode of direction differs little from that which exists in the so-called capitalist concern. While Trade Unionism is recognised and works committees have been established in a few cases, the general rule is that workpeople have no share in the management and are not eligible for election to the management committees. The conception of industrial democracy embodied in the co-operative movement is that the final word shall rest, not with the 224,000 employees, but with the six million purchasers.

In the matter of efficiency, although there are the inevitable drawbacks which result from any form of committee management

[1] Beatrice and Sydney Webb, *The Consumers' Co-operative Movement*, p. 126.

(the chief of which is slowness of executive action), the directorate of the two wholesale societies, with its elaborate system of sub-committees, regular tours of inspection and reports, is generally admitted to be an efficient administrative organ.

The Present Extent of the Co-operative System.

Whatever its shortcomings, the Co-operative movement has certainly passed the experimental stage and is in this country a firmly established form of industrial organisation. Thus, for 1928, Co-operative Retail Trading Societies in Great Britain and Northern Ireland, with a total membership of 5,807,000, and capital funds of over £125,015,000, reported sales exceeding £207,000,000, and a year's surplus of over £24,000,000. For the same year, the Wholesale Societies, with 1293 retail society members, reported total sales of over £104,000,000.

The English Wholesale Society, in addition to producing in its own factories a vast variety of food and of other household goods, owns its own ships, farms and tea plantations, and transacts banking and insurance business on a considerable scale. Further, it is said that the goods sold by the retail societies reach one-third of the families of the country. Thus it appears that roughly five per cent. of the business of Great Britain is already under the democratic control of the consumer. In other countries also, as in France, Ireland and the Scandinavian countries, co-operative trading, especially in agriculture, has made remarkable progress, and with the rapid extension of the principle to insurance and banking, many enthusiastic co-operators set no limits to future developments.

Limitations of the Co-operative Movement.

Close inquiry into the essential characteristics of the movement, however, does not justify such expectations. The sphere in which the methods of consumers' co-operation are likely to be successful, although wide, has definite limits.

There are three main types of industrial enterprise in which it seems unlikely that the co-operative principle could be successfully applied :—

1. *Those in which there is a large element of speculation.* If co-operative enterprise is to be extended to speculative undertakings serious problems are likely to arise in consequence of the dissociation of control from the ownership of capital which is involved in consumers' co-operation. In the first place, it is not likely that capital for risky businesses will be forthcoming in sufficient quantities if its owners are expected to be content with a fixed rate of interest and but little voice in the management. They will require a

return commensurate with the risk of loss, and also rights similar to those of shareholders in ordinary business concerns.

2. *Those involving the production of finer and more individual commodities, in which high qualities of skill and adaptation are called for.* One of the reasons why the co-operative store has not achieved an overwhelming success, even among the working-classes, is that there is a tendency to economise by eschewing variety and novelty. Consumers' co-operation has shown itself best adapted for the production of standard household goods.

3. *Those industries which demand highly centralised production but wherein the purchasers are scattered over wide areas.* Where such conditions obtain and where the demand is irregular, as in the engineering and cotton industries, voluntary associations of purchasers do not seem adapted as units for industrial control.

Collectivism—Nationalisation and Municipalisation.

The essence of Collectivism is that it entails the ownership and management of a business by compulsory associations of consumers (either the State or the municipality), *at the same time retaining the ordinary mechanism of exchange between producers and consumers.* The expedients of price and of marketing are not abandoned, but private enterprise is replaced by the public ownership and exploitation of the means of production.

The type of industry in which it is generally recognised that the consumers' interests require protection is that which, under modern conditions, tends to be subject to monopolistic control. The public utility services, the railways, the postal and the telegraph services, all belong to this class ; competition in such cases is either technically undesirable or impossible. Obviously, therefore, some intervention on the part of the State is inevitable, and there is an increasing tendency in these cases for private enterprise to be superseded altogether by public ownership and control.

There are further powerful arguments in favour of the application of the collectivist principle to other industries—arguments which are based primarily on the waste and reckless exploitation of national resources associated with private ownership, as in the case of the coal industry, or on moral considerations, as in the demand for " disinterested management " in the drink trade. But the crux of the nationalisation problem lies in the question of efficient management. On the one hand, it is urged that the nationalisation of industry will increase production by enlisting the hearty co-operation of the workers and by abolishing various forms of waste ; on the other hand, stress is laid upon the dangers of bureaucracy, incompetence, formalism and corruption entailed by public enterprise.

The Difficulties of Collectivism.

Whether the one view or the other is justified is a highly controversial question, but past experience appears to offer conclusive evidence that there are serious difficulties in the way of public enterprise. In the first place, it is clear that the administrative machinery of a Government department would scarcely be suitable for the conduct of ordinary business.

Secondly, those who control public enterprise are inevitably constrained to pursue a more timid and unenterprising policy than the private trader or even the directors of a joint-stock company. The initiative, resourcefulness, and adaptability of private enterprise are absent chiefly because the public administrator has not the incentive which exists in the possibilities of making high profits, and because (at any rate on these large issues) he is peculiarly sensitive to the criticism of the taxpayer. For those reasons, it is obvious that Collectivism is not well adapted to industries which call for rapid decisions and bold changes of policy; especially do these considerations apply where an industry has international connections, as in the case of the cotton and coal industry.

A third difficulty of Collectivism is that the most suitable unit for political government is often not the most suitable unit of industrial control. For example, in the case of the supply of electricity, it was found that the municipality was too small a unit. This drawback has been overcome by the establishment of the Central Electricity Board which substitutes regional for municipal units of production. This Board has received and sanctioned schemes for the supply of electricity over wide areas throughout the country.

Many of the *nationalisation* proposals which are being put forward at the present time also contain devices designed to obviate some of the difficulties associated with ordinary Collectivism. Proposals are being made to avoid the dangers of placing the conduct of industry in the hands of a Government Department by setting up an independent expert body on which those actually engaged in the industry would be represented. Thus, the miners' scheme for the nationalisation of the coal industry proposed to place the supreme power in the hands of a National Council consisting of ten Government nominees (representing only the technical and administrative sides of the industry itself) and ten members chosen by the Miners' Federation. Whatever administrative device is adopted, however, the great issue involved in a complete system of nationalised industries would still remain: once the principle of private enterprise is abandoned, the State must inevitably face the infinitely difficult task of regulating the flow of the productive resources of the community among its different industries.

The Present Extent of the Collectivist Movement.

When we consider the extent of collectivist production, we find that public ownership, like co-operation, is a well-established form of industrial organisation within a limited sphere.

In the first place, all national governments own and control their postal systems and also the various establishments incidental to the service of government. Many own and operate the national railways, but only in rare cases does the State engage in ordinary manufacture and commerce.

Secondly, most municipalities operate their own "public utility" services, such as urban transport, the supply of gas, of water, and of electricity. Thus we find that even in England, where municipalisation has not developed to so great an extent as in some other countries (notably Germany), the aggregate product of municipal trading forms a considerable proportion of the national income. Moreover, there is reason to believe that the scope of this type of enterprise may be extended in the future, as, for example, to the supply of milk and of banking facilities. At the present time, there is only one bank in this country which is genuinely owned and managed by a municipality, the Birmingham Municipal Savings Bank, established under an Act of 1916. Other attempts to establish municipal banks have since been made, but the Parliamentary Committee which considered the applications wished to have longer experience of the working of the Birmingham Bank before sanctioning further experiments. It cannot, therefore, be said that municipalisation, like the Building Guilds, Productive Co-operation and the Co-operative Movement, finds a perfectly open field within the Capitalist structure, for Parliament exercises a strict control over the types of industrial enterprise in which municipalities may engage and maintains a careful supervision over their general financial powers.

Communism.

Communism involves the government of industry by the same methods as in Collectivism, *but without the exaction of payment for services rendered.*

At the present time the application of the communistic principle to industry is confined to two sets of conditions :—

1. *Where the public authority provides a service for which it is impossible to exact a specific payment in proportion to the benefit derived by each individual.* Perhaps the best illustration is the case of the provision by the State of the various means of defence. It is clear that if industry is to be successfully carried on individuals must be provided with a substantial measure of security. At the same time, it is equally clear that no satisfactory means of defence could be

provided by individuals themselves. Hence, in the modern State, certain members of the community are withdrawn from ordinary " productive " occupations and their services are applied in the special tasks of defence. As it is impossible to determine how much benefit each individual member of the community derives from such services, the only alternative is to meet the cost out of general taxation.

2. *Where people are either unwilling or unable to offer for certain commodities and services a price which measures their real need for the commodity or service.* Since private industry is organised on a profit-making basis, it is clear that in such cases a real need may be left unsatisfied, with a resultant loss to economic welfare. Hence, the State has assumed the responsibility of providing or assisting in the provision of a great number of services which were formerly left to private enterprise ; for example, education, sanitation, and, to a certain extent, the care of the sick.

It is clear from the foregoing considerations that the case for at least a partial application of the principle of Communism is very strong, but there are a number of dangers inherent in the system. In the first place may be mentioned the general objections to Collectivism which have already been dealt with. Secondly, there is the defect, so much emphasised at the present time, that the high taxation required for the maintenance of communist services discourages enterprise. In the third place, it is essential, if a communist undertaking is to be successful, that it should be comprehensive. This difficulty is exemplified in the present housing problem, in regard to which the arguments for the application of the communist principle are especially strong. The consumers are poor, the need for working-class houses is great, but the Government has vacillated between the policy of complete control and of assisting private enterprise, and consequently confusion has resulted.

The problems involved in a thoroughgoing system of Communism are much more serious than those difficulties which we have briefly reviewed, for the State would be faced with the well-nigh impossible task of the complete administration of industry without any reference to the relation between prices and costs. Apart from this, the abolition of privately owned capital which would be necessary would involve the entire reconstruction of Society.

JOINT CONTROL

The Guild Socialist advocates of workers' control insist that the workers shall acquire their new status independently. The power of the employer is to be wrested from him by the pursuit of a policy of " encroaching control ", and any proposals for

association with Capitalism must be rejected as palliatives which are liable to be distorted into further means of enslavement.

On the other hand, there are many employers who believe in the restriction of the functions of the trade union to the exercise of those "negative" powers of regulation which it already possesses. They insist that the average workman has no desire to take any active part in the government of industry, and will be well satisfied with short hours and high wages.

At first sight the latter theory of industrial relationships appears to be plausible enough, but it leaves certain essential factors out of account. In the first place, experience shows that great strength without responsibility is liable to be abused. To-day, the regulative powers of trade unions are very extensive indeed. By the threat of the strike the workers attempt to ensure that they shall not be obliged to work under conditions which they deem unfavourable or unfair, or with workmates whose principles do not accord with their own. They have also in many cases been able to insist on the observance of certain rules as to hiring, apprenticeship, demarcation, dismissal and the like. With a few exceptions, however, they have always been in the position of "an Opposition that never becomes a Government", with the result that there has been an inevitable tendency to use their powers in reckless fashion.

It seems reasonable, therefore, to assume that, if the workers can be associated in some way with the actual conduct of affairs, their powers are likely to be more cautiously employed and, furthermore, that much effort which is now spent in combating the decisions of employers may be saved if the workers are allowed to have a voice in making the decision in the first instance.

Secondly, as we have seen in our analysis of the "control" demand, the modern labour problem cannot be summed up in terms of remuneration. It goes far deeper than mere differences over wages and hours. Even if the desire to take an active part in industrial government is confined to a small minority, there is no doubt that the desire for status and for the right to appoint representatives with some powers of control is much more widely distributed.

Assuming, therefore, that it is accepted that the essentials of the existing system must be preserved, there would appear to be material advantages in the institution of some measure of joint control, whereby the workers would be associated in the conduct of industry. The recognition of these benefits was largely responsible for the appointment in 1917 of the famous Whitley Committee. In its Report the Committee advocated a tripartite scheme, involving the establishment in each industry of a Joint Council of employers and of employed representing the trade as a whole, the Joint Councils to be linked up with Joint Works Committees by a series of District Councils.

Joint Industrial Councils.

In August, 1927, there were fifty-four Joint Standing Industrial Councils and Interim Industrial Reconstruction Committees established under the Whitley scheme, and it is estimated that roughly 3,000,000 workers are now covered by these organisations. The principal groups of workers outside the scope of such organisations are the miners, the iron and steel workers, and the cotton workers, all of whom are well-organised groups with elaborate machinery for negotiation already in existence.

The actual constitution and procedure of the Councils are left to themselves, but the universal rule is that employers and workers have equal numbers of representatives, that each side appoints a chairman and secretary, and that there must be a majority on each side for any decision. In many cases, each side meets separately prior to the joint meeting, and usually, though not invariably, the chairman of the employers' side acts as chairman of the full meeting.

The questions within the purview of a Whitley Council were summarised by the Whitley Committee in its Interim Report as follows :—

1. The better utilisation of the practical knowledge and experience of the workpeople.
2. Means for securing to the workpeople a greater share in and responsibility for the determination and observance of the conditions under which their work is carried on.
3. The settlement of the general principles governing the conditions of employment, including the methods of fixing, paying and re-adjusting wages, having regard to the need for securing to the workpeople a share in the increased prosperity of the industry.
4. The establishment of regular methods of negotiation for issues arising between employers and workpeople, with a view both to the prevention of differences and to their better adjustment when they appear.
5. Means of ensuring to the workpeople the greatest possible security of earnings and employment without undue restriction upon change of occupation or employer.
6. Methods of fixing and adjusting earnings, piecework prices, etc., and of dealing with the many difficulties which arise with regard to the method and amount of payment apart from the fixing of general standard rates which are already covered by paragraph 3.
7. Technical education and training.
8. Industrial research and the full utilisation of its results.
9. The provision of facilities for the full consideration and utilisation of inventions and improvements designed by the workpeople, and for the adequate safeguarding of the rights of the designers of such improvements.

10. Improvements of processes, machinery and organisation, and appropriate questions relating to management and the examination of industrial experiments, with special reference to co-operation in carrying new ideas into effect and full consideration of the workpeople's point of view in relation to them.

11. Proposed legislation affecting the industry.

Naturally, the emphasis which different Councils have placed on one or other of these objects has varied according to the nature of the problems associated with each industry, but as a general rule, points 3, 4 and 6 have received the greatest attention.

The activities of the Councils have been concerned, for the most part, with wage negotiations. Apart from these, consideration has been given to other matters such as organisation, education, apprenticeship, industrial research and Government relations. A number of valuable reports have been prepared, but as yet it cannot be said that the Joint Industrial Council movement represents any effective measure of control of industry by the workers. In fact, the Whitley Council has not introduced any striking advance on the older machinery but it has certainly encouraged and extended some desirable features of an ordinary negotiating body. In the first place, it has brought together for joint action assemblies covering similar classes of labour or classes of labour common to the industry. The second great advance lies in the fact that the Councils are *standing* Councils, and are not, as in the case of the Conciliation Boards, isolated pieces of machinery set up for one specific purpose, and called together only when a dispute actually arises. A process of more or less continuous bargaining is secured, with the great benefits of the elimination of vexatious delays and a more ready response to changes of opinion.

Works Committees.

Probably the most important feature of the Whitley Scheme is its provision for the establishment of Works Committees, since the "control" demand is more closely related to the workshop than to industry as a whole. Thus, it has been stated: "The centre of gravity, at any rate at present, lies inside the works; it is there that the real clash occurs. Labour's demand for control of industry in general, however sincerely held, is just a little doctrinaire; but the demand for a changed status in the workshop is vital and immediate. It is in the workshop, in his daily life, that the worker actually comes up against "the System"; it is there that he actually meets and resents the arbitrary exercise of authority, by a management he has had no voice in appointing, in the execution of a policy he has had no opportunity of understanding or influencing, and in the interest

of that " Capital " which he—mistakenly—regards as, inherently, his enemy ".[1]

Even before the Whitley proposals, the workers had in certain cases acquired an interest in the conduct of the particular concern in which they were engaged. In a few trades shop stewards exercised important directive functions, and in a large number of cases the workers enjoyed a limited share in control through profit sharing and co-partnership committees. This movement was greatly accelerated under the Whitley system and at present there are over 1,000 Works Committees in actual operation. The constitution and procedure of these Committees are naturally subject to great variations. Some are joint committees consisting of representatives of the management and the workers; others consist of workers only, with opportunities of ready access to the management. Again, some have regular meetings at intervals of a week, a fortnight, or a month; others meet only when occasion arises.

It is clearly the functions of these Committees which are important from the point of view of joint control, but here also there is considerable variation due to the different types of Works Committees actually in existence. It is important, however, to consider two questions: Are the powers of the Committees merely consultative, or are they allowed to take part in executive decisions? Again, are they concerned merely with the administration of welfare, pension and bonus schemes, and with general working conditions, or do their powers extend to those questions of " discipline and management " which lie on the real " frontier of control "?

As far as the first question is concerned, it would appear that the functions of a Works Committee are in almost every case purely consultative. Usually such a committee can bring matters to the notice of the management, discuss them with the management and press its own views on the management. In the last resort it may induce the trade union to call a strike, but, as a rule, it cannot ensure that its view shall be carried into action by any direct machinery. Under the existing system the executive power is vested in the management.

The second question is not quite so easily answered since the range of functions which the Committees undertake is necessarily indefinite, but it is true to say that as yet there has been very little devolution of what are ordinarily regarded as " managerial functions ". In the important matters of discipline, technique, commercial and financial policy, the " right to sack ", and the choice of foremen, the workers' control remains almost entirely negative. Efforts are being made, however, to alter the existing arrangements, and it seems certain that when the trade depression is over, bolder experiments will be carried out.

In the majority of cases the great service which Works Com-

[1] C. G. Renold, *Workshop Committees.*

mittees have rendered is that they have tended to produce greater harmony, and, in consequence, greater efficiency of production. They afford, too, an opportunity for the workers to get an insight into the difficult problems with which management is faced, and tend to develop a greater sense of responsibility.

Perhaps the greatest obstacle in the way of the democratisation of industry is the fear that it will inevitably lead to inefficiency. Whatever may be the shortcomings of the existing system there can be no doubt that it has enabled a growing population to enjoy a high standard of living. Before the workers will be prepared to accept the new duties and responsibilities which are inseparable from the real direction of industry, a long period of education and experience must elapse. The outstanding merit of the system of joint control established under the Whitley Scheme is that it offers a training ground wherein such education and experience may be acquired.

Recently considerable attention has been focused on the Whitley scheme through the efforts of the Association of Joint Industrial Councils to induce the Government to introduce legislation for the legalisation of the voluntary agreements which the Councils have established between employers and employed. Such legalisation is necessary in order to ensure the adherence of both employers and workers to the agreements and decisions reached. It would limit the danger of employers paying labour lower rates, and of workers selling their labour for lower rates, than those fixed by the Councils.

Unfortunately, the proposals are being opposed for political reasons by organised labour, in spite of the fact that the Trades Union Congress has expressed itself in favour of the principles of legalisation. Nevertheless, the work of the Joint Industrial Councils has received such striking commendation from the Government, from the Ministry of Labour and from the Balfour Committee appointed to enquire into the post-war problems of industry and trade, that there is little doubt that a measure legalising the decisions of the Councils will at a not very distant date be placed upon the Statute Book. Such a measure would so obviously be directed to securing better and more suitable conditions for the workers that it is unlikely to be opposed when once the political difficulties are removed.

THE MECHANISM OF EXCHANGE

CHAPTER 23

FROM BARTER TO MONEY

At an early stage in evolution man must have found it to his advantage to exchange some product, of which he possessed more than sufficient, for another product which his neighbour had in excess. The hunter could not have been long in discovering the benefit of offering some of his surplus meat for the surplus milk or wool of the flock-tender, or the fisherman in seeking to exchange some of his fish for the skins or flesh of the hunter.

This direct exchange of one commodity for another is termed *barter*, and it exists even to-day among the savage peoples of the earth. When wants are primitive and the number of exchangeable articles is small, barter may persist almost indefinitely. It is not difficult to decide upon some equivalent as a basis for the exchange of wheat for a sheep, or of fish for a certain number of apples, or of a cow for a certain number of days' work. But the difficulties and inconvenience of such a system become obvious with the increase in the number of exchangeable articles and with an increase in the number of times those articles are exchanged. Not only does barter involve the satisfaction of both parties to the bargain ; it requires also that one man must need what the other has to give, and that he shall give what the other happens to want. The hunter may wish to exchange furs for goat's milk, but the herdsman with goats' milk to spare may want fruit and not furs. The exchange of services is even more difficult than the exchange of goods, and it is easy to understand why, in any organised community, the time and trouble involved in thus seeking for a *double coincidence of wants and of possessions* make barter quite impracticable.

Barter is impossible under any but primitive conditions because it provides no standard of measurement, no means of estimating the relative values of two commodities, and no method of exchanging goods unless one thing can immediately be transferred and another immediately accepted. Even under primitive conditions barter may be impossible if a man's possessions cannot be subdivided without loss : if his wealth consists of cows only, for example, it is well-nigh impossible for him to obtain possession of an article of small value by direct exchange. Thus at a

very early period were men obliged to fix upon some intermediate commodity which would always be accepted in exchange for goods and services, and which would form a basis for the measurement and comparison of the values of other commodities.

The nature of the article thus chosen did not matter, so long as it was familiar, easily recognisable, and generally accepted. So, in the many different parts of the world where the need for such an intermediary has been recognised, articles in great variety have been utilised in this important rôle. Examples which may seem strange to our modern ideas include the use of oxen in ancient Greece, cowrie shells on the African Coast, bricks of tea in Tibet, and rice in Japan. Clearly such instruments of exchange were subject to many disadvantages: some were bulky, indivisible and inconvenient; others were perishable and clearly unsuitable as a means of holding wealth for any period of time. But all of them had the advantage that their possessors could at any time transfer them to others in exchange for such commodities or services as they required.

Even under such arrangements the old system of barter is still recognisable, but it is divided into two sections by the intervention of the third commodity. If for any reason the chosen commodity becomes unacceptable, then barter has to be resorted to again: its operation is merely facilitated by the intervention of the medium of exchange. Thus does the direct exchange of goods for goods become indirect, and thus does barter give way to the principle of purchase and sale by the use of a recognised medium. This medium is called *money*.

Apart from the question of inconvenience in handling, the chief objection to the use of the commodities mentioned lay in the fact that they had little permanent or stable material value in themselves. Oxen may die; grain, rice and tea may perish. As soon as this occurs they become valueless; they cease to be acceptable and can no longer function as money. Some more durable, more compact commodity is required, which possesses value and attraction in itself. Therefore, from very early times men have adopted for exchange purposes the precious metals—gold, silver and copper—now used as money by all civilised communities.

These metals, because of their lustre and scarcity, have always been attractive to man as a means of ornament, and their universal acceptability for these purposes naturally led to their being offered and taken in exchange for other articles, and to their being regarded eventually as a store of value,—a mode of preserving wealth for future enjoyment.

Definition of Money.

Money is therefore *a commodity chosen by common consent to be a measure of value and a means of exchange between all other commodities.* The commodity used as money must be universally

accepted within the community in exchange for goods and services, and must be received without demur in final settlement of obligations. Although money may exist in countless forms, the idea underlying all of them is that they can be used, either now or in the future, to command in exchange the labour or the product of the labour of others. Money is a kind of claim upon all other members of the community; a sort of order or promise to deliver which can be enforced whenever the owner pleases. It is a means to an end, held temporarily, not for its own sake, but as a means of obtaining other articles or of commanding the services of others. Money enables the consumer to generalise his purchasing power, and to make his claims on society at the time and in the form which suit him best. It eliminates the waste and inconvenience which would attend payments in kind, and ensures that anyone with the *means* of enjoyment may obtain *actual* enjoyment with the minimum of trouble and delay. To the producer the use of money is really a most important aspect of the division of labour. Without it, production on the modern scale would be impossible, for present day producers could spare neither the time nor the energy required to make payments in kind for labour and capital, and to barter their goods for the products of others. But for the existence and development of the money economy, man as producer could not minister to the increasingly varied and extending wants of man as consumer. Finally, the use of money facilitates the transfer of capital by the making of loans and payments of all kinds, and it has made possible that extension and efficiency of the credit system which has contributed so materially to the progress of mankind.

Strictly speaking, the definition of money which we have given is the definition of *standard money*, i.e., the commodity, usually gold, which is used as a standard of value and unit of account. Very frequently, however, the term "money" is applied in a far more general sense to mean *anything which is widely used and accepted as a means of exchange*. According to this application of the term, a thing is regarded as money even though it cannot function as a standard of value, provided that it is expressed in terms of the standard. Thus, notes, cheques and bills of exchange are regarded as money so long as they pass in payment for goods or in discharge of debts. "Money is as money does", and all such media are effective money so long as they facilitate exchange and are actually doing the money work. The only essential to their acceptance in this way (excluding for the moment any question of credit) is that their amount should be a multiple or sub-multiple of *the unit of account*, i.e., the unit regarded as a measure or standard of the value of things in general. We must remember, however, that such circulating media, being merely pieces of paper, cannot function as a standard or store of value except in so far as they *represent* the

standard of value. If there is any doubt as to the value for which they stand, they cease to be acceptable and cease to function as money. Hence, if we adhere to our conception of money as something which operates both as a medium of exchange *and* a standard of value, then we may reasonably regard bills, cheques, notes and any other instruments of exchange as *representative money*, i.e., as convenient substitutes for the standard of value. In the following pages, however, it will make for clearness if we understand the term "money" to include both standard money and the various media of exchange which are used in the modern community as substitutes for the standard.

Having thus arrived at an understanding of the meaning of the term "money", we may safely apply our definition to one or two special cases with a view to clarifying still further our ideas. We may add to the utility of our test cases by bearing in mind that anything which serves the community as money has an effect on the general level of prices because, as is more fully explained in the next chapter, it adds to the supply of money which is available to do the money work. Let us consider first of all the Bank of England note, the paper promise to pay of a privately owned institution. Such a note is certainly money because it is generally accepted for exchange purposes, it is expressed in terms of the standard of value and is ordinarily convertible into that standard. It makes no difference whether that note is backed pound for pound by gold, or that it forms part of the bank's fiduciary issue, or, indeed, that it forms part of an emergency issue in excess of the fiduciary maximum, provided—and this is an important proviso—that the notes continue to be acceptable as a convenient representative of the standard of value. What then can we say of the gold bullion held by the bank against its notes? Clearly, such gold is no more money than unmined gold, or gold which lies in the hold of a sunken ship. It certainly can be bought and sold on the bullion market, and it may be exchanged for metallic or paper currency, but the bullion itself is not expressed in terms of the standard of value and would not be generally acceptable as a medium of exchange. Again, can we include in the money category the sums lying to the credit of depositors in the hands of the banks? By some writers these sums are included in the total of money available in the community. In so far as such deposits are turned into cheques, this is no doubt true, but we know that only a small part of the total deposits in the hands of the banks circulates in this way at any particular time. Hence, only that proportion of the deposits actually in use can be strictly regarded as performing the money work. Bank deposits, like unmined gold or gold bullion, can have no effect on prices unless and until they become available in the form which the community will accept. Then and then only do they become factors in the effective quantity of money.

Currency.

The term *currency* is frequently used to indicate any form of money which passes current within a country, and in this sense it includes metallic money and most kinds of credit instruments. It is better, however, to confine the term to money which is issued by the State, and which is regarded as the current medium of exchange by virtue of the government authority behind it.

The Functions of Standard Money.

The commodity used as standard money must be capable of acting as :—

1. A MEDIUM OF EXCHANGE.—The fundamental function is that the commodity used as money shall be freely accepted in exchange for all other commodities or services. Its possession must enable its owner to obtain satisfaction of his own wants without difficulty. The intervention of money does away with the inconvenience of barter.

2. A MEASURE OF VALUE.—The value of commodities exchanged must be capable of measurement by reference to the standard commodity. The measurement of their value in this way facilitates comparison of the utility of articles, and thus simplifies their exchange.

3. A STORE OF VALUE.—The intermediate commodity must not deteriorate with time. Its owner should be enabled to retain it on hand indefinitely so that he can at any time exchange it without loss for the satisfaction of his wants. Money would lose its usefulness if its owner were prejudiced by not exchanging it at once.

4. A STANDARD OF DEFERRED PAYMENTS.—Persons who arrange *now* to receive payment at a future date must be assured that the value they will receive in the future will correspond to what they could demand now. A lender who advances money now must be assured that, on the future date of repayment, the money he receives will exchange for approximately the same quantity of other commodities as it would on the date of the loan. Some commodity must be chosen the value of which is reasonably steady over many years, and the supply of which is not subject to violent changes. The relationship between individuals and between communities must be equitably and reasonably maintained ; debtors must not gain at the expense of creditors, nor creditors at the expense of debtors. This can be achieved only if the basis of the credit transactions is of reasonably stable purchasing power.

The Properties or Qualities of a Good Money Material.

By no means all of the forms of money to which reference has been made can be regarded as satisfactory if adjudged by the foregoing analysis. Only incompletely would many of them fulfil the functions mentioned, and their use would certainly be a hindrance rather than an asset under modern conditions. A good money material must possess the following qualities :—

1. PORTABILITY or EASE OF TRANSPORT.—A satisfactory money must be of high value for its bulk, and be capable of being carried from place to place without inconvenience, expense or difficulty. Not only does this characteristic permit of the commodity being easily hidden when necessary, but also it provides that money may flow so easily from one place to another as to prevent any appreciable difference arising between its values in any two places. Ease of transport makes for a general equilibrium.

The precious metals, possessing high value for small bulk, are very satisfactory in this respect, gold being naturally much more so than silver. Under modern conditions the bulk and weight of gold itself make its use for transmission constantly less frequent than formerly, and its place is taken by paper promises to pay which are issued and accepted on the condition that gold will always be forthcoming in exchange if demanded. Thus the attribute of portability so far as metallic currency is concerned becomes of less importance with the extension of the credit system and the widespread use of paper currency.

2. GENERAL ACCEPTABILITY.—The material must be such that anyone will take it without hesitation in exchange for goods or services.

The precious metals are always acceptable ; apart from their monetary use, they possess *utility* in themselves, e.g., for ornament, and consequently their possession is desired in all countries.

3. DURABILITY.—The material must not deteriorate in itself, or as a result of wear and tear. Indestructibility is essential if the commodity is to last for any reasonable period and if it is to be capable of transport over long distances without deterioration. Durability is essential also if stability of value (see below) is to be maintained.

Gold coins may last for many years without great deterioration ; it has been estimated that a sovereign would take 8000 years to wear out completely. Silver coins are far less durable, but nevertheless they retain their lustre and are not subject to rust or tarnish.

4. HOMOGENEITY, DIVISIBILITY AND MALLEABILITY.—All coins of the same metal must be as nearly as possible of the

same quality throughout: clearly one coin must not be superior to another. Further, they must be capable of division without difficulty, so that all pieces, of whatever value, are of uniform quality and of value as material in proportion to their weight. They must also be capable of being easily re-united without loss.

Precious stones have many of the qualities of good money material, but they are incapable of division without loss, are by no means homogeneous, and cannot of course be stamped or moulded. On the other hand, the mechanical properties of the precious metals are excellent: they are capable of easy division; their standard of purity can be fixed and maintained with remarkable accuracy, while their great malleability permits of their being easily stamped and impressed with intricate designs.

5. Cognisability.—The material of which money is made must be instantly recognisable and distinguishable from all other materials whether by the eye, the ear or the touch. This is essential if counterfeiting is to be made difficult.

Gold and silver are at once recognised by their distinctive colour, metallic ring and heavy weight for small bulk.

6. Stability of Value.—Commodities which are subject to violent changes in supply and demand are useless as money. It is no less disadvantageous to have a fluctuating standard of value than it is to have a changing unit of weight or of measurement. The value of a material which is used to measure the value of other materials must be consistent and stable. Instability is the root of unacceptability.

A bill or cheque is accepted because of the knowledge that it can at any time be converted instantly into legal tender issued against metallic reserves. Consequently, the stability of value of the metals which form the basis of the modern credit system is of paramount importance.

The value of gold is maintained with fair steadiness because the yearly production is small compared with the great quantity in existence. Small changes in value do occur; but they are normally so gradual as not to occasion any widespread distrust in the metal as a monetary material. Obviously a community can more easily adapt itself to a gradual rise or fall in the value of money material than to violent fluctuations, which cause loss and considerable inconvenience. On the other hand, the world is already faced with the problem that supplies of new gold are not keeping pace with the increased demand for the metal resulting from the growth of world productivity and from the wide adoption of the gold standard.

Of late years the value of silver has fluctuated considerably and its stability is not comparable to that of gold.

PAPER MONEY

Under modern conditions, the precious metals, and particularly gold, are being used for internal exchange purposes to a constantly decreasing extent. The inhabitants of the United States have always preferred the use of notes and cheques for everyday purposes to the use of the heavier metallic currency, and since the Great War continental nations have, by force of circumstances, also adopted paper media of exchange, with the result that in all but very few countries, gold has almost disappeared from circulation.

The term "paper money" is applied to bank notes and government notes which pass from hand to hand without difficulty or question, and not generally to cheques and bills, which have a limited circulation only. Paper money is sometimes issued by the State, but in most countries, such as England, France and Germany, it is issued by private banking institutions which are subject to legal control.

Paper money may be either *convertible* or *inconvertible*. In the former case the holder has the right of conversion on demand into gold or silver, held as a reserve against the issue, whereas in the case of inconvertible paper the holder has no such right of conversion. There is merely an indefinite promise to repay in metallic currency, but in practice such a promise is not fulfilled, nor as a rule is it intended by the issuers that it shall be fulfilled.

Convertible Paper Money.

This type of money may perform the functions of a good money in the highest degree, provided that the promise to repay is unmistakable and is always fulfilled immediately on demand. Its cognisability can be made almost perfect; it is light and portable, it can easily be issued for various amounts and can be made unmistakably homogeneous. The use of paper is obviously a great economy, and although it is not very durable in itself, the difficulty in the case of paper money is overcome by the frequent withdrawal of soiled notes and the issue of new ones. The stability of value of such notes can be maintained in a high degree if sufficient care is exercised by the issuers to ensure good reserves and free convertibility into the standard of value. In this way any issue in excess of the wants of the community is converted into the standard metal, and inflation of the currency is consequently obviated. Bank of England notes prior to the war were the classic example of a strictly convertible currency: they were recognised everywhere as being as good as gold, and enjoyed almost universal acceptability.

Sometimes a distinction is made between notes which are backed unit for unit by gold, and those against which is held a reserve partly of securities and partly of gold. Both may be

absolutely convertible, but the former are regarded as being issued, for convenience, *in place of* the metal which is reserved against them; they are really *bullion certificates*, the possession of which entails no risk. On the other hand, the latter may conceivably become inconvertible if so many are tendered for encashment at one time as to exhaust the actual bullion reserve and make conversion of the securities impossible within the time at the disposal of the issuers. There is consequently a slight risk of inability to encash the notes if they are presented in large quantities at the same time.

Inconvertible Paper Money.

Unfortunately, the history of paper currencies almost always ends in a period of inconvertibility, short or prolonged. It requires the utmost good faith and most careful management to ensure the convertibility of paper notes, particularly in times of stress and financial stringency, when the temptation to over-issue is very great. Then more notes are issued than are warranted by the state of the reserve, and when demand slackens and the notes return for encashment, it becomes difficult and eventually impossible to redeem them. They may then become inconvertible and subject to all the evils of a depreciated paper currency.

Of course, a government may at the outset issue a currency which it has no intention of redeeming. In one or two cases inconvertible notes have been issued and the currency very successfully maintained without depreciation by a strict limitation of its quantity and a careful regard for public requirements. If this can be done—as it was done by France in the case of the notes issued in 1870 after her war with Germany—then such inconvertible issues are subject to many advantages. They are cheap and convenient and obviate the necessity of keeping heavy reserves.

The great danger of excessive issues is, however, always present, and few countries have been able to resist the temptation to over-issue. Many countries after the Great War were flooded with notes which it would have been quite impossible to repay in gold or silver. Such issues were in the nature of forced loans, and the notes were kept in circulation only by virtue of the power of the State which lay behind them. Obviously the value of a paper currency with no metallic backing must fluctuate considerably: people estimate its value according to the stability of the issuing government, and according to the fortunes of the ship of State. Such money has almost always been issued because of the force of circumstances, and again and again history has repeated itself in so far as the issuing State has constantly resorted to fresh issues in an endeavour to relieve itself of increasing embarrassment. With every fresh issue the value of the note falls: it rarely happens that demand is such

as to keep up the value in face of the steady output of the printing machine. The absence of any reserve leads eventually to uncertainty, discredit and depreciation, which harm the nation's credit, disorganise trade and upset the foreign exchanges.

Trade and the exchanges are influenced because in foreign states there is always a fear that when inconvertible paper is once issued it will eventually be allowed to depreciate in value. A good currency is self-regulating. Gold is universally demanded and consequently tends to flow from one country to another whenever there is an excess in one place and a shortage in another. There is an automatic adjustment which is absent in the case of an inconvertible paper currency, for the latter is useless outside the boundaries of the issuing state and will not be accepted by other nations for international payments.

Thus both the management and maintenance of an inconvertible currency bristle with difficulties. On the other hand, much theoretical argument may be advanced in favour of a currency consisting entirely of strictly convertible notes. Paper money is economical and convenient, it is easily issued and controlled; there is no wastage by wear and tear, and no loss on reminting as in the case of gold coins. A strictly convertible currency would be self-regulating. Immediately the value of notes fell below the value of bullion, the position would be adjusted by the conversion of notes into bullion; and *vice versa*. For international purposes, gold would generally be used, but the notes themselves, being really rights to receive gold, would not be refused. Some such system exists in this country at present, for although Bank of England notes are convertible in small amounts only at the option of the Bank, the latter is nevertheless compelled to sell gold in quantity in exchange for its notes. Accordingly, there does not seem to be any valid objection to the retention of our paper currency even if more favourable conditions made possible the return of gold to ordinary circulation.

COINS AND COINAGE

In early days media of exchange consisted simply of rough ingots of the chosen metal, which had to be weighed and assayed each time an exchange was effected. This system persists even to-day in China where in some districts the *sycee* or "shoe" of silver, a variable weight of the metal, is used for purposes of exchange.

The disadvantages of such arrangements led eventually to the adoption of shaped pieces of the metal, upon which the weight and fineness had already been certified by a mark or stamp. The Chinese *sycee* is nowadays marked with the "chop" or stamp of the native bullion dealer, in token of its purity and weight. Money in this form possesses the advantage that its value is at once ascertainable, and that it can be counted.

The next step marks the advent of the *coin*, a piece of metal shaped and stamped with a die in such a way that it cannot be chipped or abraded without detection. Under modern conditions the edges of the coin are *milled*, and an intricate design is impressed on its surface as a protection against fraudulent use and as a guarantee by the State of the genuineness of the coin.

In practically every country, the circulation of coins of the standard metal has now been superseded by the circulation of convertible paper money, and, in view of the great convenience of the latter, and of the present and probable future shortage of gold, it is doubtful whether metallic coins will ever return to circulation. Meanwhile, the only coins circulating in most countries are those of small denominations ; in this country gold sovereigns no longer circulate, but silver and copper *token* coins remain in use. These smaller coins, which bear a fixed relation to the standard unit of currency, are made, not of the standard metal —usually gold—but of bronze, nickel, silver or some other alloy.

Remedy Allowance and Fineness.

The coining or minting of metallic money is usually a rigidly protected monopoly of the State, the operation being carried out by the State mints. The actual weight of each type of coin and the degree of purity required are prescribed by law, and must be maintained by the mint subject to certain specified " *remedy allowances* ", within the narrow limits of which the coins may vary in weight or in " fineness ". *Fineness* is the proportion of pure metal to alloy in the coins : the sovereign is eleven-twelfths fine, that is, it consists of eleven parts of pure gold and one part of alloy, the latter being inserted in order to harden the money material and to improve its wearing qualities. Under modern conditions, with the existence of extremely accurate machinery and delicate measuring instruments, the remedy allowances in weight and fineness are scarcely necessary.

Gratuitous and Free Coinage.

The coinage of token currency is invariably undertaken by the State at its own convenience and on its own account, any resulting profit (or loss) being borne by the Exchequer. The arrangements under which standard metal is coined vary considerably, however. If the standard metal is converted into coins free of all charge for minting, the coinage is said to be *gratuitous* ; whilst if anyone may have any amount of the metal accepted by the Mint for conversion into coin, without any restrictions, the coinage is said to be *free*.

Mintage and Seigneurage.

The coinage of standard metal in most modern states is gratuitous, though not necessarily free, but this has not been

always the case. Where a charge is made to cover the *actual* cost of converting bullion into either standard or token coins, the charge is known as *mintage* or *brassage* and is to be distinguished from *seigniorage* or *seigneurage*, i.e., a charge which is *higher* than is needed to cover the expense of minting.

Seigneurage may be taken in two ways: (*a*) a certain proportion of alloy may be inserted in the coins instead of the precious metal; *or* (*b*) the coins may contain the full weight of precious metal, but a direct charge beyond the expense of minting may be exacted from the person leaving the bullion for coinage.

The coining of metal is obviously a great convenience to the public, and one which may rightly be subject to a small charge. Coinage has a special utility in that it satisfies the need for a medium of exchange, and therefore the metal is worth more as coin than as bullion. Labour and capital are expended in the manufacture and issue of coins, and should be paid for by the users; moreover, a seigniorage charge acts as a deterrent against the melting down of coin for export as bullion or for use in the arts, and, provided it is not sufficiently high to impair the demand for currency, it cannot affect the purchasing power of money, since this is determined by the interaction of supply and demand.

On the other hand, free coinage is advocated on a number of grounds. In the first place it is one of the functions of the State to provide an efficient currency, and therefore no specific charge should be levied for this service. The cost of minting is relatively small and should be defrayed from tax-revenue, just as the cost of other state-services is defrayed. Secondly, the parity between the value of gold as bullion and as coinage provides an automatic check on inflation, as coins are melted or exported immediately an excessive issue causes any divergence from this parity. Such an export of home currency is in itself an advertisement which enhances the nation's reputation, and is obtained at a very low cost to the community. In this country and in many others, the standard metal is coined free of charge, but a profit is made by the State on the minting of the less valuable token currencies.

The Mint Price and the Market Price of Gold.

The mint price of gold in any country is the price at which the metal is coined into the standard currency. In England, for example, the Mint accepts gold for coinage at the rate of £3, 17s. 10½d. per ounce standard, eleven-twelfths fine; in other words, approximately 3·894 sovereigns are coined from one ounce of standard gold. Since the coinage is gratuitous, the whole of the metal is returned in the form of sovereigns, which accordingly contain 123·27447 grains of standard gold.

Since the Gold Standard Act, 1925, the Mint will accept gold for coinage only from the Bank of England. Accordingly, a person having the metal to sell must dispose of it either in the

open market or direct to the Bank of England, which is bound to buy at £3, 17s. 9d. per standard ounce. This is known as the *Bank's Buying Price* for gold and is equivalent to £4, 4s. $9\frac{3}{16}$d. per fine ounce. On the other hand, the Bank is bound to sell standard gold in 400 oz. bars at the rate of £3, 17s. $10\frac{1}{2}$d. per standard ounce, equivalent to £4, 4s. $11\frac{1}{2}$d. per fine ounce.

The existence of these two margins normally sets limits to fluctuations in the *market price*, i.e., the price at which gold bullion can be purchased in the Bullion Market, due allowance being made for its fineness and for varying convenience of handling. Obviously a seller of gold will not accept less than 84s. $9\frac{3}{16}$d. per fine oz. for his gold, since he can obtain that price at the Bank of England. Similarly, a buyer of gold will not normally pay more than 84s. $11\frac{1}{2}$d. per fine oz. for gold in the Bullion Market, for he can buy unlimited quantities at that price from the Bank. At times, however, the market price may rise slightly above the Bank's selling price, as, for example, when the Bank issues only *standard* gold which usually needs refining before it will be accepted by a foreign central bank. Hence, it has been possible for sellers of fine gold to obtain as much as 85s. $0\frac{3}{8}$d. per ounce in times of urgent demand for the metal. The margin of $\frac{7}{8}$d. above the Bank's price represents the approximate cost of the extra refining and loss of interest during the process.

Debasement and Depreciation.

Many methods of debasement and depreciation of the coinage have been adopted from time to time in various countries. Debasement may be due to the action of the State itself, as where coins are issued much below the legally fixed weight or quality, or may result from felonious interference with the coinage after issue, with the object of extracting some of the valuable material. Among the methods adopted for this purpose are (*a*) *Clipping*, i.e., cutting away small portions from the edge of the coins—now made impracticable by milling or otherwise distinctively marking the edges ; (*b*) *Sweating*, i.e., reducing the quantity of metal in the coins by the action of corrosive chemicals ; and (*c*) *Abrasion*, e.g., shaking up the coins in a bag and thereby removing minute particles of the metal.

Under modern conditions the strict enforcement of penalties for the debasement of the coinage and for the issue of counterfeit coins has done much to perfect and to protect the issues in circulation. So far as the State itself is concerned it cannot now tamper with its standard currency without incurring discredit and national dishonour. Nevertheless, the depreciation of currency by the over-issue of notes was more widespread after the war than ever before, the nations engaged in the late conflict having been forced by the exigencies of war to resort to this method of extracting forced loans from their subjects, first of all

in order to fill deficiencies in the currency, and later in order to meet part of their extraordinary expenditure. Such issues can have only one result: the discredit of the paper currency, a fall in its value, a rise in prices and a disorganisation of credit, of trade, and of the foreign exchanges.

Gresham's Law.

During the reign of Elizabeth (1558-1603) her councillors had good reason to be perturbed by the existence in this country of a currency which had been badly tampered with in previous reigns. The coins in circulation had been so debased, clipped and sweated as to be a reproach to a nation well on the high-road to prosperity, but all attempts to improve matters by the issue of new coins proved useless. The new issues disappeared as soon as they were placed in circulation, leaving the currency in a state but little better than before.

The young Queen and her advisers sought the advice of Sir Thomas Gresham, a merchant of great experience and famous to posterity as the founder of the Royal Exchange. In a series of letters to Elizabeth, Gresham propounded the law which now bears his name (although it had been previously enunciated several times) to the effect that "*bad money tends to drive good money out of circulation*". Gresham explained that when a currency consisted of good and bad coins circulating together, people tended to hoard the better coins, to melt them down, or to export them in settlement of debt or for profit, thus leaving only bad coins in circulation. Goldsmiths and bankers who traded in gold kept back the full-weight coins coming into their hands, and passed on those which were worn or debased. Heavier coins were obviously more profitable to export because the metal was sold by weight, whereas light-weight coins could be used for internal purposes just as well as those fresh from the mint, so long as no law prohibited their tender or acceptance.

Some economists argue that Gresham's law cannot be applied at all to modern conditions, as it was applicable only to such unscientific monetary systems as existed during the time of Gresham and throughout the Middle Ages. In Gresham's day its influence was emphasised by the endeavour of the various nations to establish and maintain independent systems of *bimetallism*, i.e., the adoption by each state of a double standard of silver and of gold, the two metals circulating side by side and being legal tender for the discharge of debts at a ratio fixed by the nation concerned. Bimetallism will be dealt with hereafter, but we may note at this point that its great difficulty lies in the fact that the ratio between the market prices of the two metals frequently differs from the ratio fixed by law. The market price has no fixity: it varies with changes in the production of the metals, and with the variations in the demand for them for

coinage and for other purposes. Thus the State may decree that 15 units of silver are to be taken as equal to 1 unit of gold, but the relative market prices may make 14 units of silver equal to 1 of gold. This means that silver is *undervalued* at the legal ratio or *overvalued* at the market ratio, while gold is overrated at the legal ratio; consequently the silver currency follows the tendency of "good money" under Gresham's law and disappears from circulation.

Usually the tendency has been in the other direction: the great discoveries of silver in modern times lowered the value of the metal below the ratio legally fixed in bimetallic countries. Consequently gold disappeared from circulation in those countries and silver remained. In the absence of an international agreement to maintain the market price of gold and silver, the ratio between their values was never constant, and, as between the countries which adopted bimetallic systems based on fixed ratios between the metals, there was a constant movement of one or other of the metals from the currencies in accordance with Gresham's law.

Similarly, the law operates to drive from circulation a gold or silver currency circulating along with a depreciated paper currency which is made legal tender by the State. The good metallic money disappears, leaving the bad paper currency in circulation. This principle was strikingly illustrated during and after the Great War, when the currencies of many continental countries became greatly depreciated and in some cases worthless.

By some economists it is maintained that the disappearance of the sovereign from circulation in this country and its replacement by treasury notes was not an instance of the working of Gresham's law. Under the Defence of the Realm Regulations it was made a penal offence to melt down or export gold coin from England. In consequence paper money in England became practically inconvertible, and the banks were free to withdraw from circulation all the gold coin which passed to them. This, it is stated, was carried out as a deliberate policy for increasing the Reserve of the Bank of England, and was not a true instance of "bad money driving out good". When in 1919-20, owing to the rise in the bullion price of silver, it became profitable to melt down shillings, and to meet this difficulty the content of the silver coinage was reduced by 50 per cent., one might say that we witnessed an instance of the working of Gresham's Law in some degree similar to the conditions which constantly prevailed in Europe in the eighteenth and nineteenth centuries.

It will be clear that two conditions are essential for the operation of Gresham's Law in any of the foregoing circumstances. In the first place, there must be in circulation sufficient money for effecting the necessary exchanges within a community. Good money cannot be hoarded or exported if the circulating medium is scarce and is urgently needed for business requirements. Secondly,

bad money cannot displace good if the community as a whole refuses to accept and to circulate it for exchange purposes. Under such conditions the good money will be retained against any pressure tending to its removal. An interesting example of this occurred in Germany in consequence of the vast post-war inflation of her currency, for, in spite of the fact that the almost worthless mark notes were legal tender, goods were frequently priced in sterling and francs, and British treasury notes were freely accepted in preference to the " bad " mark paper.

Legal Tender and Token Money.

Among the many forms of money and representative money which exist in a community, there are some which a creditor need not necessarily accept in full settlement from his debtor. For example, there is no obligation on a creditor in this country to accept a cheque or bill of exchange or a private bank note. In fact, many people will not take such instruments. A cheque rarely circulates except between people who are known to one another and can be relied upon not to pass a worthless instrument. Bills have a wider and more general circulation than cheques, but neither of these circulates to the same extent as notes issued by the Government or central bank.

In order to facilitate exchange and to obviate all difficulty, the custom arose for the State to declare one or more forms of money to be a standard of value and unlimited *legal tender*, i.e., *that which must be accepted by a creditor up to any amount when offered in final discharge of debt or in full payment for commodities.* The refusal of a creditor to accept a payment in legal tender places him in a difficult position.

The high value of gold makes it impracticable for use for small coins, and so coins of a low denomination in a cheaper metal become necessary. These are known as *tokens* or *token coins*, because their face value is greater than the actual commodity value of the material of which they are made. They are representatives or substitutes for the more valuable standard metal, and can be maintained in circulation because (*a*) only sufficient are issued to satisfy the requirements of the community for making small payments; (*b*) they are more valuable as coins than as bullion, and (*c*) they are made *limited legal tender*, i.e., legal tender for payment of small amounts only. As a rule, the State makes a profit on the issue of token coins because the value of material used is not as great as the face value of the coins manufactured therefrom. A rise in the market price of the metal material may, of course, remove such profit altogether, and a reduction in the proportion of precious metal may become necessary if the profit of the State is to be maintained. In so far as a profit is made by the State on the issue of token money, such money may clearly be regarded as being subject to a seignior-

age charge. Moreover, paper money may be regarded as token money on which the seigniorage charge is one hundred per cent. When paper money and standard coins circulate together it is essential that the issue of the paper money be carefully regulated according to the community's need, for, if it is otherwise, the value of the paper money falls, and, if standard coinage is in circulation, Gresham's law will operate to drive the latter out of circulation.

MONOMETALLISM AND BIMETALLISM

Monometallism.

Monometallism is that system of currency wherein one metal only is adopted as the standard and is made legal tender for all payments. Token coins of cheaper metal, or notes of small denomination, may also circulate, but in the strictly monometallic system, i.e., the *Single Legal Tender System*, only the standard metal is made legal tender. Between 1664 and 1717 England had a monometallic currency based on silver as the sole legal tender. The present system, which is not strictly monometallic, is described later in this chapter.

Bimetallism.

Bimetallism involves the adoption of two metals—usually gold and silver—as legal tender for the payment of any amount at a legally fixed ratio, and the coinage of both metals with equal facilities. Bimetallism is otherwise known as a *Multiple Legal Tender System*, and was adopted in 1803 by France, and in 1865 by the Latin Union, comprising France, Belgium, Switzerland and Italy. Other continental countries afterwards adopted the same principle, and the majority of the nations concerned agreed by convention on the mintage of gold and silver coins of fixed weight and fineness, to be freely accepted for exchange purposes in any of the countries which were parties to the agreement. The Great War has demonstrated how futile are such arrangements to regulate economic forces and to control the economic adjustment of monetary values, for the wide differences in the financial and economic situation in the various countries, particularly as between belligerents and neutrals in the late war, made impossible the continuance of the agreement that the various currencies should be legal tender in any of the participating countries, and, in consequence, the Union was dissolved.

In the later years of the nineteenth century France made strenuous efforts to induce Britain and other nations to adopt bimetallism, but without success. Most of the leading nations have preferred the simplicity and proved practicability of the single standard, but, though bimetallism is obsolete in practice, it is still strongly supported by some economists. The chief

arguments of the bimetallists are : (*a*) that the joint production of both metals would not vary so much as that of either of them ; (*b*) that the dual system would tend to steady prices ; and (*c*) that the supply of gold is insufficient for the currency requirements of all countries if universal monometallism were adopted. These arguments have not outweighed the following proved disadvantages of the bimetallic system : (*a*) the great difficulty of maintaining the mint ratio between the metals in face of constant fluctuations in the market ratio ; and (*b*) the operation of Gresham's Law in driving from circulation the underrated metal as soon as the market prices diverge from the mint ratio, resulting in an alternating coinage of gold and silver.

In spite of the disadvantages which have resulted in practice from the adoption of bimetallism, many leading economists, such as Professor H. F. Foxwell, Wolowski, Dana Horton and Lord Balfour, have advocated a universal bimetallic system on a scientific basis. They contend that if several of the leading countries co-operated to maintain the circulation of the two metals at a ratio fixed by international agreement, then no profit would accrue by exporting one of the metals from one country to another, and consequently Gresham's Law would not operate. A strong combine of mints could arrange to maintain the joint standard by controlling the market price of bullion, and could prevent any serious divergence between the universal mint ratio and the market ratio. Such arrangements would not only make possible the advantages, already enumerated, of a bimetallic system, but would also solve the difficulties nowadays experienced in exchanging gold standard currencies for the currencies of silver standard countries.

As Gide points out,[1] the great difficulty would lie in obtaining international agreement : " Each country makes it a point of honour to adopt a gold standard. The English government in particular, whose aid would be indispensable in re-establishing bimetallism, has always set its face against it ".

The " Étalon Boiteux ".

Prior to 1914 the monetary system in France was what was known as the " étalon boiteux " or limping [2] standard, a relic of the broken-down bimetallic system. Legally, the national unit of account was the franc, defined as one gramme of silver, nine-tenths fine, and the silver 5-franc piece was legal tender for any amount on a par with gold, in spite of the fact that there was no free mintage of silver and that the silver currency actually in circulation was only ·835 fine. The foreign exchanges were maintained on a purely gold basis, but whenever there was an excep-

[1] *Principles of Political Economy*, page 237.

[2] This term implies that silver, having lost its equal status as a standard, is regarded as "limping" or functioning with difficulty alongside the superior metal, gold.

tional demand for gold, the Bank of France prevented a drain on its reserves by paying out silver 5-franc pieces. In addition, there were still in force remnants of the old agreements of the Latin Union under which the gold, silver, and subsidiary coins of the other countries were accepted at par.

THE BRITISH MONETARY SYSTEM

During the eighteenth century and until 1816, Britain had a bimetallic currency system, under which silver and gold were freely coined on an equal basis, and were legal tender for all payments at a certain fixed ratio. The relative production of the two metals varied continually during this period and great difficulty was experienced by the Government in maintaining the legal ratio, which had to be constantly altered to meet the changing conditions. By 1800 the production of silver had increased considerably; the silver currency was overrated and tended to drive gold from circulation. Consequently, in 1816, the free coinage of silver was discontinued, and gold was definitely adopted as the sole standard of value, being made legal tender for all payments. Our coinage is now regulated by the Coinage Act of 1891, as modified by that of 1920, and the present currency system is as described in the following paragraphs.

Metallic Currency.

GOLD COINS, consisting of sovereigns and half-sovereigns, are legal tender for payment of any amount. A sovereign consists of 123·27447 grains of standard gold, $\frac{11}{12}$ths or 22 (out of 24) carats fine, and is legal tender so long as it does not weigh less than 122·5 grains. A half-sovereign is exactly half the weight of a sovereign, but its minimum legal weight is 61·1250 grains. In pre-war days the Mint accepted gold for coinage at the rate of £3 17s. 10½d. per ounce standard, provided that it was of the required fineness and of sufficiently large quantity, but at the present time, by virtue of the provisions of the Gold Standard Act, 1925, all gold has to pass to the Mint through the Bank of England, by which gold is purchasable at the rate of £3 17s. 9d. per ounce standard. The difference of 1½d. per ounce between the Mint and Bank prices is not profit; it is a margin intended merely to cover the expenses and loss of interest involved in passing gold through the Mint for coinage. The Bank pays over gold coins in exchange for bullion immediately, or gives immediate credit for the gold in account, and it must accordingly be recompensed for the expense and loss of interest involved in having the bullion converted into sovereigns if it so desires.

SILVER COINS are legal tender for payments up to 40s. only. Those at present in circulation are of two kinds: (*a*) *The old silver coins* issued under the Coinage Act, 1891, which decreed that

five shillings and one sixpence were to be coined from one ounce of silver, $\frac{37}{40}$ths or 925 (out of 1000) fine. As the price of an ounce of silver was generally about 2s. 6d., the Mint usually made a handsome profit, or "seigniorage", on the coinage of silver. (*b*) *The new silver-nickel currency*, issued under the Coinage Act, 1920. These coins are only 500 (out of 1000) fine, being composed of an alloy of silver and nickel. The decreased proportion of silver was made necessary by the great rise in the price of the metal during and after the war period, consequent on the widespread shortage which resulted from a greatly increased demand for the metal for currency purposes and the withdrawal of coins for melting and export.

COPPER COINS are made of bronze, an alloy of copper, nickel and tin. They are legal tender for payments up to 1s. only.

English Paper Currency.

BANK OF ENGLAND NOTES, *of* £5 *and multiples thereof*, are issued by the Bank of England in London, and by its various branches in Manchester, Birmingham, Bristol, etc. By the Bank of England Act, 1833, these notes were made legal tender in England and Wales for payment of all amounts *above* £5, except by the Bank itself or its branches, but by the Currency and Bank Notes Act, 1928, it was provided that they should be legal tender for all amounts *of* £5 *and over*.

BANK OF ENGLAND NOTES, *of* £1 *and* 10*s*., are now issued by the Bank under the Currency and Bank Notes Act, 1928, having replaced the Currency Notes issued by the Treasury from 1914 to 1928 under the Currency and Bank Notes Act, 1914. These notes are legal tender in England and Wales, Scotland and Northern Ireland, for the payment of any amount, even by the Bank itself or its branches.

The outstanding currency notes have nearly all been withdrawn from circulation, but any such notes still outstanding are deemed to be Bank notes, for the repayment of which the Bank is responsible.

Under the Gold Standard Act, 1925, neither Bank of England notes nor currency notes are convertible into gold *coin* for internal purposes, the object of this provision being "to prevent the internal circulation of gold coin until such time as the gold standard has been firmly re-established for the purpose of international transactions". On the other hand, holders of any "legal tender" are entitled to demand in exchange, at the head office of the Bank and during office hours, gold bars containing approximately 400 ounces of fine gold, at the rate of £3 17s. 10½d. per standard ounce.

The Bank of England has now a monopoly of the issue of paper currency in England and Wales, and is required to make and publish a weekly return of the position of its Issue Department.

The War-time Emergency Issue of Treasury Notes.

The Treasury notes, issued in 1914 as a war emergency measure, were made legal tender for all payments, and were put into circulation through the Bank of England. They were secured by a fluctuating proportion of silver bullion [1] and of Bank of England notes, the remainder being Government securities. A weekly return was issued showing the amount of notes outstanding and giving details of the position of the redemption account.

The Committee on Currency and Foreign Exchanges, appointed by the Treasury in 1918, urgently recommended the legal limitation of the Treasury note issue by the fixing of the maximum fiduciary issue in one year as the maximum fiduciary issue for the next year. From 1920 onwards, this limit—known as the "Cunliffe limit"—was adhered to, and the amount of uncovered notes was gradually reduced. It must be remembered, however, that the Cunliffe limit was not fixed by law; it was embodied only in a Treasury Minute, which could have been rescinded by the Treasury at any time. Moreover, under Section 3 of the Currency and Bank Notes Act, 1914, the Treasury had power (although it was never exercised) to issue currency notes *in excess of any limits fixed by law.* Mainly for this reason, and in order to place the issue of Treasury notes on a proper basis, the Cunliffe Committee recommended that, after two years' experience of the working of the restored gold standard with a gold reserve of £150,000,000, steps should be taken to combine the Treasury note issue with that of the Bank of England, thus placing the whole of the paper currency under Bank of England control. This amalgamation was brought about by the Currency and Bank Notes Act, 1928, and necessitated changes in the provisions of the Bank Charter Act, 1844, and in the Bank Act, 1826, by which the issue of notes below £5 was prohibited in England and Wales.

Currency in the Irish Free State.

The Coinage Act, 1926, and the Currency Act, 1927, provided for the establishment in the Irish Free State of a composite legal tender system. Gold coins (when issued) are to be unlimited legal tender, while the limited legal tender consists of token coins of silver up to 40s., of nickel up to 10s., of bronze up to 1s. The silver and bronze coins are the same size and weight as the similar British coins, the silver coins being 750 fine.

Prior to 1927, Irish paper currency consisted of British Treasury

[1] In April, 1925, £27,000,000 in gold was transferred from the currency notes reserve to the Bank of England in exchange for bank notes, with the object of strengthening the central gold reserve preparatory to our return to gold.

notes and of bank notes issued by six Irish banks under the provisions of the Bank Charter (Ireland) Act, 1845. These bank notes were not legal tender (except during the War and post-war period, 1914–1920), although notes of the Bank of Ireland were legal tender for payment of Irish Revenue.

The paper currency was reorganised by the Currency Act, 1927, which provided for the establishment in the Irish Free State of an independent Currency Commission formed of representatives of the Government and of the existing banks. The Commission now issues to the shareholding banks *legal tender notes* in denominations of 10s., £1, £5 and upwards, in exchange for British Government securities, British *full* legal tender or bank drafts payable in London. These notes are secured by gold bullion, British *full* legal tender or Government securities, or sterling balances at a bank in Great Britain or Northern Ireland, and are convertible on demand into sterling at par. In addition, the Currency Commission issues to all shareholding banks *consolidated bank notes*, which replace the fiduciary issues of the banks, and are convertible into legal tender at their head offices in Dublin. The consolidated bank notes are not themselves legal tender except for the payment of Irish Revenue. The bank notes are all of uniform design, except that they bear the name of the issuing bank. Any bank may exceed the proportion of the total note issue allocated to it on payment of a tax on the excess.

Northern Ireland.

British coins and Bank of England notes of £1 and 10s. are unlimited legal tender in Northern Ireland as in this country, but bank notes of £5 and over are *not* legal tender. The notes issued by the several local banks are not legal tender.

Currency in Scotland.

The currency of Scotland is similar to that of England, except that Bank of England notes of £5 and over are not legal tender, while much of the circulating currency consists of bank notes of £1 and upwards issued by eight banks under the provisions of the Bank Charter (Scotland) Act, 1845. The authorised issue of each of these banks is limited to the average amount of its issue in the twelve months preceding the passing of the Act, but any bank may exceed the limit if it holds coin or bullion against the excess issue at its head office or principal place of issue. Scotch bank notes are *not* legal tender.

The Gold Standard.

The definite adoption of the gold standard by Britain in 1816 was a vital step in the economic history of this country. It was followed by a wonderful period of progress, marked by the

ascendancy of this country in industry and commerce and by the rise of London to supremacy as the foremost financial centre of the world. The gold standard was maintained in this country in the face of great opposition, both at home and abroad, but one by one all the leading nations have adopted the same system in practice.

Three conditions are essential to the maintenance of a *full* gold standard (i.e., a gold *specie standard*). First, all paper currency circulating within the country must be redeemable without restriction in gold coin of equivalent face value. Secondly, both notes and coins must stand at absolute parity with gold bullion. This means that there must be no restrictions on the movement of gold or on the exchange of the gold currency of the country with the gold currency of other countries having a gold standard, at mint par rates or approximately so. In measuring mint par rates, due allowance must be made for any tax on gold imports or exports, or for any subsidy given for the encouragement of gold mining or for the exportation of gold. Thirdly, any person must be entitled to receive gold coin or legal tender in exchange for gold bullion from the Mint or Central Bank, free of all charge for minting and without any restrictions as to amount.

These conditions were fulfilled in Britain before the war and are at present fulfilled in the United States. The systems now existing in most of the so-called gold standard countries are really modifications of the full gold standard. In Great Britain, France and numerous other countries, the existing system is described as a *gold bullion standard.* This implies that gold bullion, but not necessarily gold coin, must be freely issued or accepted by the Central Bank in exchange for legal tender currency. Circulating legal tender notes are not convertible into gold coin, and a holder of gold bullion is not entitled to demand that it shall be minted into gold coin. A second modification of the full gold standard which is now being widely adopted is the *gold exchange standard.* The essential of this system, which is operative in Japan, Germany, Austria and a number of other countries, is that the country concerned shall use an internal currency of silver or paper which is maintained at a fixed parity with gold by artificial control of the currency and of the foreign exchanges. This usually involves, first, regulations entitling the holder of currency to exchange it for gold or for 'gold exchange' (i.e., rights to payment in a gold standard currency) at the fixed parity, and entitling the holder of gold or of gold exchange to exchange it for currency at the same rates; secondly, the maintenance of reserves of foreign exchange on gold standard countries in the form of bills, notes or securities of those countries, exchange being sold against those reserves in order to maintain the currency at a parity with gold.

The Advantages of the Gold Standard.

Apart from the eminent suitability of gold as a metal for coinage purposes, on account of its convenience and physical properties (see *ante*, page 391), the greatest merit of the gold standard is that the metal has universal acceptability, being accepted without hesitation by the nationals of all countries, and therefore such a standard establishes an *international measure of value.* Under an effective gold standard a country has an automatic machinery by which credit expansion and exchange fluctuation are regulated. One other advantage of such an arrangement is worthy of mention—*the confidence which it inspires.* As Mr. McKenna has stated, the psychological and moral aspects are as vital in this matter as the purely economic conditions, for, as he has stated, " So long as nine people out of ten in every country think the gold standard the best, it is the best."

Disadvantages of the Gold Standard.

Against these very powerful advantages must be set the following disadvantages. In the first place, it is objected that gold is not a stable standard as measured in terms of goods and services, owing to the effect of the supply or lack of supply of new gold on world prices—an effect which, though slight, makes itself felt over a period of years. Secondly, the expansion in bank credit depends rather on new supplies of the metal than on economic and natural conditions. In the third place, it is contended that the gold standard does not act as a compensating balance to the tendency of varying economic and psychological influences to affect prices, while, lastly, the opponents of the system point to the fact that the gold standard collapsed during the War in European belligerent nations, e.g., Germany, while at the same time other nations were flooded with unwanted gold, as, for example, the United States of America. (See also Chapter 29.)

CHAPTER 24

THE THEORY OF MONEY AND PRICES

CONSIDERABLE speculation and much controversy have centred in recent years around the theory of money and the means by which the value of money is determined. In so far as money is to be regarded as a commodity, its value must be determined, like that of all other commodities, by the ordinary laws of supply and demand. Nevertheless, in seeking to explain the determination of the value of money, a difficulty arises at the outset by reason of the fact that whereas the value of all other commodities is nowadays expressed in terms of one commodity—money (i.e., gold or its representative)—there is no one commodity in terms of which the value of gold itself may be measured. But just as we can measure the value of a table in terms of so many bushels of wheat, for example, so can we measure the value of a sovereign also in terms of so many bushels of wheat. The value of money can, therefore, be measured by the quantities of other commodities for which it will exchange; it rises if a given unit of money will purchase more commodities, and falls if a smaller quantity only of the same commodities can be bought. Now the values of commodities expressed in terms of money are called *prices*, so the value of money in terms of commodities is measured by the general level of prices, i.e., by its general purchasing power. If a unit of money purchases more of certain commodities to-day than it did yesterday, its value is said to have risen. Conversely, its value falls if it purchases less of the same commodities than before. In other words, *the value of money varies inversely as the general level of prices.*

PRICE INDEX NUMBERS

It would be obviously impossible to obtain any precise information as to the general level of the prices of all commodities at any particular time. Not only are the commodities bought and sold almost innumerable, but the prices at which similar transactions are effected in the same commodity are also subject to great variation. On the other hand, it would be useless to rely upon changes in the value of one or two selected articles as an indication of general changes in prices. Consequently it becomes necessary to fix upon an arbitrary selection of commodities, and to obtain an indication of the changes in the general level of prices by considering an average of the fluctuations in the

prices of a large number of representative articles. Such an average is called a *Price Index Number.*

In this country several well-known price index numbers are in existence, and although the methods adopted vary considerably, the results approximate very closely. Essentially, the method adopted is to choose a number of representative commodities in constant demand, and to note the average price of a given quantity of each commodity in any year or series of years which it is intended to use as a basis. Obviously, the year chosen must be *normal* so far as possible; it must not fall in the middle of a war period, or in the middle of a long period of peace, or too early in history to make it acceptable as a basis for modern calculations. Consequently the base years of some index numbers have been changed from time to time, although others have been continued without alteration. The index number of the weekly *Economist* (commenced in 1869) was originally based on the period 1845-50, but the base has been changed several times since and is now calculated on the average prices of forty-four chosen commodities during the year 1927.

The Board of Trade index of wholesale prices is now based on the average prices in 1913 of one hundred and fifty important commodities. The total of the average prices so determined forms a basis with which are compared similar totals for the same articles in years subsequent to the base period. As a rule, the total in the basic period is reckoned as 100, and the sum of the averages in subsequent years is easily indicated as a percentage rise or fall on the figures of the base period. Thus, if the index number in one year is stated to be 123, it indicates a rise of 23 per cent as compared with the period adopted as the standard of comparison.

A brief description of the *Economist* index number will serve to explain the principles on which the comparative figures are compiled. The commodities chosen are divided into five groups: respectively Cereals and Meat, Other Food Products, Textiles, Minerals, and Miscellaneous. In the case of very important commodities two or more wholesale prices of different varieties are taken, and the basic figure for each group (e.g., 500 for cereals and meat) bears to the total figure of 2,200 a proportion estimated to correspond to the relative importance of each group in the national economy. The basic total of 2,200 is equated to 100, and totals for subsequent periods are expressed as a percentage of this figure as in the table on page 412, the upper section having been compiled at the time when the basic period used by the *Economist* was 1901-1905, and the second section showing more recent figures based on the average price-level during 1927.

It will be noted that the index number reached its highest point (379·6) in March, 1920, during the post-war boom period, and that, since the end of 1924, there has been a steady fall.

Wholesale Commodity Prices

Date.	Cereals and Meat.	Other Food Products (Tea, Sugar, etc.).	Textiles.	Minerals.	Miscellaneous (Rubber, Timber, Oils, etc.).	Total.	%
Basis (avg. 1901–5) .	500	300	500	400	500	2200	100·0
End July, 1914 . .	579	352	616½	464½	553	2565	116·6
„ Dec., 1915 . .	897	446	731	711½	848½	3634	165·1
„ Dec., 1917 . .	1286½	686	1684½	839½	1348½	5845	263·2
„ Nov., 1918 . .	1289	782½	1848	903	1389½	6212	282·6
„ Mar., 1920 . .	1508	914	2974½	1246	1709½	8352	379·6
„ Dec. „ . .	1344	805	1284	1216	1275	5924	269·3
„ Dec., 1921 . .	921½	636	1106	762	931½	4357	198·0
„ Dec., 1922 . .	861	706	1184½	705	807½	4264	193·8
„ Dec., 1923 . .	853	815½	1382½	774	755	4580	208·2
„ Dec., 1924 . .	992	789½	1452	815½	806	4855	220·7
„ Dec., 1925 . .	936½	679	1120	733	782½	4251	193·2
„ Dec., 1926 . .	875	736½	859	773½	731	3975	180·7
„ June, 1927 . .	913½	716	1007	662½	705	4004	182·0
Basis (1927=100) . .	100·	100·	100·	100·	100·		100·
End Jan., 1927 . .	97·7	100·9	89·7	108·5	102·0		99·6
„ June, „ . .	105·4	98·6	100·2	99·1	98·1		100·3
„ Dec., „ . .	97·4	98·2	102·5	94·1	101·5		98·8
„ June, 1928 . .	112·8	92·6	109·8	91·3	95·9		100·6
„ Dec., „ . .	97·6	90·2	101·7	94·1	94·1		95·0
„ June, 1929 . .	95·1	84·1	92·7	96·3	89·3		91·7
„ Dec., „ . .	92·3	83·6	82·6	92·4	89·2		88·3

The Formation of Price Index Numbers.

The compilation of price index numbers, involving the comparison of prices over a series of years, is necessarily a task requiring the greatest possible care. As in other departments of statistics, an entirely unbiassed and unprejudiced mind is necessary, together with a wide general knowledge and adequate sources of information.

The Choice of Commodities is naturally the first and most important essential. The articles selected must be in constant demand, and such as are purchased with regularity by all classes of the community. Uncertain demand causes considerable fluctuations which would not give a true perspective; consequently articles of ordinary consumption are those chiefly used. On some commodities a larger proportion of small incomes is spent than on others; bread is a far more important article of diet to the poor than to the rich, who have a greater variety of food at their disposal. Then, again, bread is a more important article of general use than is silk or fruit; far more people buy bread every day than buy silk every week. On the other hand, a

fair proportion must be maintained between manufactured goods and raw materials, for the average income is about equally divided between the two classes. To overcome these difficulties and to give important articles their due proportion of influence on the final result, the system of "weighting" is adopted, i.e., the average price of each commodity, or the percentage rise or fall in that price, is multiplied by a number indicative of its estimated comparative importance (so far as the quantity consumed is concerned) in the general list of commodities; e.g., the average price of bread may be multiplied by 11, that of meat by 7, that of tobacco by 1, and so on. The system of weighting is not used in the *Economist* index number but is replaced by the method of using several prices of different varieties of one commodity in determining the average; e.g., two wheat prices and four cotton prices are taken. Small differences in the weights do not greatly affect the final result, but a weighted index is likely to inspire greater confidence than one which is not weighted.

In spite of the care which is bestowed on the selection of commodities, it is frequently objected that the results obtained are arbitrary and that the commodities chosen are too limited both in number and scope. In ordinary index numbers the costs of many items such as the rent of houses and land, the cost of clothes, furniture and amusements, etc., are omitted, although, of course, part of all incomes is spent thereon. Attempts are made to obviate these difficulties in the case of certain cost of living figures, the chief of which is that of the Ministry of Labour. This is based on the average cost, in 1914, of such items as food, rent, clothing, fuel and light, the index in subsequent years being shown as a percentage rise or fall on the basic period. The table on the following page, also from the *Economist*, shows the method of presenting this index.

THE DETERMINATION OF PRICES is a task of considerable difficulty, and one which necessitates unremitting care. Indeed, the collection of reliable data concerning retail prices is so difficult that it is not generally adopted, although it is made the basis of the *Ministry of Labour* cost of living index already quoted. As a rule, wholesale prices are taken, chiefly because wholesale articles, and particularly raw materials, are subject to smaller fluctuation in price and to less variation in quality than manufactured articles, and because it is easier to obtain accurate figures from records supplied by the Board of Trade, Chambers of Commerce, wholesale dealers and others, than from retail shopkeepers and the ordinary consumers of goods. Wholesale prices tend to approximately the same level for the whole country, and are cut much finer than retail prices, which may differ widely as between one district and another, or indeed, as between one shop and another in the same locality.

Ministry of Labour Cost of Living Figure

AVERAGE PERCENTAGE INCREASE SINCE JULY, 1914.—ALL ITEMS.

(Food, Rent, Clothing, Fuel, and Light, etc.)

Month (beginning of).	1918.	1919.	1920.	1922.	1926.	1928.	1929.
	%	%	%	%	%	%	%
January .	85–90	120	125	92	75	68	67
February .	90	120	130	88	73	66	65
March .	90	115	130	86	72	64	66
April .	90–95	110	132	82	68	64	62
May .	95–100	105	141	81	67	64	61
June .	100	105	150	80	68	65	60
July .	100–105	105–110	152	84	70	65	61
August .	110	115	155	81	70	65	63
September .	110	115	161	79	72	65	64
October .	115–120	120	164	78	74	66	65
November .	120–125	125	176	80	79	67	67
December .	120	125	169	80	79	68	67

Retail prices are also more subject than wholesale prices to the many influences affecting the consumption of the same commodities as between one period and another. Changes in relative prices may result in the complete or partial substitution of one commodity, the price of which has risen, by another, the price of which has not changed or has fallen. Further, some articles of consumption may in a later period replace other articles formerly used: "A generation which knows not butter may have supplanted a generation which knew not margarine".[1]

Nevertheless, retail prices are better as a basis for cost of living index numbers, on which are now based the wages paid to certain classes of workers. It is only right that the figures determining remuneration should be based on the prices of articles on which that remuneration is actually spent. Changes in wholesale prices may not necessarily result in proportional changes in retail prices, and the latter may vary even though the former remain unchanged. In fact, it is found that movements in retail prices tend always to lag behind those in wholesale prices. In recent years, especially, the slowness with which retail prices have adjusted themselves to the fall in wholesale prices has given rise to the suggestion that the retailer is making more than his fair profit. Actually the lag is due largely to economic friction. In the retail trade information is little diffused and agreements for maintaining prices are common.

[1] *Money*, D. H. Robertson, page 25.

Moreover, at any moment the retailer is selling goods which he bought months ago when prices may have been considerably higher: he will therefore be unwilling to sell except at prices sufficiently high to cover the original cost. Finally, retail prices usually contain a large element of wages and these are notoriously slow to respond to a fall in prices.

The comparison of prices over several years is rendered particularly difficult because articles change considerably in description and quality. This factor is, however, less marked in the wholesale than in the retail markets, and is a further reason for the general adoption of wholesale prices as the basis of most price index numbers.

In spite of the difficulties mentioned and the many objections which are made to the use of price index numbers, it is found that the results obtained by various methods are generally in broad agreement. Index numbers are at best only approximate; their very construction shows that they are not intended to be meticulously accurate, but merely an approximate indication of the trend of prices over a period. They have certainly proved of the greatest utility to the economist and politician, to the statesman and business organiser alike.

The method of index numbers gives us a reasonably accurate basis for comparing changes in the value of money over a period of years, but it gives us no indication of the cause of those fluctuations. Rising prices mean a fall in the value of money, falling prices mean that the value of money is rising. But what are the factors which influence or determine these movements? Obviously the matter can be approached in two ways: we may endeavour to discover the causes of fluctuations in the prices of commodities, or we may try to find the reasons for changes in the value of money, for a change on the one side results in a change in the other. On the other hand, it is possible to reach certain general conclusions with regard to money itself considered as a commodity, and consequently it is usual to approach the problem from this side.

The Quantity Theory of Money.

As already stated, the value of money is measured by the quantity of other articles for which it can be exchanged. Alternatively, we may say that the general level of prices at which goods are sold depends on the quantity of money available to effect purchases. Thus a sudden increase in the quantity of money available, without any corresponding increase in the volume of goods, will result in a rise in prices, for more units of money will be available to purchase each unit of commodities. Conversely, a decrease in the quantity of money, with no change in the available quantity of commodities, will result in a fall in

the prices of the commodities bought, because less money can be offered in exchange. This, in short, is the *Quantity Theory of Money*, and in its barest form it may be thus stated:—"*Every change in the quantity of money in circulation produces, other things being equal, a directly proportional change in prices*".

This statement of the tendency was that adopted by the older economists, but in recent times it has been much discredited. It is undoubtedly true as a general statement that an increase of money in circulation does result in a rise in prices: after the Great War we had numerous examples of soaring prices (i.e., a fall in the value of money) resulting from too great an issue of paper currency in various states. It is also common knowledge that in gold and silver mining communities, where the precious metals are comparatively abundant and commodities are comparatively scarce, prices are very high. Further, in the past marked rises in prices have often followed great discoveries of the precious metals in various parts of the world.

Nevertheless, this bald statement of the theory is scarcely applicable to modern conditions, although it might possibly apply in a hypothetical community wherein the only forms of money are gold coins, where every piece of money exchanges but once, no hoarding takes place and money is used for monetary purposes only. Then the value of money will be the value of gold, and such an "equation of exchange" as is embodied in the theory may be obtained; every increase in the quantity of money, unaccompanied by a change in the number of commodities, will raise prices and so lower the value of the medium of exchange, whilst the converse would also be true. If the quantity of goods remained constant while the quantity of money doubled, prices would also double; if the quantity of money decreased by 50 per cent., prices also would fall by half. Similar results would accrue if the quantity of money remained constant while the number of commodities varied: if the quantity of commodities doubles while the volume of money remains constant, then will prices fall by half and the value of money be doubled. In such circumstances, the elasticity of demand for money is equal to unity.

In modern communities no such hypothetical conditions exist, and the bare statement of the Quantity Theory has to be modified because account must be taken of the following factors:—

THE USE OF CREDIT INSTRUMENTS AS MONEY.—Nowadays by far the greater proportion of the world's currency consists of cheques, bills and bank notes. These pass from hand to hand in discharge of debts and in payment for commodities. Their use economises that of metallic currency, and must obviously be taken into consideration in computing the quantity of money in circulation. Further, the system of modern banking and of book-credits permits a great reduction in the use of money for

the settlement of debt, and has undoubtedly prevented that enormous rise in the value of money which must otherwise have resulted from the difficulty of keeping the supply of metallic currency proportionate to the demand.

THE RAPIDITY OF CIRCULATION.—To-day one piece of money may function in a thousand transactions, and each time it circulates it does as much work as if an entirely new piece were used. In other words, a shilling which circulates 10,000 times does as much work as 10,000 shillings each circulating once only. Thus in endeavouring to estimate the quantity of effective money in circulation one must consider each unit of money in relation to the number of times it passes or circulates. If two countries have exactly the same number of units of money, but in one country those units circulate twice as quickly as in the other, i.e., the "momentum" of money in one country is twice as great as in the other, then the quantity of *effective money* in the former country is necessarily twice as great as that in the latter.

Thus the use of credit instruments and the increased rapidity of circulation of all forms of money *increase the supply of effective money*, i.e., the total quantity of money available to settle transactions, and *accordingly cause a lowering of its value.*

THE ACTIVITY OF EXCHANGE OR THE VOLUME OF TRADE.—The greater the activity of exchange or the greater the volume of trade, the more sales and purchases, advances and loans, wage and salary payments, etc., which have to be effected by the use of money. The more transactions there are to be made, the greater the demand for the money commodity, and, consequently, *the higher its value*, and the lower the general level of prices. Conversely, stagnant industry means a surplus of money and a fall in its value.

The Value of Money.

We may conclude, therefore, that, at any moment, *the value of money, like that of other commodities, is determined by the relation between the demand for money and its supply.*

By supply of money we must understand the quantity of all forms of exchange media multiplied by the rapidity of their circulation, i.e., the supply of effective money; and by demand for money we must understand the total number of exchanges which have to be effected by the use of money. If, therefore, the supply of money remains constant during any period of time, while the demand for money increases because of greater trade activity, then will a given quantity of money purchase more goods than before, that is, its value will rise and general

prices will fall. Conversely, if the total quantity of goods to be exchanged remains the same, while the supply of money increases, either through an increase in the quantity of exchange media or through an increase in the rapidity of their circulation, the value of money will fall and general prices will rise. To proceed a step further, if the demand for money at any time increases more quickly than the supply, the result will be a rise in the value of money and a corresponding fall in general prices ; while, if the supply of money increases more quickly than the demand, there will be a fall in the value of money and a corresponding rise in general prices.

An important difference requires to be noticed between the determination of the value of money and the determination of the value of ordinary commodities. Whereas in the case of an ordinary commodity, say, steel, there is no proportional relationship between fluctuations in demand and supply and variations in price, in the case of money, by hypothesis, the value at any moment varies in exact proportion to the changes in demand or supply. If supply is doubled while demand is unchanged, the value of money is exactly halved. If demand is halved while supply is doubled, the value of money is reduced to one-quarter.

There is, however, a similarity in the fact that, as the normal value of a commodity tends to approximate to its cost of production, so, *in the long run*, the value of money *is influenced by* the cost of production of the precious metals. Dear money and cheap goods make mining cheaper and more profitable, and hence tend to increase the output of the precious metals. Conversely, cheap money and dear goods lessen the incentive to mining, and hence tend to decrease the supply of the monetary metal or to diminish its rate of increase.

The use of the term *value of money* in the sense of ' purchasing power ' is to be distinguished from its use to mean the value of *floating capital*, or short term loans, on the Money Market, as indicated by the prevailing rates of discount and interest, and also from its misleading application to the material worth of the metal of which standard money is composed.

The Equation of Exchange.

We may therefore state the Quantity Theory of Money in more general terms as follows :—The general level of prices tends to vary *directly* with the quantity of money and its rapidity of circulation (i.e., its supply), and *inversely* with the activity of exchange (i.e., the demand for money).

Professor Irving Fisher[1] calls this " the equation of exchange " and expresses it mathematically as $P \propto \frac{M \times V}{T}$,

[1] *The Purchasing Power of Money*, Chap. XI., Sec. 2.

where P is the price level; M is the Quantity of Money in circulation; V is the velocity of circulation of that money, M; and T is the volume of trade effected, or the total amount of debts and all forms of transactions to be liquidated by the use of the money.

Alternatively, it may be expressed thus :—

$$PT=MV.$$

In this case PT is described as the "goods side" of the equation and MV as the "money side". In order to include the settlement of debts by the transfer of credit instruments, so pronounced a feature in modern communities, the equation is extended as follows :—

$$PT = MV + M'V',$$

where M′ is the total amount of all forms of cheques, notes and instruments of credit in circulation; V′ is the average velocity of the circulation of these credit instruments. Then M′V′ is the total value of purchases by means of credit instruments.

Limitations of the Quantity Theory.

It is very necessary in estimating the position of the Quantity Theory in economic science to avoid, on the one hand, the danger of accepting the statement of the theory as an exact explanation of the way in which the value of money is determined, and, on the other hand, the mistake made by those who dismiss the theory as a worthless truism.

In the first place, it must be understood that the theory, like most economic laws, is merely indicative of a *tendency*, and, while it depends essentially on the acceptance of the proposition that money is a commodity, and, as such, that its value is determined by the laws of supply and demand, it does not imply that every change in the *volume* of money has a corresponding effect on prices (and, inversely, on the value of money itself). It sometimes happens that a slight increase in the quantity of money stimulates the demand for money (i.e., the supply of goods) to such an extent that the ultimate effect of the increased volume of money is actually to lower prices, and thus to *raise* the value of money. Again, while brisk trade may result in an increase in the volume of transactions, it may nevertheless coincide with a period of high prices (as in 1919-20); conversely, a period of slack trade may coincide with the prevalence of low prices (as in 1920-25). This may be explained by the fact that during a boom period the volume of trade increases, but the volume of money (at the beginning of the boom at any rate) increases more than proportionately. Similarly, in a slack period, although the volume of trade contracts, the volume of money also contracts to an even greater extent.

The charge that the theory is merely a truism, or in other words that it merely shows that the general level of prices is determined by the formula,

$$\text{General Price Level} \propto \frac{\text{Quantity of money exchanged for goods}}{\text{Quantity of goods exchanged for money}},$$

seems plausible at first. But it is evident that the theory tells us more about the determination of prices than this. The value of the quantity theory, as modified to allow for modern conditions, lies in its explanation of the effect which is *likely to result* from changes in, say, the rapidity of circulation of money, new discoveries of gold, a contraction of credit, huge issues of paper money, or from improvements in industry leading to a vastly increased output of goods. In considering the effect of any one of those influences we must be very careful to watch for other factors which may balance or even outweigh the particular influence under consideration.

Apart from these necessary limitations, a number of material objections to the quantity theory have been made from time to time. There are a number of economists who dislike the orthodox statement of the theory, which assumes that money (or at least gold, which is the basis of most monetary systems) is a commodity and that its value as such is determined by the laws of supply and demand. Professor Cannan,[1] for instance, stresses the fact that unlike most commodities money is not governed by the strict laws of supply and demand because there is always such a huge stock already in existence that an additional supply is barely felt unless it is of extraordinary amount. Accordingly, he takes the view that the demand for currency is furnished "not by the number and amount of *transactions*, but by the ability and willingness of persons to *hold* currency, in the same way as we think of the demand for houses as coming not from the persons who buy and re-sell or lease and sub-lease houses, but from the persons who occupy houses".

Other economists take exception to the heterogeneous character of the terms involved in the "equation of exchange" previously mentioned, and contend that the amount of cheques in circulation cannot be added to the amount of gold in circulation any more than two per cent. per annum can be added to £100. "The proposition which we have laid down respecting the dependence of general prices upon the quantity of money in circulation must be understood as applying only to a state of things in which money, that is gold or silver, is the exclusive instrument of exchange, and actually passes from hand to hand, at every purchase, *credit in any of its shapes being unknown.* When credit comes into play as a means of purchasing distinct from

[1] See "The Application of the Theoretic Apparatus of Supply and Demand to Units of Currency," *Economic Journal*, Dec., 1921, also *Money*, page 72.

money in hand, we shall hereafter find that the connection between prices and the amount of the circulating medium is much less direct and intimate, and that such connection as does exist no longer admits of so simple a mode of expression ".[1]

Finally, it is sometimes objected that the theory cannot be applied to the conditions obtaining in a particular country to explain the rise or fall of prices within it without taking into account the position of prices all over the world. In the same way that the oceans have approximately the same level throughout the world, so money always tends by the process of international exchange to attain the same value notwithstanding that social or political conditions in a particular country may raise or lower its value there for the time being.

Arguments in Favour of the Theory.

On behalf of the theory it has been claimed that a law similar to that enunciated regulates prices in proportion to the amount of money of all kinds in circulation, and that this law has applied in some degree to conditions of trade and labour in all countries and at all times, all persons having some appreciation of its existence. Secondly, it is held that the law is applicable to conditions prevailing in England to-day, but the complexity of the term " money " considered in all its forms prevents the law from being enunciated in such a manner as permits of close definition, and which admits of positive proof by substitution of numerical values for the terms involved. Nevertheless, the validity of the theory was well illustrated both in this country and in other countries after the Great War, when the heavy issues of paper currency forced prices up to unprecedented levels.

Thirdly, it is maintained that the theory must be considered as regulating price movements throughout the world, and that when it is applied to explain movements in prices in a particular country, the indirect working of the theory in regulating prices in other countries must likewise be taken into consideration.

Finally, it is pointed out that a clear case can be established for the acceptance of the theory in its relation to the general level of prices, because it is possible to lower, to stabilise, or to raise the general level of prices by any of the following methods of regulating the amount of money in circulation or by a combination of some of these methods, as, for example, by (*a*) controlling the working of the gold mines and curtailing or subsidising the production of gold, which plan was considered and rejected by the Monetary Conference of 1892; (*b*) regulating the amount of gold in circulation by controlling the mintage, as was done in the Scandinavian countries during the war, when the central banks were no longer obliged to buy gold at the legal rates of mintage; (*c*) varying the standard of value, while retaining the

[1] John S. Mill, *Political Economy*, Book 3, Chapter VIII., Sec. 4.

name of the unit of account, as suggested by Professor Irving Fisher in his plan for an "unshrinkable" dollar; (*d*) controlling the circulation of bank and government notes; (*e*) regulating the circulation of cheques and instruments of credit by fixing the proportions of banking reserves; (*f*) encouraging an increase in the volume of trade, for the liquidation of which money in all its forms is required.

Fluctuations in Prices.

The reasons for fluctuations in prices have been hotly debated by economists for many years. The quantity theory in its older form was obviously an inadequate explanation of the considerable changes in prices which have taken place in modern times, but if the foregoing explanation of the equation is accepted, it is clear that fluctuations in the general price level may be attributable to fluctuations in the demand for money (i.e., variations in the number of transactions) or to fluctuations in the supply of money, or to a combination of both of these causes.

FLUCTUATIONS IN THE DEMAND FOR MONEY (i.e. on the "goods side"), may be attributable to one or both of two factors: (a) *Changes in the volume of turnover*, i.e. changes in the total quantity of goods exchanged. The quantity tends to increase under modern conditions, with the great extension of output which follows industrial development; on the other hand, a contraction of credit induces traders to sell stocks at low prices in order to obtain ready capital. (b) *Changes in the rapidity of turnover*, i.e. changes in the number of times certain goods are exchanged. Just as one piece of money may circulate several times, so may a given article be the subject of several bargains, being purchased and sold again and again.

FLUCTUATIONS IN THE SUPPLY OF MONEY (i.e. on the "money side") may also result from one or both of two causes: (a) *Changes in the amount of money* available for effecting exchanges. The amount tends to increase with the extension of the use of bills, notes, and cheques, and with the vast expansion of credit arrangements in recent years. On the other hand, the increase in the use of the precious metals for hoarding and for the arts tends to restrict their supply and to enhance their value. (b) *Changes in the velocity or rapidity of circulation of money.* Circulation depends on the volume of trade, influenced chiefly by the density of a population and the stage of industrial development, and on the development of the credit system, which facilitates and extends the use of cheques and bank notes.

Subject to the modifications which we have noted, the truth of the quantity theory of money has been often proved by past events in the history of this country, and the fluctuations in prices which have occurred at certain times are generally re-

cognised as being due to the operation of the law. The following summary may be useful in this connection :—

Period.	*State of Prices.*	*Causes.*
1820–49.	Falling Prices	The Industrial Revolution in the country caused a vast increase in trade and in the amount of goods produced. The demand for money was greater than its supply, hence prices fell rapidly and consistently.
1849–74.	Rising Prices. (1849–57—rapid ; 1857–74—slow.)	Great supplies of gold from the new mines in California and Australia increased the available amount of money and caused its value to fall and prices to rise.
1874–96.	Falling Prices.	A falling off in the output of the mines was accompanied by a vast demand for gold for special purposes, particularly for currency. In 1871 Germany adopted the gold standard, and Italy followed suit in 1873. Thus the value of gold tended to rise, and prices tended to fall, a result which was accentuated by the great output of commodities resulting from the opening up of the new countries and from the vast increase in industrial production.
1896–1900.	Rapid Rise.	The great increase in the supply of gold from the South African mines and the widespread development of the banking system, with its use of cheques and of credit payments, caused a great increase in the amount of money and in its velocity of circulation. Hence gold fell in value and prices rose very rapidly.
1900–14.	Slow Rise.	The output of gold was maintained, but production as a whole tended to be fairly constant. Hence prices were tending to rise slowly but steadily.
1914–20.	Unparalleled Rise.	The amount of money was enormously increased by the vast addition of paper money to the world's currencies, whilst the quantity of goods coming forward for exchange was greatly restricted and was accompanied also by a certain destruction of goods and of services for which payment had usually to be made. Enormous expansion took place also in the use of credit, particularly by the Government. War loans were issued by the State and taken up by the public with loans from the banks. The latter increased their advances against Government securities, whilst the State purchased goods with the money borrowed and so increased purchasing power in the hands of the public Fresh issues of paper money were constantly required to enable employers to pay advancing wages and to enable labourers to pay for goods at advancing prices. (See also Chapter 30.)

Period.	*State of Prices.*	*Causes.*
1920–22.	Falling Prices.	The rise in prices continued until it assumed the usual "boom" appearance. Great quantities of goods were produced and vast stocks were unloaded by producers to secure the advantage of the high prices. Prices fell rapidly, the fall being accentuated by the Government's adoption of the policy of deflation (see *post*, page 427), and by the restriction of credit facilities and the calling in of loans by the banks. Credit suffered a severe blow and everywhere conditions became extremely depressed, while the diminution in the currency and the demand for gold for export purposes forced its value to a great height. (See also Chapter 29.)
1922–24.	Slow Rise.	The lowest point in the post-war slump was reached in September, 1922, when the Board of Trade Index Number stood at 154·3. From that time up to December, 1924, as confidence revived and the purchasing power of the belligerent countries increased, there was a gradual rise in prices.
1925–30.	Falling Prices.	After the first half of 1925, however, the upward movement was checked, and prices fell steadily. After a temporary revival, there was a further world-wide slump, until, in 1929-30, wholesale prices had almost reached pre-war levels.

The Effects of Fluctuations in Prices.

The value of any person's income depends on its power to purchase the goods and services produced by others. If the power of one person's income to purchase the products of other people varied in exactly the same proportion as the power of their income to purchase his products, general fluctuations in prices might not have any very serious results. But unfortunately this is not what happens in actual fact. Changes in the value of money, i.e., fluctuations in prices, are generally harmful because they disturb the even basis of trade and industry, and because they tend to benefit some classes at the expense of others.

From this point of view people may be divided into two broad classes: first, those who are able to adjust their incomes comparatively quickly to changes in prices; and secondly, those whose incomes are fixed for a long time ahead in terms of money. In the first group are producers of commodities in fairly regular demand, who can adjust their prices—and consequently their profits—according to the changes in the value of money. The second group includes professional men whose charges are fixed by custom, persons receiving pensions, annuities, retired pay,

or allowances, and the *rentier* class, i.e., persons whose income consists primarily of interest from investments. Clearly, the former are affected less than the latter by price fluctuations.

In considering the general effects of fluctuations in prices it is convenient to distinguish between their reactions on the Production of wealth (or, as it is sometimes stated, on the volume of the National Dividend), and their reactions on the Distribution of that wealth or dividend.

Effects on Production.—Violent fluctuations in prices react adversely on the production of wealth because they create uncertainty, one of the greatest enemies of healthy business enterprise. In modern industry, production is almost always initiated long ahead of demand on an estimate of what that demand is likely to be. Countless operations are nowadays conducted on a credit basis underlying which are faith, hope, and expectation. Appreciable changes in the general price-level—in other words, in the purchasing power of money—destroy this basis of sound trading because they cause purely arbitrary, and usually unforeseeable, changes in the relationships between those who have to pay and those who have to receive. Even when such changes are spread over a long period, they may produce serious effects; when they take place during relatively short periods they do incalculable harm. These reactions are particularly evident in international trade, since violent price fluctuations are always reflected in movements of the exchanges, and such movements reduce foreign trade to a chaotic speculation.

Effects on Distribution of Rising Prices.—Of the broad classes in the community which we have distinguished—those who are readily able to adjust their incomes to changes in the price level, and those who are less fortunately placed—those in the first class, roughly synonymous with the business or producing community, are beneficially affected by rising prices. The prices of the goods and services produced by these classes immediately respond to a fall in the value of money, but the costs of labour (wages) and of capital (interest) rise more slowly. There is always a *lag* between the upward movement of prices and the rise in wages and other items in costs. Even when profits are rapidly expanding, the workers have usually to fight hard for additional earnings to meet the higher cost of living. Moreover, producers generally obtain higher prices for their goods than those on which their estimates were based. Consequently, profit margins are widened, business is stimulated, and the business classes reap rich rewards.

This gain of the producing class is, of course, illusory, in so far as the increased profits have to be expended on consumers' goods, the prices of which have risen or are rising. For this reason rapidly rising prices may result in a considerable inflation of book profits, and make these appear very much greater than they really are. This reacts psychologically on business confidence—

already increased by the *real* gains—and leads to a rapid increase in productive activity. Rising prices, therefore, are said to be " good for trade ".

On the other hand, since wages and salaries lag behind prices, the working classes tend to lose, and there is a growth of discontent and hardship. The duration of this time lag, and therefore the extent of the loss to the workers, depends chiefly on the efficacy of the trade union organisation, and of the machinery, if any, for the automatic regulation of wages in the industry concerned.

Probably the most serious effects of rising prices result from the fact that debtors gain at the expense of creditors, since money borrowed when it was dear is paid back when it is cheap, while interest payments are lightened from the debtor's standpoint and become of less real value to the creditor. Rising prices are thus politically beneficial in so far as a country's national debt becomes a smaller real burden to the taxpayer. Indeed, one of the greatest inducements to inflation—as the events of the last few years have proved—is that national debts may be virtually repudiated by constant currency inflation, as happened, for example, in the case of Germany. Very adverse effects, however, fall upon the *rentier* class, for the real value of their incomes, as well as of their capital, falls as prices rise.

Effects on Distribution of Falling Prices.—Falling prices have exactly opposite effects. People of the *rentier* class are benefited by the increase in the purchasing power of their incomes, and by the increased real value of their capital. Creditors (e.g., war loan stockholders) gain at the expense of debtors (e.g., the taxpayers), so that the internal debt and its annual charge becomes a greater real burden to the community.

The producing classes suffer because prices fall more rapidly than wages and other production costs can be reduced. Profit margins are narrowed; they may even disappear and be converted into losses. Hence business is depressed. Producers aim at curtailing, or at any rate at not expanding production, while the fall in the prices of consumers' goods tends to the understatement of profits or to the overstatement of losses. The psychological effect is to increase the existing depression, and it is universally agreed that falling prices are " bad for trade ". To some extent the wage-earners gain because wage-reductions are strenuously resisted and lag behind the fall in prices, but labour, as a whole, bears its main share of a depression in the form of unemployment. Thus, falling prices, or a rise in the value of money, mean that non-producers benefit at the expense of producers; labourers are put on short time and unemployment increases, and there is a continual drag on credit, current industry, and enterprise, due to the enhancement of past burdens in the form of debt and fixed charges.

Clearly, fluctuations in prices are of the profoundest social

significance, and may exert immeasurable influences on the production and distribution of wealth. Indeed, it has been said with a great deal of truth that the instability of the value of money is the greatest economic drawback of modern times.

Inflation and Deflation.

It should be clear from the foregoing explanation that the effects of rising and falling prices are the effects of a *changing* and not of a *changed* currency. It is the process of change in the value of money which brings about important reactions on production and distribution, and such reactions will continue until the community has adjusted itself to the new currency conditions. It is, therefore, not difficult to appreciate the great responsibility which rests upon the authority—either the Government or central bank—which in the modern community controls the volume of currency, nor is it difficult to understand the controversy which in recent years has surrounded the monetary policy of forcing prices up or down by " inflation " or " deflation."

INFLATION may be defined as an *abnormal* and *deliberate* expansion of currency and credit beyond the amount necessary to supply the needs of trade at the existing level of prices. It is quite distinct from an ordinary expansion of currency and credit, such as may be rendered necessary by an increase in trade or population.

DEFLATION denotes a contraction of currency (and usually of credit) relatively to trade requirements at the existing level of prices. Deflation, like inflation, implies deliberate action by the monetary authority, but this time in the contractionary direction.

Professor Cassel [1] describes deflation as " a process by which the internal value of the monetary unit is increased. This means a deliberate raising of the purchasing power of the unit in regard to commodities and services—i.e., a general and uniform reduction of prices, wages and salaries as measured in terms of the monetary unit ", which is effected by a restriction in the supply of the means of payment and a consequent reduction of the nominal purchasing power in the hands of the public. This, of course, involves a rise in the bank rate, a reduction of credit facilities and a greater discrimination in granting loans. At the same time, increased taxation and reduced government expenditure are usually necessary in order to raise a fund for the reduction of excessive note issues.

Some writers, especially those who are critical of the gold standard, take a much wider view of inflation and deflation, and point out that upward and downward swings of the price-level have occurred independently of conscious monetary policy. Thus, these writers speak of *gold inflation*, i.e., an upward movement of prices due to a super-abundance of gold, and *gold*

[1] *The World's Monetary Problems*, p. 112.

deflation, i.e., a downward movement of prices due to a shortage of gold. It is on the existence of fluctuations of this kind that they base their criticism of the gold standard and put forward various schemes for the stabilisation of prices.

When currency is inflated, as it was, in varying degrees, by most countries during the war, five main stages may be detected. In the first place, prices, profits, and money wages rise, but despite the apparent prosperity there is no rise in the general standard of living. Secondly, inflation breeds further inflation. As the rise in prices continues, the cost of Government supplies becomes heavier, and the increased expenditure has to be met by further inflation. Thirdly, the currency becomes an unsuitable store of value, and people give up saving in domestic money. Some purchase foreign currencies which are still effectively tied to gold ; others purchase goods the value of which is likely to endure, while business firms invest their profits immediately in new machinery and plant. The spendthrifts indulge in an orgy of extravagance. The fourth stage consists of violent fluctuations in prices. In most cases people have become accustomed to inflation, and knowing the probability of its continuance, endeavour to anticipate it by charging "to-morrow's price". *Thus, although currency is abundant, it is always scarce relative to the level of prices.* If the inflation is stopped and the currency is stabilised, it is found that practically all the issued currency is actually circulating, and there is a shortage of liquid capital. But if inflation is allowed to proceed, the currency finally breaks down as a standard measure of value. People refuse to enter into long term contracts in terms of a rapidly depreciating currency, the currency loses its acceptability for all purposes, and may finally become valueless.

During this process, great changes will have taken place in the distribution of wealth. The *rentier* class will have suffered severely, while producers, particularly those of the profiteering class, will have reaped extensive profits.

On the other hand, the effects of rapid and pronounced deflation are not such as to be welcomed, for, when prices are rapidly falling, capital development practically ceases, and repairs and renewals are reduced to a minimum. Producers, as we have seen, curtail their output, and workers suffer through unemployment. Profits diminish and trade generally becomes depressed. Both inflation and deflation have thus most important psychological effects on the economic organisation. While inflation tends to over-confidence, dangerous speculation, and an extension of business which is not justified by the real economic position, deflation tends to lack of confidence, stagnation, and a greater general depression than is justified by the underlying strength of the economic fabric.

CHAPTER 25

THE FUNCTIONS OF CREDIT AND BANKING

CREDIT AND ITS FUNCTIONS

THE word *credit* in its original meaning connotes simply belief or trust, but in the modern commercial world it has a far wider significance and yet, in some ways, a more restricted sense. The term is now applied to that belief in a man's probity and solvency which will permit of his being entrusted with something of value belonging to another, whether that "something" consist of money, goods, services or even credit itself, as when one man entrusts to another the use of his good name and reputation.

The most simple form of credit transaction arises when one man *transfers goods to another in return for a promise to pay an equivalent value at some future time.* This is an arrangement for deferred payment; its elements are *confidence*, *amount*, and *time.* A more advanced stage is reached when money and not goods is transferred in the present in return for a promise to pay its equivalent in the future; i.e., a system of *loan* develops, in which the borrower endeavours to use the borrowed money productively and profitably, while the lender runs a certain amount of risk that his loan will never be repaid.

The arrangements are still further complicated by their extension to embrace the whole world and by the system of contra accounts, wherein each party may be at the same time borrower and lender and debts may be settled by a mere process of compensation, cancellation or set-off. Underlying the whole is the foundation of mutual trust, the idea that prompt payment may be demanded and will be given at any time. These factors enable men in various countries to accept the written word of others whom they have never seen as equivalent to payment in gold itself, and permit of the transfer of goods from one end of the earth to another merely against the signature of some one whose word is a bond.

A man's credit is, therefore, said to be good or bad according to the ease with which people are willing to accept his word or signature as a bond for future payment. This depends, of course, on his known ability and willingness to meet his obligations promptly, and in the business world the highest value is placed on the retention of such a reputation for solvency and prompt payment as will ensure an immediate acceptance of the

name of a person or firm as good for any obligations undertaken. Apart from this moral basis, credit transactions are protected also by law, inasmuch as a creditor can always obtain the assistance of the law in enforcing his *right* against the debtor, and in compelling the latter to discharge his *legal liability*. It is therefore natural to find the highest development of the credit system in those countries where there exists a high standard of business morality, a well-maintained security of private property, and a strict enforcement of the law.

Credit Instruments.

As we have seen, one element of a credit transaction is the giving of a promise to repay at a future time. Usually such a promise is given on paper, and in a modern community it may exist in several forms, known collectively as *credit instruments*, examples of which are bank notes, government notes, cheques, bills of exchange, promissory notes, postal orders and money orders.

BANK NOTES are issued by authorised banking institutions in the various countries. The issues are nowadays strictly regulated and limited by law, and adequate reserves of gold must ordinarily be maintained to ensure free convertibility. Bank notes are issued for round sums, and are frequently legal tender. They are consequently accepted freely, and where convertibility is maintained they pass to all intents and purposes as gold. A bank note is in form and legal effect similar to a promissory note payable to bearer on demand.

GOVERNMENT NOTES are similar to bank notes except that they are issued by the State and that there are usually no restrictions on their issue. As a result, the notes are frequently over-issued to meet Government demands, and, after the War especially, little attempt was made in some countries to provide an adequate reserve. Such notes are usually legal tender for all payments, and are frequently the principal means of exchange within a community. Hence they must be used for internal transactions, although their value may be permitted to fall considerably.

Underlying all such instruments is the idea of confidence—the knowledge on the part of the holder that the document represents purchasing power, that it will be freely accepted in exchange for goods or services, and, in most cases, that it represents so much gold, the basis of all credit in highly civilised communities. The credit instruments mentioned are, in fact, simply substitutes for gold; their intervention economises its use and also facilitates exchange on a large scale.

In the case of the cheque, bill of exchange and promissory note, the confidence is a strictly personal one: the promise

to pay is clearly evidenced by the signature of the giver of the instrument, and by that signature he is both morally and legally bound. By that signature, also, is the worth of the instrument judged: if the credit of the signer is good, the cheque, bill or note may pass as a medium of exchange in several transactions; if it is bad, the circulation of the instrument is restricted accordingly. Thus we find that, as a general rule, cheques and bills pass current only in a limited circle within which the financial soundness of the parties is known; and again that bills pass current far more frequently than cheques, which are used principally for single transactions only as between drawer and payee.

Bank and government notes are on a different footing. Under normal conditions in the principal countries the credit of the issuers is usually undoubted, and the security of the notes is generally maintained by the provision of ample metallic reserves. Consequently, when such notes are passed from hand to hand they are accepted not so much on account of the credit of the transferor but because of the credit of the issuers. In fact, they act merely as representatives of gold itself, and the question of credit or solvency becomes of almost negligible importance.

It must be understood, of course, that this explanation does not apply to depreciated inconvertible note issues, such as those which were so prevalent during and after the War Such notes are taken only because no other form of exchange medium is available, and the diminished credit of the issuers is clearly shown by the depths of worthlessness to which such paper may sink.

The distinction between bank notes and cheques and bills is important also from the point of view of their effect on prices. Obviously a man's reputation for solvency, i.e., the question as to whether his credit is good or bad, can have little effect on the price level; but when credit instruments are used for settlements in place of metallic currency, they affect prices to the same extent as would metallic currency of the same amount. Bank notes pass far more frequently and far more readily than cheques and bills; they are rarely hoarded, and are not kept out of circulation in the same way as bills of exchange which are discounted and locked away in a banker's or broker's portfolio. Consequently, the effect on prices of the circulation of bank notes is far greater than the effect of the use of cheques, and particularly of bills of exchange.

Book Debts and Loans.

Evidences of the giving of credit may exist in forms other than such instruments already mentioned. A sale on credit by a tradesman or an advance of money by a banker is evidenced simply by an entry in the books of the tradesman or of the banker, and no promise signed by the borrower may exist. But the right of action on the one hand and the liability on the other are just

as clear as if an instrument existed, and the transfer of credit by book entries is recognised universally as involving a legal and a moral obligation. A feature of modern commercial organisation is the enormous increase in the transfer of credit by means of book entries, which reaches its highest pitch of intricacy and yet wonderful perfection in the clearing houses and stock markets. The greater the civilisation of a community and the higher its development, the more efficient usually is its system of credit and method of cancelling indebtedness. Mention of the clearing houses brings home to us the dependence of the modern credit system on the organisation of banking institutions; in fact, the present day credit system owes its vast development to the wonderful efficiency of banks and bankers, whose chief function it is to deal in loanable credit. These functions are considered in detail hereafter.

Frequently loans by one person to another are evidenced by instruments of various kinds, such as bonds and debentures. Joint stock companies, especially, obtain considerable amounts of capital by the issue of debenture bonds or debenture stock. Debentures to bearer are negotiable instruments in the same way as bills or cheques, but they are not used to the same extent for the settlement of transactions in the ordinary course of business.

The Functions of Credit.

As we have shown, the use of credit instruments economises the use of metallic money, and provides a very convenient medium of exchange for the settlement of debts. But this by no means exhausts the functions of credit in a well organised community. The great advantage of credit, in its broadest meaning, is that the reputation of one man or firm may be made use of for trading purposes by another. A great bank, with almost unlimited credit in the sense of reputation for solvency, may transfer the benefit of that reputation in a multitude of directions: to enable an enterprising but perhaps little known London merchant, not possessed of much capital, to buy goods to the value of thousands of pounds in the Argentine; to enable a reliable farmer, of little means, to become possessed of a farm which he can cultivate successfully and profitably; to enable a great railway or a newly-developing state to borrow considerable sums of money, collected by the bank from balances small and large, in the names of numerous depositors living in widely scattered localities.

The great function of credit is to finance the producer who is engaged in turning out goods in anticipation of demand. This system of production, as we have seen, is a characteristic of modern industry,—a characteristic which would have been incapable of development in the absence of credit facilities sufficiently elastic and progressive to keep pace with a constantly

increasing demand. The moderate expansion and contraction of credit in modern society is accomplished easily and conveniently, and producers are enabled to apply themselves without undue limitation to that specialisation and organisation which is so marked a feature of modern business.

We may therefore say that the chief functions of credit are, first, that it economises metallic currency, and substitutes a cheap medium of exchange for a more expensive and less convenient one, which would not in any case be available in amounts sufficient for modern requirements. Secondly, it enables payments to be deferred until it is convenient for the borrower or promisor to make them, and consequently diminishes difficulty and hardship. Thirdly, it permits the collection of a multitude of small amounts into centralised reservoirs (i.e. the banks) whence they can be drawn, in small or large quantities, for productive purposes. The proportion of idle capital is thus minimised, large undertakings involving huge capital are made possible, and production as a whole is stimulated. In the fourth place, the careful regulation of the volume of credit tends to minimise price fluctuations and to stabilise trade. This is achieved by a restriction of credit facilities when a " boom " is imminent and speculation is rife, and by an expansion of credit when trade is reviving slowly after a period of depression. (See *post*, chap. 30.) Finally, there is little doubt that the modern credit mechanism does much to promote progress, aid development, and to encourage invention and industry.

The Dangers of Credit.

The creation of credit is necessarily a matter subject to human control: notes can be issued to almost any extent if reserves are disregarded, while advances by a banker can be increased beyond the limit of safety for a considerable period before a crash ensues. There is no automatic limit to the expansion of a credit system as there is to an expansion of a metallic circulation, and the intervention of the human element, with its usual accompaniments of uncertainty and variableness, is the chief source of danger in a credit organisation.

Hence the greatest danger of credit lies in its liability to excess. There is always a possibility that more notes will be issued than are necessary and healthy, or that more bank advances will be granted than are safe to the community. The confidence induced by general prosperity in trade and industry very frequently leads to excessive zeal, over-production and speculation. An enormous superstructure of credit may be built up on a small metallic reserve, and any outstanding event which shakes public confidence may serve to bring about a violent contraction of credit facilities, with consequent commercial and financial stringency.

There is also little doubt that the modern credit system tends to the *disguising of financial weakness*, for it enables a low grade entrepreneur to continue a losing business with the help of borrowed capital. In the absence of credit facilities such an employer would be forced to cease his operations, but by borrowing he can continue until his eventual failure brings widespread loss and hardship to the many whose capital was committed to his keeping. Such men are enabled to persist because an extensive credit system means low interest rates and a consequent competition of capitalists to sink money in enterprises which cannot hope to succeed.

Furthermore, it is frequently pointed out that the modern credit organisation makes possible the *control of vast capital by monopolistic combinations* of producers, and, although the results are not necessarily harmful, they may not be so beneficial as when the capital is in the hands of a number of individual producers. Only too frequently, the control of large capital by certain individuals and organisations leads to the exploitation of labourers, to an exaggeration of prices, to large combinations and to unfair competition.

Lastly, it must be recognised that credit is so easily obtained in periods of expanding trade that *waste may be encouraged*, particularly on the part of government departments and irresponsible entrepreneurs.

Influences Determining the Volume of Credit.

The expansion or contraction of credit is influenced by a number of important factors. In the first place may be mentioned the influence of *Trade and Industrial Conditions* at home and abroad. When trade is good, credit is usually abundant but bad trade creates distrust and fear of the future, which are accompanied by depressed conditions of credit. The second factor is *The State of Public Confidence and General Security*. When confidence is high, credit is good, but the superstructure of credit is quickly contracted by any event which shakes public confidence, such as the outbreak of war, a great earthquake, or widespread anticipation of governmental interference with the currency. Marked instances occurred in 1923-24, when the Japanese earthquake and the proposals to inflate the currency in this country caused a considerable disturbance of credit conditions.

Foreign Affairs and the Political Outlook are important chiefly because of their influence on public confidence and the feeling of security. The outbreak of a war (cp. 1914) is always followed by a contraction of credit, for the uncertainty causes bankers and others to strengthen their reserves and to reduce their commitments. A change of government has a similar effect, particularly if its policy is distrusted. The advent of Britain's first Labour Government in 1924 was preceded by considerable apprehension

in the money market, largely because of the threat of a levy on capital, and a large contraction of credit resulted.

Speculation is an important influence by reason of the fact that most speculative enterprises are instituted and conducted on borrowed money, i.e., on credit. Consequently in a period of active trade culminating in a boom, speculation is rife. Speculation and credit expansion go hand in hand, and as speculative enterprises are the first to suffer when credit contracts, so is a threat of reduced or dearer credit facilities followed at once by a decrease in speculation.

Lastly, may be mentioned the effect of the *State of the Currency*. A sound currency system based on an adequate gold basis promotes an expansion of the credit superstructure. As we shall see later, a fundamental principle of modern banking is that credit can be created to several times the extent of the actual cash reserve held. Consequently, a sound currency permits bankers to maintain a low ratio of cash to liabilities, and so to extend their credit facilities. On the other hand, the existence of a bad currency in itself creates distrust and uncertainty, resulting in a restriction of credit.

As was shown in discussing the quantity theory of money, the amount of credit is a determinant of the general level of prices. Consequently it is of paramount importance that credit facilities should be subject to careful control. Under an effective gold standard system the principal factors influencing the volume of credit are movements of gold to and from the country. When gold flows into a country, it strengthens the reserve of the central bank and so increases the basis of credit. Money rates become easier and the volume of credit is expanded. When gold flows out of a country, the central bank's reserve is weakened, money rates tend to rise, and credit is curtailed. But the actual *extent* to which the movement of gold is allowed to influence the volume of credit depends partly on current banking policy and partly on the policy of the authority which controls the legal tender currency. This important and controversial matter is discussed below.

Credit and Capital.

Credit must be distinguished from capital. The former cannot create wealth and is not itself an instrument of production. It is, however, an instrument or mechanism which, by its intervention, enables production to be carried on. Credit permits the transference of wealth from those who cannot utilise it effectively to those who can turn it to profitable use.

Credit is thus of enormous importance in production, and benefits not only the immediate parties but also the community as a whole, by its function in changing latent or idle capital into capital which can be actively used for productive purposes.

It is sometimes said that a credit instrument, such as a bill of exchange or bank note, is capital in itself; this is not strictly correct. Such instruments *represent* capital; they stand for houses and land, machinery and raw materials, the transfer of which is greatly facilitated by their use. The transfer of a credit instrument always involves two elements: a *right* on the part of a creditor, and an *obligation* on the part of a debtor. It does not itself create wealth or enter into production, but the material objects for which it stands may so enter, and may yield great increase.

Credit and Prices.

It has been shown that the use of credit instruments for exchange purposes affects prices in the same way as the increased or decreased use of metallic currency, whilst the effect of the use of bank notes is greater than that which follows the use of cheques and bills. One other aspect needs to be mentioned, and that is the considerable temporary effect on prices which may follow an expansion of all forms of credit (principally book credit) consequent on speculative activity. Most speculators work on borrowed money, and an extension of credit is bound to follow action by several speculators who borrow in order to purchase goods or otherwise embark on speculative transactions in anticipation of rising prices. One speculator may anticipate a rise in the price of wheat, and, with the object of making a profit, may buy now so as to sell later at an enhanced figure. Other speculators do the same, practically all of them buying on credit or with funds borrowed from a bank. The increased purchases—other things being equal—will force up the price of wheat, and the rising price of the commodity will stimulate further speculation. If such operations are overdone, the rise may be far greater than was ever anticipated by the original dealers, and any fall which ensues will be all the greater by reason of the over-speculation. If trade is expanding and a boom period is anticipated, speculation on a credit basis may extend in all directions, and prices of a great number of commodities may be forced up. Thus is speculation made possible by the development of credit, and speculation may result in considerable fluctuation in the prices of commodities.

Consumer Credit.

The extension of credit to consumers by means of what is known as the "open credit," that is, by the granting of permission to "run up an account," is by no means new, nor is the system of buying goods by deferred payments at regular intervals a novelty. *Hire purchase*, as it is known in this country, or *instalment buying*, as it is known in America, has long been in use in many highly respectable businesses, particularly in the piano and motor industries. Building societies, also, allow similar

facilities to buyers of houses, the prospective house owner paying an initial deposit and instalments spread over a series of years.

Of late years the system whereby the consumer pays for the goods while he is consuming them, instead of paying in advance as he does when he pays cash, has been extended to many other industries. The security held by the creditor is the right to the goods if the debtor defaults. Consumers' credit thus affords to industry a stimulus complementary to that given by producers' credit.

Though the system is capable of wide application, it cannot be adopted in all cases. It cannot be successful where the merchandise is consumed in its use; the commodity must be durable, since perishable goods cannot be reclaimed. It must also be a standard product, since special orders lose their value if reclaimed. Further, at any time before payment is completed the merchandise should be worth at least the amount outstanding under the hire purchase agreement. To this end the length of the agreement has to be adjusted to the nature of the commodity.

The advantages of this system are many. Saving, being compulsory, is made easier; demand is increased; the manufacturer finds a market for his finished goods; and trade activity is stimulated. As supply can be more scientifically regulated, the system makes for greater stability of production, and the incidence of the trade cycle should be mitigated. Mass production is encouraged and both producers and consumers reap the benefit of increasing returns.

Arguments against the system are numerous. It is held that to use goods for which one cannot pay is merely to anticipate the trade of future years and that people are encouraged to indulge in extravagance and to buy goods for which they have no real need, and which are worn out before they are paid for. The psychological effect of living in debt may be more harmful than the beneficial effect of enforced saving.

Special machinery is necessary for the finance of schemes of this nature. It is out of the question for a merchant to finance such undertakings as they involve the tying-up of capital for long periods during which little return accrues to the creditor. Moreover, the security such traders can offer to the banks is inadequate. Hence new financial institutions are specialising in this business and stand prepared to provide the necessary financial accommodation, provided the position of the supplying firm is sound.

BANKING AND ITS FUNCTIONS

The functions and organisation of banking are intimately related to the functions and organisation of credit. The development of modern banking and the extension of credit have gone hand in hand; the system of credit is the basis upon which

is built the structure of a modern bank, while the extension of credit facilities has been made possible only because banking arrangements have kept pace with modern requirements.

Banking institutions are, in fact, a part of the credit mechanism of a present day community: they organise and control the issue and circulation of bank credit instruments, and regulate the granting of bank credit in the form of advances and loans. It is the prime function of a banker to co-ordinate the demand for and the supply of floating funds, and to apportion such funds among the various producers within the community. We have said that the efficient entrepreneur can always obtain funds for his enterprises; in supplying these funds banks discharge an economic function of the first importance. In effect if not in name, they are traders in loanable capital, borrowing that capital from depositors in order to lend it to borrowers.

Money Changers.

The earliest banks were merely money changers, facilitating trade by changing one currency for another and enabling merchants to obtain good currency at a time when a great variety of debased coinage was in existence. Gradually they undertook to safeguard money on behalf of its owners, to whom receipts were issued signed by the bank. Here was the germ of that confidence which now permeates the credit organisation: belief in the soundness of the bank was sufficient to induce a man to leave his gold in exchange for a signed slip of paper. The holders of the receipts were not long in making the important discovery that a most convenient way of paying debts was to hand their creditors the receipts carrying the right to gold at a certain bank. To facilitate this use, the receipts were made out in such a form that the gold held against them could be demanded by *any* holder, and a further advance was made when each depositor was given, not one receipt, but a number of receipts for small and convenient sums. Thus was the signed slip beginning to discharge the functions of the bank note as we know it to-day.

The Issue of Notes.

But the safe-keeping of gold was a troublesome and expensive matter. The bankers found themselves continually with a large accumulation of gold on hand, only a small proportion of which was required at any time to exchange such receipts as were presented. For those who owned the gold were well content to leave it in safe-keeping, and those creditors who were handed the receipts or notes were quite content to pass them on again without troubling to ask the banker for money in exchange. At the same time, many people existed who desired loans against security, and so we find the bankers arranging to make a little profit for themselves by lending out part of the gold in their keeping in

consideration of the payment of an agreed rate of interest. To some borrowers gold itself would be given ; others were content to take the banker's signed notes for such amounts as they required.

Unhappily, there was for a considerable time no attempt by the State to control such activities, and consequently the history of pure note-issuing banks is one long record of failure due to the keeping of inadequate reserves. Such failures naturally caused widespread distress, frequently resulting in a financial crisis and panic, so in course of time governments have been compelled to assume responsibility for the note issues. The method generally adopted was to confine the right of issue to certain institutions which conformed with the necessary requirements, or were granted the special privilege of issue on account of their association with the central government or for other reasons. Control was instituted in this country early in the eighteenth century, when the Bank of England, established in 1694, was given certain monopolistic rights of note issue so far as joint-stock banks were concerned. This matter will be dealt with hereafter.

The Cheque System.

The issue of notes to depositors and also to borrowers is still an important function of banking in a number of foreign countries, but, in this country, notes have largely given way to *cheques*. The distinctive features of cheques and bank notes have already been noticed, and they make evident the reasons which have led to the state regulation of the latter and the perfect freedom of the former. The bank note passes as money, and is so accepted by persons who have no knowledge of the stability of the issuers. The cheque serves a limited circle, and is accepted only if known to be good. There is less danger of hardship in the latter than in the former case.

Consequently the cheque system afforded an outlet for the development of those banks which were restrained from issuing notes. The essential of the system is that customers are given the right of drawing cheques on current or drawing accounts kept with their bankers, at their convenience and for such amounts as they may require. The limit to the amount which may be drawn is fixed in two ways : (*a*) according to the amount of the customer's funds held by the banker ; or (*b*) according to the amount of credit which the banker is willing to grant the customer.

The drawing of cheques against money left with a banker is not very different from the acceptance of notes by a customer against money lodged with a banker for safe-keeping. But in many respects the cheque is a far safer and more convenient instrument than the note. A bank note is regarded as money, and is consequently liable to be stolen or lost. A cheque is

valueless until it is filled in and signed, and even when it is so completed the owner has certain safeguards against loss of his money by theft or misappropriation. Further, the cheque can be filled up at any convenient time, and for any amount, within the prescribed limits mentioned. For these reasons, the cheque system has been developed to a state of perfection, and cheques are issued for the settlement of an enormous volume of transactions.

The advantages arising from this provision of credit instruments are enormous. The amount of gold in existence is totally inadequate to perform all the exchanges in modern communities, apart from the fact that gold is such an expensive and inconvenient medium of settlement as compared with notes, bills and cheques, which have considerably facilitated exchange and made possible the perfection of modern large-scale organisations for the cancellation of indebtedness.

Other Functions of the Modern Bank.

Apart from the issue and control of credit instruments, modern banks perform the functions of lenders and borrowers on a vast scale. Deposits are accepted from every class and from every source, and in all cases an implied undertaking is given by the banker to repay the money either in part or in whole in legal tender. Such money becomes the banker's absolute property, and he is free to dispose of it as he pleases. A substantial margin must necessarily be kept to provide for any demands for the withdrawal of funds, but the modern banker acts on knowledge gained as the result of generations of experience that only a small part of the total left with him will be required at any one time. Consequently, he employs most of the balance to grant loans and advances to the multitude of borrowers in a modern community who are anxious to make profitable use of the capital of other people. In addition to lending the money which he borrows, a banker employs for this purpose such of his own capital as remains after the provision of premises and equipment, but by far the larger proportion of his loanable capital is obtained from the deposits of his customers. The borrowers are required to pay a higher rate to the banker for accommodation than is paid by him for money deposited by other customers. The difference represents his gross profit, from which must be deducted all necessary expenses and overhead charges.

Thus the merchant or manufacturer is enabled to obtain adequate funds for his operations, and the small depositor is granted facilities for the safe investment of his surplus money. The bank is a great reservoir of loanable capital, into which flow countless small rivulets gathered from every source and direction, and from which flow many streams, small and large,

destined to drive the wheels of industry and float the vessels of commerce. By assisting the entrepreneur, and by providing the sinews of trade and business, banks perform a productive function of the first importance.

Advances made by a banker may be made either (*a*) On Current Account; (*b*) On Loan Account; or (*c*) By Discounting Bills and Notes.

When an advance is granted on *Current Account*, the customer is allowed to "overdraw" by cheque up to a certain limit in such amounts as suit his convenience. Security is generally required, although many small overdrafts are granted on the mere estimation by the bank manager of a customer's integrity and worth. No specific appropriation of funds is made by the banker in respect of such loans, although he may limit the amount which may be drawn at any one time or within a given period. On the other hand, in the case of advances on *Loan Account* a definite amount is placed to the credit of the borrower, while a loan account is debited with an equivalent sum and charged with the agreed interest.

A feature of English banking which distinguishes it from banking in many continental countries, especially in Germany and Italy, is that the majority of advances made are for *short periods only*, rarely for more than six months, at the end of which period they are reconsidered and may either be terminated or renewed. British banks furnish *circulating* as distinct from *investment* capital, i.e., capital which may be locked up for lengthy, indefinite periods. In Germany and Italy, on the other hand, the banks furnish permanent investment capital, and are thus much more closely linked up with industrial enterprises and their fortunes. In Germany, the intimate relationship between finance and industry has been an important factor in the development of her closely knit kartell system.

Discounting a bill or note means its purchase at its market worth; i.e., an amount is given for it which is equivalent to its face value, *less* the interest that would be earned by the amount of the instrument during the period remaining before its maturity, the proceeds being paid to the customer or placed to his credit in the bank's books. Bills of exchange are so easily saleable or rediscounted that the process of discounting is a valuable method of utilising a banker's surplus of liquid funds.

Investment. A large proportion of a bank's funds is loaned to home and foreign governments, local authorities and municipalities, railways and other large undertakings, through investment in stocks and shares. In Britain such investment is confined to securities which are undoubtedly safe and can be readily realised if necessary.

In addition to issuing notes, accepting deposits and making loans against security, bankers perform a number of other important functions as agents for their customers and other bankers,

by taking care of valuables and securities, such as bonds, title-deeds, plate and jewels; collecting and paying coupons and dividends; transacting stock exchange and foreign exchange business; acting in various other capacities, for example, as trustees, attorneys or executors, and as clearing agents, London agents, or correspondents of other banks; and, finally, by issuing letters of credit, circular notes and traveller's cheques for the convenience of their customers.

For most of these services a banker obtains a commission which adds to the amount of profit obtained by him from his more essential functions of money-lending.

The Maintenance of Adequate Reserves.

The principle upon which modern banking rests is that but a small proportion of the funds left in the hands of a banker will be demanded at any one time. On this basis sufficient legal tender money is kept at hand to meet any likely contingencies. The proportion varies with different banks, and is necessarily determined by the nature of the business and the individual experience. It also varies in accordance with the general state of confidence and the state of trade: in depressed and uncertain periods a greater proportion of reserve is necessary than when confidence is high and credit is good. A bank with an extensive town business may require a larger proportion of liquid funds than one with a wide country connection. In all cases, however, it is essential that a reserve be maintained which is sufficient to meet all demands, normal and abnormal, otherwise the bank's reputation and stability may suffer considerably, and a panic may thus be started amongst its customers.

The first line of defence must consist of legal tender currency kept by the bank itself or by a central bank on its behalf. After this comes money lent at call or very short notice to market operators and stock exchange dealers, all of which can be recalled very quickly and easily. Money employed in the discount of first-class bills is of equal liquidity, for such bills may be sold or rediscounted without difficulty, and there is always some proportion of their total falling due for repayment as the dates of maturity arrive. Three considerations must influence a banker in apportioning his funds—(1) security; (2) ready convertibility; and (3) the necessity of making profits for the shareholders in the concern. In all first-class banks to-day, the third consideration is subordinated to the others, and never is the desire to make profits by loans and investments allowed to outweigh the necessity of keeping a high proportion of liquid funds. For these reasons, modern banks are well content to pay a higher rate of interest on deposits than on current accounts because of the great advantage, in the case of the former, of the right to several days' notice of withdrawal during which provision

may be made to meet large demands. Further, banks which are essentially banks of deposit or savings banks, cannot lock up as large a proportion of their capital in industrial undertakings and in loans against land as, for example, the discount banks and agricultural credit banks of the continent, which exist essentially for such purposes and are specially organised and capitalised to fulfil such functions.

The Creation of Credit.

The great importance of bankers in a modern community rests primarily on the extent to which they have been responsible for the erection of a vast superstructure of credit on the basis of comparatively small cash reserves. As a general rule the basis for an expansion of credit is gold, but it may consist, as we shall see later in discussing the Bank of England, of a credit balance with a central bank, and may not necessarily be gold. If we assume that, as the result of his experience, a banker has determined on maintaining a reserve of cash equal to $33\frac{1}{3}$ per cent. of his liabilities, then it is not difficult to understand that for every £1,000 in cash which he receives from depositors he can create credit to the extent of £3,000, i.e., the credit of £1,000 in his own books in respect of the original deposit, *plus* £2,000 further credit created by allowing merchants to draw upon him, or by discounting bills, or by investing in stocks and shares. If the advances are made against good security and the stocks are discreetly chosen, there is not much danger. The banker's experience teaches him that of the many amounts of £1,000 in cash which he receives, only a small proportion will be demanded within any given time. But the remarkable fact about modern banking is that the reserve need not be kept by the banker himself in actual gold ; he may entrust it to a central or government bank, *which carries on an ordinary banking business and itself utilises any gold left with it as a basis for creating credit.* The first banker regards his credit balance at the central bank as being as good as gold : he relies on obtaining the gold whenever he wants it, although the central bank makes no more provision for the banker in this respect than it does for any of its other customers. Thus the original £1,000 in gold may act as a basis for £3,000 in credit at the first bank, and possibly for a further £2,000 at the central bank, the actual amount depending on the proportion of reserve to liabilities which the latter seeks to maintain.

But there is a still more remarkable stage. The money received by a banker from his customers may not be gold at all : it may consist of notes issued by the Government or by the central bank. So long as these notes are full legal tender they can be placed in the reserve, or added to the reserve of the central bank, and against them may be issued credits to several times

their amount. If the notes are all convertible into gold there is no difference in the general result, but if they are merely inconvertible paper promises to pay, the evils are obvious. Herein then lies the great danger which is inherent in the credit system.

Fortunately, there are in normal circumstances definite limits to the powers of the banks to increase the volume of credit, while all modern states recognise that effective control of the credit mechanism is an essential to stable and prosperous conditions. This important question is discussed in Chapter 27.

Banking Concentration and Specialisation.

The performance by banks of the specialised functions mentioned above is an indication of the application to banking of that division of labour which exists in other branches of commerce. In Britain there are many notable instances: such are the British Overseas Bank, specialising in the financing of overseas trade; the Yorkshire Penny Bank, catering for the poorer classes in the Yorkshire manufacturing centres; the now almost obsolete army banks in London, and the Post Office Savings Bank, which provides a safe deposit for the lower classes and a secure investment for the small capitalist. In Germany are many banks specialising in the financing of trade and industry; others devoting themselves to the co-operative finance of agriculture, and the large central banks, which issue notes and discount bills in great quantity.

The trend towards concentration or amalgamation is also much in evidence, and banking functions in most countries tend to be centralised in a few large institutions, with a large number of branches and agencies throughout the community, controlled directly from the head office. The United States is a notable exception, the system of branch banking being still little developed in that country. In most countries also the general banking policy is determined by a central bank, which is usually under government direction and is able to exercise a certain amount of control over all other institutions, particularly in so far as the regulation of interest rates is concerned.

Branch and Independent Unit Banking Compared.

The fact that the American banking system, chiefly on account of Government restrictions, is preponderantly one of independent units [1] with a central banking system superimposed, whereas in this country the tendency has been for banking to become concentrated in the hands of a very small number of banks each having a large number of branches, has, not un-

[1] In the United States there are 28,468 National and State Banks, only 681 of which have branches.

naturally, given rise to debate as to which type of organisation serves the community most efficiently.

Perhaps the most important argument adduced in favour of branch banking is that it permits the easy transfer of capital from regions which have a surplus to regions not so well endowed, and also that it enables funds to be distributed to different regions according to seasonal needs. The result is that interest rates tend to be equalised throughout the country, whereas, in the absence of branch banking, rates would tend to be low in old, well-developed districts and high in the new, developing districts. Again, a branch bank can spread its risks over the whole range of industries, whereas an independent local bank must rely mainly on important local industries; indeed a bank of this kind may actually be organised and controlled by local borrowing interests. Hence it is claimed that branch banking tends to greater stability, for local "runs" and depressions can be more easily met than by independent unit banks with smaller average reserves. Lastly, the advocates of branch banking point to the efficiency of the services which it is able to provide. The advantages of first-class skill and business efficiency at headquarters can be given to all districts; internal and foreign exchange business can be handled economically, while adequate banking facilities can be provided in even the smallest village where no independent bank could survive.

Opponents of the branch banking system urge that some of the above advantages are not realised in practice, while others are equally available to independent unit banks. Furthermore, it is contended that there are many evils incident to branch banking from which independent unit banking is either wholly or comparatively free. The most important arguments, however, are directed, not against the organisation of branch banking, but against the dangers of monopoly, and experience would seem to show that the danger of a large proportion of the financial resources of the community becoming concentrated in a few hands is much greater under a continued process of amalgamation such as exists in this country than under an independent unit banking system.

Other arguments put forward point to the competitive waste of branch banking, to the high rates charged in well-established localities to cover low rates in developing regions, to the preferential treatment granted to concerns situated near head offices, and to the fact that branch managers do not remain long enough at one branch to become thoroughly acquainted with local needs.

The Utility of Banking to the Community.

The great services rendered by banks to industry and trade have already been indicated in the foregoing paragraphs, but they are sufficiently important to deserve recapitulation.

In the first place, it is to be noted that the mere existence of a sound banking organisation tends to the encouragement of saving, thrift, economy and investment, it facilitates the interchange of goods and creates a general feeling of security and prosperity which enhances the national dividend and strengthens the morale of the people.

Secondly, an economic function of first importance is performed by the banks in transferring the surplus capital of one district (as, for example, a wealthy residential neighbourhood) to others where it can be usefully and efficiently employed (as, for example, busy industrial areas). In this way, production is stimulated by the increase of money in circulation and by the facility of obtaining necessary capital to tide over difficult times, and to purchase widely when the funds of the producers concerned are temporarily locked up. Bank loans to manufacturers enable them to increase productive capacity, to adopt new methods and better machinery, to improve working conditions and generally to speed up production. Furthermore, the careful regulation by modern banks of credit granted to industry and commerce tends to check speculation and to prevent the recurrence of crises, while the service rendered by the banks in acting as referees as to respectability and standing is of considerable influence in putting trade relations on a sound basis.

In the third place, bankers render great service in controlling and regulating the currency by withdrawing light coins and by issuing new ones, by transferring specie to those districts where it is required, and by supplying notes when and where required as currency. At the same time, the use of cheques for the settlement of the great majority of commercial transactions effects an enormous saving in the use of currency, with the added advantages that payments by cheque are safely and easily made, while losses are minimised by the fact that a record and a receipt are automatically obtained.

The banks also serve the community generally in a number of other ways, as, for instance, in the provision of convenient and safe places of deposit for valuables and securities, in transacting foreign exchange business and in placing their established reputation at the service of merchants and travellers by the issue of various forms of letters of credit.

CHAPTER 26

THE DEVELOPMENT OF THE ENGLISH BANKING SYSTEM

BRITISH banking is recognised as the most highly efficient and the best organised in the world. For many years British bankers have maintained a reputation for sound finance and absolute integrity which is second to none, and by their efforts in this respect they have succeeded in establishing London as the world's chief monetary centre, and the Bank of England as the hub of international finance. A brief historical survey of the development of banking in this country will enable us to appreciate the difficulties of this great achievement, and will permit us also to understand the intricacy and economic bases of an organisation which is as wonderfully sound as it is remarkably elastic and adaptable.

Banking in this country may be said to have originated many centuries ago in the lending of money by rich merchants to those who desired to borrow. The Jews were the first to transact business in this way, although their operations were subject to much hindrance, culminating finally in their expulsion from the country. Later, in the fourteenth century, merchants from the Lombard States in Italy conducted a similar business, and have left their mark to posterity in the name of that most famous of all streets, Lombard Street, E.C. The term " bank " is attributed by some to the custom of these traders of acting as money changers on benches (" banco ") in various centres, and particularly in Lombard Street.

There is little real connection between banking as we know it to-day and this simple form of money changing and money-lending. The money-lenders were simply usurers ; they made profits by loaning their own private capital and performed only one side of the characteristic function of banking in a modern community, i.e., borrowing from some in order to lend to others. It was not until about 1645 that any organisation similar to that of a modern bank began to take shape. At this period, merchants found it necessary to find some place of safe deposit for their surplus wealth against the dangers of war, of theft and especially of appropriation by the king. Hitherto, the Mint had been used for this purpose, but the appropriation by Charles I. in 1640 of £130,000 left at the Mint for safe custody impelled the merchants to seek some other place of security.

The strong rooms of the goldsmiths offered undeniable attractions, and consequently large sums were left with them for safe-keeping against signed receipts called "goldsmiths' notes", which were an undertaking to return the money to the bearer of the notes on demand.

As has been explained in the preceding chapter, the goldsmiths soon discovered that they could safely lend out a part of the funds left with them, for only a comparatively small proportion of gold was required to meet current withdrawals and probable demands. The loaning of other people's money at interest proved a very profitable operation, so much so that the more enterprising merchants began to offer an inducement for the deposit of money with them by the payment of interest, at a lower rate, of course, than they charged for loans, while the goldsmiths discontinued their original functions and applied their whole energies to this new business. At the same time, competitors sprang up who were bankers first and last, and who performed no other function than that of dealing in money,—especially that of other people.

Thus began that system of lending and borrowing which now characterises banking, but for more than a century this function was discharged chiefly by the issue of notes payable to bearer on demand, which were transferable from hand to hand, and formed a convenient mode of payment.

The Foundation of the Bank of England.

It is frequently stated that modern English banking had its origin in the foundation of the Bank of England in 1694. It is certainly true that the formation of the Bank of England was the first step in the direction of joint-stock banking as it exists to-day in this country, and so closely was the future development of banking as a whole bound up with the progress of the Bank, that a consideration of the latter is essential to an understanding of the former.

The Bank of England owes its foundation to a Scotsman, William Paterson, who was responsible for the scheme under which an amount of £1,200,000 was subscribed as a loan to the Government of William III., then in financial difficulties. In return for lending this sum to the Government at 8 per cent., the subscribers were granted a charter incorporating them as the Bank of England, with the privilege of issuing notes to the extent of the sum lent. This loaning of capital at interest, rather than the issue of notes, was the primary object of the Bank, although nowadays its issue is particularly important, inasmuch as its notes have a monopoly in England and Wales, and are the principal legal tender of the country. The new bank proved an immediate success, and in order to prevent the formation of rival institutions, an Act was passed in 1708 forbidding

the issue of notes by joint-stock banks other than the Bank of England.

The Act of 1708 was of first importance in the subsequent history of British banking. In the first place, it gave the Bank a monopoly of joint-stock banking which contributed essentially to its predominance in succeeding years. Secondly, by forbidding joint-stock banks to issue notes, it confined such issues to the multitude of small private banks throughout the country, the activities of which were quite unregulated, and which were in many cases totally unfitted to bear their responsibilities. The third important result of the Act was its effect on the functions of bankers in London. Here, and in the surrounding district, the Bank of England note was supreme, and its predominance eventually caused the London private bankers to abandon the issue of notes, and, about 1780, to apply themselves to the system of deposit banking; i.e., they accepted deposits, which were withdrawable at first by letter and later by cheque, and with the funds so placed at their disposal they made advances at interest to borrowers. So successfully did they develop this system, that in later years it became of much greater importance than the issue of bank notes.

For more than a century after 1708, the Bank of England was the only joint-stock bank in the country, and was enabled by its state-granted privileges to grow in importance and superiority. In London itself the small private bankers, in spite of the competition of the Bank, were fostering deposit banking and establishing a reputation for soundness and business ability. But outside this area were the uncontrolled private banks, and a constant recurrence of failure and distress. The persistence of these conditions and a number of severe crises in the early years of the last century resulted in efforts, extending over several years, to place the banking and currency system on a better footing.

The Restriction of Cash Payments and the Bullion Report.

During the Napoleonic wars, England had incurred such expenditure that her financial position became menaced. The gold reserve at the Bank of England had been seriously depleted, and when rumours of a French landing brought about a panic and a demand for gold, an Order in Council had to be issued in 1797 permitting the Bank to suspend payments in cash. Extra notes were issued to meet the deficiency in the currency, but the issue was in excess of actual requirements, with the result that the notes became depreciated in value, while gold coins disappeared from circulation. The price of gold rose to such a height that in 1810 a House of Commons Committee was appointed to consider the whole question of the high price of bullion.

THE BULLION REPORT, 1810.—The famous report of this Committee set forth a number of important conclusions in regard to the currency and the exchange, and in spite of the fact that more than a century has elapsed since these conclusions were first promulgated, they are still recognised as fundamentally sound. The propositions enunciated were, first, that the variations of the rates of exchange with foreign countries can never for any considerable time exceed the expense of transporting and insuring the precious metals from one country to another; secondly, that the considerable variation in the chief exchange rates beyond these limits was due to the excess issue of Bank of England notes and their depreciation as compared with gold, which had to be used for foreign payments; thirdly, that the market price of gold could not exceed the mint price unless the purchasing medium—in this case paper—was depreciated; and, finally, that the depreciation was measured by the difference between the mint price and the market price of gold.

The Committee regretted the continuance of the suspension of cash payments, and expressed the opinion that the only safeguard against excess issues of paper currency was convertibility into specie, and that the increased price of gold and unfavourable exchanges were the best criteria for judging the sufficiency or otherwise of the paper currency and for regulating the issues of Bank of England notes.

Banking Failures and Currency Troubles.

The House of Commons for party reasons refused to adopt the recommendations of the Committee, but the views expressed were upheld by subsequent events. Violent speculation and disaster followed the declaration of peace with Napoleon in 1814, and hundreds of note-issuing banks failed. The collapse of the issues meant that the paper currency was reduced, so gold fell in price, and the exchanges moved above par. In 1816 the system of gold monometallism was adopted and the Bank attempted to resume cash payments. This attempt failed on account of large withdrawals to France, but in 1819 the bank-note currency was finally established on a convertible basis.

In some quarters, the unsatisfactory position of the currency and banking systems was attributed to the monopolistic privileges of the Bank of England, and a number of Acts were passed in subsequent years with the object of mitigating the effects of the monopoly.

In 1826 an Act was passed which permitted the establishment of joint-stock banks of issue with unlimited liability, provided that they did not conduct business within a radius of sixty-five miles of London. This was an important departure, for it not only lessened the monopoly of the Bank so far as joint-stock banking was concerned, but also strengthened the system of

banking in the country, which hitherto had been conducted by a great number of weak private bankers.

It is in the Bank Act of 1833, however, that we find the beginning of the really modern period, inasmuch as it contained a provision which permitted the establishment in London itself of joint-stock banks for the transaction of all banking business other than the issue of notes to bearer on demand. In this respect the Act still further modified the power of the Bank of England, although the fact that by the same Act the Bank's notes were made legal tender for all payments over £5 (except by the Bank itself or its branches) added considerably to its prestige.

The passing of the Act of 1833 was followed immediately by the establishment in London of several joint-stock banks, the forerunners of the great institutions of to-day.

The Banking and Currency Theories.

The constant trouble concerning the currency at this period and the recurrence of failures among the banks and of commercial crises throughout the community caused widespread alarm and much dissatisfaction. By many the evils were attributed to the over-issue of notes by the Bank of England and by the small private banks, and considerable controversy arose in financial circles as to the best method of controlling the issue of paper money. Gradually two opposing schools of thought could be identified, advocating the *Banking Principle* or *Theory* and the *Currency Principle* or *Theory* respectively.

THE CURRENCY THEORY.—The exponents of this theory held that bank notes were issued merely to provide convenient and economical substitutes for metallic money, and not in order to provide instruments of credit. They maintained, therefore, that the issues should be limited to the amount of gold held against the notes, and that they should be regulated according to the flow of gold into and out of the country. The Currency School maintained also that the banks should create credit only in return for specie, but obviously their ideas were not altogether compatible with that great development which was still to come. The chief objections to the theory were that it provided for a non-elastic paper currency, which could not vary as trade conditions varied, and also that it made no provision for a temporary shortage of gold. As later events proved, note issues may be an effective addition to the currency provided they are adequately controlled, even though they are not necessarily a substitute for the actual metal.

THE BANKING THEORY.—The members of the banking school took the view that the issues of notes could safely be left to the discretion of the bankers, whose object it should be to limit the circulating currency to the *legitimate* demands of business and trade. They held that any notes in excess of trade requirements

would be presented for encashment, and so long as an adequate reserve was maintained, strict convertibility could be ensured and inflation prevented. But this did not necessitate the holding of gold to cover every note issued.

Those who objected to the Banking Principle had the experience of past years to give weight to their arguments. They contended that bankers were not always in a position to judge the operations for which notes were required, neither were they always sufficiently prudent and careful, while to leave to them the control of note issues was to place too much power and responsibility in the hands of one class of business men.

The Bank Charter Act, 1844.

The government of the day was eventually won over by the Currency School, and many of their recommendations were embodied in the famous Bank Charter Act of 1844. In some respects the Act was a compromise, for it did not altogether exclude the ideas of the Banking School: although it ensured the maintenance of adequate gold reserves behind the Bank of England note, it provided also for a limited issue against securities.

The following is a summary of its chief provisions :—

1. The Bank was to be divided into two distinct departments, called the Issue Department and the Banking Department respectively.

2. The Issue Department was authorised to issue notes against securities (the *Fiduciary Issue*) to the amount of £14,000,000, all issue in excess of this to be covered by gold and silver in reserve.

3. The silver in reserve was not to exceed one-fourth of the gold held.

4. Anyone might demand notes from the Issue Department in return for gold bullion at the rate of £3 17s. 9d. per ounce standard.

5. If, after the passing of the Act, any country bank ceased to issue notes, the Bank could obtain an Order in Council empowering it to increase its fiduciary issue by two-thirds of the lapsed issue.

6. The Bank was to publish a weekly return of both departments in the *London Gazette* (see *post*, page 472).

7. No further banks of issue were to be established, and any existing bank losing the right of issue through bankruptcy, amalgamation, the opening of an office in London, etc., could not resume such issues.

8. Every existing bank of issue was to forward a weekly return of its issues to the Stamp Office for publication in the *London Gazette*, and its issues were not to exceed its average circulation for the twelve weeks preceding 27th April, 1844, otherwise the right of issue would be forfeited.

The principal object of the Act of 1844 was to ensure the absolute convertibility of note issues in this country and to ensure full publicity regarding the amount of the issues and of the reserves held against them. It aimed also at so regulating the paper currency that inflation would be prevented, speculation and crises obviated, and the foreign exchanges stabilised. Its object of limiting and finally abolishing all note issues in England and Wales except those of the Bank of England was finally achieved in 1921, when the last private bank of issue was absorbed by one of the large joint-stock banks. In accordance with the fifth provision in the foregoing summary, the Bank obtained the necessary power to increase its fiduciary issue from its original figure of £14,000,000 to £19,750,000, which was the maximum fiduciary issue permissible under the Bank Charter Act. The aim of centralising the note issues of the country in one institution so as to facilitate control thus took three-quarters of a century before it was finally accomplished.

Criticisms of the Bank Charter Act, 1844.

The provisions of the Bank Charter Act have now been considerably modified by the Currency and Bank Notes Act, 1928, but, before referring to this Act, we may usefully review some of the more important criticisms which were from time to time directed against the arrangements made by the former Act for the control of the bank note currency in this country.

It was frequently pointed out, in the first place, that the Bank Charter Act failed signally in its object of preventing financial crises by its control of note issues. Serious crises occurred in 1847, 1857, and 1866, which were relieved, not by aid of the provisions of the Act, but by their *suspension*, thereby enabling the Bank to increase its fiduciary issue of notes, supply currency to those who required it and at the same time make its own position secure. Similarly, during the 1914 crisis, the Bank of England was authorised by the Treasury to increase its fiduciary issue against securities, although it was not found necessary to do this, or to secure parliamentary sanction for the suspension of the Bank Act, since the issue of Treasury notes filled the gap in the currency caused by the withdrawal of gold.

Again, it was held in many quarters that the fiduciary circulation was too small, and that no provision existed to enable it to be increased when necessary to meet modern requirements, for with the constantly increasing demands for currency, notes are required in *addition* to gold and not instead of gold. In the third place, it was argued that the note circulation could not be increased in times of pressure or panic except by the uncertain interference of the Government. It was maintained that the note issue should be elastic and be so adjusted as to enable bona-fide

traders to obtain accommodation for legitimate purposes in times of stress. Finally, it was urged that although the Act had restricted bank note issues, it had exercised no control over the creation of bank credit, which may be just as much subject to over-expansion as the issue of bank notes.

In favour of the Act it was contended that its first object of controlling the paper currency had been well achieved, and that the provision for a Weekly Return by the Bank ensured ample publicity regarding its financial position and the reserve which it maintains. The note issue was certainly restricted and inelastic, but any deficiency in this respect was adequately made up by the circulation of cheques, which is easily expanded or contracted to meet demands for credit facilities, while the cheques themselves are frequently preferred to Bank notes. Finally, it was maintained that, although no provision existed for the expansion of the note issue to meet currency requirements in times of stress, the suspension of the Bank Act had almost invariably resulted in a restoration of confidence and in a collapse of the crisis.

Systems of Note Issue in Other Countries.

The system of note issue existing in this country is described as the *Partial Deposit System* (i.e., some notes are issued against securities) in contrast to the *Simple Deposit System*, under which every note is backed by its equivalent in gold. The latter method has the disadvantage of being expensive and unprofitable, while the former permits the use of a portion of the gold reserves for profitable purposes, and at the same time ensures an adequate reserve of gold for maintaining convertibility in all likely circumstances. The partial deposit system has now been adopted in all countries, but there are important differences between our system of Bank note issue and the systems adopted by other nations. The following brief review of the systems now established in France, Germany, and the United States should assist the reader to understand the criticisms directed in recent years against the British method of currency control.

FRANCE.—In France, the monopoly of note issue is in the hands of the Bank of France, which is a private institution like the Bank of England, but is under strict government control. Until June, 1928, the issue was subject to a statutory limit (known as the "*maximum issue principle*"), but the maximum, originally fixed at 350 million francs, was raised several times to meet emergency demands for currency, as, for example, during the Franco-Prussian War and the Great War.

There was no legal restriction as to the form or amount of the reserve, but a large reserve of gold and silver was usually maintained and protected by exceptional measures. Thus, in times of emergency, advantage was taken of the fact that the notes were convertible into either gold *or silver*, and, on occasion, a

premium was charged on conversion of the notes into gold with the object of inducing holders to accept silver.

During the War and post-War period, 1914 to 1928, the notes of the Bank of France were inconvertible. When the gold standard was restored in June, 1928, the maximum limit was abolished, and the note issue was based on a *proportional reserve system*, under which a gold reserve of 35 per cent. must be held against all notes issued. The fiduciary proportion is *fixed*, and cannot be increased except by a change in the law.

GERMANY: ELASTIC ISSUE.—During and after the War huge note issues of small and large denomination altogether replaced the coined money, and resulted in such an inflation of the currency that it became practically valueless. The notes were largely issued against Government Treasury Bills, the restrictions on the note issue of the Reichsbank having been removed at the commencement of the war. In 1923, the Dawes scheme was adopted with a view to putting the currency upon a more stable basis, and, as a preliminary expedient, *Rentenmark* notes were issued by the Rentenbank, the rentenmark being made nominally equivalent to the pre-war gold mark and to one billion paper marks. The next step was the reorganisation of the Reichsbank to form a new central bank, and, in November, 1924, the paper and rentenmark issues were replaced by a new currency based on the gold *reichsmark*, made equivalent for exchange purposes to the rentenmark and to one billion paper marks.

The Reichsbank has a virtual monopoly of note issue, other existing issues being of negligible amount. Against its notes a reserve of 40 per cent. must be maintained, 30 per cent. being in gold and 10 per cent. consisting of certain foreign currencies, or foreign credits which are readily convertible into gold. In an emergency this reserve can be reduced, subject to (*a*) the imposition of a graduated tax on the difference, and (*b*) the discount rate being at least 5 per cent., rising as the reserve falls. The system thus possesses *elasticity* in that extraordinary demands can be met without difficulty or delay by increasing the fiduciary issue in the manner legally provided for.

UNITED STATES: ELASTIC ISSUE.—The United States note issue is controlled by the *Federal Reserve Act*, 1913, which established in the principal towns twelve Federal Reserve Banks under the control of a Federal Reserve Board. Each of these banks was empowered to issue notes against securities of a liquid character and a gold reserve which was fixed at a minimum of 40 per cent., but which could be reduced in emergency on payment of a steeply graduated tax, as in the German system.

Prior to 1913, the bulk of the United States note circulation consisted of notes issued by the National Banks, secured by United States Government Bonds of nominal amount equal to the authorised issue, deposited at the United States Treasury. A fixed proportion of gold to deposits had to be kept by each

National Bank, and there was no method of providing for an increased demand for notes except by restricting credit and calling in loans. The 1913 Act was designed to overcome this difficulty, and provided for the eventual transfer of the right of issue from the National to the Federal Reserve Banks. It aimed at centralising the gold reserve of the country under the control of the Federal Reserve Board, and changing the decentralised system of independent banking into a more centralised system. Thus, our own reserve system was adapted to the conditions of the United States: there is no single central bank, but all the note-issuing banks are subject to central control.

As the great creditor nation of the war period, the United States have benefited greatly. About one-half of the world's gold has flowed into the coffers of the Federal Reserve Banks, whose gold reserves have reached the remarkable proportion of about 80 per cent. of the notes outstanding. The Americans prefer notes to coins for currency purposes, and the banks have been well able to meet the increased demands for currency—due to the vast expansion in trade—by issuing notes against the immense reserves of gold. Other methods of increasing the note issues have thus been unnecessary.

Criticisms of the English System of Note Issue.

Between 1844 and 1914 the fiduciary issue of the Bank of England was rigidly fixed under the Bank Charter Act, 1844, and no provision existed for its automatic increase either in times of exceptional pressure or to meet the demand for additional currency arising from normal economic progress of the community. Between 1914 and 1928 the position was to some extent modified by the circulation of Treasury notes, but the inelasticity of the Bank note issue, as the basis of our credit system, was subjected to much criticism. In 1926, the late Dr Walter Leaf expressed the view that the stringent provisions of the Bank Charter Act had proved a failure, and suggested that the hard-and-fast limit to the Bank's fiduciary issue should be replaced by a more elastic system such as that of the reorganised Reichsbank. Some months later, Mr M'Kenna contended that the inelasticity of our currency system partly explained the prolonged post-War depression in this country, particularly as compared with the prosperous conditions prevailing in the United States, where the more elastic system, which he advocated for adoption in this country, has made possible the expansion of credit to keep pace with business demand.

Equally strong support has been forthcoming for the existing system. In 1918 the Cunliffe Committee recorded their view that "the stringent provisions of the Act have often had the effect of preventing dangerous developments; and the fact that they have had to be temporarily suspended on certain rare

and exceptional occasions (and those limited to the earlier years of the Act's operations, when experience of working the system was still immature) does not, in our opinion, invalidate this conclusion". The Cunliffe Committee recommended the continuance of the principle of the Bank Charter Act, but with a slight modification to provide ready means of supplying emergency currency in time of acute difficulty. Previous to 1914, such currency could be issued only by breaking the law, and afterwards obtaining an indemnity from Parliament (as in 1847, 1857, and 1866), but the Currency and Bank Notes Act of 1914 gave the Bank of England, with the consent of the Treasury, the right to issue notes "in excess of any legal limit". The recommendation of the Committee was that this provision should be continued in force subject to the conditions that Parliament should at once be informed of any step taken by the Treasury in this matter; that any profits from the excess issue should be surrendered by the Bank to the Exchequer; and that the Bank Rate should be raised to as high a figure as would ensure the earliest possible retirement of the excess issue.

In opposing the suggestion that we should institute the more elastic American system, Mr F. C. Goodenough directed attention to two important objections to the adoption of the ratio plan. He pointed out, in the first place, that as the Federal Reserve banks issue their notes against a backing of not less than 40 per cent. in gold, the balance being covered by approved notes and bills of exchange, the plan would necessitate a larger supply of ordinary commercial bills than is available in this country. Hence its adoption would completely disorganise the London bill market and would call for considerable modifications of banking practice. His second objection was based on the fact that the American system is elastic in both directions, expansionary and contractionary. It seems doubtful whether elasticity in the latter direction would be desirable in the case of a country, such as our own, which, with its big export trade and responsibilities as an international monetary centre, is very liable to external demands for gold. Our credit system certainly ought not to be made more sensitive to the effects of gold movements than it already is under the existing system.

The Amalgamation of the English Note Issues.

Both the Cunliffe Committee (1918) and the Committee on the Currency and Bank of England Note Issues (1925) reported in favour of the amalgamation of the note issue of the Bank of England with the issue of currency notes, and it was generally recognised that amalgamation sooner or later was a corollary of the return to the gold standard in March, 1925. Much importance was attached to the question of unifying the control of our paper currency. While the connection between the Government and

the Bank is, and must be, very close, the Bank is under no obligation to fall in with the Government's wishes on currency matters. On the other hand, it was generally considered desirable that the issue of paper currency in this country should be free from political influence, and not subject to the possibility of radical changes in policy.

The Cunliffe Committee advised that the contemplated combination should not be effected until the country had obtained the benefit of at least a year's experience of satisfactory working of the exchanges with a normal minimum gold reserve of £150,000,000. This condition was fulfilled towards the middle of 1928, and the necessary legislative sanction for the amalgamation of the note issues was embodied in the Currency and Bank Notes Act, 1928.

The Currency and Bank Notes Act, 1928

This Act provided that *as from an appointed day*, fixed subsequently as 22nd November, 1928, all outstanding currency notes issued under the Currency and Bank Notes Act, 1914, were to be deemed to be bank notes, and the Bank was made responsible for their repayment. The existing restriction on the Bank's power to issue notes below £5 was removed, and the Bank was given authority to issue notes for £1 and 10s., which were made legal tender for the payment of any amount in England, Wales, Scotland, and Northern Ireland, by the Bank itself or any of its branches, and even in payment of the Bank's larger notes. The £5 Bank note was made legal tender *for any amount*, except by the Bank itself or its branches, and not, as under the Act of 1833, legal tender for amounts above £5 only.

So far as the amount of the note issue is concerned, the Bank was authorised to issue notes against the Issue Department's total holding of gold coin and gold bullion (and not gold *or silver*, as under the Bank Charter Act, 1844), and in addition, to issue notes against securities to an amount of £260,000,000. The securities so held may include silver coin to an amount not exceeding £5,500,000, the amount previously held by the Treasury against the currency note issue. Any profit made by the Bank from its note issue accrues to the Treasury, as before, and the fiduciary issue cannot be increased above the limit of £260,000,000 except by sanction of the Treasury, immediately communicated to Parliament. Any authority so given shall apply only for a period not exceeding six months, but may thereafter be renewed for a further period of six months, provided that no expansion of the fiduciary circulation shall exist for more than two years without express Parliamentary sanction.

The Act thus retained the principle of a fixed fiduciary issue established by the Bank Charter Act, but it replaced the clumsy and uncertain method of suspending the Bank Act, and met

the demand for a more elastic note issue, by prescribing the method by which the fiduciary issue may be increased.

Critics who favour a higher degree of elasticity in our credit system suggest that the fiduciary limit is too low, and that the powers given to the Bank of England to expand the fiduciary circulation will not be used freely, but only in times of emergency, so that any increased demand for credit, due to a genuine business expansion, will be still unprovided for. From official statements on the subject, however, it would appear that the new device for increasing elasticity is intended to be used freely, while such elasticity as is required to meet seasonal changes in the internal demand for currency can be adequately provided for by altering the Reserve in the Banking Department.

The Growth of the Joint-Stock Banks.

The Bank Charter Act established the Bank of England as the supreme institution in English banking, and succeeding years saw a great increase in its power and influence. Its note issues were the sole legal tender paper currency until the outbreak of war in 1914; it acted as the banker to the British Government and, in course of time, to all the other joint-stock banks in the country, who came to leave their surplus balances on deposit with the central bank. This arrangement, as we shall see later, is of vital significance in its relation to the structure of the English banking system.

But while the bank of banks was thus passing from infancy to virile maturity the joint-stock banks were by no means at a standstill. Faced from the outset with jealousy and even open hostility on the part of the Bank of England and the private bankers, hampered by the difficulties which necessarily attended inexperience, and, by reason of their inability to issue notes, forced to develop the comparatively new deposit system of banking, these early joint-stock banks nevertheless made great progress. At a time when Britain was opening up her vast resources and was rapidly placing herself ahead in the industrial race, the birth and growth of the joint-stock banks supplied a pressing need. While their remarkable development may be traceable in part to that general advance which marked British industry in the last century, there is no doubt that they are entitled to a considerable share of distinction for having made that development possible.

Two important amendments of the law relating to banks were made in succeeding years, and did much to strengthen the position of the joint-stock concerns and to facilitate their development. These were:

THE EXTENSION OF LIMITED LIABILITY TO BANKS, 1858.—The shareholders in the first joint-stock banks were liable in full for all debts of the companies, and it was not until 1858 that an act

extended to banks the principle of limited liability which had already been applied to other corporations. The removal of this anomaly gave a further impetus to the expansion of banking, as it widened the area of investment in bank shares by attracting a wealthier class of investor.

THE INSTITUTION OF RESERVE LIABILITY. 1879.—An Act of 1879 authorised limited companies either (*a*) to increase the nominal amount of their shares so that a certain amount over and above that paid up on each share could be called up only in the event of liquidation of the company, *or* (*b*) to resolve that a portion of the existing uncalled amount of each share should be callable only in the event of the company's winding-up. The adoption of this principle by the more important banks gave depositors and creditors an added security by creating a reserve which could be called upon if necessary.

THE CHARACTERISTICS OF MODERN ENGLISH BANKING.

The development of the joint-stock banks never faltered; their progress has naturally been bound up with that of the country as a whole, and their organisation has been constantly improved to keep pace with modern conditions. One of the most striking developments in recent years has been the tendency of banking in England to become concentrated by amalgamation and absorption in the hands of a small number of very large institutions, which now have capital and deposits of enormous size. Other important characteristics are the establishment by the largest institutions of branches throughout the country, the extension of the activities of English banks to other countries, the organisation of the Clearing House System, and the development of the Central Reserve System.

The Process of Amalgamation in English Banking.

As mentioned above, the process of amalgamation between banking institutions in this country has resulted in the development of vast organisations, which rival in importance the world's greatest industrial combinations. The five great banks —the "Big Five" (namely, the Midland, Lloyds, Barclays, the Westminster, and the National Provincial)—are the largest banking institutions in the world, and have at their disposal almost incredible resources and facilities for the convenience of customers.

The Economic and Social Effects of Bank Amalgamations.

In several quarters the constant growth in the size of English banks is regarded with considerable uneasiness. It is considered by many statesmen and business leaders that the concentra-

tion of enormous resources under the control of a small number of men constitutes a danger to the community. Some fear the harmful effects of monopoly, whilst others are concerned with the more obvious danger that such large institutions may become unsound.

In 1918 the Chancellor of the Exchequer appointed a committee to " consider and report to what extent if at all amalgamations between banks may affect prejudicially the interest of the industrial and mercantile community, and whether it is desirable that legislation should be introduced to prohibit such amalgamations or to provide safeguards under which they might continue to be permitted ".

The committee examined about twenty-two witnesses, of whom thirteen were bankers and the others professors of economics or business men, and in its Report divided amalgamations into two classes : (*a*) *The old type of amalgamation* ; i.e., the absorption of local banks by a larger and more widely spread joint-stock bank, and (*b*) *The new type of amalgamation* ; i.e., the union of one large joint-stock bank with another similar bank.

In Favour of Amalgamation the Committee reported that amalgamations of the first type seem inevitable owing to the force of competition, unless the local bank is able to give its customers a special type of service, as in Lancashire and Yorkshire, where the local banks, by reason of their intimate association with the cotton and woollen industries, can well hold their own against outside competition.

As regards the second type, it was pointed out that amalgamation usually results from one or more of several reasons, as, for example, (*a*) From the convenience to trade secured by an extension of bank areas. (*b*) Because of the advantages of size. Larger banks have larger resources and can afford to make greater individual advances on a more generous scale. (*c*) From special reasons ; e.g., to gain admission to the Clearing House, or to secure a monopoly in a certain area, or to prevent another bank from obtaining a monopoly in a particular area.

In addition to those indicated by the Committee a number of other advantages of amalgamation may be mentioned. In the first place, there is an increased facility for the control of banking as a whole when the business is in few hands, and consequently concerted action in time of emergency is more easily obtainable, as, for example, was the case on the outbreak of the Great War. Secondly, large organisation makes for greater economy, increased efficiency, and greater uniformity, while national efficiency and productive capacity are increased because capital is cheapened, is more easily obtainable and is provided where required. Furthermore there is a tendency to greater security when reserves are well managed, dividends well regulated, and when accounts are made public and subject to searching criticism.

THE ARGUMENTS AGAINST AMALGAMATION were summarised under three headings: (*a*) *Reduction of capital.* Amalgamations usually result in the reduction of bank capital because the shares of the absorbing bank are usually worth more than those of the smaller bank it swallows up, and the exchange of shares in the amalgamated concern for the shares of the absorbed bank results in a reduction of the nominal capital of the two considered separately. (*b*) *The dangers of reduced competition.* Strong representations on this ground were received from the stock exchange and discount houses. (*c*) *The danger of monopoly*, i.e., the possibility of the creation of a money trust which would be detrimental to the national welfare.

From the point of view of the customer the process of amalgamation is attended by the marked disadvantages involved in the disappearance of the personal element. As a rule, the modern bank manager has merely a temporary interest in local affairs, and there is an absence both on the part of the manager and of the head office of that essentially specialised knowledge of local occupations, industries, customs and prejudices so characteristic of the old private banker. Furthermore, there is undoubtedly some danger that the constant growth of the banking institutions may result in a liability to cumbrousness and over-expansion, leading eventually to lack of efficiency and possibly to financial instability. This danger might reveal itself in an inadequate supervision of loans, and possibly in the granting of more accommodation than is strictly justified by the nature and extent of the bank's business and cash resources.

The Committee of 1918 recommended that legislation be passed to make it necessary to obtain the approval of the Treasury before any amalgamation was announced or carried into effect. To prevent secret amalgamations by the interlocking of directorates, it was recommended that such arrangements should also be submitted to the Treasury for approval. The committee recommended that if a scheme of amalgamation is designed to secure important new facilities for the public it should be approved, but that if an amalgamation involved an appreciable overlap of area without securing such advantages, or if it involved an unusual aggregation of deposits without adequate capital and reserves, then it should be refused.

The proposed law that no banks might amalgamate without the previous sanction of the Treasury was never enacted, but prior to an amalgamation the scheme has hitherto been laid before the Treasury for its approval.

The Expansion of Branch Banking.

The reasons for this development include: (*a*) the intensity of competition between the leading institutions; (*b*) the desire to provide every convenience for customers; (*c*) the expansion

of business and increased profits obtained by tapping new resources; (*d*) the economy effected by saving agents' commissions and expenses. This centralisation of the direction and management of the banking organisation, and the extinction of the private banker with his local interests and sentiments, has resulted in a loosening of old-established ties between the local banks and the people and industries of the relative areas. To some extent the "Big Five" have endeavoured to counteract this tendency by the formation of local directorates, but the large banks must necessarily remain far more cosmopolitan than their predecessors of the Victorian era.

The Expansion of English Banks to Other Countries.

Until recent years English banks were noted for the peculiar conservatism of their methods as compared with those of foreign banking institutions, and particularly in so far as they had not previously attempted to establish their own branches in other countries. For a long period of years foreign banks have had branches in London and other world centres, but prior to 1911 the interests of English banks in places outside this country were entirely served through the agency of foreign institutions. In the past this policy applied even to the neighbouring countries of Scotland and Ireland, and it was consequently a marked departure from established practice when certain leading English banks opened branches in important continental towns, and followed this up by obtaining direct representation in Scotland, Ireland, and other countries by fusions with established banks in those countries.

A notable development in bank expansion overseas took place in August, 1925, when the Colonial Bank, the Anglo-Egyptian Bank, and the National Bank of South Africa were merged into one institution known as Barclay's Bank (Dominion, Colonial, and Overseas), Ltd.

Such a development seems to be the natural outcome of general economic conditions. The evolution of domestic industry called for a strengthening and consolidating of internal banking resources; to-day, the expansion of international trading relationships, together with the keenness of competition in international markets, demands that the fullest financial facilities shall be available not only for domestic but also for foreign business.

Already the needs of this new situation have been partially met by the policy of our big banks (with the notable exception of the Midland) of acquiring interests in, and establishing working arrangements with, overseas banks, both colonial and foreign, but it is being realised that in this, as in other spheres, economy demands consolidation as well as expansion.

Numerous advantages might be realised—the essential function of gathering deposits and directing them into productive

channels of employment could be more efficiently rendered by the widening of the sphere of operations, while a consolidation of Empire banking resources would undoubtedly tend to closer economic relationship between the various parts of the Empire. At the same time, however, the development is exposed to the dangers which inevitably accompany amalgamation in industry. There is a loss of personal touch, a tendency to stereotyped and unenterprising policy, while if the advantages of consolidation are to be fully realised, increasing attention will have to be paid to the problem of management.

The Clearing House Organisation.

The extraordinary development of modern banking, and the enormous extension in the use of cheques for making payments, made imperative the establishment of Clearing Houses, the chief of which is in London. Others exist in several provincial centres, such as Manchester, Liverpool and Birmingham, but cheques on local banks only are dealt with at these clearings, cheques outside a given radius being collected through London.

THE LONDON CLEARING HOUSE was established about 1775 between the London private banks, but it was not till 1854 that the joint-stock banks, which are now practically the only members, were admitted. In that year the principle of settlement of differences by transfers at the Bank of England on account of each banker was inaugurated. The London Clearing is geographically divided into three sections: (*a*) *The Town Clearing*, embracing all banks in the Central London or City area, around the Bank of England; (*b*) *The Metropolitan Clearing*, embracing all banks and branches outside the Town Clearing, but within an area having a radius of approximately four miles; and (*c*) *The Country Clearing*, dealing only with *cheques* on those branches and correspondents of the clearing bankers which are outside the range of the other two collections. All balances are settled by a transfer from each bank's account at the Bank of England to the Clearing Bankers' Account or vice versa. The enormous growth in this system of settlement, and the importance of the part played by the cheque and bill of exchange in the British currency and credit system, are indicated by the fact that the total of the London Clearings increased from approximately £9,000 millions in 1900 to the stupendous total of over £45,000 millions in 1929.

The Development of the Central (or "Single") Reserve System.

The other important characteristic of modern English banking is the unique arrangement whereby the liquid cash reserves of the great banks have come to be concentrated in the

hands of the Bank of England, which thus acts as the banker's bank, and has almost automatically attained a position of pre-eminent importance among the banks of the world.

Practically the whole of the banking business of England is centralised in the hands of a few large institutions, operating chiefly from London. The local banks are controlled by branch managers, who are subject to the direction of officials at the various head offices, advised in many instances by local boards of directors.

The local branches maintain on hand only sufficient cash to meet their ordinary requirements for till money. The bulk of the funds are transferred to the central offices, which maintain a current account with each local branch. On the same principle each Head Office retains only sufficient cash on hand to meet its estimated requirements, leaving any surplus funds on current account with the Bank of England, whence they may be withdrawn in legal tender on demand. As the account of the Clearing House is also kept at the Bank, the maintenance by each clearing banker of a current account with the central institution facilitates the transfers necessary for clearing purposes.

The Bank of England is therefore the " bankers' bank ", and so is liable to be drawn upon at any time to meet demands for money in any part of the country. The customer depends on the branch bank for supplies of currency ; the branch banks look to their London offices, and these, in turn, depend on the Bank of England. But in spite of this, the Bank conducts its business in the same way as other banking institutions, and is under no legal obligation to make special provision to meet demands from the other banks. Nevertheless, its moral obligation to safeguard the nation's ultimate cash reserve is not unrecognised, and accordingly special precautions are taken to prevent any undue depletion.

The vast responsibility thus resting upon the Bank is accentuated by the facts that London is the world's leading gold market, and that any gold required for export is most easily obtained from the Bank of England Reserve. Foreign nations are not slow to take advantage of this availability of gold supplies, so that the Bank is liable to be drawn upon, not only to satisfy the needs of a multitude of small banks within the country, but also to meet the requirements of a foreign nation for gold bullion, whether for currency or for other purposes. The methods which the Bank adopts to safeguard its Reserve will be dealt with in the following chapter.

CHAPTER 27

THE LONDON MONEY MARKET

In our discussion of the term "market" we showed that it was frequently interpreted in two ways: first, as a place of assembly for buyers and sellers of a commodity; secondly, as indicating all the operations which centre around one commodity. The London Money Market is no exception to the general rule. In the localised sense it is taken to apply to the world famous institutions and streets which centre around Lombard Street and the Bank of England; in its wider significance it connotes the operations of all the bankers, brokers, discount houses and financiers in the city of London who transact business in the commodity—money, and its representative, credit.

Members of the Money Market.

The Bank of England is the pivot of the Money Market, the corner-stone of the whole edifice. Its position as the holder of the nation's ultimate cash reserve gives it a pre-eminent importance, and enables it to exercise a great influence on the rates of interest charged on the market and in the country generally for loans of money.

The Lenders of Funds on the market are chiefly the bankers, particularly the "Big Five." Their disposable funds which are lent out at low interest for short periods (frequently overnight) consist of the floating surplus of their deposits after reserving sufficient to meet current demands, and employing what is deemed to be a safe proportion in loans, investments, and other ways. Money so lent is repayable either "at call", or "at short notice", and figures as "*Money at call or at short notice*" in the bank balance sheets.

The Borrowers of Money are chiefly the bill brokers and discount houses, who employ the funds borrowed in discounting bills, and stock exchange brokers and operators, who utilise the funds for dealing in securities.

In addition, the British, Foreign and Colonial Governments, and foreign banks with agencies in London, lend or borrow considerable sums on the market. Since the War, the British Government has established itself as the largest borrower in the market.

The International Aspect of the Money Market.

The world-wide importance of the London Money Market is indicated by the number of specialised organisations existent

therein which are occupied essentially in international finance. Among these are the Discount Market, the Foreign Exchange Market, and the Bullion Market.

The Discount Market, consisting of the discount houses [1] acting in close conjunction with the bill brokers, the London accepting houses [2] and the banks, applies itself to the buying and selling of bills of exchange. Its creation of a free market for good bills and its insistence on a high degree of business integrity, together with the fact that the sterling bill can be at any time converted into cash in London, have contributed very largely to the world-wide acceptability and negotiability of the bill of exchange on London. Moreover, the market organisation is so efficient and competition so keen that discount rates are kept down to the lowest possible levels.

The development of the accepting houses is a feature peculiar to the London financial organisation, and accounts in no small degree for the superiority of London as an international monetary centre when compared with New York or Amsterdam. These houses are now private banking firms of first-class credit who undertake to accept bills drawn upon them under arrangement, in return for an acceptance commission. The term " merchant bankers ", sometimes applied to these well-known firms, is indicative of their origin in the ranks of merchant traders of established reputation, who found themselves able to develop a lucrative business by lending their names on the bills of less well-known firms. So high is the reputation of the accepting houses that their services are used to finance not only the import and export trade of this country, but also direct trade between foreign countries in goods which never touch our shores. Moreover, the rates at which their acceptances can be discounted are much lower than the rates charged on ordinary commercial acceptances, and the difference is usually sufficient to cover the cost of arranging the acceptance facilities.

Consideration of the Foreign Exchange Market is deferred to a later chapter, but at this point it may be observed that during the great post-war foreign exchange boom London was able to obtain a hold on the bulk of foreign exchange business and to establish herself even more firmly as the world's leading monetary centre. Working in close conjunction with the foreign exchange market is the bullion market. As the British Empire supplies the world with the greater proportion of its supplies of new gold, the bulk of this finds its way to the London Bullion Market, where it is put up for international competition. The intimate relationship of London with India, Hong-Kong, and Shanghai, has invested her silver market with a similar importance. So highly developed is the mechanism of the bullion market, and so sensitive its reaction to exchange conditions throughout the world, that its

[1] Such as Alexander's Discount Co., Ltd:, National Discount Co., Ltd., and Union Discount Co. of London, Ltd. [2] E.g., Brown, Shipley & Co.; Frederick Huth & Co.

prices may be regarded as a world barometer of the values of the precious metals. Moreover, the existence in London of a free and open market in bullion greatly increases the strength of the foreign exchange organisation.

Working in close co-operation with the foregoing organisations and performing functions of first importance in relation to international finance and trade, are the home, colonial, and foreign banks having offices in London. Apart from undertaking purely banking business, these institutions also undertake many of the functions performed by the specialist organisations to which reference has been made. Thus they transact the bulk of present-day foreign exchange operations. They undertake acceptance business, grant loans against goods entering into international trade, provide short-term credit for the bill brokers and discount houses, and assist the underwriters and issuing houses in raising capital from the investing public.

To a large extent the joint-stock banks have become competitors of the accepting and discount houses, and now undertake a growing proportion of the acceptance business. They are also large discounters of bills. In the acceptance business they are able to offer rates of commission lower than can be offered by the accepting houses, and, consequently, they have been able to secure for themselves a large part of the London acceptance business. In the discount business, however, the joint-stock banks have to face strong competition from the discount houses, for the latter have not to pay so keen a regard to the liquidity of their resources.

The Money Market and the Capital Market.

The nucleus of specialised agencies mentioned in the foregoing paragraphs is usually regarded as constituting the money market proper, in contradistinction to the far wider organisation sometimes referred to as the *English Capital Market*, which embraces not only the money market itself, but also the whole of that specialised and centralised machinery in the City of London primarily concerned with the transfer of capital from those who wish to invest it to those by whom it is required, together with a wide circle of other less defined agencies which perform a similar function. The Capital Market may, in fact, be regarded as comprising an inner and an outer ring, the first of which includes not only the specialised institutions of the money market, but also the market in *new* securities consisting of the many forms of trust and finance companies in the City, the company promoters, underwriters, brokers, issue and advertisement houses, all of which are engaged in company flotation, together with the market in *issued* securities represented by the highly organised London and Provincial Stock Exchanges. The outer market, however, is much less centralised, and comprises the services of the solicitor, of the provincial broker and of building societies,

together with the system of trade credit and all those less definite but widespread arrangements which facilitate the movement of capital from investor to borrower.

The Inner Capital Market.

The joint-stock banks are undoubtedly the foremost members of the market organisation which deals with the supply of short-term capital. They relieve the capitalist of the entire work of management of his disposable funds, and, through an elaborate system of some 5000 branches, establish business relations with large numbers of people who have capital available for investment and people who are desirous of turning it to account.

The trust and finance companies comprise a large group of several hundreds of institutions, ranging from the highly reputable trust company proper to less well-known financial houses engaged in more speculative operations. Many and varied are the purposes for which such institutions are formed. Those which operate mainly at home invest funds, discount bills, underwrite issues of new securities, convert businesses into joint-stock companies, act as trustees and agents, purchase assets of insolvent estates, acquire and develop property, and generally assist commercial undertakings. The companies operating mainly abroad have even more varied objects, being formed to invest in all types of foreign securities, in real estate mortgages, railway bonds, rubber, tea and coffee plantations; to assist industrial development, acquire freehold land and work railways; and to carry on general financial business, and act as trustees and agents. In fact, the great variety of purposes for which such trust and finance companies are formed tends to obscure their principal function—that of supplying capital.

The market for negotiable securities is primarily concerned with the supply of capital for *long periods*, and as already indicated, really consists of two distinct organisations—*the market for new securities*, and the *market for old securities*. The function of the first of these is to formulate the demand for capital by expressing it in the form of a large number of negotiable securities adapted both in amount and the degree of risk to appeal to a widespread public. Underwriters may guarantee the subscription of the whole or part of the issue; well-known brokers lend their names to prospectuses and open up a market among their clients; bankers receive subscriptions and issue securities in return; while the specialised machinery of the advertisement houses enables them to distribute an enormous number of prospectuses among a selected public.

The work of the second half of the market, the Stock Exchanges, is ancillary to the main function of obtaining supplies of new capital from the public. It contributes to this end by providing facilities by which securities after they have

been purchased may be readily disposed of by the people who hold them. The organisation of the market as a whole enables an immense number of small portions of capital to be collected annually from a wide public and placed at the disposal of states, municipalities and industrial and commercial enterprises in all parts of the world. (See also Chapter 12.)

The Outer Capital Market.

While the inner capital market plays a most important part in linking up the demand for capital with its supply, it is seldom realised to what extent industry in this country is financed through the less defined but none the less important agencies already referred to as constituting the outer market. Thus loans of large and small amount are daily made by solicitors and friends on little or no security other than faith in the borrower's integrity and ability; professional moneylenders advance huge amounts to individuals of every class; business men raise large sums on security, particularly on mortgage; while in many industries capital is supplied for short periods through merchants, dealers, and middlemen, who provide trade credit. Most of such traders have a much larger amount of capital in their business than is represented by assets, and thus it may be said that the typical merchant is not merely a buyer and seller, but that he is also a financier in the true sense of the word, utilising a certain proportion of his capital in advancing trade credit and accepting similar facilities in return. In some industries, particularly in the cotton industry, this aspect is one of first importance, for by reason of the intimate knowledge which traders in this industry have of their customers, they are able to perform services which no banker would undertake.

Market Rates of Discount or Interest.

The rate charged on the Money Market for loans of *money* for short periods, chiefly by the purchase and sale of bills of exchange, is referred to as *Discount*, in contradistinction to the term *Interest*, which is used in reference to the charge made for the loan of *capital* for long periods. Discount, as the word implies, is deducted from the amount of money advanced at the time of the loan, whereas interest charged is added to the amount lent, either periodically or at the time of repayment. When due allowances are made, however, there can be little or no difference between the two rates, for any difference must result in a flow of loanable capital from one purpose to the other, i.e., if discount is higher than interest, capital will be used for discounting operations rather than for loans for long periods in return for interest.

From an economic standpoint, the London Money Market consists of several distinct markets, each of which has its own dealers, with its own price for the commodity in which it deals,

i.e., rates of interest for loanable capital. These rates are distinguished as follows :—

THE BANK RATE, i.e., the official advertised minimum rate of discount at which the Bank of England will discount approved bills of exchange. For its regular customers the Bank may discount at slightly lower rates. The Bank rate is fixed by the Bank Court of Directors on Thursday in each week, and is the basis of all other rates in the money market.

THE MARKET RATES are the rates of discount charged by the various members of the Money Market, other than the Bank, for discounting bills and advancing money. Various market rates are quoted, depending chiefly on the length of the period for which the loan is made : the longer the period the higher is the discount. The Market rate, sometimes called the "private" rate, is nearly always lower than the Bank of England rate.

THE BANKERS' DEPOSIT RATE is that paid by the bankers on deposits left with them by their customers. This rate is regulated by the Bank rate : until a few years ago it was fixed at 1½ per cent. below the latter, but nowadays the difference is 2 per cent.

THE BROKERS' DEPOSIT RATE is usually ¼% higher than the bankers' deposit rate, and is paid by brokers and discount houses on money left with them at call and short notice.

THE BANKERS' CALL RATE and SEVEN-DAY RATE are charged by bankers for loans of money at call and at seven days' notice respectively.

The following table, taken from the *Economist* of 18th October, 1930, indicates the methods of quoting the various rates :—

LONDON RATES OF DISCOUNT AND INTEREST

	Oct. 9, 1930.	Oct. 10, 1930.	Oct. 11, 1930.	Oct. 13, 1930.	Oct. 14, 1930.	Oct. 15, 1930.	Oct. 16, 1930.
	%	%	%	%	%	%	%
Bank rate (changed from 3½% May 3, 1930)	3	3	3	3	3	3	3
Market rates of discount—							
60 days' bankers' drafts	2 2 1/16	2 1/32 1/16	2 1/32 1/16	2 1/32 1/16	2 1/32 1/16	2 1/32 1/16	2 2 1/16
3 months' do.	2 1/16 2 1/8	2 3/32 1/8	2 3/32 1/8	2 3/32 1/8	2 3/32 1/8	2 3/32 1/8	2 1/16 1/8
4 months' do.	2 1/8 1/16	2 1/16 1/4	2 1/16 1/4	2 1/16 1/4	2 1/16 1/4	2 1/16 1/4	2 1/8
6 months' do.	2 1/4 3/16	2 1/4	2 1/4	2 1/4	2 1/4	2 1/4	2 1/8 1/4
Discount (Treasury Bills)—							
2 months	2	2 1/32 1/16	2 1/32 1/16	2 1/32 1/16	2 1/32 1/16	2 1/32 1/16	2
3 months [1]	2 1/16	2 3/32	2 3/32	2 3/32	2 1/16 3/32	2 1/16 3/32	2 1/16
Loans—							
Day to day	1½	1½ 2	1 2	1¼ 2	1½ 2	1½ 2	1½
Short	1¾ 2	1¾ 2	1¾ 2	2	2	2	1¾ 2
Deposit allowances—							
Bank	1	1	1	1	1	1	1
Discount houses at call	1	1	1	1	1	1	1
At notice	1¼	1¼	1¼	1¼	1¼	1¼	1¼

[1] Additional to those offered by tender in the preceding week.

The Short Loan Fund of the Money Market.

Most of the money in which the market deals consists of that surplus, already mentioned, of the deposits of the bankers. The banks must keep this surplus as liquid as possible, for it is their second line of defence. The method of loaning "Money at Call and at Short Notice" on the market has the advantage of providing them with a ready means of utilising their surplus money and at the same time preserving its liquidity, for the loans can be recalled almost at once. At the end of 1929, the total deposits of nine English clearing banks amounted to no less than £1,800 millions, of which probably as much as £130 millions was utilised on the market as "Money at Call."

The Barometer of the Money Market.

Before considering the inter-relation of the various rates of interest on the London Money Market, we may usefully devote our attention to the weekly return which the Bank of England is required to make under the provisions of the Bank Charter Act, 1844. This return gives such indications of the state of monetary conditions generally that it has been well described as the "Barometer of the Money Market", and an appreciation of its meaning is necessary to a correct understanding of the movements in the market rates of interest. The Return, which remained unchanged from 1844 to November, 1928, when it was slightly modified, is issued on Thursday in each week after a meeting of the Bank Court of Directors, and appears as follows :

BANK OF ENGLAND

Return for Week ended Wednesday, June 5, 1929

ISSUE DEPARTMENT

Notes Issued—		Government Debt	£11,015,100
In Circulation	£361,576,772	Other Government Securities	236,252,577
In Banking Department	61,391,652	Other Securities	7,900,003
		Silver Coin	4,832,320
		Amount of Fiduciary Issue	260,000,000
		Gold Coin and Bullion	162,968,424
	£422,968,424		£422,968,424

BANKING DEPARTMENT

Proprietors' Capital		£14,553,000	Government Securities		£43,106,855
Rest		3,236,699	Other Securities—		
Public Deposits *		8,511,444	Discounts and Advances	£6,215,102	
Other Deposits—			Securities	20,999,901	
Bankers	£70,346,971				27,215,003
Other Accounts	35,945,514		Notes		61,391,652
		106,292,485	Gold and Silver Coin		882,706
7-Day and other Bills		2,588			
		£132,596,216			£132,596,216

* Including Exchequer, Savings Banks, Commissioners of National Debt and Dividend Accounts.

The Issue Department.

Gold Coin and Bullion.—Since the War the nation's gold has been concentrated at the Bank, and the stock in the Issue Department represents practically all the gold in the country at the present time which is available for the discharge of obligations. No other bank keeps gold in its tills, and there is none in general circulation as in pre-war days.

Notes Issued.—This item represents the Bank's liability in respect of notes in the Banking Department, and in the hands of the public and other banks.

The Bank's active circulation, at the date of the Return reproduced, was about £361 millions. It is to be noted, however, that with the withdrawal of gold from circulation, bank notes are held by the banks and others in their ready cash as being equivalent to gold, so that a proportion of the £361 millions does not pass from hand to hand.

The *Government Debt* has been unchanged since 1833, and is represented by a book entry at the bank.

Other Government Securities and *Other Securities* respectively comprise the Issue Department's holding of Government Securities (largely Treasury Bills), and other first-class securities, including prime bank and commercial bills of exchange.

Silver Coin.—It should be observed that this forms part of the *fiduciary* backing, and not of the metallic backing, and that its amount in the Return given is less than the authorised figure of £5,500,000.

The Banking Department—Liabilities.

THE PROPRIETORS' CAPITAL. Like the Government debt, this also has been unchanged since 1833. It is divided into fully-paid stock, which earns about 9 or 10 per cent. on the nominal amount.

THE REST is a general reserve of the Bank, representing the accumulation of undivided profits, and the balance of Profit and Loss Account. It is never allowed to fall below three millions, and its gradual increase during the year gives stockholders an indication of the amount of profit which will be available for distribution.

PUBLIC DEPOSITS represent the sums standing to the credit of the Government Departments, and vary with the collection of income tax, payment of dividends on Government stock, etc.

OTHER DEPOSITS are the deposits of the Bank's other customers, including the balances of the other banks, shown separately as "Bankers' Accounts." Movements in the item "Bankers' Accounts" afford a fair indication of the disposable funds of the Money Market, and of the trend of financial affairs.

In normal times Public Deposits and Bankers' Accounts vary inversely. Amounts paid by the Government as dividends out of the former help to swell the latter, whereas Bankers' Accounts

are decreased and Public Deposits swollen when income-tax payments are made to the State by the customers of other banks. The relation was very marked on the issue of the War Loans, which added enormous amounts to the Public Deposits at the expense of the balances of the other banks. At times, however, the relation is obscured by heavy borrowings on the part of the Government from the Bank as a result of which Public Deposits and Government Securities tend to increase together, while Bankers' Accounts show no change.

In general, a high level of Bankers' Accounts indicates that the banks have a large surplus of unemployed funds, and is usually coincident with low interest rates and cheap money. If a monetary crisis or a disturbance of credit is impending, Bankers' Accounts may rise suddenly at the same time as the Bank rate; the rise in the Bankers' Accounts indicates that bankers are strengthening their position by calling in loans or realising securities, whilst the rise in the Bank rate indicates that the Bank finds it necessary to raise the rate of interest in order to protect its Reserve and check borrowing by brokers and others (see *post*, page 476).

SEVEN-DAY AND OTHER BILLS are chiefly Bank Post Bills at seven or sixty days' sight issued by the Bank of England and requiring acceptance. They were originally issued in order to prevent loss by theft of money in transmission, but are nowadays almost confined to the remittance of funds by government officials to the Bank and to various towns.

Banking Department—Assets.

GOVERNMENT SECURITIES represent the extent of the Bank's investments in British Government stocks, and Exchequer and Treasury Bills, but include also loans to the Government on "Ways and Means Advances" and "Deficiency Bills". This mode of borrowing money was much resorted to during the war to tide over temporary shortage, but was originally used to finance Government expenditure until the tax payments came in.

OTHER SECURITIES include the investments of the Bank in securities other than those under the first heading, and also advances to bill brokers and its customers other than the State.

A rise in Other Securities coincident with a rise in Bankers' Accounts is generally evidence that bankers are strengthening their position. This drives market borrowers to the Bank for accommodation (i.e., the Market is "in the Bank"), thus causing an increase in Other Securities to coincide with an increase in Bankers' Accounts through the accumulation of funds in the hands of the banks.

The Bank of England Reserve.

The last two items on the assets side of the statement of the Banking Department, amounting to about 62 millions in the

Return given above, are probably the most significant of all, as they represent what is known as the *Bank's Reserve.* This must be clearly distinguished from the reserve of gold held by the Issue Department, for the latter reserve is held and appropriated solely to redeem the notes in circulation and the notes which are held by the Banking Department and by other banks.

Gold is withdrawn from the Bank for export and other purposes by obtaining some of these notes from the Banking Department, either by withdrawal from deposits or by obtaining an advance against securities. In times of stress the Reserve has been almost exhausted and sanction has had to be obtained by the Bank from the Government by an Order in Council, empowering the Issue Department to increase its fiduciary issue, and thereby issue bank-notes to those who require them. In such times it is found that panic can be alleviated to a great extent if bank-notes can be freely obtained; the solvency of the Bank is never questioned, its notes being received as equivalent to gold.

The Ratio of Reserve to Liabilities.

In pre-War days the Reserve was maintained at about 45-55 per cent. of the total liabilities, but during and immediately after the War the proportion was allowed to fall considerably. In the Return quoted above, the proportion stands at about 46 per cent., which is near the pre-War figure.

The item Bankers' Accounts on the liabilities side of the Return consists to a large extent of that item which is described in the balance-sheets of the banks as "Money at the Bank of England", and which, for practical purposes, is treated as equivalent to Cash. In calculating the ratio of their cash on hand to their liabilities the bankers treat as cash their funds at the Bank. These are included in the total of "Other Deposits", but a perusal of the Bank Return shows that the item "Other Deposits" is treated by the Bank as an ordinary liability, and no provision is made to set aside a special cash reserve which can be used to meet the demands of the bankers for repayment. As the Bank's Reserve ratio in the Return given stands at about 46 per cent., somewhat less than one-half of the bankers' "Money at the Bank of England" is represented by bank-notes or coin, and of this 46 per cent., about two-thirds are backed by securities in the Issue Department. It follows, therefore, that the bankers' "Cash at the Bank of England", totalling nearly 71 millions, is represented by only about 16 per cent. of coin and bullion.

The Protection of the Reserve.

As we have shown in the preceding chapter, the Bank's Reserve is liable to be depleted by demands from two sources: (*a*) Demands for internal requirements; and (*b*) Demands from foreign sources and for export purposes.

Generally speaking, inland demands are fairly regular and periodic, as when money is required for half-yearly dividend payments, for the harvests and holidays, and so on. Consequently the Bank is enabled to make adequate and timely provision to meet these demands upon its resources, and so to maintain the proportion of its Reserve. On the other hand, the liability of the Bank to a foreign drain is not only spasmodic, but also more important in its results on the Reserve in the Banking Department.

There are three recognised contingencies which may result in a serious depletion of the Reserve: first, when, in circumstances such as those existent in pre-war days, a monetary crisis abroad causes a world-wide demand for gold and seriously affects London's position as a free gold market; secondly, under abnormal conditions, such as the outbreak of war or a failure of national credit, when the Reserve is again threatened by the foreign demand for gold and the pressure to encash the numerous foreign claims on London; and thirdly, when a heavy periodic drain for internal purposes coincides with a drain for external purposes.

In any of these circumstances the Bank is compelled to resort to measures to protect its holding of gold, otherwise its financial stability and that of the country as a whole may be endangered by an excessive depletion. The method usually adopted is the raising of its rate of discount, which tends to raise all other rates of interest in the money market, thereby attracting foreign floating balances for investment in this country, and so inducing an inflow of gold.

The Influence of the Bank Rate.

The Bank rate is ordinarily effective as a lever for raising rates of interest in the market chiefly by reason of its relation to the bankers' deposit rate, which by custom is based on the Bank rate, and is nowadays fixed at a rate of two per cent. below. Every movement in the rate of the Bank of England is followed by a corresponding adjustment of the deposit rate. When the former rises, depositors expect to get more for their money, and the bankers, who are thus compelled to pay more for their borrowed funds, necessarily attempt to recoup themselves by charging higher rates of interest for loaning that surplus money which, as we have shown, forms the bulk of the short loan fund on the market. Further, the bill brokers and other market borrowers, who have thus to pay more for their loans, increase their own charges for discounting bills and making loans. So under ordinary circumstances the Bank is enabled to raise interest rates, not only in the London Market, but also in the country at large.

The influence of the Bank rate is most effective when money

is scarce, for then not only are lenders anxious to make the best of the shortage of supply, but borrowers are frequently compelled to resort to the Bank for the necessary accommodation. In such circumstances the Bank naturally charges whatever rate it deems necessary, and is usually able to force other market lenders to do likewise. At some periods, however, when supplies of money are plentiful, the effectiveness of the Bank rate is less marked. Then the banks and other lenders endeavour to get whatever rate they can for their funds, and competition between them tends to keep down their rates for loans.

As a result, market rates of discount do not follow the Bank rate, and the Bank does not achieve its purpose of restricting credit supplies. Consequently, the Bank aims at making its rate effective by resorting to its "Open Market Policy," which consists in depleting the Market's resources by the sale of securities. In the reverse circumstances, when the Bank wishes to keep rates of discount low, it may take steps to increase the Market's resources and widen the basis of credit by the purchase of securities.

In addition to being an important means of narrowing the margin between market rates and the Bank rate, the Bank's open market operations are frequently applied to negative the effect of gold movements and so make unnecessary a change in the Bank rate. In other words, they are undertaken to keep the volume of credit stable independently of the amount of the Bank's gold holding. In this way, the Bank secures a much finer control of credit than it would do by raising or lowering its official rate, and, whilst the latter still remains the basis of all other rates in the Market, its movements are much less frequent and violent than they used to be.

Fluctuations in the Supply of Floating Money.

The supply of market money depends chiefly on all the factors which combine to influence the amounts deposited with bankers, such as trade conditions, the political and industrial outlook, foreign affairs, the prospects of peace or war, the state of the foreign exchanges, and the general state of credit both at home and abroad. These are contingent or unforeseen causes, but as previously indicated there are certain periodic influences :—

1. GOVERNMENT DIVIDEND PAYMENTS at the four quarterly periods increase the funds of the other banks, and lessen the Government accounts. In the Bank's books this simply results in a transfer entry from Public Deposits to Bankers' Deposits, but the increase in the available funds of the other banks has its effect on interest rates and prevailing conditions.

2. TAX PAYMENTS during the March quarter have a con-

trary effect, as money is transferred from Bankers' Deposits to the Government account at the Bank, thus reducing market supplies of money, and increasing the influence of the Bank and the effectiveness of its rate. The instalment payments in July have a similar effect.

3. TRADE REQUIREMENTS.—In the autumn trade is usually more brisk and extra money is required for harvesting wages and for paying for imports of cotton and corn from America. The result is a demand on the Bank for both home and foreign payments.

4. SCOTCH AND IRISH DRAINS occur regularly during May and November, when payments of rent and interest are made in those countries, causing a demand for an increased circulation of notes. The latter are issued by the Scotch and Irish Banks, but as any increase in circulation has to be backed by gold, this must be obtained from the Bank of England, thus diminishing its reserves and tending to raise interest rates.

5. "WINDOW DRESSING" is the term applied to the action of some of the joint-stock banks, who, in order to show a strong position in their half-yearly balance-sheets, call in their loans at short notice. In this way they increase their funds at the Bank of England, which are shown in their statements as "Cash at the Bank of England", or as actual cash. These operations reduce the funds in the hands of the bill brokers, and may drive them to the Bank for loans.

Criticisms of the Central Reserve System.

The Central Reserve System here described has from time to time been subjected to considerable criticism, and several alternatives have been advocated with the object of obviating the remarkable dependence of the whole financial arrangements in the country on the policy of one institution which is purely a private organisation and is not responsible to the nation for any steps taken by its management. Although the moral obligation upon the Bank is actually quite as strong as any legal bond, it is nevertheless a constant source of wonder to foreigners that our entire credit superstructure should thus depend on the judgment and decision of a private institution which is quite independent of State control.

The criticisms of the present system may be divided under three heads—(*a*) The Inadequacy of the Reserve; (*b*) The Measures taken to protect the Reserve; (*c*) The Inelasticity of the System. The last of these has been already discussed in the preceding chapter.

THE INADEQUACY OF THE RESERVE.—Prominent bankers are the first to complain of the insufficiency of the Reserve, and some of them at one time signified their intention to increase their holdings of specie as much as possible. By certain banks

the practice of maintaining large independent reserves was actually commenced before the war, but the course of hostilities upset all calculations, and British bankers now co-operate to protect and to strengthen the Bank's holding of gold.

The main argument in favour of an increased reserve is that if it were larger, frequent and violent changes in the discount rate would be unnecessary, while the entire monetary system of the country would not be so sensitive to the movements of gold which are an inevitable feature of a free gold market.

THE MEASURES TAKEN TO PROTECT THE RESERVE.—Some of the above criticisms apply here also. In the first place, it is pointed out that the measures of protection are in the hands of a private board of directors, who, though they must take steps to safeguard the security of the Bank, are under no legal obligation to protect the "cash" basis of the other banks, or to ensure the adequacy of the gold reserve upon which depends the financial stability of the nation. Secondly, it is argued that changes in the discount rate are not always effective, particularly in recent years, because, by reason of the enormous growth in their resources, the larger banks may not always find it to their advantage to follow the Bank rate and thereby cause the market rates to rise. The fact that the other banks are in competition as lenders both with one another and also with the Bank of England does not tend to concerted action, for they are necessarily anxious to make profits and must frequently be guided by individual and not national circumstances. The presence of foreign banks in London also complicates matters in this direction. In the third place, it is contended that frequent changes in the discount rate cause similar changes in other lending rates throughout the country, with consequent ill effects on trade, progress, efficiency, and stability, while in many cases loss is caused to innocent persons, particularly to the bill brokers, whose profits depend on the ruling rates of interest.

Suggested Remedies and Improvements.

Many remedies and improvements have been suggested, but it should be noted that the Committee on Currency and Foreign Exchanges after the War, the interim report of which is dated August, 1918 (see Chap. 29), considered the present system best suited to the requirements of this country, and approved the present regulation of the Bank, as modified by the changes made during the war.

Among the suggested remedies may be mentioned, in the first place, the assurance of *concerted action on the part of the banks*. This would give the Bank control over the market rates, and increase its power to attract gold and to influence the exchanges.

Prior to the war the Bank of England was disposed to keep

the clearing banks at arm's-length, while they did not willingly accept its leadership. More enlightened control at the Bank, together with the exigencies of war, remedied the position, and co-operation was made possible by the formation of the "Treasury Committee" of London and provincial bankers, which kept in touch with the Chancellor of the Exchequer, and by the establishment of constant relations between the Governor of the Bank and the Clearing House Committee. But in spite of the fact that frequent conferences take place, the joint-stock banks are never consulted on such important matters affecting banking generally as changes in the Bank rate, and for this reason the Bank is still criticised on the grounds of the excessive secretiveness of its banking policy.

Other suggestions which have been made are that the Bank should be recognised as a State institution, or alternatively that an independent central bank should be established, quite distinct from the Bank of England, to hold the gold reserves of the large clearing banks, and to perform the recognised functions of a State-directed central banking institution.

The General Effects of Changes in Discount Rates.

Changes in discount rates are of first importance, inasmuch as they considerably affect the relative amounts of credit instruments of exchange which are issued and brought forward for discount, and because they influence the demand for and the supply of loanable capital.

On the one hand, fresh borrowing of all kinds is discouraged by high charges for accommodation, and those who have already borrowed endeavour to reduce their commitments. Speculation, particularly, is discouraged, for as it is conducted principally on borrowed money, high rates of interest reduce the possible margin of profit and make speculative enterprises less attractive. Consequently the prices of stocks and shares tend to fall as a result of realisations by those who conduct operations on the stock markets with borrowed capital.

On the other hand, fresh lending is encouraged because bankers and capitalists can obtain a higher return, and for the same reason endeavour to arrange a continuance of their advances. Merchants and bankers in other countries are more content to leave money in this country, and are also prepared to extend any credits they may have granted; they may even send money here for investment. The raising of the rate of discount makes commercial bills cheaper to buy, and consequently induces investment therein, particularly by foreigners. The raising of the bankers' deposit rates attracts deposits and induces people to leave their capital in the banks rather than withdraw it for other purposes. Consequently, the general eagerness to lend money results in less being spent on commodities, and general

prices tend to fall. The fall is accentuated because business men who trade on borrowed capital endeavour to realise stocks even at lower prices. The general fall in the values of goods discourages imports but encourages exports, because the country is a good market in which to buy but a bad market in which to sell. Finally, the attraction of funds to this country for investment and the tendency for exports to exceed imports move the foreign exchanges in favour of this country and attract imports of gold. In this way the Bank Reserve is increased and the position of the Bank of England as the cornerstone of Britain's finances is safeguarded.

The lowering of the rate of discount is followed by reverse effects, but it should be noted that the explanation given above is general. Foreign investment in this country is not likely to be encouraged if interest rates here are not raised as high as they are abroad ; money—other things being equal—tends always to flow to the best market.

The Influence of Treasury Bill Issues.

The British Government, through the intermediary of the Bank of England, regularly borrows large sums on the Money Market by the issue of *Treasury Bills*, which are instruments signed by the Secretary of the Treasury, entitling the holder to payment of the face amount on presentation at the Bank of England at the expiration of a specified period—usually three months.

The mode of issuing Treasury Bills has varied from time to time, but nowadays the procedure is as follows. Each Friday tenders are invited, by advertisement in the *London Gazette*, for a maximum weekly issue ranging roughly from £30 to £45 million. Tenders must be handed in at the Bank before 1 o'clock on Friday, and allotments are made to the highest bidders. Needless to say, the Treasury need not, and sometimes does not, allot the whole of the amount offered if the total tenders at satisfactory rates do not absorb the whole offer. At one time it was customary for the Treasury to issue " additional " bills after the weekly tender at a fixed rate, known as the " tap " rate, which was slightly lower than that tendered and accepted for the main issue ; but this procedure has fallen out of use in recent years.

Money Market conditions are markedly influenced both by the volume of Treasury Bills issued and by the rate at which they are allotted. This will more readily be understood when it is pointed out that the volume of such bills in circulation rarely falls below £600 million, of which probably £250 million are to be found in the portfolios of the banks and discount houses. Hence, any sudden reduction in the amount of the weekly issue must necessarily restrict the available outlets for the investment of Market funds and must consequently create an artificial

plethora of such funds. In its endeavours to stabilise credit conditions, the Bank of England is able to turn this fact to advantage, for, by co-operating with the Treasury, it can increase or decrease the Market's surplus funds merely by reducing or increasing the volume of Treasury Bills issued. Incidentally, the reduction of the volume of bills issued generally leads to a reduction in the rate at which they are allotted (i.e., to an *increase* in their price), and *vice versa*.

After issue, Treasury Bills are dealt in on the Discount Market in much the same way as other prime bills, and the fact that Treasury Bills constitute a high proportion of the bills current on the Market, renders the various rates quoted for them of particular importance. Obviously, there can be no great divergence between these rates and those quoted for other bills of the same currency and of approximately equal status ; and, if a shortage or excess of Treasury Bills leads to a variation in their rates, there is likely to be a corresponding variation in other Market rates. The rate at which Treasury Bills are allotted is equally important. In general, the rates tendered for Treasury Bills will approximate very closely to the current rate for such bills on the Market : but if there is an abnormally small issue of Treasury Bills in any one week, bankers must tender at relatively low rates (i.e., at a high price) if they are to stand any chance of securing an allotment. The resulting divergence between Market rates and the rates for Treasury Bill allotments will necessarily result in a fall in the former rates. Similarly, if Treasury Bills are allotted at a rate higher than the current Market rate, the latter is likely to rise.

Central Banks and their Functions.

In performing the functions we have described, the Bank of England is said to act as a *Central Bank*, by which is meant a central banking institution which is the focus of the money market of a country and has wide powers as the regulator of credit.

The fundamental principle underlying the establishment of a central bank is that it should be distinct from the ordinary commercial banks in that its policy is directed, not merely to making profits and to maintaining its own solvency, but to regulating the credit machine and maintaining the solvency of the banking system as a whole. Consequently, although the problem is not a simple one in new, developing countries such as Australia and New Zealand, the central bank avoids, as far as possible, competing with the commercial banks for ordinary business, and aims at maintaining as liquid a position as is practicable. For these reasons, central banks do not ordinarily allow interest on deposits, or make advances on fixed property, or grant unsecured overdrafts.

The main principle underlying the operation of a central bank is that it does not rely on other banks, or upon the market, to supply it with cash or to take bills or securities off its hands in case of need. Instead, it always stands ready to perform these services itself. Thus, it is a reservoir of credit, and will always provide accommodation *at a price*, its own price, which it fixes with due regard to national and international monetary conditions.

In order to perform these functions, a central bank has to hold among its assets what to a competitive bank would be an unduly high proportion of idle gold and currency. It must always be in a position to meet both external drains and variations in the country's internal requirements for money for making day-to-day payments.

The assumption of such responsibilities necessarily means that a central bank cannot pursue a passive policy. On the contrary, it must be constantly alert to prevent the exhaustion of its reserves by gold exports or by internal demands. To protect its position it has recourse to one of two weapons. First, it may *raise its official rate of discount*, and thereby stiffen the terms on which it will grant credit. As a rule, market rates are compelled to follow the official rate, and the effect, like that of a rise in the price of an ordinary commodity, is to check the demand for loans and to increase the volume of deposits. At the same time, the demand for loans tends to be shifted to other monetary centres, while money from such centres is attracted for investment on deposit at the higher rates of interest. Alternatively, the central bank may adopt the *open market policy* already mentioned in relation to the Bank of England. This means that it may sell securities for cash to the money market, thus diminishing its cash liabilities to other banks and increasing its own holdings of money.

Conversely, of course, the central bank may create easier conditions, and encourage an expansion of credit, by lowering its discount rate or diminishing its holdings of money by the purchase of other assets, as, for example, bills or government stock.

Central Bank Equipment.—In order to be in a position to perform these special functions, a central bank must have certain special powers and equipment. In the first place, it is very desirable that it should have a monopoly of note issue, so that it can meet variations in the demand for currency without having its calculations upset by variations in the issues of other institutions. It is essential, too, that no other bank in the country should have an unrestricted power of note issue, otherwise it could flout the central bank's authority. Secondly, it is desirable that all the other banks and the government should keep their floating balances with the central bank, and that it should hold the nation's ultimate cash reserve. It thus becomes the "bankers' bank" as well as banker to the State.

The final and fundamental principle is that a true central bank should be largely independent of political influences. It cannot be entirely independent, but, as the currency authority, it should be given as free a hand as possible, and should not be tied to any political machine. If this is not the case, currency policy is placed in danger of becoming the plaything of party politics and of being swayed by class interests.

During the half-century before the war most European countries built up strong centralised banking systems on these lines; in England, the Bank of England, in France, the Bank of France, in Germany, the Reichsbank, and so on. Since the war, the urgent necessity for a strong guiding hand in monetary matters has resulted in a considerable extension of the principle, which is now adopted in nearly all important countries.

The Bank for International Settlements.

In recent years there has been a growth of sympathy towards the idea of greater co-operation between central banks. The relative scarcity of gold, due to the widespread adoption of the gold standard, has necessitated economy in the use of the metal. Hitherto the only attempts at the co-operation entailed by this position have been purely personal conferences between the directors of central banks, but a far more vigorous policy has been rendered possible by the establishment of the Bank for International Settlements.

The conception of this Bank was the most prominent feature of the famous Young Plan, formulated in 1929 to supersede the Dawes Scheme, for regulating German Reparations payments. The actual scope of the operations of the Bank, domiciled at Basle, must for a time remain indefinite, but though its primary function is the conduct of all transfers and operations in connection with reparations, its Statutes clearly reveal the intention that the Bank shall become a central bank for central banks, promoting co-operation between them and co-ordinating their policy in financial matters of world importance.

Unlike the relations between a central bank and other banks in the same country, the relations between the International Bank and the world's leading central banks are reciprocal. The International Bank may not only keep gold deposits on account of central banks, but may also deposit gold with them. It may rediscount bills held by central banks and it may have its own bills rediscounted by them. It may open and maintain current or deposit accounts either *for* central banks or *with* central banks, and it may act as agent or correspondent for any central bank and appoint any central bank to act as its agent or correspondent.

In addition, the Bank may buy and sell gold coin or bullion, exchange, or negotiable securities for its own account or for the account of central banks; it may lend to or borrow from central

banks against gold, bills of exchange and other short term obligations of prime liquidity or other approved securities. Subject to the consent of the central banks affected, it may deal with private individuals also, but, in practice, this concession is not likely to be very effective. On the other hand, the Bank may not issue notes, accept bills of exchange, make advances to governments or open current accounts in their name, acquire a predominant interest in any business concern or remain the owner of any real property except in so far as it is required for its own business.

Provisions as to the actual reserve to be maintained by the Bank are omitted from the Statutes, but the Bank must hold assets appropriate to the maturity and character of its liabilities.

It is obvious from these provisions that the International Bank is not intended to interfere with the national independence and the influence of central banks in their own markets. To obviate the possibility of competition with existing banks and the effect of such competition on national markets, the central banks may veto any operation in their currency or on their territory if it *may* involve the withdrawal of funds invested in the country.

It is intended that entries in the books of this bank will, to a large extent, take the place of actual transfers of gold. Moreover, co-operation between the central banks should discourage the cut-throat policy of " scrambling " for gold, whereby one centre secures gold and sterilises it in its vaults just at the moment when another centre is in need of the metal. Instances of this occurred in 1929-30, when first the U.S.A. and then France acquired huge and apparently unnecessary reserves of gold, thereby reducing world supplies of the metal and enhancing its value. A policy of co-operation would ensure that gold flowed to the places where it was most required, and would enable the same quantity of gold to act as the basis for a much larger structure of credit, thereby preventing, or at least delaying, the fall in prices which must otherwise result from the fact that the world's new supplies of gold are not keeping pace with the monetary demands for the metal. International price stability may thus be attained.

In entering into any system of co-operation of this kind the central banks would presumably adjust their reserve requirements to suit the new conditions. Each bank might be willing to work on a lower gold ratio if it were certain of the availability of further gold in time of need.

The Control of Credit.

The question of the control of credit, so intimately related to the principle of central banking, has in recent years been the subject of prolonged discussion and considerable controversy.

In Chapter 25, it was explained how the business of banking has been founded on the knowledge, gained by experience, that

credit may be created by the banker to an amount several times greater than the amount of the cash reserve which he sees fit to maintain.

The old English private banks created credit when, on the strength of their reputation, they issued notes both to depositors and to borrowers and placed no limit on such issues other than that imposed by each banker's conscience and his fear of a "run". Our modern joint-stock banks do not issue notes, but by the development of the cheque system and of the central reserve system they have made possible a remarkable economy in the use of gold and the erection of a vast credit superstructure on a small metallic reserve.

The customer's deposit becomes bank money—real purchasing power, which adds to the quantity of money in circulation. And it is important to remember that such bank money may be issued, not only against an actual deposit, but also through the making of a loan by the banker to his customer. In the latter case the banker accepts his customer's credit and gives the customer in return the right to issue bank credit in the form of cheques. As Mr M'Kenna has stated, "Every new loan or purchase by a bank creates an equivalent deposit, thus increasing the quantity of money".

Yet in spite of these facts, some authorities, notably the late Dr Walter Leaf, have contended that the power of the banks to add to the volume of credit is strictly limited. To some extent this is true. If our analysis in Chapter 25 is correct, it is clear that the banks will cease to create credit at the point where the proportion of their cash to liabilities reaches the figure which is sometimes described as a bank's "traditional" ratio. But while there may be a minimum below which the banks would not let this ratio fall, it requires little demonstration to show that the banks, in this country at any rate, can vary and have considerably varied the total amount of credit by altering the proportion of cash to their liabilities.

Let us suppose, for example, that one bank or a group of banks which has steadily maintained a cash reserve of £15 million against deposits of £100 million, i.e., a ratio of 15 per cent. cash, decides that, owing to the greater feeling of security and confidence within the community, or to the increasing use of cheques for making payments, or to a change in the distribution of its business as between town and country customers, a ratio of 10 per cent. is adequate. Clearly, if the cash reserve of £15 million is maintained, the deposits can be increased to £150 million, and the most likely way of doing this is to increase loans and advances.

Variations such as this have undoubtedly resulted from the widespread amalgamations among English banks, for the policy has brought about such a remarkable concentration and economy of cash resources that deposits and advances have increased more

than proportionately. This important fact is indicated by the following figures showing the variation in recent years in the proportion of cash held by the banks in the United Kingdom.

Banks in the United Kingdom.

(EXCLUDING THE BANK OF ENGLAND)

Proportion per cent. of Cash (including Money at Call, etc.) to Liabilities, on Deposit and Current Account, and Notes Issued, 1914-1926.

1914	1915	1916	1917	1918	1919	1920	1921	1922	1923	1924	1925	1926
29	25	30	31	29	23	22	21	21	21	22	22	22

It will be observed that between 1914 and 1926 the proportion of cash held by these banks fell from 29 per cent. to 22 per cent. In this period the amount of cash and money at call, etc., *increased* from £345 million to £550 million, but the total liabilities increased *more* than proportionately, from £1174 million to £2531 million. In other words, we may say that if the 29 per cent. proportion of 1914 had been maintained in 1926, the total liabilities could not have exceeded £1900 million, whereas the banks had permitted a creation of credit to the extent of a further £630 million.

The foregoing figures afford scant evidence that the banks rigidly adhere to any " traditional " ratio of cash to liabilities, and there is little doubt that by varying this ratio, they can exercise a marked influence on the volume of credit.

At the same time, the figures for the period 1920-1926 exhibit a remarkable steadiness, and it is quite possible that a proportion of about 22 per cent. will henceforward be maintained by these banks. If this is the case, and we may regard the ratio as being definitely fixed, then, and only then, may we safely conclude that it is not within the power of the banks to create credit to any appreciable extent. In such circumstances, their power to make further loans is governed by their ability to *secure additional cash.*

It will still be true, from a book-keeping point of view, that " every bank loan creates a deposit " ; but the fact which has to be remembered is that bank loans do not create cash. When one bank makes a fresh advance the effect is that its " Advances to Customers ", on the assets side of its balance-sheet, are increased, while its " Deposits " (or the deposits of another bank) are increased to a corresponding extent. If the advance is taken by the borrower in cash, the loaning bank's ratio of cash to deposits is to that extent decreased, so that such advances cannot continue indefinitely if the bank is to maintain its customary ratio of cash to liabilities. Moreover, the amount of cash available for the reserves of all the joint-stock banks is not

standard, although to some extent the ordinary joint-stock banks can create credit by varying their cash ratios, and, to a greater extent, the central bank can regulate the national credit situation, yet the real determining factor is the movement of gold, which reflects the state of trade and the international credit position.

The foregoing explanation will indicate to some extent the so-called " vicious circle " in which credit and currency work. The Cunliffe Committee and others desirous of effectively regulating our credit and currency position were insistent that the remedy lay in a rigid control of the Treasury note issue. They said, in effect, " Take care of legal tender currency, and credit will take care of itself ". But it is a nice point as to how far the Treasury notes issued during the inflationary period were actually made necessary through the increase in credit by the banks, for as prices rose there was necessarily a constant increase in the demand for legal tender currency. Hence the converse argument, " Take care of credit and legal tender currency will take care of itself ". The exponents of the principle expressed in this statement contend that credit should be controlled directly by a rigid regulation of banking policy and not indirectly through the control of legal tender. The remedy clearly lies, as is usual in such cases, not in drastic action in one direction or in the other, but in the " half-way house "—a careful regulation of the issue of legal tender currency combined with an equally careful control of the volume of credit by the banks, acting in close co-operation with the central institution.

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CHAPTER 28

THE THEORY AND PROBLEMS OF INTERNATIONAL TRADE

INTERNATIONAL TRADE, as its name implies, concerns the interchange of goods between the nations of the world, as distinct from that trade which is conducted within the political boundary of any particular nation. The subject of international trade is fraught with much difficulty and complexity, as becomes evident when we consider that it is complicated by such a variety of interests, customs, ways of living, and methods of working as must necessarily exist in the heterogeneous communities which comprise the civilised world.

The Theory of International Trade.

The principle underlying international trade is the same as that which determines the division of labour and the localisation of industries, and just as these forms of organisation increase the efficiency of the labourer and that of the unit by which he is employed, so does international trade add to the efficiency of each nation and enhance the benefit it may derive from the enjoyment of the world's goods. England imports oranges from Spain because she cannot grow them herself, whilst Spain imports certain machinery from Britain because her industrial organisation is not suited for its manufacture. Trade arises in such cases because one country enjoys an *absolute* advantage over other countries in the production of the product or products concerned. It is not, however, quite so easy to see why one country imports many commodities which it could, if necessary, produce itself.

The object of all international trade is, of course, the same as that which underlies all forms of exchange—to obtain the greatest possible advantage from the exchange of one kind of commodity for another. But important differences exist between international and internal trade in consequence of the fact that although political states are not originally coherent economic units, they each tend to develop economic unity, and barriers, natural and artificial, spring up between them which prevent the free operation of economic forces.

Within the boundaries of each state labour and capital flow to those branches of production in which their employment yields the greatest net return. But as between different States, labour and capital are comparatively immobile, various factors

operating to interfere with their free movement from one state to another. The effect of such factors is that free competition between the industrial agents in the various states does not exist, and for this reason international trade is theoretically regarded as that trade which takes place between *non-competing* groups of productive agents organised as independent " nations " or " states ".

This immobility of labour and capital between various political groups is the result of differences in language, laws, custom, monetary systems, religion, and social conditions, and also such impediments as are due to fear or ignorance, poverty or sentiment. These barriers apply more to labour than to capital, but just as a labourer prefers to remain in his own country rather than emigrate to a foreign land, so does a capitalist prefer to invest his savings at home rather than abroad.

The second important difference between international and internal trade is the fact that the free flow of goods is, in the former case, frequently impeded by political restrictions which result from the existence of different governments. These restrictions may assume various forms, as, for example, the imposition of taxes on imports of certain classes, and the granting of preferences to goods emanating from certain foreign sources. Finally comes the question of transport, involving the carriage of goods over long distances, by water and land. Under modern conditions, the difficulties of transport tend to be reduced to a minimum, and are rarely sufficient to prevent the flow of goods if the advantages which may accrue as a result of that flow are sufficient to outweigh the difficulties and expense of carriage.

The Theory of Comparative Cost in International Trade.

Economic forces do not therefore operate as freely in international trade as they do in internal trade. But, at any particular time, with the existing distribution of natural resources, labour and capital, one country is more fitted to produce a given commodity than another country.

It is a matter of common knowledge that some countries have greater natural advantages for the production of goods than others. Such advantages may be due to climatic conditions, mineral wealth, to physical configuration and geographical position, or to the joint operation of several of such factors. When we say that one country can produce more cheaply than another, we mean that the total expense to that nation of placing a commodity on a given market is less than would be the expense to another nation of doing the same thing. In estimating this expense, costs of transport must, of course, be included.

Generally speaking, therefore, articles will tend to be produced in those localities and in those countries where expenses of production are least. Raw wool is not now produced to any extent in Yorkshire, where it is really needed, because it can be obtained

far more cheaply in Australia and South Africa. On the other hand, many countries rely on Yorkshire for worsteds because the natural advantages enjoyed by the industry in this locality enable it to produce cloth of better quality than any other district in the world.

But a cheaper cost of production is not sufficient in itself to explain all movements of goods from one country to another. Why, for example, should England—the finest dairy country in the world—rely on Denmark for butter and cheese? The answer is that it pays England better to concentrate on manufactures and to obtain much of her supplies of butter from Denmark because she thereby *obtains a greater relative advantage.* This may be explained by saying that England obtains a greater accession of wealth from every unit of labour and capital by employing that unit in manufacture rather than in dairying. England wants butter and Denmark wants machinery. England prefers to get the butter from Denmark rather than produce it herself because she is thereby enabled to employ her labourers and her capital in other occupations which make their use more profitable. For the same reason Denmark sells butter and buys machinery or clothes. In the long run both sides benefit by such an arrangement. England obtains less costly butter and Denmark less costly machinery, and in both countries there is an economy of both capital and effort in obtaining the same satisfaction.

Similar considerations apply to the Yorkshire woollen industry already mentioned. English sheep have long been famous, and if necessary we could rear far more sheep than we actually do. Sheep are still reared on the Yorkshire Wolds, but not in sufficient quantities to supply the needs of the West Riding mills, who now look overseas for most of their supplies. The reason is not far to seek. Capital can earn higher dividends and labour higher wages in the manufacture of woollens than in sheep farming. Yorkshire possesses greater natural advantages for making woollen goods than for rearing sheep, and her inhabitants benefit most by concentrating on the former and by leaving to other nations the production of the raw material.

The same principle applies throughout the whole of the industrial organisation; to the individual producer, to the large combination, and to the nation as a whole. An office manager may be able to type letters or to file correspondence far more rapidly and accurately than a girl clerk, but it is to the advantage of himself, of his employers and of the community that he should leave such work to lower paid labour and apply all his energies to the performance of his own duties. Or again, a first-class portrait painter could produce pictorial greeting cards of much better quality than those of a third-rate artist, but it would be to his own and the community's detriment if he spent any of his time doing the inferior work. It pays the community to allow a third-rate man to do the inferior work, even though it could be done

better by another, because the specialisation means, on the whole, a decided net benefit to the individual himself, to his employers and to the community.

The theory of comparative costs as applied to international trade is therefore that each country tends to produce, not necessarily what it can produce more cheaply than another country, but those articles which it can produce *at the greatest relative advantage*, i.e., *at the lowest comparative cost.* And by the extension of this principle, which is that underlying both the division of labour and the localisation of industry in a given community, is the general efficiency and productiveness of the whole world increased, and the share which may accrue to each individual correspondingly enhanced. The analogy here mentioned is responsible for the application of the term *Territorial Division of Labour* to this specialisation of national functions.

As has already been indicated, various influences, such as differences of language, custom, and religion, tend to prevent the full working of the theory. As in the case of most economic laws or tendencies, the conditions under which the theory of international trade operates completely are largely hypothetical, chiefly because labour and capital do not always seek their most remunerative outlets, their mobility being influenced, not only by the factors already mentioned, but also by political conditions, variation in commercial methods, and differing degrees of security.

Why International Trade is Competitive.

It is clear that if the theory of comparative costs were universally applicable, trade between the nations would be almost entirely complementary, i.e., the principles of specialisation and division of labour would result in each nation specialising on the production of those commodities and services in which it enjoys the greatest relative advantage. How then is the theory to be reconciled with the fact that so much international trade is essentially competitive? In many instances trade is clearly complementary. We export manufactured goods, engines, and machinery to countries such as India, China, and Brazil, while they in return send us tea, cotton, gold, and other products which we cannot produce. But in other directions the keenest competition prevails. In Indian markets, Lancashire cotton goods, once supreme, are now faced with strong competition from the home manufactured products. Germany and America compete with us in our own markets as producers of steel, chemicals, and motor-cars, while South America, Canada, and Australia compete with our farmers as producers of grain and meat.

Several factors explain this apparent contradiction. In the first place, competition is often more apparent than real. Costs of transport, artificial barriers in the form of tariffs, or temporary national sentiment may render competition between two countries unequal, and may strictly limit the extent of the profitable market

available to one of them. Secondly, even though one country may be better fitted to produce a commodity than another, production may be made possible in the latter country because of the danger of the operation of the law of diminishing returns in the former. We find it advantageous to grow part of our food ourselves, but we do not attempt to grow the whole of it because extended production would raise costs unduly owing to diminishing returns.

Finally, and most important, the operation of the law of comparative costs assumes that, from the beginning, exact knowledge exists of a nation's potentialities in any line of production. The truth is, of course, that our knowledge of industrial possibilities is of slow growth. Experiments are made, sometimes aided by the State—by bounty or subsidy or by protective import duty—to discover what a country's capacity is; the establishment of every new industry requires the initiative and energy of a backer, somebody who holds a high opinion of its possibilities, and who will be prepared to make immediate sacrifices in order to reap ultimate gain.

Such forces take a considerable time to operate, but their tendency is to secure an ultimate distribution of industries in accordance with the law of comparative costs. Society is constantly working to achieve the ideal of maximum production (and hence satisfaction of wants) at minimum cost. The process involves competition, for only by competition are the strength and weaknesses of producers made manifest. As the nations strive for the ideal, their industries pass through periods of challenge, test, and struggle. Industries well established in one country are challenged and ultimately driven to the wall by vigorous growths in other countries, and, as new industries become well established, they tend to become complementary and non-competitive until they, in turn, are challenged from other directions. It is possible that if society were static instead of dynamic—if its development were stationary and its needs fixed—then all international trade would tend to be complementary. But in actual fact the forces of change are so strong that a position of equilibrium is never likely to be reached.

The Advantages of International Trade.

The advantages which result from international trade are similar to those which follow the localisation of industries within a community (see *ante*, page 136).

1. It enables every country to enjoy goods which it does not itself produce, and all peoples benefit from the greater variety of products. This makes for comfort and happiness, and leads to the still further extension of wants which must be satisfied.

2. Each country secures a maximum net return for a minimum of effort and resources by devoting itself to the production of those commodities in which it enjoys the greatest relative advantage or which it can produce at the least comparative cost.

3. This leads to an increase in the world's productive powers and to cheaper prices all round, an advantage in which all nations and individuals share.

4. The greater number and wider area of the sources of supply and of demand tend to greater stability in prices and fewer fluctuations.

5. The interchange of goods facilitates the interchange of ideas, whilst the recognition of economic interdependence promotes peace and goodwill.

The Disadvantages of International Trade.

As in the case of the division of labour, there are certain disadvantages to be offset against the advantages. In the past foreign trade was regarded as being in some respects detrimental to a nation's well-being, and even to-day bitter controversies are aroused in certain communities because many people consider that unrestricted foreign trade is injurious to a nation's economic health, and that steps should be adopted for its regulation. The following are some of the objections :—

1. One country, in order to exist, is forced to produce certain goods, and may consequently exploit her resources to the greater advantage of other nations. This may result eventually in a decline in the prosperity of the one country and a lasting benefit to the others.

2. The interests of the future may be sacrificed to those of the present. For the sake of present advantages a country may be led to exploit her resources instead of conserving them for future needs. Is Britain's coal inexhaustible that she should be supplying half the world with anthracite ?

3. Cheap foreign produce may be harmful, as the consumer is not always the best judge of his own interest, and he may suffer if allowed free access to adulterated foods, drugs, and intoxicants.

4. Foreign competition may ruin an industry and cause extensive harm owing to the difficulty of transferring capital and labour from one occupation to another.

5. In this and in other countries the rapid concentration of labour, the congestion in towns and cities, and the withdrawal of labour from the countryside and from agriculture, are all results of specialisation in manufactures, and are attended by many social evils.

6. *Quality* as well as *quantity* of employment should be considered. One nation should not be tied down to hard,

toilsome occupations whilst others are engaged in the more refined and skilled crafts. The British colonies are by no means anxious to continue indefinitely to supply agricultural produce for British markets whilst Britain applies herself to the production of more profitable manufactured articles which frequently involve proportionally less effort and capital outlay.

RESTRICTIONS ON INTERNATIONAL TRADE

The advantages of international trade already mentioned apply when the flow of goods between the nations is free and unrestricted by natural or artificial barriers. Only in very few countries however—notably Great Britain—has *Free Trade* with other countries been maintained for any considerable period, and history, down to the present day, abounds with instances in which nations have endeavoured to regulate their interchange of articles with other countries in order to obtain for themselves certain anticipated benefits.

The Bullionist Principle.

From the fourteenth to the seventeenth century the view current in this country was that foreign trade was advantageous only in so far as it resulted in the importation of the precious metals—gold and silver—which were regarded as the only source of wealth. Consequently, various measures were adopted to encourage the export of goods and the inflow of the precious metals, and, on the other hand, to discourage the import of goods and the export of specie.

The Mercantilist Principle.

The Mercantile Theory current in Europe in the seventeenth and eighteenth centuries was really a refinement of the older Bullionist Principle rendered necessary by the acceptance of the obvious fact that there are certain foreign commodities which are essential to every country. The aim of the exponents of this theory was the same as that of the Bullionists—to maintain an inflow of the precious metals—but its primary object was to obtain a *favourable balance of trade*, i.e., an excess of exports over imports of goods. If this was achieved it was argued that the balance would be paid in specie, and with the object of attaining this result, various devices were adopted to restrict imports and to encourage exports, including protective duties, bounties to producers and exporters, colonial monopolies and treaties of commerce.

The essence of Mercantilism was state-making, but its exponents failed to realise that economic objects are not achieved by legislation alone. Their principles were unsound, inasmuch as they attached undue importance to foreign trade, emphasised

too strongly the maintenance of a large population as a source of national strength, and omitted to take into account the influence on the balance of a country's indebtedness of such invisible items as payments for interest, commissions, and freights.

The adoption of the system throughout Europe caused much international friction, and this led eventually to its abandonment.

In 1846, with the repeal of the tax on imported corn, England shook off the shackles of Mercantilism and Protection, and commenced an era of unparalleled prosperity, during which she gradually came to adopt and to maintain, in the face of great opposition, a policy of complete freedom of trade with all other nations on equal terms, and permitted the admission of goods without tax, or subject to the imposition of a tax for *revenue* purposes only, the rate of the tax imposed being usually equivalent to that imposed on similar goods produced internally. In other countries, however, the decline of Mercantilism was followed by the adoption of the policy of Protection.

The Protective Principle.

Protection is nowadays adopted by most of the great nations other than Great Britain. Its aims may be summed up in a few words—*the promotion of national unity*, economically and otherwise—but the principle may be extended to apply to a group of countries instead of a single country. Thus, the advocates of the so-called policy of " Empire Free Trade " urge the abolition of all import duties between the various countries of the British Empire, and the imposition of tariffs on goods entering the Empire from foreign countries. Protection may be achieved in any of several ways, of which the chief are :—

The Imposition of Tariffs, or import duties, on goods entering the area protected. Such duties are commonly imposed only on those goods which are considered capable of being efficiently produced internally.

The Prohibition of Imports, usually only a temporary measure introduced to adjust an unfavourable balance of trade, or to protect a country's industries during a period of abnormally bad trade.

The Establishment of Import Boards for the bulk purchase of staple commodities such as wheat and wool. Such schemes have usually a three-fold object : (*a*) the protection of the home producer by means of the regulation of imports ; (*b*) the stabilisation of prices by the elimination of short-term fluctuations ; (*c*) the securing of the home market for countries with whom it is desired to maintain close economic relations, e.g., in the case of this country, the Dominions.

The Granting of Bounties, i.e., payments made by the State to encourage the export or import of stipulated commodities.

The Safeguarding of Industries. This is a policy directed to protect certain " key " or " pivotal " industries and also certain

industries subject to "dumping" or undue foreign competition. In this country the M'Kenna duties of 1915 imposed tariffs on imported motor-cars, cinema films, and clocks and watches. The Safeguarding of Industries Act, 1921, also subjected some 3,000 articles to an *ad valorem* duty of 33⅓ per cent. The majority of the latter duties have been allowed to lapse, but machinery still exists whereby any industry may apply to the Board of Trade to set up a Committee to consider the question of safeguarding. Before a duty will be imposed the Committee must be satisfied that the industry concerned is of substantial importance, that it is suffering from excessive foreign competition, that it is efficiently conducted, and that the imposition of a duty will not adversely affect any other industry. Many applications have been made in accordance with these provisions, but only some half-dozen have been successful.

The Establishment of a Quota System, such as that operating in the British film industry, by which a fixed quantity or proportion of a certain class of goods must be of home production. This system may also be operated where imports are controlled by an Import Board.

Commercial Treaties may be entered into between two nations, whereby it is agreed to admit on favourable terms certain commodities produced in the contracting states. The *Most-favoured-nation Clause* inserted in such treaties provides that each contracting nation shall give the other as favourable terms in regard to trade as it shall to other countries. Frequently, the contracting parties admit each others' goods on preferential terms.

The Theory of Protection.

The first argument of the advocates of Protection is that the strength of a nation and its freedom from dependence on other nations can be preserved and consolidated only if its *industries are diversified* and are so organised as to be capable of satisfying national wants. A nation should not be dependent on a few industries only, the failure of which may cause widespread hardship; the greater the variety of industries, the less the danger of disaster. This variety of production can be achieved only if taxes on imports prevent the underselling of a country's producers by foreign exporters of those goods the production of which it is sought to develop. This argument is clearly opposed to the principle of international trade, inasmuch as it aims at a national unity in place of an international one: the basic idea is to make the nation self-supporting, and thus minimise its reliance on other nations.

In new countries the further argument is advanced that newly developing industries cannot progress or even continue to exist in the face of unrestricted competition in their own markets from the products of other more advanced communities.

In U.S.A., Canada and Australia this argument is particularly emphatic, and the practical adoption of its principle has unquestionably enabled these countries to develop their manufacturing industries under the shelter of protective tariffs directed against the older industrial countries of Europe. In older countries also, the same reasoning is advanced in favour of protective duties, with the object of making possible the development of new industries for the production of articles which would otherwise continue to be imported from abroad.

Judged solely on the basis of economic principles this "*nursing*" *of infant industries* must be held to be unsound, as it is opposed to the principle that industries *will* develop and *will* prosper if they have a sufficient relative advantage to justify their existence. While there may be some justification for assisting one industry in its early stages in the face of severe foreign competition, there can be no economic justification for the persistence of that industry if it is unable to exist without the sheltering barriers of a protective wall. The practical result of protective duties is to create *vested* interests, in the form of industrial organisations the existence of which depends on a continuance of protection, and which are virtually placed in possession of a monopoly because the capital and labour retained in them by virtue of State interference would otherwise flow to other industries yielding a greater net return. A nation's capital and labour will be applied in the most remunerative employment only if their mobility is unhampered, and the force of competition can make itself felt without hindrance.

The reply of protectionists to such contentions is generally that labour and capital are not perfectly mobile, even within the boundaries of one State, and that some assistance must be given to enable them to reach their best possible outlets.

A third reason for the adoption of protection on nationalistic grounds is that self-sufficiency tends to *improve the national defence in times of war*, particularly by safeguarding essential or "key" industries. The reliance of one country on others for necessary products may have serious results in times of war, and for this reason especially is the protection of agricultural products necessary in industrial countries to prevent a scarcity of vital foods. During the Great War the dependence of Britain on overseas supplies of food was terribly accentuated: the submarine blockade, although eventually unsuccessful, might have been attended by dire results, while the effect of the Allied blockade on Germany was possibly the foremost cause of her defeat.

Fourthly, it is argued that *home industries should be encouraged* on patriotic grounds, quite apart from any other consideration. If home markets were reserved to home producers the latter would benefit from the greater stability of demand and the security of an internal market free from international complications. On the other hand it is argued that a country cannot

benefit in the long run by the protection of an industry which would otherwise cease to exist, and that the support of an industry under such conditions is charitable and not economic.

Fifthly, protectionists maintain that their policy is necessary to *prevent the "dumping" in the country of the products of pauper labour*, or the products of industries conducted under monopolistic conditions, as in Germany. In the former case, home producers of the same article cannot compete because they are compelled to pay higher wages than may be current abroad. In the latter case, foreign monopolistic organisations, as in Germany, may produce more than is required to satisfy the home demand solely in order to obtain the benefits of production on a large scale in the form of increasing returns. They are accordingly prepared to dispose of the surplus commodities at rock bottom prices, thereby hopelessly undercutting home producers. Frequently articles may be dumped in a country at low prices by a large foreign organisation in order to drive the home producer off the market, and as soon as this object is achieved prices may be raised again.

The free trader, while admitting that dumping may be harmful, and that it should be countered in certain circumstances, maintains that such operations are frequently of general benefit to the community in so far as they enable consumers at spasmodic intervals to buy at bargain prices. Further, the dumping of cheap products may arouse home producers to extra effort, and in the long run the consumer may benefit from home produced goods sold at lower prices.

The sixth argument is that protective duties *result in an increase in wages*: those industries already well established can pay more because their markets are wider, while the developing industries are enabled to employ more workers and to increase their remuneration as progress is made. Free traders reply that an increase in wages frequently means higher prices for the products of the industry. Such prices must in any case be higher than what would be paid for foreign products were their import unhindered by protective duties. Consequently, the consumer bears the ultimate burden of the high wages, and, as the worker is himself a consumer, either of his own products or of the products of other workers, so must his *real* wages fall even though his *nominal* wages may be raised. Thus in the long run does the home consumer pay the protectionist taxes, and it is rarely that such taxes can be shifted on to the foreign producer. Free traders maintain that the territorial division of labour must inevitably result in the greater efficiency of industry, and that this in itself will result in an all round cheapening of products and a rise in *real* wages. Protection is a violation of man's rights to buy and sell where he will, and must inevitably reduce the real benefits which accrue to the poorer class of consumers in the form of a great variety of cheap goods.

Finally, protection is advocated on *fiscal grounds*, i.e., it is held

that the duties afford a good revenue largely at the expense of the foreigner, who, it is argued, has to bear at any rate the larger proportion of the protectionist taxes. Free traders reply that in the long run the home consumer will pay the taxes in the form of increased prices for goods; only in the very rare instance, when the importing country has a monopoly of the *demand* for a commodity, is it likely that the tax will be borne by the foreigner. They maintain that if duties are to be imposed at all, they should be exacted for revenue purposes only (with countervailing duties on home produced goods), or to prohibit the import of deleterious goods and not with any ulterior object of regulating the production of commodities. With a few exceptions, this principle is adopted in Britain.

An important argument against protection is that based on the commonly quoted statement that "goods must pay or goods". Although this statement is not literally true in the sense that a nation's imports of goods must balance its exports of goods, it is nevertheless a fundamental proposition of the theory of international trade that, in the long run, a nation's receipts cannot materially exceed its payments. This matter is explained in detail in Chapter 29, but it may here be said that any excess of exports over imports, unless it has arisen automatically in payment for services rendered by other nations, must be adjusted by the lending of an equivalent amount to the debtor countries. If, therefore, by a policy of protection or otherwise, a nation restricts the total of its imports, it can only maintain the total of its exports by increasing its loans to foreign countries. But no country can increase the total of its investments to an unlimited extent, and the usual effect of a restriction of imports is to cause a corresponding restriction of exports. In other words tariff barriers tend to aid the sheltered industries at the expense not so much of the foreign competitor, as of the home exporting trades.

In reply to this contention, protectionists point to the benefits accruing to home industries from the widening of home markets and urge that, even if exporting trades suffer some injury, the loss in foreign trade is more than made up by the increase in domestic trade. So far as this aspect is concerned, no conclusion can be reached which is applicable to all countries. In one case internal trade may benefit to a greater extent than foreign trade suffers; in other cases the reverse may apply.

Britain's Position.

So far as Britain is concerned protection has been advocated especially on Imperial grounds (see below, "Imperial Preference") Other arguments are that an economic weapon is required by this country as a lever to force down duties in the protectionist states which buy our goods; that British agriculture has been ruined by foreign competition and can be saved only by protective duties that other countries, by virtue of their protective duties, are pro-

gressing more rapidly, so we should adopt protection as a means of conserving and developing our resources; that our almost complete dependence on overseas supplies of essential foods and materials is a weak point in our economic structure, especially stressed by the late war, and is therefore a state of things which should not be allowed to continue.

Free traders meet these contentions by referring to the vast strides made by British industry under free trade. They emphasise the benefit we obtain by concentrating upon manufacture and relying upon other nations for agricultural products. We cannot hope to retain indefinitely that vast superiority in manufacture which we were enabled to obtain by reason of our greater resources and more advanced position in the nineteenth century: other countries must inevitably reduce our lead as they improve their productive organisation, and no protective weapon can prevent the operation of such powerful economic forces. Finally, they declare that it is obviously unsound for a nation which depends on foreign supplies of food and raw materials, which it could not itself produce in sufficient quantity, to adopt any tariff principles which may antagonise her foreign customers, close her foreign sources of supply, and undermine her position as the premier financial and entrepôt nation of the world.

Reciprocity or Fair Trade.

In recent years the policy of reciprocity has been advocated as a mean between the two extreme principles of Free Trade and Protection. It proposes the institution of free trade with free trade countries and the imposition of protective duties on goods entering from protectionist states. On imported commodities subject to bounties in the foreign country equivalent import duties would be applied, so as to obviate giving to one set of foreign producers an unfair advantage over those in other countries supplying the same market. Much of the agitation in this country during the last century for a return to protection was based on considerations of retaliation and reciprocity. It is argued that as our goods are subject to import duties in other countries, the products of those countries should not be admitted free of duty. Retaliation of this kind has been advocated also as a means of protection against foreign imposition, but free traders object to such practices, not only because they are contrary to economic principles, but also because they lead to international friction and, in the case of this country particularly, because they would be suicidal in view of her dependence on foreign food and material.

Imperial Preference.

Extremely widespread has become the agitation in the British Dominions and Colonies for an extension of the system of Imperial Preference, which already exists between certain of the colonies,

and to some extent also between the colonies and the Mother Country. The principle involves the granting of preferential import duties in respect of the products of the preferred country as against the products of foreign nations, and is advocated as a means of preserving imperial unity and of consolidating the Empire both economically and politically. As the Mother Country adheres in general to the principle of free trade, the granting of preference to the Dominions and Colonies would necessitate the imposition by Britain of taxes on foreign products and the admission of colonial products free of all duty or at least at a lower rate of duty.

The most important argument against preferential treatment in favour of the Colonies is that it may result in difficulty and possibly open rupture with other nations to whom we must look for supplies, in view of the fact that the Dominions and Colonies cannot, at present at any rate, satisfy all our needs for vital commodities. Furthermore, Britain's trade with her Dominions is but a tithe of the vast total of her foreign trade, and so far it would seem that she cannot possibly afford to sacrifice the one for the other. From the standpoint of the Dominions, there is the objection that they would scarcely desire indefinitely the admittance of cheap British products, inasmuch as they are making strenuous efforts to develop their own manufacturing industries.

In recent years, Imperial Preference has been strongly advocated in this country on the ground not only that it would encourage inter-Empire trade and strengthen Empire bonds, but also that it would provide a remedy for the present depression in our commerce and industry. Consequently, practical effect has been given to the proposals by the granting of preferences in favour of Empire produced goods in the form of rebates from the import duties ordinarily imposed. Moreover, an Empire Marketing Board has been established with the object of furthering Empire sales in this country, and with power to expend £1,000,000 annually in carrying out its work.

Empire Free Trade.

The development of the idea of Imperial Preference has led to a demand for the establishment of a system of Empire Free Trade, having three main objects : (*a*) the welding of the Empire into a single, practically self-sufficing economic unit (like U.S.A.) ; (*b*) the conservation of the interests of the group constituting the Empire by the institution of a tariff wall against all other countries ; and (*c*) a policy of agreements, quotas and compensations to strengthen the economic interests within the group.

Against Empire Free Trade it is argued that : (*a*) The analogy with the U.S.A. is imperfect. While both markets are large, the American market is also homogeneous, embracing great uniformity of tastes. The Empire market, however, falls into many

parts, separated by thousands of miles, and covering widely differing needs. (*b*) The suggested policy is *impracticable*. This is the most cogent argument, the trend of Empire tariff policy in recent years having been definitely adverse to the Mother Country. (*c*) Empire Free Trade is a fundamentally harmful conception, in that it might easily lead to economic war.

The attitude of the Dominions and Colonies themselves to this policy is necessarily an important factor. On the whole, there is a distinct desire on their part to promote free trade within the Empire, and to retain and to develop the market which Great Britain offers for their products.

In considering the case for and against Free Trade within the Empire, it is necessary to distinguish between political, sentimental and economic forces. Imperial sentiment has given the movement a wide, popular appeal, but it must be remembered that a very large part of our supplies of raw materials and foodstuffs comes from countries outside the Empire. Consequently, the imposition of a general tariff would appear to involve raising the prices of most foodstuffs to consumers in this country.

The Controversy now Political rather than Economic.

The wide controversies centering around the opposing principles of free trade and protection have become so largely political in character that the economic aspect is apt to be overlooked.

From a purely national standpoint, protection may be just as sound economically as it is unsound from a world point of view. It is clearly preferable for a country to sacrifice some degree of economic gain if it can thereby achieve greater political security and foster its own economic development. On the other hand, there can be little doubt that the balance of economic justification is in favour of general free trade. The productivity of the world as a whole would inevitably be maximised if the law of comparative costs were given free play and tariff barriers were removed.

These facts are each day becoming more widely understood and appreciated. The Report of the Trade Barriers Committee of the International Chamber of Commerce, issued in 1927, urged the removal of tariff restrictions as a means of fostering trade, while in the same year an international conference was held at Geneva, under the auspices of the League of Nations, with the object of launching an international convention for the abolition of import and export restrictions and the establishment of freedom in trade. Behind the conference was the ideal of an " Economic United States of Europe ", having its origin, no doubt, in a recognition of the fact that the remarkably prosperous United States of America, the world's greatest exponent of protection both in theory and in practice, adopts unrestricted free trade throughout the vast territory within her own borders.

CHAPTER 29

THE FOREIGN EXCHANGES

(This Chapter is based on the author's *Principles and Arithmetic of Foreign Exchange* (Macdonald and Evans), to which the reader is referred for further information on this important and intensely interesting subject.)

THE organisation of Foreign Exchange is simply an extension of the internal credit system to the wider field of international settlements, and we may define the foreign exchanges as those operations and arrangements devoted to the settlement of international indebtedness by means of credit documents and credit transfers. As we have seen, the transfer of credit instruments within the community economises the use of metallic currency. In like manner, the organisation of foreign exchange economises the use of gold over the much greater distances which exist between the countries of the world. The organisation aims at setting off the multitude of debits owing by individuals in one country, against the multitude of credits owed to those individuals, in a way similar to that whereby the debits and credits on various banks are speedily and conveniently cancelled in the various clearing houses. By this process of cancellation, time, trouble, and expense are economised, and the necessity for sending large quantities of bullion from one country to another is reduced to a minimum.

In the past, foreign exchange was conducted chiefly by means of the purchase and sale of bills of exchange, those instruments already described which enable a creditor to order his debtor to pay a sum of money to the bearer of the document or to a named payee. Creditors in England would draw bills on their debtors in France and sell the bills to the banks on this side of the water. To these banks would come for payment bills drawn by French creditors on Englishmen, and the banks would balance the one lot of claims against the other. Banks in France would do the same, and in the long run gold would go from London to Paris or from Paris to London to settle the balance, according to whether England owed more than France in the aggregate, or France owed more than England.

Obviously the matter is much facilitated because the banks themselves keep the funds of most of the debtors and creditors who thus transact business across the Channel, and also because the banks in London all keep current accounts with those in Paris. These accounts they can debit or credit with the balance which arises from time to time, and so obviate the flow of specie except at infrequent intervals. In fact, to such a high degree are these

arrangements developed at the present time that the banks settle the great bulk of transactions between various countries, just as they settle the multitude of exchanges within the country by the cheque system.

The Use of Different Moneys.

The understanding of the foreign exchanges would be an easy matter if all countries used the same unit (such as the sovereign) as their standard of value; but unfortunately nearly every country has adopted some special monetary unit of its own, which differs from other units in weight and frequently in fineness. In France, the *franc* and the *centime* are used; in the United States, the *dollar* and *cent*; in Germany the *mark* and *pfennig*; in Italy the *lira* and *centimo*, and so on. Obviously, then, any payment from one country to another (not using the same currency) involves a "translation" of an amount in one currency into its equivalent in the other. A debt of £100 to France must be paid in francs, because the Frenchman has no use for sovereigns in his everyday life, although a French banker would take them at once. In the same way it is useless to offer a small grocer in England francs or centimes, and therefore if we have to receive payment from France, we naturally expect to get sovereigns or their equivalent in a draft on a bank in this country. The rate at which the unit of one currency (e.g., francs) will at any particular time exchange for another (e.g., pounds) is called a *Rate of Exchange*, and may be defined more accurately as *the value of the unit of one currency expressed in terms of the unit or units of the currency of another country.*

The Basis of the Rate of Exchange.

The rate of exchange between any two currencies varies from day to day, and even from hour to hour, according to the vagaries of supply and demand. The *supply* of any currency in London at any particular time consists mainly of offerings of rights to that currency in a variety of forms by persons who have sent goods, securities or money to the foreign country concerned. The *demand* for the foreign currency arises chiefly from persons in this country who have to buy rights to that currency in order to pay for goods, securities or money imported from the foreign country.

In addition to demand and supply springing from the actual transfer of commodities, foreign currencies are in demand to pay for a variety of services rendered by other countries in connection with the transfer, insurance and financing of goods, while, conversely, offerings of foreign currency are made by British ship owners, factors, commission agents, accepting houses and other agencies which undertake services connected with the transfer and finance of goods on foreign account.

In brief, the demand for and the supply of a foreign currency on the London Foreign Exchange Market at any particular time

arise mainly on *trade* account, and, naturally, the intensity of demand and supply varies according to the general direction of trade, i.e., according to the balance of trade indebtedness arising for settlement between the two countries concerned at any particular moment.

Apart from what we may term *legitimate* demand and supply, based on payments for goods, securities and services, there is always an important *speculative* demand and supply in the most important foreign currencies. Just as on the Stock Exchange there are " bulls " who buy shares they do not wish to hold in the expectation of a rise in price, and " bears " who sell shares they do not possess in the hope of a fall in price, so also the foreign exchange market has its bulls and bears who buy and sell the various currencies in the hope of making profits from changes in the rates of exchange. The result of such conditions is that there are constant movements in the principal rates of exchange, sometimes very slight, at other times violent in the extreme.

" Now, at any particular time, people in London who are buying dollars or francs or marks may be willing to give for them whatever they are asked in the market—they will be prepared to buy at the prevailing rate of exchange. But *in the long run* buyers of those currencies in this country will give for them *only what they are respectively considered to be worth in terms of goods and services.* People in London buy dollars because that is the only way in which they can obtain purchasing power in the States, but ultimately the price they will give for dollars is determined by the quantity of goods which dollars will buy as compared with the quantity of goods which pounds will buy.

" We judge the value of a foreign currency to us by its command over goods and services (i.e., its purchasing power) as compared with the command of our own money over similar goods and services. The greater the purchasing power of the foreign currency unit, the higher the price we are willing to pay for it. As we have seen, purchasing power is indicated by the general level of prices, so that if prices in a foreign country are high compared with our own, the money of that country will not go very far, and we therefore expect to get more of its money in exchange for our own money. If the franc or the peseta is not purchasing enough goods and services to satisfy our feeling of justice or equality at the moment, we will not pay a high price for it, and the higher the level of prices in the foreign country relative to our own prices, the less will we pay for the money of that country." [1]

The Purchasing Power Parity.

While, therefore, the value of the unit of one currency in terms of another currency is determined, *at any particular time,* by the

[1] *The Principles and Arithmetic of Foreign Exchange,* by S. Evelyn Thomas. Fifth Edition, page 39.

market conditions of demand and supply, *in the long run* that value is determined by the *relative values of the two currencies as indicated by their relative purchasing power over goods and services.* In other words, the rate of exchange tends to rest at that point which expresses equality between the respective purchasing powers of two currencies. This point is called the *Purchasing Power Parity.*

We may illustrate this by considering some representative group of commodities which are as much in demand in the United States as they are in Britain ; for example, a group consisting of certain quantities of bread, sugar and tea. We will ignore transport costs and assume that these goods can pass freely from the one country to the other without impediment or restriction of any kind, and that, at a certain time, this representative group can be purchased in the States for $500 and in this country for £100. Clearly, in such circumstances, people in the two countries would regard the purchasing power of $500 as equivalent to the purchasing power of £100, and in exchanging dollars for pounds, they would expect a rate of exchange of $5 per £1, i.e., a rate based on the relative worth of the two currencies. If, in fact, they did not receive this rate, their actions would cause economic forces to come into play which would tend to bring the exchange rate to this point.

The great practical difficulty about the purchasing power parity is that it is largely an abstract conception. There is no *absolute* basis by which we can measure the relative real values of two currencies because these currencies themselves function in their respective countries as the basis of all values, and, as we have seen in discussing price index numbers, there is no absolute method of assessing the purchasing power of any currency. Fortunately, we are afforded a working basis for determining the purchasing power parity in the fact that all the most important countries of the world have adopted gold as a measure and standard of value, in terms of which we can not only assess the relative values of different commodities, but also compare the relative values of two different currencies by reference to *their relative purchasing power in terms of gold.*

Between countries on the full gold standard or on the gold bullion standard, gold—the basis of all values—flows with comparative freedom. The prices of goods in such countries are gold prices. If, for any reason, gold becomes relatively scarce in one of these countries, the prices of its goods fall. Other nations then buy its goods and gold tends to be sent to that country in payment, thus increasing its supplies of gold and restoring its level of prices. Thus the quantity of gold in existence tends to be distributed among the nations according to their relative requirements, and prices in all gold countries tend to reach equilibrium at the point where a given quantity of gold buys approximately the same quantity of goods in one country as it does in another.

In other words, both money (i.e., gold) and goods tend to have the same value in all places where gold is the standard.

Under a common gold standard, therefore, the purchasing power of the gold standard currencies is the purchasing power of gold, and the basis of the rates at which these currencies exchange one for the other is the quantity of pure gold which the standard coins respectively contain. This basis is called the *Mint Par of Exchange.*

Mint Par of Exchange.

The Mint Par of Exchange is defined as—"The exact equivalent of the unit of currency of one country, expressed in terms of the currency of another having the same metallic standard, based upon the quantity and fineness of the metal contained in the two coins as fixed by law".

By English law our standard coin, the sovereign, contains a definite weight of gold of a definite fineness. In like manner, the monetary laws of other gold standard countries fix the quantity of pure gold in the respective currency units, so that, if we know these laws, or *Monetary Regulations*, as they are called, we can calculate the mint pars between this country and other countries, and obtain the equivalents included in the table on page 513.

It is clear from the definition that a Mint Par of Exchange can be established only between two countries having the same metallic standard. We cannot have a Mint Par between one country with a gold and another country with a silver standard, though we may have a Mint Par of Exchange between two countries whose standard is silver. No ratio can be definitely fixed between silver and gold, because the market price of one metal in terms of the other is a variable and not a fixed price.

Gold Points or Specie Points.

If gold can flow freely between two gold standard countries, the rate of exchange between them must tend to keep very close to the mint par. If both currencies are freely interchangeable into gold, their purchasing power is the same as the purchasing power of gold and the purchasing power parity between them coincides with the mint parity. In practice, the market rate of exchange will not remain exactly at the mint par. It will move on either side of that ratio within two limits, known as the *gold points* or *specie points*, which are determined by the cost of moving gold between the two countries.

Clearly, there are two gold points between this country and each country whose monetary standard is gold, one, the *outgoing specie point* at which it is cheaper to ship gold to pay foreign creditors than to buy and use any other form of remittance, and the other, the *incoming specie point*, at which it is cheaper for

foreign debtors to remit gold than to use any other form of remittance.

The cost of moving gold from one country to another comprises freight, packing, carriage and insurance charges, together with commission to the banker or bullion broker undertaking the business, and perhaps some charge for minting and/or assaying. These charges vary from time to time, according to the competition between shipping companies, the competition between air and other means of transport, and the value of the consignment. There is, also, the question of interest for the time the gold is in transit and the price at which the gold can be purchased and sold in the respective centres. Interest will vary according to the time taken and the rates being charged in the money markets concerned, while the buying and selling prices for the metal are determined by market conditions (as in London) or by central bank policy, as is usual in other centres.

Any factors which increase the cost of obtaining or of moving the gold have the effect of widening the margin between the export and import specie points. On the other hand, any factors which *lessen* that cost have the effect of reducing the margin and of making it possible to move gold profitably from a country at a more favourable rate of exchange to that country than would otherwise be the case, e.g., gold may be moved from London to New York when the dollar rate reaches 4·8515 if certain expenses are ignored, whereas the rate may have to fall to 4·85 if these expenses have to be allowed for.

The *fundamental* importance of the gold points is not so much that they act as limits to the prices of remittances between two gold standard countries as that they afford an automatic indication that gold movements (or other alternative measures) are necessary to adjust the relative price levels between those countries.

If prices in one country are relatively high as compared with those of other countries, its imports increase and its exports fall off. The value of gold in that country is low relatively to its value in other countries. The purchasing power of the country's currency falls as compared with other currencies, and the purchasing power parities move to the export specie points, when the position is corrected by the movement of some of the gold to the countries where its value is relatively high. Thus gold flows out and goods flow in.

Hence, between two countries on a gold standard, forces are constantly at work which tend to bring about an equality in their respective price levels, i.e., an equality in the value of gold in both countries. If the two countries rigidly maintain the gold standard, the exchange rate between them will fluctuate only slightly on either side of the mint par between the limits imposed by the gold points, i.e., the cost of buying gold in one country and selling it in another.

The Parity between Inconvertible Currencies.

During the Great War normal movements of gold between the various countries entirely ceased, while gold currencies gave way to inconvertible note issues. Such gold as was available was most carefully conserved, and was used only in exceptional circumstances to make foreign payments. In the majority of countries, the issue of inconvertible paper resulted in severe inflation, i.e., more currency was put into circulation than was required to satisfy the needs of trade at the existing level of prices. Many currencies became heavily depreciated, and prices accordingly soared to unprecedented heights.

Now the rate of exchange between an inflated currency and a gold standard currency will tend to the point which marks equality between the relative purchasing powers of the two currencies. But, since the purchasing power of the inflated currency will vary each time its quantity is increased, it necessarily follows that the purchasing power parity will also move and engender still further fluctuations in the prevailing rates of exchange. Moreover, the position will be rendered even more complicated and unstable by the anticipatory dealings of speculators "for the fall", and, on occasion, "for the rise".

Movements of the exchanges are violent enough between an inflated currency and a gold standard currency. But the exchange position is still more complicated and uncertain when both currencies are depreciated. The influences affecting the relative purchasing power parity between the currencies then come from two directions; exchange fluctuations are brought about by every change in the value of *either* currency following on further issues of inconvertible paper. If we assume that both countries start from the position of a common gold standard, then we may say that the purchasing power parity between their currencies will be determined *by the relative degree to which those currencies are inflated.*

In spite of its practical drawbacks, the purchasing power parity theory of the exchanges is of the greatest importance inasmuch as it is the only theory which is applicable to all types of currencies, to all theories of money, and to all conditions of the exchanges. It is the only theory which explains the relationship between currencies which are on an effective gold standard as well as the relationship between those which are hopelessly depreciated through the issue of inconvertible paper.

Exchange Quotations.

The rates of exchange at which business in various countries is transacted fluctuate from hour to hour in the various financial centres, and it is therefore difficult under present conditions to

say that the rate on any given day stood at a specified figure. In many foreign places having localised exchange markets, official lists are issued and posted at certain times of the day, giving rates at which currencies were bought and sold during the period covered. Prior to 1921, a similar market was held in London at the Royal Exchange on Tuesdays and Thursdays in each week, and was followed by the issue of the *London Course of Exchange*, giving the official quotations for transactions.

Nowadays, most of the London banks have foreign exchange departments, in constant touch with one another and with foreign centres by telephone and telegraph. Although market rates tend to equality at any particular time, there is no semblance of an official quotation, and such lists of rates of exchange as are issued give the figures quoted by the issuing bank or exchange institution. On these lists are based the "Foreign Exchange Tables" published in our various newspapers, giving an approximate indication of the course of business in foreign currencies on the preceding day, and usually specifying the *limits* of selling and buying prices or the *range* of quotations during the period covered. The daily quotations given in the *Times* are of this type, but those which appear in the *Financial Times*, the *Morning Post*, and the *Economist* (see the specimen table on page 513) give the actual buying and selling prices for foreign currencies at the time the list is handed to the financial editor by the exchange bank concerned.

It will be seen that this table gives the London exchange quotations on the most important commercial centres of the world. The column headed "Usance" indicates that most of the quotations are for *Telegraphic Transfers*, whereby payment in the foreign centre is effected on receipt of telegraphic or cable instructions from London. This fact is indicative of the great change which the war has wrought in the foreign exchange mechanism, for whereas long rates of exchange (see page 514) were a feature of pre-war quotations, it is unusual nowadays for rates other than those for telegraphic and cheque remittances to appear.

Exchange Terms and Maxims.

Reference to the second column in the table will indicate that most of the rates quoted in this table are in terms of foreign money to the £. In practically all cases the mint pars are given, and make it possible to determine at once whether a rate is "favourable" or "unfavourable" to this country. A rate is favourable when more of the foreign money is quoted per £1 than the mint par equivalent, and unfavourable when less than the mint par equivalent is quoted. On the other hand, in the case of those rates which are in sterling to the foreign unit, the rule applicable to all purchases applies: the *lower* the rate (or

RATES OF EXCHANGE.

The Economist, 8th June, 1929.

London on		Usance.	Par.	June 7, 1928.	May 30, 1929.	June 8, 1929.
New York	dollars to £1	Cable	4·86⅜	4·88 31/32–1/2	4·85–·85 1/32	4·84 7/8–·84 15/16
Montreal	dollars to £1	Cable	4·86⅜	4·89⅜–½	4·88 7/16–·88 9/16	4·88⅜–·88½
Paris	francs to £1	T.T.	124·21	124·10–·20	124·03–·07	124–124 1/16
Berlin	marks to £1	T.T.	20·43	20 42–½	20·33¾–·34	20·33½–·33¾
Amsterdam	florins to £1	T.T.	12·107	12·09½–⅝	12·06¾–·07⅛	12·07⅞–·08⅛
Brussels	belga to £1	T.T.	35·00	34·97½–¾	34·90–·91	34·91⅛–·92
Milan	lire to £1	T.T.	92·46	92·70–5	92·65–·68	92·67–·70
Berne	francs to £1	T.T.	25·22	25·32½–3	25·19½–·19⅝	25·19–·19⅛
Oslo	kroner to £1	T.T.	18·159	18·22–½	18·19⅜–·20¼	18·19⅜–·20
Stockholm	kroner to £1	T.T.	18·159	18·19¼–⅜	18·14–·14½	18·13½–·13⅝
Copenhagen	kroner to £1	T.T.	18·159	18·19¼–⅜	18·20¼–·20⅜	18·20⅛–·20⅜
Madrid	pesetas to £1	T.T.	25·22½	29·31–33	34·40–·45	34·75–·78
Lisbon	escudo to £1	T.T.	4·50	111½–112	108–108¼	108–108¼
Vienna	schllgs. to £1	T.T.	34·58½	34·68–72	34·52–·54	34·51–·53
Prague	krone to £1	T.T.	24·02(*a*)	164½–⅝	163⅝–163⅞	163⅝–163⅞
Belgrade	dinars to £1	T.T.	25·22½	277–½	275¾–276¼	275⅝–276¼
Budapest	pengo to £1	T.T.	27·82	27·94–·8	27·82–·85	27·81–·84
Bukarest	lei to £1	T.T.	813·6	792–4	817–818	817–818
Sofia	leva to £1	T.T.	25·22½	672–7	668–673	668–673
Athens	drachmæ to £1	T.T.	375	374–5½	374⅜–375½	374⅜–375½
Constantinople	piastres to £1	T.T.	110	950–2	1003–1005	1010–1015
Moscow	roubles to £1	T.T.	9·46	†9·48–9·50	†9·41½–·43½	†9·41¼–·43¼
Warsaw	zloty to £1	T.T.	43·38	43¼–⅜	43 3/16–7/16	43 3/16–7/16
Helsingfors	F. marks to £1	T.T.	193·23	193¾–4⅛	192⅝–193⅛	192⅝–193
Kovno	lits to £1	T.T.	48·66	48½–9½	48½–49⅛	48½–49⅛
Reval	kroon to £1	T.T.	18·159	18·00–18·40	18·16–·23	18·16½–·23½
Riga	lats to £1	T.T.	25·22½	25·15–30	25·15–·25	25·15–·25
Alexandria	piastres to £1	Sight	97½	97 15/32–17/32	97 7/16–97 9/16	97 15/32–17/32
Buenos Aires	pence to peso	T.T.	47·62d.	47 1/16–⅛	47⅛–47 3/16	47⅛–47 3/32
Rio de Janeiro	pence to mils.	90 days	16	5 29/32–15/16	5 55/64–57/64	5 55/64–7/8
Montevideo	pence to peso	T.T.	51	50–½	48–48½	47½–48
Valparaiso	dollars to £1	90 days	40	39·44	39·60	39·58
Lima	Eng. to Per. £1	90 days	par	20½% prem.	19⅝% prem.	19⅝% prem.
Calcutta	pence to rupee	T.T.	18	1/5 43/64–1/6 1/64	1/5 55/64–1/5 57/64	1/5 53/64–1/5 55/64
Bombay	pence to rupee	T.T.	18	1/5 43/64–1/6 1/64	1/5 55/64–1/5 57/64	1/5 53/64–1/5 55/64
Madras	pence to rupee	T.T.	18	1/5 43/64–1/5 1/64	1/5 55/64–1/5 57/64	1/5 53/64–1/5 55/64
Hong Kong	ster. to dollar	T.T.	—	2/0 7/8–2/1⅜	1/11–2/0 1/16	1/11⅜–1⅜
Shanghai	ster. to tael	T.T.	—	2/8 1/16–2/9 1/16	2/4⅜–2/5⅜	2/4 1/16–⅜
Singapore	ster. to dollar	T.T.	2s. 4d.	2/3 1/16–1/8	2/3 29/32–2/3 31/32	2/3 29/32–1/8
Kobe	ster. to yen	T.T.	24·58d.	1/10 15/16–1/11	1/10–1/10 3/32	1/9 29/32–1/9 31/32
Manila	ster. to peso	T.T.	24.066d.	†2s. 0 1/16d.	†2s. 0 1/16d.	†2s. 0 1/16d.
Mexico	pesos to £	T.T.	9·76	23¾–24¼ (*b*)	10·00–10·25	10·05–10·20

† Rate for previous day.

(*a*) An official stabilisation at 2·90–3·03 dollars to 100 krone, i.e., approximately 162½ krone to £1

(*b*) Pence to dollars.

"price") in sterling the better from the point of view of this country.

The terms "rise" and "fall" are frequently applied to changes in the rates of exchange. If the rate is in foreign currency, a rise is obviously favourable to this country, for more foreign currency is purchasable per £1. The converse is true if a rate is quoted in sterling. Much confusion exists, however, because the term "rise" is often applied to the *rise in value* of the currency. If, therefore, francs "rise" in value, the rate of exchange must *fall*, because fewer francs are purchasable per £1 than formerly. In the case of rates quoted in sterling a rise in the value of the currency and a rise in the rate of exchange are synonymous, so that no confusion should occur in such cases.

Other expressions frequently used in connection with rates of exchange are the terms "*premium*" and "*discount*," which often cause much confusion unless they are confined to currencies which are of the same nominal value, as, for example, U.S. and Canadian dollars; or as between Australia and England, both of which have the sovereign as the standard of value. The rates of exchange in these cases are quoted on the basis of \$1=\$1, and £100=£100 respectively. If, therefore, we say that the American dollar is at a premium of $\frac{1}{8}$ per cent. in Montreal, we mean that $100\frac{1}{8}$ c. Canadian equals \$1 U.S.A; or if we say that the exchange rate on London in Australia is at a 5 per cent. premium, we mean that £105 must be paid in Australia to obtain £100 in London.

A careful appreciation of the precise meaning of a rate quoted in foreign currency per £1 will enable the reader to understand the significance of the oft-quoted maxim, "Buy high, sell low", attributed to exchange dealers in the City. This simply means that it is better to buy foreign currency at a *high* rate of exchange because more of that currency is obtainable per £1, whereas it is better to sell currency at a *low* rate for the reason that fewer units of that currency have to be given for each £1 sterling received. Thus a rate of \$4·80 is better for buying and worse for selling American money against sterling than a rate of \$4·75 per £1.

Various Classes of Exchange Rates.

Funds may be sent from one country to another in several ways, and various forms of remittances may be purchased for the purpose. For each of these, different rates of exchange are quoted in the markets, varying according to the time which must elapse before payment, the amount of risk incurred, and the trouble and expense (including stamp duties) which may be involved. Thus *The Long Exchange* is the rate quoted for bills having three months or more to run before they fall due, and is based on the sight rate, or the rate for cheques and bills on demand, by making allowances for interest for the time the bill has to run, for the extra stamp duty on a long bill, and for a small additional margin to cover risk and contingencies. In whatever way the rate is quoted, the long rate is always the *cheapest* rate, because it is the rate for money which is not payable for a period of time, during which interest is lost and a certain amount of risk is run in waiting for payment. *Sight* or *Cheque Rates* cover mail transfers (i.e., remittances similar to Telegraphic Transfers but communicated by letter), together with bills and cheques drawn on demand, and bills having only three days to run before maturity. *Short Sight Rates* are quoted for bills having up to ten days to run before they fall due for payment. These are slightly cheaper than sight rates, because a small amount of interest must be allowed in reckoning the rate for the times which must elapse

before the bills fall due. *Cable Rates* or *T.T. Rates* are by far the most important at the present time, and are quoted for remittances made by bankers between two centres by cabling or telegraphing their agents in other places to transfer funds to third parties. The payer is not involved in any risk, loss of time, or trouble in making payments in this way, as the whole transaction is left in the hands of the bank, which is, however, able to demand a *dearer* rate than the cheque rate, because of the greater advantages and increased cost of a remittance of this kind. *Tel Quel Rates* are rates of exchange which are adjusted to suit bills "as they are", when the period which has to elapse before the bill falls due for payment does not coincide with that for which a rate of exchange is quoted. In such cases an allowance must be made off or on the quoted rate for interest lost or gained as the case may be.

In connection with the various classes of rates the maxim "*the better the bill, the lower the rate*" may be mentioned. This indicates that when the rate is in foreign currency, a lower rate (i.e., *a dearer price*) will be given for a bill of undoubted security, as for example a first-class bank draft, than for one which bears ordinary commercial names, i.e., a *trade* bill, because, in the latter case, there must be a greater allowance for risk and also for interest, trade bills being discounted at bank rate whereas bank bills are discounted at lower market rates. This maxim may also be applied to the various classes of short rates as compared with the longer quotations, for in such cases immediate payment is better than payment which is deferred. Hence the rates for a cable, cheque, or short bill are lower (i.e., dearer) than the rates for long bills.

Fluctuations in the Rates of Exchange.

There are a great number of influences which may cause fluctuations in the rates of exchange, but it is not possible within the limits of our space to do more than review them briefly. They may be considered under two main headings: (a) *The Demand for and Supply of the Foreign Currency*, and (b) *Currency Conditions*.

THE DEMAND FOR AND THE SUPPLY OF THE FOREIGN CURRENCY. These are dependent upon (*a*) Trade Conditions; (*b*) Stock Exchange Influences; (*c*) Banking Influences; (*d*) Government Financial Operations; and (*e*) Speculative Influences.

Trade Conditions. The necessity for making remittances arises chiefly from the flow of goods. If French imports from England are largely in excess of French exports to England, then will French debtors exceed French creditors of this country. There will be more people anxious to *buy* English currency than people who wish to sell it, so its price in terms of francs will rise. The converse is, of course, equally true.

Trade debts arise not only from the passage of goods but also as a result of the performance of services by one nation for another,

e.g., banking and shipping services. These also must be paid for, and the necessary payments influence exchange rates in the same way as do payments for the transfer of goods.

Stock Exchange Influences include investment and speculation in international securities, and the raising of loans by one country in another. If England lends money to France, or if Englishmen buy securities on the Paris Stock Exchange, then French people acquire the right to withdraw funds from London, and this increase in the claims against us depresses the value of our currency. The payment of interest on loans made by us and the investment of money by other countries in our securities has the reverse effect, since they both increase our claims on other nations. The raising of the loan is more important as an *immediate* effect, especially if it is of large amount, whereas the payment of interest is spread over a period and its results are consequently more permanent.

Banking Influences include investment by bankers of funds in other countries, the issue by them of circular notes and letters of credit, and the undertaking by them of arbitrage operations, i.e., the buying and selling of foreign currencies with the object of making profits out of the differences existing between various exchange rates at the same time. In pre-war days the investment of funds in foreign centres was made chiefly by the purchase of first class bankers' bills on the centre concerned, but at the present time large balances are transferred by the purchase of *spot* currency of the centre concerned against *forward* sales of the same currency. Thus an American banker may buy *spot* sterling with dollars and place the proceeds in three months' Treasury bills or on fixed deposit for three months with a London bank. At the same time, he will secure the return to New York of his original dollars, and the interest earned thereon, by a *forward sale* of sterling against the anticipated sterling amount he will have at his disposal at the expiration of the period.

The buying of bills of exchange by bankers for investment is of the greatest importance since it affords the banker a convenient and safe means of utilising his surplus funds. London bills are particularly in request for this purpose, because their ubiquity and universal acceptability make them instantly realisable and because they are readily convertible into gold on demand. Thus, foreign bankers, by retaining London bills, are enabled to accumulate claims to gold, and at the same time to earn an appreciable rate of interest, represented by the prevailing rate of discount on the London Money Market.

Consequently, when the Bank rate rises, foreign bankers are induced to transfer balances to the London Market and to increase their holdings of London bills, and this extension of the demand for sterling, coupled with the tendency of holders to retain sterling bills in their possession, naturally forces up the rate of exchange on London. By taking advantage of this factor, the Bank of

England is able to exert a powerful influence on our exchanges, and at the same time to safeguard its gold Reserve. This attraction of funds to the London Market by the raising of the rate of interest was, in fact, one of the most potent factors making possible our return to the gold standard in the Spring of 1925.

The issue of travellers' cheques, circular notes, and letters of credit influences rates against the country in which the issuing banks are situated, inasmuch as such credit instruments increase the supply in other countries of claims upon the country of issue.

Government Financial Operations. In recent years rates of exchange have been much influenced by reparation payments and other debt transfers between various governments. During the War, vast sums were lent by the British Government to the Allies, and also by the United States to this country and the Allies. The periodical payments of interest and repayments of capital on these loans give rise to a number of problems, since the large transfers of funds involved throw a strain on the foreign exchanges which the normal machinery is hardly suited to bear.

So far as possible, governments accumulate funds in readiness for these payments at times when the exchange rates are favourable, and supplies of the creditor country's currency plentiful, but if conditions are not sufficiently favourable to enable them to do this, some other course must be found. Sometimes it will be possible for the Central Bank concerned, by altering its discount rate, to induce supplies of foreign exchange to be put on the market, or, in other words, to stimulate the investment demand for its own currency. Frequently, however, it is not possible to induce sufficient transfers of funds to enable the necessary payments to be effected, and in that event two courses are open to the debtor country. It can either (*a*) ship gold to the creditor country, or (*b*) adopt the more usual course of arranging for the flotation of a foreign loan to enable it to meet its payments. These, however, are only temporary expedients, since gold shipments are possible only to a limited extent, while the raising of foreign loans is an expensive method, and one that can be continued only so long as the country's credit permits. Ultimately the balance can be restored only by an increase in the exports of the debtor country.

Speculative Influences, involving the purchase and sale of foreign currency by speculators in the expectation of a rise or fall in its value, have already been referred to. They exercise a most potent influence on the prevailing rates, particularly in abnormal conditions such as existed in the years following the War.

Currency Conditions.—The foregoing factors affect the rates of exchange because they directly influence the relation between the demand for a currency and its supply. There are, in addition, a number of long-period influences which affect rates because they modify the purchasing power of one or both of the currencies

concerned, and thus bring about a change in the purchasing power parity between them. The depreciation and debasement of a currency, which, as we have seen, affect its exchange value within the community, must also affect its value for exchange purposes with other nations. A paper currency which does not represent gold may pass current within a community by virtue of the government power behind it, but its value to another nation is determined solely by its purchasing power in terms of goods and services as compared with the purchasing power of that nation's own currency. Again, the currency of some countries is based on silver, and it is then impossible to establish a mint par of exchange with gold standard countries. In such cases the rates of exchange are determined by the market value of silver in the gold-using countries, and of gold in the silver-using countries.

Many other influences affect the rates of exchange, such as the general state of credit, the political outlook, floods, earthquakes, and harvest conditions, for not only do these factors influence international trade, but they also interfere with the delicate mechanism of the international credit machine, and consequently affect all those operations which determine the value of one currency in terms of other currencies.

Lastly, if the depreciation of the currency is a cause of the adverse position of the exchanges, steps have to be taken to *reform the currency* if the position is to be remedied. In the case of a circulating medium consisting chiefly of a debased coinage, reform is effected by remintage on a proper basis, while if it consists essentially of depreciated paper money, the remedy lies in *stabilisation*, *deflation*, or *devaluation* (i.e., the replacement of the existing currency by a new monetary system based on gold but with the new unit reduced in value to correspond with the existing gold-value). The latter method has been adopted by several countries since the war, notably by Germany and France, and although it necessarily causes widespread hardship, particularly to the *rentier* class, it is ultimately followed by improvement in the credit and economic conditions of the nation concerned.

THE BALANCE OF TRADE AND OF INDEBTEDNESS

The Governments of all properly organised States publish periodical statements, compiled from the Customs and Excise returns, setting forth details of the nature, quantity and value of all goods imported and exported during the preceding month, quarter, half-year or year, as the case may be. These statements afford valuable information respecting the nature and direction of the country's trade. They indicate whether its exports of goods exceed its imports, or *vice versa*; the main items comprising its exports and imports respectively; the main sources of its foreign supplies and the chief overseas markets for its own products.

Actually, if the trade statistics of all countries were compared, it would be found that total imports appeared to exceed total exports. The reason for this is that the values of imports as shown in Trade Returns include the cost of freight and insurance, whereas exports are reckoned at their net value without addition for the other items.

In addition to statistics of goods, separate records are maintained by all important countries of the movements of gold and silver bullion to and fro across the national frontiers. Gold and silver, by reason of their universal use as money, are easily the most important commodities in the world, and it is only to be expected that full and accurate details of their movements should be available.

"Invisible" Exports and Imports.

But in spite of the great importance and value of the published statistics relating to the movement of goods and bullion, they are deficient in one important respect. They contain no record of payments made to or by a country in respect of the many other items, apart from goods or bullion, which give rise to international payments, e.g., debts arising from the carriage, insurance and finance of goods, debts to be paid or received in respect of the loaning and investment of funds abroad, and debts arising from the transfer of funds by banks and other institutions. The absence of such items from the recorded statistics of trade has led to their being described as *invisible imports* and *invisible exports*.

The term invisible *exports* is applied to those unrecorded items and services for which payments have to be made *to a country*, and which have therefore the same effect as exports of actual goods, e.g., exports of British Treasury Bills purchased by foreigners. They create a foreign demand for the currency of the selling country, and must in the long run be paid for by the purchasing country in money, goods or services. On the other hand, services and other unrecorded items for which a country has to pay are referred to as invisible *imports*, since exports of money or of commodities have to be sent in payment to other countries.

In the case of our own country, the statistics or returns of imports and exports are published from time to time in the *Board of Trade Journal*. These returns of our *visible trade* regularly disclose a large excess of imports over exports, i.e., the figures indicate that our total imports of goods and bullion are not by any means all covered by similar exports. Hence, the question naturally arises, How is the excess paid for? The answer to this question is to be found in the fact that, on balance, enormous sums have regularly to be paid to this country in respect of various invisible items. Some of these payments represent accruing *income* or *revenue*, whereas others are *capital* items, i.e., they

represent movements or transfers of capital, in the form of goods or of money, to and fro between this country and other countries. If we apply an accounting analogy, we may say that the income or revenue items are those which pass into and out of our *Current Account* with the rest of the world, whereas the capital items are those which affect our *Capital Account.* The chief income or revenue items are usually grouped by the Board of Trade under the following headings :—

Shipping Income.—This item covers the net revenue received by Britain in respect of the services of her mercantile marine and associated industries.

Investment Income.—The Board of Trade gives under this heading its estimate of the *net* income accruing to this country from overseas investments *of a joint stock character*, after allowing for deduction of income paid to foreigners in respect of their investments here.

Income from Banking, Insurance and Similar Services.—Under this heading are included (*a*) the payments made to our bankers, brokers, merchants and accepting houses for commissions and brokerage in respect of services rendered in the financing of trade and the marketing of goods; (*b*) the premiums paid to our insurance companies, brokers and underwriters in respect of the insurance of goods exported from this country, and in return for marine risks undertaken on foreign account, i.e., for goods which never touch our shores; and (*c*) commissions paid to brokers and agents on the London Stock Market and produce exchanges for business executed on foreign account.

Miscellaneous Receipts on Revenue Account.—Among other items of less importance from the point of aggregate annual value which give rise to payments by other countries to the United Kingdom are payments made on account of the sale by Britain of second-hand ships; sums sent home by British settlers or emigrants abroad; sums remitted on account of profits by the overseas branches and agencies of British commercial houses; amounts paid by other countries in respect of tourists' expenditure in this country; and, finally, payments made to our Government on account of war debts, the reparation payments made by Germany, and the contributions made by India and other parts of the Empire for services rendered by the War Office, Admiralty and other Government Departments.

The precise effect which the payment of reparations will have on the figures of visible and invisible imports and exports depends upon whether the reparations are paid in money or in kind. When reparations are paid in money they act as an invisible export of the recipient country because they occasion an increase in the demand for its currency in the debtor country. When, however, payment is made in kind, the figures of the recipient country's visible imports will be swollen without giving

rise to any corresponding increase in the demand in that country for currency of the debtor nation, since no payment has to be made.

Miscellaneous payments of similar kind have, of course, to be made by Britain to other countries, but it is estimated by the Board of Trade that a *net* amount of about £28 millions is annually paid to Britain on account of these items.

Britain's Favourable Balance on Current Account.

In the Spring of each year the Board of Trade publishes estimates of the total payments made and received by the United Kingdom during the preceding year in respect of visible trade and invisible revenue items, and the computation shows that the *net* income accruing to us on account of invisible items is considerably more than is required to redress our adverse visible balance of trade in goods and bullion.

From the Board of Trade figures for 1928, given below, it will be observed that the net balance of payments in favour of this country in respect of that year, i.e., Britain's favourable Balance of Indebtedness on current account for 1928, excluding capital items, was estimated to be very close to £150,000,000.

UNITED KINGDOM: ESTIMATED STATEMENT OF BALANCE OF PAYMENTS ON CURRENT ACCOUNT, FOR THE YEAR 1928.

	£	£
Total imports of goods	1,196,900,000	
Total exports of goods	843,700,000	
Excess of imports of goods	353,200,000	
Excess of imports of bullion	6,300,000	
Due in respect of the Excess of imports over exports of goods, i.e., *adverse visible trade balance*		359,500,000
Estimated net receipts for *Invisible Exports* :—		
Net income from foreign investments	285,000,000	
Net income from shipping services	130,000,000	
Net receipts from banking and other services	65,000,000	
Net miscellaneous receipts	15,000,000	
Excess of Government receipts from Overseas	13,000,000	
		508,000,000
Net Balance on Current Account in favour of this country		£148,500,000

It must be clearly understood that the values here given for receipts from our invisible exports of services are merely estimates, which are in fact based on such slender material that, at the best, they can only be described as arbitrary. On the other hand, the figures are the most accurate that can be obtained with the meagre statistics which are available, and they do give us some idea of the amount which Britain exacts from the other countries of the world for her services as an international shipper, underwriter, banker, and financier.

Although the Board of Trade estimates of Britain's annual current account balance vary considerably from one year to

another, they show on the average a very considerable balance in our favour. Now, if we looked no further than these figures, we should expect to find that (*a*) the exchanges were usually very much in favour of this country and practically always at the gold import points, and that (*b*) we imported from other countries as much gold as they would release.

Actually the rates of exchange between London and other centres are on the whole favourable, but they are not always at the gold import points. On the average they keep fairly near to the mint parities, and rarely, if ever, move much beyond the gold specie points. Again, while in the course of a year Britain imports considerable quantities of gold, she also exports almost equally large quantities, and on balance there is usually very little in it. Indeed, in some years she may export far more gold than she receives.

Obviously, the exchange position so far as the United Kingdom is concerned is one of comparative equilibrium. The demand for sterling in other centres keeps reasonably close to the supply. How, then, can this position be accounted for in face of the large balance estimated to accrue in our favour each year ?

The answer is that Britain, through the unrivalled agency of the London Money Market, annually invests abroad at least as much as the estimated surplus of her receipts over her payments. In other words, her annual excess of receipts due to her heavy invisible exports is counterbalanced by *invisible imports* of securities from other countries in respect of capital issues made in the City of London on behalf of foreign Governments, foreign municipalities and foreign commercial enterprises.

According to the Midland Bank annual statistics of overseas issues on the London Money Market, the amount so loaned by this country in 1928 was £143,000,000. Considering the magnitude of the items and the method of their computation, this figure is extraordinarily close to the Board of Trade estimate of £148,500,000 as our available balance for that year, and the fact demonstrates in a truly remarkable manner that, when allowance is made for both *capital* and revenue items, Britain's total annual payments abroad are approximately equal to her total annual receipts from all foreign sources.

A Large Balance on the National Current Account must be offset by Capital Movements.

This analysis of Britain's international financial accounts will have prepared the reader for the statement that no country, and especially a country which seeks to maintain the automatic working of the gold standard, can for long have a large annual balance of payments or of current indebtedness, one way or the other. While, for a short or a long period of time, a nation may have an adverse or a favourable *balance of trade*, i.e., a balance

between the total values of her exports and imports of goods, it is not possible for any nation to maintain a consistently heavy adverse balance of indebtedness in respect of all national transactions ; nor, on the other hand, a permanent favourable balance of any magnitude.

A root fact about the maintenance of the gold standard is that the exchanges shall be kept as closely as possible to the mint parity with any other gold standard country, and that actual movements of gold shall be reduced to a minimum. But neither of these objects can be achieved in the face of a considerable balance one way or the other on the national Current Account.

" If a nation's annual transactions involve a large standing deficiency of receipts as compared with payments, she will be compelled to remedy the position by borrowing abroad, either for short term or long periods, or, what comes in effect to the same thing, she will be forced to raise credits abroad out of which to make the excess payments. If, on the other hand, the transactions of a country result in a consistently heavy surplus of receipts, the position will be equilibrated, in the absence of other measures, by loaning the surplus to other countries for development and other purposes. Such a nation pays away the excess in return for securities which she imports, and by so doing achieves that balance between her payments and receipts which is so essential to the maintenance of stable exchanges and a stable price level. In brief, a country with a surplus on her international income or current account is compelled to lend that surplus abroad whether she likes it or not." [1]

In the case of our own country, the international account is balanced by an increase or decrease of foreign investment in sterling bills and by the movement in and out of London of short-term funds. When we are in deficit, as was the case in 1924 and 1926, we encourage foreign purchases of London bills and borrow short-term balances from other countries. On the other hand, when we have a balance on the right side, we increase our short-term balances abroad, permit those already with us to be withdrawn, and lessen the attractiveness of sterling bills to the foreign investor. Thus permanent equilibrium in our international balance of payments is achieved by modifications in the relative totals of our invisible imports and exports of capital securities and short-term investments, effected mainly by changing the rates of interest on loanable capital paid on the London Money Market.

The movement of balances described above is often loosely referred to as the movement of money from one country to another. What actually happens, of course, when a foreigner transfers a balance to this country, is that he pays out his own currency in his own country in return for a right to sterling in this country, i.e., he creates a demand for sterling, which has the same effect as if the exports from this country had been increased.

[1] *Op. cit.*, p. 247.

The transaction, in effect, results in a transfer of the right to sterling in this country and a transfer of the right to foreign currency in the foreign country.

It is the fact that payments and receipts tend always to balance that is quoted by opponents of Protection, who say that, if imports are reduced by the imposition of duties, exports must likewise be reduced. Though true to a certain extent this claim ignores the important balancing influence played by transfers of funds for short- and long-term investment. To some extent a reduction in imports of goods may be offset by an increase in invisible imports (e.g., investment abroad), but in view of the fact that there is neither an unlimited amount of capital available for investment nor an unlimited demand for capital abroad, it is probably true to say that a reduction in imports will usually result in a sharing of the impact by exporters, whose markets will be curtailed, and by capitalists, who will invest more abroad.

Central Bank Influence on the Exchanges.

The control of interest rates in all civilised countries is vested in the hands of a central bank. In our own country we have the Bank of England, in Germany there is the Reichsbank, and in the United States the Federal Reserve Banks, which collectively perform the central banking functions for that country. The central bank exercises its control over the prevailing rates of interest through its power to force all other interest rates in its own centre to follow the movements in its own rate of discount (i.e., its rate for discounting first-class bills of exchange), which is fixed according to the dictates of its policy and usually in close consultation with the central Government.

In determining this policy the central bank has before it two main objects. The first is to maintain a steady internal price-level by so regulating the volume of credit that internal trade and industry shall be disturbed as little as possible by changes in the value of the circulating media of payment, and so that the foreign exchanges shall not be disturbed by changes in the purchasing power of the currency. The second object is to maintain stability of the external exchanges so that the country's foreign trade may be smoothly conducted on a certain and secure basis.

In seeking to achieve these two objects, most central banks pin their faith to the gold standard. This, as we have seen, implies the maintenance of both the internal and external values of a currency as nearly as possible on a par with the value of gold. Internally the circulating currency must be exchangeable for gold on demand. Externally, the exchange must be kept as closely as possible to the mint parity with any other gold standard currency, and fluctuations in the rates of exchange must be confined within the gold points by the removal of all restrictions on the import and export of the metal.

"But a nation's adherence to the gold standard implies some-

thing more fundamental than this. It implies, first of all, that there shall be a position of reasonable *temporary* equilibrium between the demand for and supply of the nation's currency on the foreign exchange markets, so that the rate will not move too far from the mint parities with other gold currencies. Secondly, it implies that there shall be a position of more *permanent* equilibrium on the nation's international account, i.e., that, in the long run, a nation's credits shall balance its debits." [1]

It is the function of the central bank to ensure that these positions of both temporary and more permanent equilibrium are achieved. Generally speaking, temporary equilibrium will be established by the actions of the banks and exchange dealers, who equilibrate demand for and supply of exchange by market deals and arbitrage operations, by offering foreign currency (e.g., in the form of finance bills) when it is in demand and dear, by purchasing foreign currency to replenish their balances when it is in supply and cheap, and, when necessary, by arranging exports or imports of gold in order to balance the position.

In such circumstances, the central bank intervenes only to assist the daily adjustment of demand and supply. In a gold exchange standard country it does this by offering to buy or sell foreign currency as may be required to equilibrate the position. In a gold standard country the central bank may itself undertake the movement of bullion, or it may buy and sell exchange as may be required, or it may resort to other measures to influence the volume of credit and so rectify the position.

Balancing the National Debits and Credits.

As a general rule, the result of the operation of these factors is that the adjustment of the debits and credits which go to make up a nation's international accounts is brought about automatically, we might almost say unconsciously, by various forces which come into play. The result of this process between gold standard countries is that the rates of exchange tend to keep fairly close to the mint parities. Unfavourable rates of exchange tend almost automatically to correct themselves, since a rate which is adverse to a country makes that country (from the standpoint of the other country concerned) a *good* market in which to buy, but a *bad* market in which to sell. Hence the exports of the first country are encouraged, but its imports are discouraged, and, ultimately, the favourable turn of trade tends to improve the exchanges.

While a change in the direction of trade has a lasting effect on the exchanges, it necessarily takes some time to become operative, and consequently more immediate methods are resorted to in order to correct an unfavourable position and to prevent further depreciation. Of these, the most obvious and the most immediate

[1] *Op. cit.*, p. 248.

in its effects is the *export of gold*. Frequently, however, gold movements are restricted or even prohibited altogether, as they were during the war in several countries, and, in any case, it is clear that gold cannot be sent indefinitely, except in limited amounts by gold mining countries, in which cases it takes the form of an ordinary commodity-export and not of a monetary payment.

At times, the national balance of payments remains consistently adverse or consistently favourable, and all ordinary means of remedying the position are doomed to failure. Radical methods must be applied to correct the disturbance of equilibrium. Active interference is called for by those responsible for the nation's monetary affairs. At the present time this interference takes the form of action by the Government or by the central bank, and most usually by the latter, with the object of modifying the relationship between the demand for and the supply of the national currency on the world's foreign exchange markets, by (*a*) encouraging the creation or the extinguishment of debt, and/or (*b*) bringing about a change in the purchasing power of the currency through a suitable adjustment of credit.

Now the second of these methods takes some time to operate. Changes in the value of a currency, i.e., in the general level of prices, are brought about through the actions of traders and consumers, through the interplay of supply and demand—processes far too slow in operation to save the situation in a country which is being denuded of its gold reserves and is suffering from other effects of consistently adverse exchanges. They are equally unsuitable as a quick remedy in the case of a country which is being flooded with unwanted gold.

The first method, involving the encouragement of the creation or extinguishment of debt, has no such disadvantages. It is a remedy which can be applied with the greatest ease and one which is capable of extreme rapidity of action. The Government or central bank, therefore, endeavours to increase the available supplies of foreign currency by borrowing money abroad, either by floating long- or short-period loans, or by establishing credits in other countries ; or, it adopts the other alternative, and takes steps to increase the foreign demand for its own currency by encouraging the inflow of liquid capital in the form of banker's floating balances by increasing the rate of interest. Both of these methods involve, in effect, the correction of adverse exchanges by the *export of securities*, which are sent abroad by the borrowing country in exchange for the capital received from other countries.

" To a very large extent, the transfer of floating balances takes the place of the movement of gold. As a result, the use of gold is economised at a time when such economy is imperative, first, because of the world-wide demand for the metal for reserve purposes, and, secondly, because of the present one-sided distribution of gold through the accumulation of about one-half of the avail-

able supply in the United States. Furthermore, the transfer of funds in place of the transfer of gold is quicker, safer and more economical. The movement of credit balances involves no risk of loss, no loss of interest, and practically no expense, while it eliminates the loss through abrasion, etc., which takes place on a transfer of gold.

" Thus we may say that the maintenance of the gold standard in several countries to-day depends essentially on the existence of these large sums of liquid funds, and on the fact that they move very easily from one centre to another, in quick response to central bank policy as epitomised in changes in the ruling rates of discount on the world's money markets." [1]

THE SILVER EXCHANGES

Although most countries of the world have adopted gold as their standard currency, there are still one or two that maintain a standard currency composed of silver. In such cases, silver coins are made legal tender for any amount, whilst gold is simply an article of commerce just as silver bullion is in our own country, and the question naturally arises as to how exchange rates between such countries and the gold-standard nations are determined.

Now a reference to the definition of a Mint Par of Exchange, which has already been given, will indicate that, although it would be possible to establish such a par between two silver-using currencies, it is not possible to establish a mint par between one of those countries and a gold-standard country like Britain, because, unlike gold, silver bullion cannot be brought into this country and exchanged at the central bank for a fixed amount of legal tender. If gold were sent to this country, it could easily be changed into a predeterminable quantity of bank notes on demand at the Bank of England, but this could not be done with silver, because silver coins are issued by the Government only when it considers necessary, and a considerable profit is made on the issue. Our silver coins are merely tokens; their value for currency purposes is greater than their value as silver bullion, and a shilling will, in fact, purchase more than its equivalent by weight of pure silver. Consequently, it will be appreciated that whereas a London merchant will always accept gold in settlement of a debt due to him, he would not take silver unless it was of sufficient amount to realise enough to wipe off his debt, when sold at the market price ruling in London.

The Parity between a Silver and a Gold Currency.

" Clearly, therefore, the exchange of the currency of a silver standard country for that of a gold standard centre involves the exchange of silver purchasing power for gold purchasing power,

[1] *Op. cit.*, p. 252.

and the basis on which that exchange can be effected at any time is *the purchasing power parity between gold and silver as expressed by the market value of one in terms of the other.* 1,000 ounces of silver in the form of Hong Kong dollars will purchase a certain group of commodities in China. I can buy those dollars as so much silver bullion on the London market, or I can buy an equivalent amount of silver bullion and have it exchanged for the dollars by one of the exchange banks or bullion dealers. But, theoretically, I will not pay more of my gold currency for those 1,000 ounces of silver than I should have to pay for a similar group of commodities in this country or in another gold standard country. If I can buy that group of commodities for £100 in gold, then that is the most I will pay for the 1,000 ounces of silver, i.e., 2s. an ounce.

"Putting the matter generally, therefore, we may say that the world price of silver in terms of gold tends to measure the purchasing power parity between the two metals, and the rate of exchange between a gold standard country and a silver standard country maintaining free mintage of silver will tend to be determined by that purchasing power parity." [1]

The rates of exchange will not be determined exactly by the price of silver in terms of gold, because allowance must be made for the expenses of transmitting the metal to the places where payment is due. Thus the rates of exchange between Eastern centres and London vary according to the cost of sending silver bullion (either from the Eastern centre concerned *or elsewhere* where it is cheaper) and realising it in London, or, on the other hand, according to the cost of buying silver in London (*or elsewhere* if it is cheaper there than in London) and sending it to the silver country.

Fluctuations in the Silver Exchanges.

It will be evident from the foregoing that fluctuations in the silver exchanges, as, for example, those on China, must result not only from the ordinary influences affecting the demand for and the supply of bills, which have already been discussed, but also from changes in the price of silver and the consequent unstable conditions of the currency in the silver countries, together with the cost of moving the metal from place to place. Not unnaturally, therefore, the silver exchanges fluctuate very considerably even in normal times. Anything which affects the price of silver, such as the opening of new mines, the release of large quantities of hoarded coins, or the demand for extra silver for currency purposes, must have its effect on the exchanges. Gold is required by practically all nations, and any change in its value tends to adjust itself throughout the world, but silver is unlimited legal tender in only one or two countries, so that the stabilising influence is much less effective. In fact the price of silver has fluctuated

[1] *Op. cit.*, page 315.

considerably in recent years: in pre-war days the price was about 26d. per ounce; in 1920 it rose to 89d., whilst in 1930 it had fallen to 15d.

The reader will appreciate that such changes in the price of silver must have been attended by violent fluctuations in the silver exchanges, and in view of the importance to this country of the Indian Empire, the fluctuations have caused a great amount of anxiety to the Government, and also to our bankers and financiers. Every change in the value of silver has its effect on trade. A rise in the price increases the purchasing power of the silver dollar or silver tael, so imports into a silver country are encouraged and exports are discouraged, whilst a fall in the price of silver has the reverse effect. Merchants who deal with these countries are therefore greatly concerned with fluctuations in the value of silver, and all business transactions are flavoured with a speculative element, as the traders rarely know what amounts they will have to pay, or what returns they will realise.

THE GOLD EXCHANGE STANDARD

The system of exchange and currency known as the "Gold Exchange Standard" has proved specially suitable to those countries which desire to regulate their *external* exchanges as far as is possible on a gold basis, but which are unable to adopt a full gold standard for *internal* use, either because of the comparative poverty of their inhabitants, or because of their early stage of development, or because their resources have been impoverished by war or other destructive agency.

The gold exchange standard has been in operation in more countries than is generally known. In 1893, the system was adopted in India, where it functioned with a fair degree of success until it was disorganised by the Great War. Japan, Holland, Austria-Hungary, and the Philippines are among the other countries in which the system operated successfully until the war period, while most of the countries whose currencies have had to be reorganised in consequence of the war—notably Austria, Hungary, Belgium, and Germany—have applied the principles of the gold exchange standard in order to stabilise and maintain their rates of exchange with the gold-standard countries.

The essential of the system is the provision of a cheap internal currency of silver or paper, and the maintenance of the value of that currency as near as practicable to a fixed par with gold (or with the gold currency unit of another country) by Government control of the exchanges, and strict regulation of the internal currency. This necessitates the possession by the State (or by a central bank acting for the State) either of adequate reserves of gold or of its equivalent in the form of gold exchange, i.e., saleable exchange on one or some of the chief gold-standard countries. If gold reserves are maintained, they

are kept generally in the foreign centre whose currency unit is taken as a basis ; thus, India's gold reserves are kept in London, those of Japan chiefly in London and New York, and those of the Philippines in New York.

Against these reserves of gold or gold exchange, foreign exchange may be sold when the demand for remittances to other countries tends to force the exchange rate away from the fixed parity. The remittances are paid for either in notes or in silver, according to the currency of the country concerned ; contraction of the circulation enhances the value of the unit and tends to restore the exchange, whilst the payment of the remittances lowers the reserve of gold in the foreign centre or lessens the Government's holding of gold exchange. Conversely, when the exchange tends to rise above the fixed parity, and there is a strong demand abroad for remittances to the gold exchange standard country, the Government again steps in to prevent any great divergence from the parity by selling abroad homeward remittances drawn on State agencies and payable in silver or paper. When these are paid in due course, the circulating currency is increased, the value of the unit falls, the exchange rate becomes more normal, and the gold or gold exchange received abroad adds to the reserve. In effect, the result is the same as if gold had been exported or imported, and, theoretically, the Government intervenes whenever the exchange has sufficiently diverged from the parity to make the movement of gold profitable. It may be noted that in silver-using countries the success of the system presupposes the fixing of the parity value of the silver unit higher than its intrinsic value, otherwise it would be possible to contract the circulation when necessary, but not to expand it.

The pure gold exchange standard must be distinguished from the *Currency Exchange Standard*, which exists in certain countries. The essence of such a standard is that the currency of the country concerned is based upon and convertible into the currency of some other country instead of into gold or gold exchange. Needless to say, the currency to which the home unit is thus linked is chosen usually because of its recognised stability, and is therefore usually a currency based either on the Full Gold Standard or on the Gold Bullion Standard. The most familiar example of a Currency Exchange Standard is afforded by the currency of the Irish Free State, which is on a *Sterling Exchange Standard*, i.e., it is based on and linked to sterling.

ELIMINATING EXCHANGE RISKS

The frequent fluctuations which characterised the exchanges in the years after the war naturally forced traders to seek some methods whereby they could be safeguarded, at least to some extent, against loss from marked changes in the prevailing rates.

Of the various devices which have been adopted with this object, two important methods may be briefly described.

The first of these consists in *enfacing the bills relative to the transactions with an exchange clause* which fixes the rate at which the bill is to be paid. Such clauses are of many kinds, but their general effect is to ensure payment of the full amount of the bill to the agents of the holder either in sterling or at a rate which he is prepared to regard as satisfactory, and subject to payment by the foreign drawee of any necessary expenses.

Forward Exchange.

The second method is of far greater importance, and is one which is widely adopted at the present time. This consists in the arrangement by the trader of a *forward contract* in exchange, which, in its essentials, involves the application of the principle of "futures" to exchange operations. By this means a merchant who has a payment to make in a foreign centre at the end of a specified period may settle *now* with his banker the rate of exchange for the *future* payment, and so may know immediately the exact amount he must pay, and be freed from concern about future fluctuations in the rate of exchange. Similarly, a merchant who has to receive a payment in foreign money at a future date may arrange *now* with his banker the rate at which the latter will take over the foreign currency when it is paid. In other words, the merchant settles now the amount of sterling he will receive when the payment is made by his foreign debtor.

LONDON'S INTERNATIONAL SUPREMACY

London occupies a unique position in reference to the world's exchanges. Her pre-eminent position as the world's financial centre has established the sterling bill as an international medium of currency, utilised by other nations to settle their transactions, not only with this country, but also with other countries. Consequently a large proportion of international settlements is adjusted through the medium of London financial institutions, and upon them devolves much of the mechanism of international credit operations.

It has, in fact, been estimated that in pre-war days as much as nine-tenths of British overseas trade, and more than one-half of the world's overseas trade, were financed in sterling, principally through London. Although this position has necessarily been modified by the war, it is clear that such operations not only bring our bankers and accepting houses very large annual sums in the way of commissions, but also have the effect of carrying their reputation to every corner of the world.

Very many reasons may be advanced to account for London's eminence as a financial centre, but the most important are

briefly, that (*a*) Britain's maritime supremacy and the spread of her people have caused a world-wide extension of British trade, with the result that bills on London are required everywhere. Trade, it is said, follows the flag, and it may well be added that sterling bills follow trade. (*b*) The establishment of the gold standard gave us a sound currency, and the world recognises that British money is gold, or is convertible into gold, and that bills payable in London mean gold. (*c*) London is the largest free market for gold in the world, and for a long period was the only free gold market. (*d*) British banks and accepting houses have a world-wide and unrivalled reputation for soundness and stability. (*e*) Britain's great wealth has contributed to make her people the creditors of the world, and has given them an interest in the affairs of all nations. (*f*) The highly efficient organisation of the London Money and Foreign Exchange Markets allows money and exchange operations to be carried through with the utmost ease and economy.

London draws Few Bills but accepts Many.

The combined effect of these factors is that in no other centre can exchanges be so economically or so efficiently conducted, and other places use London as a matter of necessity or of economy. As a result, bills are drawn on London for settlements between foreign nations, and most of our foreign trade is settled by bills drawn on this country. In other words, our creditors abroad obtain payment of their debts by drawing and selling bills on London, which foreign debtors purchase and remit to this country in settlement, instead of waiting for their English creditors to draw upon them in currency or possibly in sterling. Consequently, it is true to say that *London draws few bills but accepts many.* In ordinary circumstances, foreigners prefer this arrangement. They can easily buy or sell a London bill, and they often make extra profits by watching the exchange rates. The British trader also is quite satisfied, because he benefits indirectly by the position of London, and because he prefers not to be troubled with exchange quotations.

London's Supremacy Threatened.

The supremacy of London as an international money market has been challenged at various times, but with little success. Amsterdam and New York have each made repeated attempts to establish themselves as the financial centre of the world, but, although during and immediately after the War they achieved temporary success, London soon regained her old position. The fact is, that at present London alone of all the financial centres has a sufficiently well-established discount market to form the basis for an international acceptance business of great importance. New York has shown signs of becoming a powerful competitor, but

as yet it has appeared impossible for any newly organised market to supplant one that has behind it the experience of centuries and a long-established and well-deserved tradition of efficiency.

But although New York has as yet met with comparatively little success in its attempts to capture London's international acceptance and discount business, it has nevertheless succeeded in governing to a large extent monetary conditions on the London market, and the Bank of England is ever compelled to keep a watchful eye on New York lest a variation in interest rates should cause funds to be moved from one centre to the other.

More recently, determined efforts have been made by France to establish Paris as an international money market. To this end, a huge bank—entitled Banque Française pour l'Acceptation —has been formed under the auspices of the leading Parisian bankers. The new bank, as its name implies, will interest itself mainly in the finance of Continental trade by means of Acceptance Credits. Those responsible for the scheme have, however, been influenced by the lesson of New York, and have given due consideration to the necessity for establishing a robust " bill-market " to provide a demand for the acceptances of the new bank. As a further step towards the establishment of a strong discount market, the gold reserves of the Bank of France have been considerably strengthened by heavy withdrawals of gold from London.

POST-WAR STABILISATION PROBLEMS

The general acceptance of the purchasing power parity theory smoothed over many of the difficulties which would otherwise have had to be faced in connection with the return to more stable conditions after the violent fluctuations of the war and post-war periods. In several countries, the restoration of stable conditions meant the return to the gold standard of pre-war days, but in other cases, where such a complete return was impossible, it involved the stabilisation of the currency at a lower gold value, i.e., it involved devaluation.

Every stabilisation scheme has had to face the initial difficulty that each currency has two values which are not necessarily equal: its *internal* value, as represented by its purchasing power within the country in terms of goods and services, and its *external* value, as indicated by its price in the foreign exchange market. Between these two values a considerable difference may exist, particularly if the currency is subject to the whims and fancies of the foreign exchange speculator. If a currency is given a higher value in the foreign exchange market than its internal value in its own country, it is said to be *overvalued,* and the result is to give an artificial stimulus to imports and to impose an artificial handicap on exports. On the other hand, if a currency is *undervalued,* i.e., when its internal value is higher

than its value in the foreign exchange market, there is a premium on exports and a corresponding restrictive influence on imports. Such undervaluation may result from speculative selling of the currency concerned in the exchange market, as happened for instance in the case of the " flight " from the franc and the mark in post-War years, when, owing to the fear of further inflation and lack of confidence in the future of these currencies, they were wildly sold to an extent that was not fully justified by their internal valuation. If a currency which is internally depreciated is thus undervalued in the foreign exchange market, it is said to be *specifically* depreciated, and the amount of this specific depreciation measures the extent of the divergence of the prevailing exchange rate from the purchasing power parity.

It is clear that a government which embarks on a stabilisation scheme must decide at the outset whether the currency shall be stabilised at its lower or at its higher value. In practice, this means that the currency may be stabilised either at the *current rate of exchange* or *at an alternative rate*, higher or lower than the current rate.

If the current rate of exchange is taken as the basis, the internal value of the currency will have to be adjusted by inflation or deflation according to whether the currency is undervalued or overvalued in the foreign exchange market. If the currency is *undervalued*, its internal purchasing power must be forced down, i.e., internal prices must be raised by a continuance or resumption of inflation, until the internal and external values are approximately equal. While inflation is proceeding, exporting and producing trades will be stimulated by the rising prices (see Chapter 24), while imports will be discouraged. At the same time, internal activity will be stimulated by the desire to acquire goods rather than to hold currency which is continually declining in value. When once the necessary adjustment is achieved, the discontinuance of the inflationary process will result in the checking of the temporary boom, and cause what has been described as a *stabilisation crisis*. Such has been the experience of several countries whose currencies have been reconstructed after a period of inflation, notably Germany and Belgium, where the stabilisation rates adopted did not fully represent the internal (or intrinsic) value of their currencies.

If, on the other hand, the currency is *overvalued* by the external exchange, the necessary adjustment can be effected only by raising the internal value of the currency, i.e., forcing down internal prices by deflationary measures. Stabilisation on these lines results in an *adjustment crisis*, ordinarily involving trade depression, the restriction of exports, and unemployment. Britain and France have suffered similarly in this way. In order to make possible our return to gold, the value of sterling was artificially forced up in the foreign exchange market, and when the parity had been reached, steps were taken to bring

about a corresponding rise in the internal value of the pound by a careful regulation of credit and a reduction in the treasury note issue. Similar steps were taken in France in 1928 in order to stabilise the franc in the neighbourhood of 124, about half the figure it once reached.

The alternative process of stabilising the currency at a new rate of exchange amounts, in effect, to stabilising the currency at its internal value. If, therefore, the currency is overvalued the rate chosen will give the currency a *lower* value than is represented by the existing rate of exchange, while if the currency is undervalued, the rate chosen will give the currency a *higher* value than the prevailing exchange.

Whichever method of stabilisation is adopted a crisis of one kind or of the other is unavoidable so long as there is a divergence between the internal and external values of the currency concerned. Some classes in the community are bound to lose while others gain. On the grounds of equity there is much to be said for raising the value of a depreciated currency, but, in practice, the problem becomes one, not of ethics, but of expediency, and it is impossible to ensure justice for every one. The simplest practical solution is undoubtedly to stabilise at the rate which is calculated least to disturb existing conditions, and recent experience would seem to indicate that the adjustment crisis, involving internal deflation, is the more painful and prolonged method. In any case the ultimate effects of the stabilisation process necessarily depend on the magnitude of the divergence between the internal and external values of the currency, on the elasticity of the factors of production, on the country's economic organisation, and on the skill of those responsible for its monetary policy.

The Gold Standard Controversy in Britain.

Although, in this country the conclusions of the Cunliffe Committee of 1918 (see *ante*, page 406) were generally accepted as providing a sound basis for our post-War monetary policy, a considerable body of expert opinion expressed itself in strong opposition both to the findings of the Committee and to the measures adopted by the Government to give those findings practical effect. As a result, monetary opinion in this country became sharply divided into two opposing schools of thought, the *Sound Currency School* and the *Managed Currency School.*

THE SOUND CURRENCY OR LONDON SCHOOL.—On the one side were those who unhesitatingly affirmed the recommendations of the Cunliffe Committee of 1918; they maintained that Britain should make every possible effort to return to the complete gold standard and to that end should restore her rate of exchange with New York to parity as soon as possible.

Among the many convincing arguments of the Sound Currency

School, possibly the most important is the contention that the gold standard has been proved by long years of experience to be the only certain and automatic regulator of fluctuations in prices and in the foreign exchanges, and that such a dependable exchange medium, particularly for *external* purposes, is of vital importance in the case of a country such as Great Britain, whose very existence depends on large purchases of food and materials abroad and on the sale to other nations of manufactured products. In such circumstances stability of the foreign exchanges is essential, otherwise foreign trade partakes largely of the nature of a gamble.

In addition to this a number of other strong arguments were advanced. Thus it was contended that London's international position is bound up with the gold standard, and that her prestige demanded its restoration at the earliest possible moment; for the use of the sterling bill as an international exchange medium depends essentially on its convertibility into gold, and it could not remain acceptable by the people of other countries if it were reduced to representing a paper currency only. At the same time, it was emphasised that the currency conditions and the price level which had prevailed since the Great War were abnormal, and that a return to pre-war conditions was both necessary and desirable, particularly as there had always existed in this country a strong feeling against the continuance of the depreciation of our currency, so long renowned for its soundness and stability, while it could be regarded only as a breach of faith for the Government or the Bank to redeem its notes in a lower standard than the one to which it was tacitly pledged. Again, in response to the objection that stabilisation could not be attained in the face of the persistent deflation of prices in other countries, it was argued that the best method of neutralising deflation abroad was to stabilise rates by a corresponding deflation at home.

In reply to the arguments used by the advocates of the "managed currency" (which had been suggested as an alternative—see below) it was pointed out that "in a country like England, so subject to foreign influences on her trade outlook, depression might easily arise that could not be cured by domestic monetary devices," and also that a currency subject to State control "opens a door to interference by the House of Commons in a sphere in which its activities are far from desirable. The gold standard frees us from muddling with our money by politicians, has worked right well in the past, and may do so again, whenever the politicians succeed in giving us peace and security and confidence and good will".[1]

THE MANAGED CURRENCY or CAMBRIDGE SCHOOL.—Issue was joined with the advocates of an immediate return to gold by the Managed Currency School, the acknowledged leader of whom, Mr. J. M. Keynes, went so far as to describe the gold standard as a "barbarous relic"[2] and expressed strong opinions con-

[1] *Bankers and Credit*, by Hartley Withers. [2] *A Tract on Monetary Reform*.

cerning the wisdom of our taking active steps to bring sterling to parity with the dollar. According to this group of economists and prominent industrialists, the stability of *internal prices* is of greater importance than the stability of our exchange rates with other nations, for our main object should be to remedy those fluctuations in prices which cause such hardship as between debtor and creditor and as between one class in the community and another. The gold standard, they maintain, has signally failed to ensure such stability, and its adoption throughout the world is undoubtedly one reason for the cyclical depressions which have characterised modern civilisation.

Accordingly, they suggest that in place of our having one commodity—gold—as the measure of value and standard of deferred payments, we should substitute instead a *tabular standard of value*, consisting of a group of representative commodities the total value of which would be less likely to fluctuate over a period than that of a single commodity such as gold. Before the war such a system, sometimes described as an *isometric* standard, had been advocated by the American economist, Professor Irving Fisher, and it undoubtedly has many theoretical attractions. Thus it is contended that internal price steadiness could be achieved by the issue of an inconvertible currency, the value of which is stabilised in terms of a group of selected commodities, and the circulation of which is expanded or contracted by a careful regulation of credit according to the needs of trade. Hence, if such a system existed and the level of prices tended to rise, the Bank rate would be raised, loans would be called in and deposits attracted to the banks, thus causing surplus notes to return for cancellation. On the other hand, if prices fell, the Bank rate would be lowered, and the note-issue and credit would expand until prices rose again. Within narrow limits, therefore, the paper pound would always purchase the same quantity of goods internally; manufacturing costs and selling prices would be accurately determinable, and wage disputes would be reduced to a minimum. In this connection Mr. Keynes has stated that the most important argument in favour of such a currency is "that fluctuations of trade and employment are at the same time the greatest and most remediable of the economic diseases of modern society, that they are mainly diseases of our credit and banking system, and that it will be easier to apply the remedies if we retain the control in our own hands". By so doing we should obviate the serious disturbance of industry and trade which must result from a persistent policy of deflation with its consequent uncertainty as to the future course of commodity prices.

From a purely scientific standpoint, the proposals for a managed currency are undoubtedly attractive, but a number of objections would need to be met before such a scheme could be put into practice, particularly in such a country as our own. In the first place, the maintenance of internal price steadiness

does not guarantee freedom from exchange fluctuations, and the achievement of any degree of exchange stability would appear to necessitate international agreement on monetary policy, a difficult matter at the best of times. Again, the compilation of index numbers is still an art rather than a science, and it does not seem that sufficient advance has yet been made in this direction to justify the management of our currency on a basis or bases known to be arbitrary and inexact. In any case, it appears inevitable that any monetary policy adopted would be subject to violent criticism, in view of the different interests which are necessarily affected by changes in the value of the currency. Another very pertinent objection is that it would be difficult, if not impossible, to ensure that a managed currency should be free from political interference, especially when the fortunes of the Government are, as at present, so intimately bound up with the success of its financial policy. The final objection is specially relevant in the case of a country, such as our own, with a large export trade—that external price stability is more important than internal price stability. As Britain lives by buying and selling in foreign markets, it is imperative that her medium of exchange should be as stable as possible.

Britain's Return to Gold.

In spite of the theoretical attractions of a managed currency however, and in spite of the anticipated danger of our being bound to the United States by chains of gold, the Government was induced by the weight of financial opinion in this country to persist in its declared policy of restoring sterling to parity with the dollar and of effecting a return to the essentials of the pre-war currency system. The vital step in this direction was taken when the Gold Standard Act, 1925, restored the free gold market in London.

There is little doubt that this event was of paramount importance, marking as it did the end of a period of financial upheaval unparalleled in our history. As Mr. McKenna has stated, the psychological and moral aspects of the matter are of almost greater significance than the purely economic and financial considerations. The gold standard implies an international measure of value, ensuring an automatic adjustment of prices and of the exchanges, while it inspires that confidence in the future which is so vital to a return to more normal and more stable business conditions. The resumption of the gold standard betokened the return to that parity between sterling and gold which existed for over one hundred years prior to the war. It meant the re-establishment of the fact that the purchasing power of sterling and the purchasing power of gold are synonymous—a fact which has endowed the British monetary unit and British instruments of credit with a world-wide prestige.

Is the World now on a Dollar Standard?

It has been emphasised in the foregoing pages that stability of the foreign exchanges and of internal prices in the world of to-day depends on the maintenance of the purchasing power of the currency at the same level as the purchasing power of gold. Now it is sometimes erroneously assumed that the purchasing power of gold never varies, whereas the fact is that, over a series of years, very considerable changes may take place in that purchasing power.

But whatever the value of gold may be at any particular time, that value tends to be the same in all countries which adhere to the gold standard, provided the metal can move freely from one to the other, and provided no restrictions are imposed on its normal credit-creating power. This was the position in the days before the War. Gold flowed from the country where its value was relatively low to the country where its value was relatively high. The process of adjustment was, therefore, automatic, the price of gold and the prices of commodities tending to find their own level throughout the world.

Nowadays, conditions are modified because of the present one-sided distribution of the world's gold through its vast accumulation in the United States, and because the gold reserves in the latter country are denied their normal credit-creating power by the action of the Federal Reserve authorities. Gold can now enter or leave the States without any apparent effect on the means of payment or on the volume of credit in that country. In other words, the internal value of the dollar is maintained without reference to gold movements. The United States Treasury is able to buy or to sell unlimited quantities of gold at a fixed price in terms of dollars, with the result that the value of gold can nowhere move far from that fixed price. In other words, the *value of gold throughout the world is determined by the value of the dollar*, as that value is determined from time to time by the monetary policy of the United States authorities.

So runs the argument advanced by eminent economists and bankers to prove that the world is not now on a gold standard, but on a dollar standard. Theoretically, it does not matter from the point of view of exchange stability which of the two standards is in operation, so long as the value of the dollar is kept as steady in terms of commodities as the value of gold has been kept over a long series of years. Absolute stability is, of course, impossible. There is no means of determining the value of the dollar except the method of index numbers, which, at the best of times, provides an arbitrary and uncertain basis. Clearly, then, the standard selected by the Federal Reserve authorities for maintaining the value of the dollar is of the utmost importance at the present time, and makes more than ever desirable the closest possible co-operation between those authorities and the world's leading central banks.

CHAPTER 30

CREDIT CYCLES AND FINANCIAL CRISES

IT is not to be expected that the remarkably delicate and wonderfully complex economic mechanism, outlined in the foregoing pages, could function permanently without any semblance of disorder or breakdown. When an infinite variety of commodities is produced in anticipation of demand from so many sources and from consumers of every type; when fashion and style change with every caprice of which man is capable; and when the division of labour and the localisation of industry are developed to such a high degree that an array of producers throughout the world may co-operate in the supply of one single commodity, then may weakness in one link of the chain profoundly influence the efficiency of the whole. In a modern community the failure of one large organisation may involve many people in loss and hardship, and difficulty in one trade may make its evil effect felt in a great number of directions, so dependent is one group of producers on other groups, and one community on another community for the supply of essential raw material and semi-manufactured goods.

The liability to disorganisation is attributable to two chief dangers inherent in highly specialised productive communities: (a) *The imperfect anticipation of demand*; and (b) *The imperfect co-operation between various producers.*

Imperfect Anticipation of Demand.

As we have seen, many industrial processes have to be initiated months, and sometimes years, before the commodity can be marketed. The gap between original producer and ultimate consumer tends ever to widen, and with each additional stage does the liability to error become more pronounced. In spite of the wealth of technical and general information at the disposal of the entrepreneur; in spite of the great resources at his command, and in spite of the great variety of products which he may turn out, his difficulties under modern conditions are immeasurable. A sudden change in fashion may upset the most carefully laid plans; a legal enactment may sweep away every hope of anticipated profit; a new invention or the sudden appearance of an improved article or efficient substitute may entirely supersede a commodity which, after years of labour, is just about to be marketed. In these and in many other ways are

the anticipations of the producer likely to be totally disappointed, or at best his profit is likely to be far below his estimate.

Imperfect Co-operation between Producers.

Similar effects may result from imperfect or incomplete co-operation between producers. In the factory each successive process in the production of an article depends on the prompt and efficient completion of the previous process ; the assembler of a bicycle wheel cannot proceed with his contribution to the final product unless he is supplied, constantly and sufficiently, with the various parts of that common but wonderful mechanism. In the factory subject to a centralised control, it is not difficult to ensure co-operation, and to provide for the smooth working of each department. But when the work of a number of independent producers may be necessary to provide a given article, when several distinct and specialised industries, separated perhaps by half the circumference of the earth, have to co-operate to produce a single commodity, then does the risk of failure at some point become of vital importance ; then may a breakdown at one stage result in widespread disorganisation : the failure of the United States cotton crop may cause enormous losses and the greatest hardship throughout the whole of Lancashire, while its effects will be felt in a still wider sphere.

Imperfect co-operation may be due to a great number of factors : to unfavourable climatic conditions, to floods or earthquakes, to the depredation caused by an insect (such as the boll-weevil cotton pest of the United States) or to the countless imperfections which may be summed up as the failure of the human element. Not only may this imperfection lead to a shortage of material : it may result also in inadequate supplies of labour or of fixed capital at some stage or in too great an accumulation of these factors at some point in relation to their proportionate contribution to the whole process. For example, in the cotton industry, a period of good trade and of bountiful crops may determine spinners and weavers to extend their operations, and to increase their labour and their fixed capital. All goes well until supplies of raw material fall off, or the demand for cotton goods decreases, when the capacity to produce on the one hand or the output on the other may be in excess of requirements. Possibly such supplies may fall or demand may decrease before the new plant is actually in working order—the building and equipping of a mill take many months—so that their anticipated utility is destroyed even before they are available to proceed. It takes time to prepare an industry to meet increased demand, and to attract to that industry the capital and labour necessary for expansion. The disadvantages are emphasised because once capital and labour have been so specialised it is difficult to convert them to other uses, and consequently the depression tends to remain for a considerable period.

The Synchronism of Trade Fluctuations.

So intimately related are the many units in the productive machinery that depression in one tends always to produce depression in others. Apart altogether from the fact that the failure of one industry contributing to a process necessarily involves other industries in that process, is the fact that the workers in one large department of industry are consumers of the products of their fellow-workers engaged in other branches. Consequently a period of distress in one section of a community tends to spread, and eventually to embrace the greater part of the productive machine. Employers in one trade are made apprehensive by the non-success of employers in another, and in order to safeguard themselves they may restrict their operations, thus similarly affecting other producers from whom they obtain supplies of raw materials, etc.

But just as depression in one industry may tend to spread to others, so also does the prosperity of some producers spur others to greater efforts. A greater demand for a product at one stage necessarily means an increased demand in the contributory processes : if there is a greater demand for woven cloth, then there will also be a greater demand for spun wool ; the prosperity of the weaving industry induces prosperity among spinners, and, farther back still, among all those who make possible the work of the spinners—producers of the raw material, dealers, transport workers, and machine makers. Thus, if after a period of depressed trade, confidence is revived in one branch of industry, that confidence tends to spread and industry as a whole may experience a growing prosperity, culminating possibly in a period of very active trade conditions.

This tendency of trade and industry as a whole to be subject to general conditions of depression or of prosperity is sometimes described as *synchronism*, because the bad times and good times in various industries tend to synchronise or occur at approximately the same periods. The tendency applies not only to the industries within one community but also to those throughout the industrial and commercial world : so interdependent are the various nations that depressed conditions in one tend to bring depressed conditions in others, and good times in one country tend to influence business conditions in other countries in the direction of prosperity.

The Periodicity of Trade Fluctuations.

But the history of trade during the last century and a half reveals a still more remarkable peculiarity. That is, the tendency of good times and bad times to alternate with a certain regularity. Starting from depressed conditions, when industry is stagnant and unemployment is rife, confidence gradually revives and a period of growing prosperity follows. Prices rise, profit-

margins are widened, and production is stimulated. Raw materials and basic commodities like coal and iron are sensitive, their prices moving with, or even in anticipation of, prices in general; but wages, interest, and credit charges lag behind. Expanding markets and increased demand cause entrepreneurs to institute production on an extended scale; many enterprises are developed and conducted on borrowed capital; speculation tends to spread to all classes of the community; credit is expanded to meet the growing demand for trade requirements, and everywhere producers and workers are anxious to make the best of a good period and to reap as high a reward as possible for their effort.

Presently, however, prosperity begins to generate its own checks. Labour costs are increased with the forcing up of wages, the payment of overtime rates, and the absorption of less efficient workers; production costs rise as old equipment is strained, while competition for new equipment and raw materials sends up their prices disproportionately; finally, charges for credit and capital are raised. A point is reached when it becomes evident that costs are going to catch up receipts, and when this is perceived the boom is over.

As a rule the breaking-point is reached when some event occurs which shakes confidence in one branch of industry or in the community as a whole or even in the world at large. It may be an earthquake, a violent tempest, a great flood, the failure of an important crop or of a large financial house, the outbreak of war, or any other event which threatens one or more large producers with a loss of anticipated profits. In any case there is usually a crisis marked by a sudden curtailment of credit. On the downward slope the order of events is reversed. Selling prices fall more rapidly than costs can be reduced; wages can be forced down only with difficulty, and labour bears its share of the prevailing depression mainly in unemployment.

But the depression, like the boom, produces its own correctives. Labour, credit, and capital charges are gradually forced down; production costs are reduced by the elimination of the less efficient firms and workers, and the commitments of the boom period are gradually liquidated. Thus, the time arrives when costs again fall below selling prices, and the conditions of profitable enterprise are restored. "First we find a state of quiescence—next, improvement—growing confidence—prosperity—excitement—overtrading—convulsion—pressure—stagnation—distress—ending again in quiescence".[1]

This alternation of good and bad trade has occurred in recent years with such regularity that a *trade* or *credit* cycle is now recognised, extending over a period of from seven to ten years.

[1] Lord Overstone, quoted by Marshall, *Money, Credit and Commerce*, p. 246.

Deductions from the History of Trade Cycles.

A careful study of the history of the trade cycle reveals a number of very important facts. In the first place, the cyclical fluctuation of trade is not confined to any single country—it is a world phenomenon. Prior to the war, when most countries were on a gold standard, there was a remarkable parallelism in the movements of trade in different countries. In the decade following 1914, when gold standards gave way to paper standards, the parallelism was not so marked, a fact which suggests the monetary influence on trade. Secondly, periods of trade activity have been periods of capital development, Britain, in particular, during such periods, having increased her investment of capital, both at home and abroad. In this matter public authorities usually follow private enterprise; hence the argument that if the ups and downs of trade are to be diminished, public authorities, which can afford to take a long view, should undertake schemes of capital development during periods of depression. Thirdly, the extent of the boom and depression seems to have some connection with long-period changes in the general level of prices. During periods of falling prices (e.g., 1873-1896) booms were less marked, and depressions more intense and prolonged. During periods of rising prices (e.g., 1897-1914), booms were more marked, and depressions less intense and less prolonged.

The fourth fact of importance is that the fluctuations in prices are more pronounced and occur earlier in some industries than in others. In the short period, they are more pronounced in the case of raw materials than finished products; in the wholesale market than in the retail market; in commodities than in services. In this respect trade has been likened to a tree swaying in the wind. The trunk represents that group of economic activities (such as education, internal transport, retail trade in necessaries) which is relatively firm and unbending. The branches represent that group (including the constructional trades and raw materials) which is subject to extreme fluctuations in supply and demand, and which may therefore be called the "speculative" group. During a period of expansion big profits, and during a period of depression big losses, are made by this group; the returns to the other group are more stable throughout.

Another fact which emerges is that the cycle does not repeat itself in every detail. As we have seen, the length and severity of the depression and the intensity of the boom are influenced by long-period changes in prices. Successive trade cycles are also differently affected by such haphazard factors as failures of harvests, outbreaks of war, the growth of trusts, and the development of banking. Such factors necessarily cause considerable variation in the development and course of the trade cycle, but, in spite of this, the similarity between the successive "waves" is greater and more striking than the differences.

The final point is that behind the cyclical movement of trade there is a steady growth in the volume of production and in population, the increase in production during periods of trade activity being greater than the falling off during periods of depression.

Commercial Crises.

The periods of trade cycles are marked off from one another by certain convulsions of commerce and finance known as *commercial* or *financial crises*. As we have indicated, the critical phase of the cycle is a wide expansion of credit and an orgy of speculation on borrowed capital, and the immediate effect of the disturbing factor referred to is a sudden contraction of credit due to the apprehensions of bankers and of merchants, who endeavour to consolidate their position against the future by demanding payment of their loans and debts. Thus trade is deprived at one blow of the mechanism which drives its wheels; some firms experience difficulty in meeting their commitments and their failure involves many others in loss.

The collapse of credit makes itself felt in another way: less faith is placed in all forms of credit documents, so that fewer are issued and those outstanding are pressed for sale or conversion into specie. Thus, on the one hand, the media of exchange shrink in number and amount, while, on the other hand, there is an increasing demand for legal tender currency, which is rarely forthcoming in the quantity desired. A feature of such crises is therefore an insufficiency of money, which has almost invariably resulted in a run upon the banks, a rush to realise securities, and a general financial panic.

"Crises imply the overwhelming and simultaneous occurrences of inability on the part of independent entrepreneurs to pay their debts" (Adolph Wagner). "There is said to be a commercial crisis when a great number of merchants have or apprehend that they have a difficulty in meeting their engagements" (J. S. Mill).

In times past these conditions have been accentuated by the inability of banking institutions to stand the sudden strain on their resources by the demand for cash, the failures among their customers, and the difficulty under generally unfavourable conditions of converting securities into money or of obtaining increased supplies from other sources. In this way the banking systems of various countries have been shaken to their foundations; not infrequently many banks have themselves failed and have thus accentuated the difficulties of the community as a whole.

Crises of this type occurred in 1763, 1773, 1783, 1793, 1810, 1816, 1825, 1837, 1847, 1857, 1866, 1878, 1890, 1900, 1907, 1914, 1920 and 1929. The periodicity of occurrence is remarkable, although it should be added that all the crises were not equally

severe; in some cases the years given were characterised rather by monetary stringency than by an actual crisis. The characteristics of the most important, in reference particularly to Britain, are considered below.

How Crises may be Counteracted.

We have seen that the principal feature of a panic is a contraction of credit and an insufficiency of currency. Consequently experience has shown that, although trade as a whole takes a long time to resume its normal trend and the industrial machine to function smoothly once again, yet the violence of the immediate blow may be considerably lessened by a courageous policy on the part of the banks as a whole or of the central bank in particular, by lending freely on satisfactory guarantees to legitimate traders who are involved in temporary difficulties. This permits such merchants to tide over the period of disaster and gives them time to reorganise their arrangements to meet the altered circumstances. The beneficial effects of this procedure are assisted if the State or the central bank can intervene to provide acceptable currency in sufficient quantity to meet trade requirements. Thus the crisis may be prevented from undue extension and intensity by the provision of adequate credit facilities and of such supplies of money as are necessary.

Obviously credit facilities must be afforded under such circumstances only at a high rate: otherwise demand may be unduly extended and speculative activity encouraged. These measures have been adopted in Britain especially during the various crises which have occurred during the last century (see below), and have always been attended with considerable success.

It remains to be added that under modern conditions the tendency is for such crises to be less frequent and less disastrous. Although on the one hand the productive organisation tends always to become more complex and delicate, on the other hand banking systems and technical knowledge tend ever to greater efficiency. Consequently it is easier under modern conditions to anticipate and provide for the climax, and thus mitigate its severity.

Crises in Great Britain.

The history of crises in Britain has been intimately related to the development in the organisation of her banking and credit systems. While the acute stage of each paroxysm has been usually marked by the failure of one or more units in the banking structure, so also has it generally been followed by some distinct improvement in the organisation based on the knowledge and experience gained as a result of the crisis. A consideration of the events of the various crises which have occurred in this country is therefore instructive, not only in that it gives

us an insight into the causes of trade cycles and of crises in general, but also in that it provides us with some idea of how crises have been overcome at different times.

The crises of the eighteenth century were all due to the unsatisfactory position of the currency and to the absence of State control over the activities of the private bankers. We need not, however, consider these in detail, as conditions were by no means comparable to those of the modern industrial period ushered in at the beginning of the last century. Consequently, we may direct our attention to the crises which have occurred in this country since the close of the Napoleonic wars.

1814.—Violent speculation followed the declaration of peace with France after the downfall of Napoleon, ending eventually in industrial disaster and the failure of a great number of note-issuing banks. The consequent contraction of the currency caused widespread inconvenience, which was, however, not without its compensations, as the resulting deflation permitted the Bank of England to resume payments in specie (see Chapter 26).

1825.—The resumption of cash payments by the Bank was accompanied in 1816 by England's definite adoption of the gold standard. This and the period of peace after prolonged war led to an increase in public confidence and an expansion of trade. Speculation ensued, particularly in foreign mining companies and in South American enterprises, resulting in an inflation of prices. The year 1825 was marked by a violent panic, during which the Bank of England was forced to issue £1 notes in an endeavour to remedy the deficiency in the currency.

1836–7.—After the usual period of prosperity, over-speculation in new mining and railway companies following the exploitation of our mineral deposits and the application of steam to railway haulage, resulted in a crisis and widespread failures of private note-issuing banks. This crisis was the immediate cause of the Bank Charter Act of 1844, which sought to provide a remedy for the condition of the currency and for the evils of the uncontrolled note issues.

1847.—At this period Britain's industrial development was proceeding apace, and railways were being built in all parts of the country. The great increase in the wealth of the nation and the prevailing low rate of interest led to rash speculation in railway and similar enterprises yielding a slow return, and there was consequently a scarcity of funds on the money market. Credit was contracted, prices fell, and a crisis was precipitated by the failure of the potato crop in Ireland and of the cotton crop in the United States, and by the prevalence of bad harvests in Europe. The immediate causes were a demand for money for foreign payments and

for calls on railway shares. The Bank of England was compelled to raise its rate from 3 per cent. to 8 per cent.; it refused to lend on Public Securities, and was finally obliged to obtain government sanction for the suspension of the Bank Charter Act, 1844, in order to increase its fiduciary issue. Public confidence was, however, at once restored by the knowledge that this step would permit of an adequate supply of notes, and the Bank was not actually forced to take advantage of the powers granted.

1857.—At this period the gold discoveries in California and Australia stimulated enterprise of all kinds; a great extension of railways took place, followed by over-trading and speculation in mining, railway, and shipping companies. Gold replaced the silver currency in France and U.S.A., but banks in the latter country could not keep pace with the demand for loanable capital. In August 1857, a panic occurred on the New York exchange, and many banks and railway companies failed. The effect was felt in Britain, and particularly in Liverpool and Glasgow. This resulted in a drain on the Bank of England for gold for transmission to America, Scotland, and Ireland. Several English and Scotch banks stopped payment, the Bank of England discount rate rose to 10 per cent., and its Reserve fell below half a million. Accordingly the Bank Act was again suspended, and £2,000,000 excess fiduciary notes were issued but were not all used, for public confidence was restored as soon as the Bank was freed from restriction.

1866.—When confidence had been restored after the 1857 crisis trade revived. The American Civil War led to issues of inconvertible paper in the U.S.A. in 1861, and in consequence of the operation of Gresham's Law gold was driven to Europe, while the reduction of the cotton supply caused purchases at high prices to be made in India, China, and Egypt, which were paid for in silver. Many new companies were formed under the Companies Acts of 1858-62, and much speculation took place, particularly on the part of finance companies, one of which, Overend, Gurney & Co., lent money for enterprises all over the world. Deficient crops, adverse exchanges, and a continental crisis caused a contraction of credit, which was followed in 1866 by one or two failures and a run on country bankers, who fell back on London for supplies. The Bank rate remained at 10 per cent. for three months, and on May 10th Overend & Gurney stopped payment with liabilities exceeding £10,000,000. On May 11th—"Black Friday"—the Bank of England increased its loans by four millions, and in consequence of the depletion of the Reserve, the Bank Act was suspended and the panic was allayed by the following day.

1878.—Great prosperity existed in England during 1870-72, and was followed by speculation and reckless expenditure in U.S.A. and Britain. The Franco-German War had caused much capital to be transferred to this country for safety, and had resulted in disturbed conditions on the Continent. A crisis in Vienna and another in America in 1873, when many banks failed, caused a subsequent drain of gold to Germany and a dullness of trade as a result of the loss of our best customer, America. The Russo-Turkish War accentuated the difficulties, so that many failures followed in 1876–78, including that of the City of Glasgow Bank, with liabilities of six millions, and of several other banks and large firms of bill brokers. A great depression in trade followed, with prevalent lack of confidence and stagnation.

1890.—The crisis was preceded by a great increase in the number of joint-stock companies, excessive speculation, and inflation of prices. Baring Bros., who had invested huge sums in South American securities, were on the eve of failure with liabilities of twenty millions, as a result of a sudden fall in the value of these securities. The failure was prevented by the action of the Bank of England and leading bankers, who guaranteed the liabilities of the firm to the extent of fifteen millions.

1893.—This crisis was a result of that of 1890. The Baring failure led to a movement to withdraw part of the millions of British money which had been invested in land speculation in new countries, causing stringency in Australia and the United States. Several banks failed as a result of a panic among British depositors.

1900.—The crisis of 1900, which originated in Germany and spread to the United States, did not much affect this country, although it was characterised by the failure of the London and Globe Insurance Company.

1907.—In the United States the failure of banking facilities, hoarding, and high rates of discount led to a scarcity of money and an extensive credit collapse, which was severely felt in London. Continental countries refused American bills, so an insistent demand for metal from New York caused by a heavy premium on gold had to be met by the Bank of England. By raising its rate the Bank attracted three millions in gold from France, and the situation was relieved by the issue of Panama Bonds and Treasury Notes in the United States. This crisis was particularly noteworthy because it evidenced the power of the Bank to attract large sums of gold by raising its rate of interest, and because it marked an unprecedented demand for gold in London as a result of the premium offered thereon by America, although

the exchanges warranted the passage of gold from New York to London.

1914. The Outbreak of the Great War.

The crisis of 1914, like the war which followed it, was the greatest in point of seriousness and effect which the world has ever seen. In practically every country apprehension was felt as to the future, and it is therefore not surprising that London's position as an open gold market and as the centre of international finance, exposed this country to considerable financial danger. This was accentuated because foreign nations were exerting every effort to convert their British assets into gold, which they sought to withdraw from the country. Great quantities of London bills were in circulation throughout the world, and the sudden presentation of many of these for discount and payment naturally caused considerable monetary difficulty on the part of the London accepting houses, discount houses, and banks, while the inability of stock-exchange operators and of the bill brokers to repay their loans borrowed from the bankers deprived the latter of their "second line of defence", i.e., money at call, etc. The acceptances of enemy firms and banks were necessarily thrown on the hands of their holders without any hope of prompt repayment. Considerable apprehension prevailed throughout the trading community: there was a rush to realise all forms of credit documents and to call in loans of every kind. The widespread demand for cash created a considerable shortage of currency, for which there was no provision under the existing law.

In order to relieve the position the stock exchange and banks were closed for several days, the former to prevent the "dumping" of securities for sale, and the latter to prevent a "run"; the bank rate was raised to 10 per cent. to restrict the outflow of gold and reduce the demand for loans; to meet the demands for currency, the Treasury arranged that, if necessary, the Bank Act would be suspended to enable the Bank of England to increase its fiduciary issue, but it was not found necessary to do this, and the gap in the currency was filled by the issue of treasury notes; finally, the pressure on acceptors of bills and other debtors was relieved by the establishment of a three months' moratorium.

The foregoing immediate measures were sufficient to prevent a panic and to restore public confidence. In the next few weeks the position was still further relieved when the Government undertook to guarantee certain bills for discount at the Bank of England, and, through the Foreign Debts Committee, undertook to advance to drawers up to 50 per cent. of the amount of outstanding foreign debts. The Bank also assisted acceptors of bills and stock exchange operators by granting them loans, and in this way unlocked part of the liquid resources of the other banks.

1920. The Post-War Crisis.

The depression during the war period was quite naturally followed after the armistice by widespread feelings of buoyancy and of hope in the future. All people looked forward unhesitatingly to a golden future, free from the horrors and uncertainties of a vast conflict. There was much leeway to make up in regard to the supply of goods, and the reaction was sufficient to cause a considerable activity in internal trade and in production for home and foreign markets. Those who made money during the war period and the many discharged and demobilised soldiers spent money with great freedom. For a time mills and factories were working to their full capacity. Speculation on the stock markets particularly was very pronounced, induced largely by the substantial distributions of profits and bonuses by those enterprises which had benefited by the war conditions. Thus for some time the banks created extensive credits against the great amounts of paper currency and of Government and industrial securities which passed into their hands. Prices were consequently forced up, and each successive rise in prices necessitated a further expansion of the exchange media. Further, the rise in prices was followed, as is usual, by rising wages, and the consequent additional purchasing power in the hands of the workers tended to react again on prices and force them still higher. Thus a vicious circle was created : high prices caused demands for higher wages ; the latter caused an increased demand for goods, which could not be satisfied except at an increasing expense of production, because of the scarcity of material and the enhanced cost of all articles in the post-war period ; thus were prices again forced up and the workers given another justification for demanding increased remuneration. Eventually a " boom " was present, marked by soaring prices, overtrading, and widespread speculation. At one time during the boom period a cotton-spinning firm in Lancashire declared a dividend of 400 per cent. on its ordinary shares ! All the characteristics of the nineteenth-century crisis were present in a marked degree. In March 1920, wholesale prices were approximately 263 per cent. above the level of July, 1914, and conditions were ripe for a crash.

The collapse cannot be attributed to any outstanding event of a disturbing nature ; it was due rather to a sequence of influences. The principal factor was undoubtedly the recognition by producers and consumers that a fall must come ultimately. Consequently very little was required to start its course, and this was provided by the attempts of producers and of the Government Disposal Board to unload vast stocks on a rising market. Many orders for goods were cancelled by foreign merchants, who found themselves unable to make the necessary payments. This feature was accentuated by the policy of deflation adopted in the

United States and in Japan. Prices accordingly fell away, and consumers withheld their funds in order to buy at lower levels. Once the ball was set rolling it gathered impetus, and the rapid fall was accentuated by the Government's declared policy of deflation and by the action of the banks in calling in advances and in restricting credit facilities. Traders and the public lost confidence, the German reparations difficulty especially causing considerable uneasiness; one fall led to another, until by December, 1921, prices were only 82 per cent. above the pre-war level, and industry everywhere was characterised by depression and uncertainty.

1928–9. Speculation in Industrials: The Hatry Crisis.

The years 1928-29, however, were marked by an almost unprecedented boom in certain British industrial securities, particularly those connected with newly developed industries, such as artificial silk manufacturing and the gramophone and wireless trades. The movement on this side of the Atlantic was accentuated by an unexampled boom on the New York Stock Market, and prices of certain international issues reached greatly inflated levels. The high rates of interest offered on the New York call-money market led to a vast transfer of funds to the United States from Europe, and this, combined with certain other factors, led to a heavy drain of gold from the Bank of England, which in the Autumn of 1929 was forced to put up its rate to 6½ per cent. The inevitable contraction of credit and collapse of stock exchange prices followed very quickly, and so accentuated the difficulties already engendered by the world-wide fall in commodity prices which, in August, 1929, reached the low level of 35 per cent. above pre-war figures.

In this country the crisis was marked by the crash of certain financial groups, notably those connected with a financier, Clarence Hatry, whose operations involved the unprecedented loss of £13½ millions. In the United States, Wall Street suffered the greatest collapse in its history, and millions of dollars were lost by speculators, large and small, throughout the country.

The collapse and depression in America had the effect of relieving the strain on European financial resources, and liquid balances were transferred in such quantities from New York to London that sterling rose to a substantial premium over the dollar. By gradual stages the Bank of England was able to reduce its rate to 4½ per cent., and the resourceful measures taken by the monetary authorities both here and in U.S.A. soon brought about conditions of greater ease. Prices still continued to fall, and, in August 1930, were only 9 per cent. above pre-war level, with the result that production throughout the world was thoroughly disorganised and unemployment seriously increased.

THEORIES OF THE TRADE CYCLE

Many people regard the periodicity of trade cycles merely as a matter of coincidence, but it has long been recognised by economists that their peculiar regularity must be attributable to some explainable cause or causes. In the following paragraphs attention is directed to the principal theories of the trade cycle which have from time to time been advanced, mainly with the object of suggesting means whereby the harmful fluctuations may be corrected and avoided.

Climatic Theories.

Several nineteenth-century economists, unable to find any other adequate explanation for the periodicity of trade cycles, have endeavoured to find some connection between such cycles and climatic conditions, apparently the only external cause which could produce so widespread an effect. Climatic conditions, it is maintained, determine the abundance or scarcity of the harvests, and upon these largely depend industrial conditions throughout the world. Raw materials play a vital part in commerce, and the failure or abundance of the harvests of important crops makes a vast difference in agricultural communities, affecting not only their economic well-being but also their power to purchase the goods of other countries. Thus are the effects, adverse or favourable, felt throughout the trading community. The failure of India's grain crops or of America's cotton crops profoundly influences Britain's industries, and depressed conditions in one community or a section of it must necessarily cause depression in other communities and other districts.

The first of such theories was the famous "Sunspot Theory" of W. S. Jevons, who sought to show that the periodic appearance of spots on the surface of the sun coincided with the failure of the Indian monsoon and with general agricultural depression throughout the world. He accordingly suggested that the sunspots may result in the emission of less heat with an adverse effect on the quantity and quality of harvests. This theory is now discredited, but more recently Sir William Beveridge[1] has suggested that periodic changes of temperature may affect harvests and consequently business conditions in all countries, although he expresses the opinion that climatic influences may be only one of many causes of the cyclical fluctuations.

The Over-Capitalisation Theory.

Exponents of the Over-Capitalisation Theory of trade cycles attribute them to the fact that the workers receive too small a proportion of the product of industry. Consequently, in prosperous periods, much of the "surplus value" created by

[1] "Weather and Harvest Cycles," *Economic Journal*, Dec. 1921.

producers passes into the form of fixed capital held by the entrepreneur instead of into the hands of labour. Thus the power of the workers to purchase goods is diminished, less goods are consumed by the great body of the population than are produced, and industry accordingly suffers from a dearth of floating capital, and a period of failure and stagnation ensues.

This theory has been developed by Mr J. A. Hobson, who stresses the existence of a limited market in most commodities as an explanation of the tendency of production to out-run consumption. He contends that there is a normal tendency for an excessive proportion of the general income of the community to be saved and applied to capital (i.e., productive) purposes instead of being used in the purchase of consumer's goods. The explanation of this tendency to chronic over-saving he finds in the wide disparities of income between rich and poor. The large elements of unneeded and unearned income which fall to the former class cause a virtually automatic accumulation of capital in excess of real needs.

The economic checks commonly adduced, viz., the fall in the rate of interest as a check on excessive saving, and the fall in prices as a stimulant of increased consumption, are too slow in their action. They do not become effective until great waste and damage have occurred.

The remedy, it is argued, is in a better distribution of income, which, although involving a reduced *proportion* of saved to spent income, would not ultimately result in less being saved because the fuller and more regular use of the machinery of production would provide a greatly enlarged national income.

Like many other theories, this may possibly offer a partial explanation of the onset and prevalence of depression, but it is not adequate as an explanation of periodicity. There are also several other objections. There seems to be no reason why the concentration of income in the hands of the producing class should not result in as much consumption as if that income flowed to the poorer classes: possibly more luxuries would be bought than necessaries, but as we have seen, the demand for the latter is not very elastic and consequently cannot fall very much. But the purchase of a greater proportion of luxuries than of necessaries should not cause a crisis, particularly as the sale of the former generally results in a greater proportion of profit to industry than the sale of the latter. A more important objection is that a crisis is almost always marked by a rise in prices and a rise in wages, i.e., the working-class incomes are *increased*, and consequently their power to consume is extended and not lessened as the cycle progresses to its breaking-point. Then again, as is pointed out by Professor Wesley Mitchell, the great American authority on the business cycle, if under-consumption were the explanation of the trade cycle, one would expect, as the sign of oncoming depression, that the prices of

consumer's goods, would fall before the prices of raw materials and other producer's goods, but, in fact, the reverse is the case. Depression is first felt in those industries which supply producer's goods.

The Competition Theory.

Socialist writers stress the view that trade cycles are due to competition between *independent* producers, resulting in a greater volume of production in anticipation of demand than is justified by the resources and demands of the community. It is argued that prosperity induces a flow of money into productive enterprises, an extension of credit facilities, a rise in prices, and an attraction of new, and possibly incapable, producers into industry. Eventually the continued extension of production overtakes demand for the products and drives up the cost of the factors of production, while general prices tend to fall. The position is accentuated because large-scale enterprises take a considerable time to get into working order, and by the time the products can be marketed demand may have fallen off. This tendency of producers to overshoot demand and to glut the market is the result, not of wild speculation, nor of miscalculation of the total demand, but must be regarded as a normal incident wherever competition has a place.

For a time the organisations once started continue to function: it is difficult and sometimes impossible to convert large quantities of fixed capital to other uses, so some industries may persist for a time even although they must produce at a loss. The marginal or less capable employers are at last forced out of the market, production falls off and a restriction of credit facilities causes general depression. This continues until industrial enterprise is stimulated by the scarcity of commodities, and a period of improving trade again commences.

While every economist would admit that the unco-ordinated nature of modern production is one factor in the trade cycle, most authorities maintain that it is going much too far to suggest that it is the only factor. So long as production is initiated ahead of demand it must be an estimate, and a collectivist society might make bad estimates of the future as well as a competitive society.

Nevertheless, this theory explains most of the phenomena of a trade cycle, and is in accord with modern conditions of large-scale capitalistic production in anticipation of demand. The periodicity of the cycle is explained by the time taken by production in getting into full working order and in adjusting itself to meet the anticipated demand for its commodities, and by the period required for recovery after the crash has occurred. The theory does not, however, completely account for the regularity of the occurrence of the cycle.

Monetary Theories of the Trade Cycle.

A study of the paragraphs on crises cannot but emphasise the remarkable dependence of the whole industrial structure upon its financial organisation, and particularly upon the arrangements of its credit machinery. As we have seen, the fluctuations in trade and industry may be attributable to climatic influences or to the vagaries of human nature, but the conditions which eventually culminate in a boom and result later in a crash are due almost entirely to financial or monetary causes.

In the nineteenth century crises were chiefly attributable to the issue of notes by bankers in excess of what their resources could bear. More recently crises may be stated to be preceded by an " over-issue " of credit facilities by the banks in the form of overdrafts and discounts. In both cases speculation has been encouraged by the comparative ease of obtaining accommodation, and such speculation has forced up prices and involved business in that vicious circle which inevitably leads to a sudden contraction of credit, a collapse of speculation, and a violent recoil in prices.

It is certainly true to say that bankers do not initiate speculation, but they undoubtedly exercise a most profound influence upon the extent to which it spreads. Through their hands pass most of the credit operations which characterise a period of speculative activity, and they unquestionably have the power, on most occasions, of discriminating between the use of credit facilities for speculative and for legitimate business purposes. It is therefore not surprising that it is frequently asked whether the ordinary type of crisis could not be altogether avoided by a united and determined policy on the part of the bankers. Have they not those resources and that information at their disposal which should enable them to estimate whether speculation is extending or no, and whether conditions are ripening for a boom and a harmful crash ? If so, there seems little reason to doubt that a united policy could be adopted which would aim at preventing too violent a movement by the gradual and timely application of restrictive measures.

Considerations of this kind led the so-called " monetary theorists " to ascribe trade cycles primarily and mainly to defects in the monetary, financial, and banking organisation.

Purchases, it is pointed out, are made largely with borrowed capital, i.e., bank discounts, loans, and advances. When people expect a rise in prices they buy in order to sell, and their action strengthens the upward tendency in prices which, in turn, justifies their action. But the power to purchase in this way is made possible by the readiness of banks to grant accommodation at comparatively low rates.

So long as production can be expanded to keep pace with the increased volume of money (including bank advances) all is well,

and the price-level is held in check. But after the limits of genuine productive expansion have been reached, the banks continue to lend freely and manufacturers and merchants continue to expect prices to rise. The result is that a speculative boom is superimposed on a production boom and prices rise rapidly. Now this speculative boom might be prevented if the banks would refuse accommodation at the point at which the limit of true productive expansion is reached. On the other hand, if the banks would lend more freely and not restrict credit so suddenly when depression sets in, the depression might be made less intense and prolonged.

The history of trade cycles appears to show that a steady increase in prices is a necessary corollary of a revival of trade after a period of depression. But the problem to be solved is how the expansion of credit can be restricted as far as is possible according to the needs of trade, i.e., how currency and credit can be regulated so as to ensure stability in the general level of prices. One group of theorists suggests as a means of achieving this object the conscious manipulation of the discount rate by the central bank so that credit would be regulated according to the movements in prices. Another group proposes the careful rationing of bank credits and a rigid discrimination between various types of borrowers. The third and most important proposal is that stability in the general level of prices should be achieved by the substitution of a *managed currency* for the usual gold standard. The practical objections to this proposal have already been discussed in the preceding chapter.

Monetary theories are criticised mainly on the grounds that the fundamental causes of fluctuations arise out of the conditions of industry itself rather than finance, and that although monetary influences are important, they are not the primary cause of fluctuations. Credit and currency inflation make a boom *possible* and condition the *extent* of the boom, but they do not cause it. A more important objection is that the trade cycle, being a world phenomenon, cannot, on the one hand, be attributed to the internal conditions of one or two countries, nor, on the other hand, can it be remedied by isolated attempts at monetary reform. International and not national action is clearly necessary if international stability is to be achieved.

The Psychological Theory.

In the theory developed by Professor Marshall, Professor Pigou, and Mr F. Lavington, and now widely accepted, the psychological factor, stressed by Ricardo, J. S. Mill, and other classical economists, is given first importance. Briefly, the theory asserts that changes in the state of mind of the leaders of industry and commerce are more important than all such haphazard factors as harvests, floods, inventions, etc., although these undoubtedly

exert a great influence upon the psychological factor. Business men vary between errors of optimism and pessimism. In good times they become over-confident, and expand investment and production beyond what a true forecast of their profitableness would warrant. After a while, when the goods produced cannot be sold at a price high enough to cover their cost of production, the business community suffers losses, and these losses react on the state of mind, causing business men to underestimate the prospects of investment just as previously they had over-estimated them.

If the minds of business men worked *independently*, as is suggested by the "competition" theorists, their movements would tend to cancel out, and fluctuation would not be very great. But the minds of business men do not move independently; the swing from one type of error to another is a common swing, a sort of crowd movement. This is so mainly because, in the first place, states of mind are infectious, and, secondly, because different business firms are closely bound together by a network of orders and credit relations. Consequently, moods of optimism and pessimism tend to move in waves over large areas and have a natural rhythm, the period of which approximates to that historically applicable to the trade cycle.

The psychological theorists do not deny the influence of monetary factors, but Professor Pigou points out that it would be a "gross fallacy to infer, as is sometimes done, that, because the trade cycle always presents itself in a money garment, therefore the forces that underlie its movement necessarily reside in the money system" . . . "It may be—and indeed it certainly is—the fact that the monetary and banking arrangements current at the present time cause errors of optimism and errors of pessimism to be larger than they would be in a régime of stabilised general prices: because, when general prices are rising, the ordinary man, while seeing clearly the benefit to himself that will result from the rise in his own things, does not attend so closely to the harm to himself that will result from the rise in other things; and similarly when general prices are falling. But to grant this is not to grant that errors of optimism and of pessimism are merely monetary phenomena." [1]

The Psychological Theory is criticised on the grounds that what are called optimism and pessimism are substantially correct anticipations of rises or falls in prices, that if price stabilisation were attained through a bolder use of discount policy, the effects of optimism and pessimism would be corrected whether or not they were errors, and finally, that it does not satisfactorily explain the approximate fixity in the period of the trade cycle nor the difference between the wants of consumers in good and bad times.

[1] *Is Unemployment Inevitable?* pages 92 and 98.

Proposed Correctives of the Trade Cycle.

The great number of theories of the trade cycle which have been put forward, each stressing different aspects of the phenomenon, suggests at once that there is no single explanation. The causes are many and complex, and probably only a combination of all the theories would offer a complete solution.

Fundamentally, there is the difficulty that production in modern industry must be based upon an estimate; psychological influences produce errors of optimism and errors of pessimism; sometimes those errors may be influenced by climatic factors; competition fosters excessive production; banking and monetary policy exaggerates the "swings" of trade. But although there seems to be no single explanation of industrial fluctuations, the various theories which we have discussed serve a most important purpose in that they point the way to various measures whereby the harmful effects of such fluctuations may to some extent be ameliorated.

In view of the fact that the imperfect anticipation of demand has an important bearing on the trade cycle, attempts have been made during recent years, e.g., by the Cambridge and Harvard (U.S.) Economic Services, to provide reliable statistical data upon which the business man may base his estimates of the probable future course of general economic conditions. In return for an annual payment subscribers are supplied, from time to time, with comprehensive reports on the economic situation, and also with a chart (e.g., the Harvard Business Barometer), showing graphically indexes of the figures of various items, such as bank clearings, prices, bank loans and deposits, interest rates, imports, the prices and turnover of stocks and shares, and so on, all of which are indicative of the trend of commercial activity, and enable a reasonable prediction to be made of the future course of events.

Another proposal which has considerable merit is that the Government and local authorities, who employ large numbers of workers, could do much to even out employment and increase stability by adjusting their activities so that employment on public constructional works is increased in times of depression and diminished in more prosperous periods, when the workers are required for the general purposes of industry. Similar adjustments, it is suggested, could be made by railway companies and by large private organisations. Closely allied to this proposal is the suggestion that business firms generally could do much to smooth out fluctuations by pursuing a more stable policy, as, for example, by planning capital expenditure far ahead, by advertising strongly in bad times, by following a cautious dividend policy, avoiding over-capitalisation, and utilising reserves accumulated in prosperous periods in financing extension and improvements in times of depression.

Those who maintain that the trade cycle is due to competition or to under-consumption propose that it could be corrected by the reorganisation of industry on a socialistic basis. It is argued that what is required is some co-ordinating authority and a much greater equality in the distribution of income as between rich and poor. But quite apart from the desirability or otherwise of State control of production on other grounds, there seems to be no good reason to suppose that the imperfect anticipation of demand would be removed simply by abolishing private enterprise. Government officials might not forecast requirements, especially capital requirements and those of commodities which enter into foreign trade, any more accurately than independent entrepreneurs.

Whether complete stability is or is not desirable is still a subject of controversy, but all economists are agreed that much greater industrial and commercial stability is desirable than that which has at present been achieved. But it is clear that, as the trade cycle is a world phenomenon due to many complex causes, there can be no simple remedy. More accurate and widespread knowledge of economic factors would undoubtedly modify its effects; it should be possible for private producers to assist to some extent in stabilising production, while the Government and public bodies, by suitable timing of capital expenditure, could do much to ameliorate depression in private trade. The practical difficulties in the way of this policy might be met if plans were laid sufficiently in advance and as much attention were paid to restricting public expenditure when private trade is good as to enlarging public expenditure when private trade is bad. Finally, it is now generally agreed that the violence of upward movements of prices, and consequently the severity of the reaction, might be checked by a more conscious and deliberate use of the discount rate by the central bank. But the extent to which such policy can be adopted is limited by practical considerations. It involves checking trade prosperity when it is on the up-grade, and consequently implies great confidence on the part of the business community and the workers in those responsible for monetary policy.

THE ECONOMICS OF GOVERNMENT

CHAPTER 31

THE NECESSITY FOR STATE INTERFERENCE AND ITS FORMS

THE relation of the Economics of Government to the general theory of Economic Science as it has been presented in the foregoing chapters of this book is not at once evident. The Consumption, Production, Exchange and Distribution of wealth have been considered and analysed without reference to any political organisation or to any political boundaries. The theory of Economics, as hitherto expounded, has no special application to Briton, German, or American : its scope is world-wide and its subject is man wherever he is actuated by economic motives.

But it becomes clear on a little consideration that the modern State fills a most important position in relation to the economic organism. Even in comparatively primitive communities it is recognised that the provision of security and the upkeep of law and of order are functions which must be discharged for the benefit of the community generally and at the general expense of the members of that community. The classic definition of a State is " an association of human beings established for defence against external enemies and the maintenance of peaceable and orderly relations within the community itself ". But as civilisation advances and society progresses both socially and economically, it becomes necessary for the State to undertake far more than the maintenance of defence and the administration of justice. The need for Governmental activity is constantly increased, and the functions assumed by the State become ever more diversified, complex, and expensive.

So far as our present inquiry is concerned, we have to consider primarily those functions of government which have an immediate influence upon man's economic activity ; we seek to investigate those forms of State activity and interference which have important effects upon the industrial and commercial life of the community. But although we are more particularly concerned with the economic side of the duties of government, we do not ignore the social aspect, for, as we shall understand as our inquiry develops, the social activities of the State, such as the provision of education and the control of public

health, have important though indirect effects on the productiveness of the community.

The Limits of State Activity.

According to the definition quoted above, the very existence of a State implies the association of its members for defence against external enemies and for the maintenance of internal peace and order. These activities must exist before a State can be said to exist, and it has therefore always been recognised that Government interference and enterprise for the maintenance of external defence and internal justice are inevitable in any organised community. Furthermore, it is generally conceded that the effectual discharge of these *protective* or *primary* functions necessarily involves the secondary activities of taxation and legislation, with their extensive and costly organisations.

But in regard to other forms of Government interference considerable controversy has always existed. Although the members of all communities have been agreed that some degree of State interference is inevitable and frequently necessary in business and in social life, there has never existed any unanimity concerning the extent of this interference. Accordingly, we may find, on the one hand, instances of sovereign control of social and economic activity which is akin to bondage, and, on the other hand, such a recognition of individual liberty as to lead to an unrestrained and almost inhuman fight for personal gain.

For a long period in British history the supporters of Mercantilism were enabled to carry State interference with social and economic life to extreme limits. These conditions persisted until the Physiocratic doctrine of "natural liberty" and the appearance of Adam Smith's *Wealth of Nations*, 1776, marked the beginning of a new era of freedom and of unhampered competition. But it soon became apparent that the unrestricted play of economic forces was as mischievous in some of its results as artificially controlled enterprise. The policy of non-interference or *laissez faire* led to the widespread evils of the factory system, to the sordid exploitation of the workers, and to the terrible oppression of the poorer classes.

It came to be recognised that the State has duties other than the provision of an army, a navy, and police, and that defence of quite a different kind was necessary. The community, as a whole, must unite to enforce right against might, to protect the economically weak against the economically strong, to prevent the exploitation of the poor by the rich, and to restrict the growth of poverty and disease, with their destructive effects upon the social and political order. It came to be acknowledged, also, that certain services of great utility to the community cannot be left to private enterprise either because

of their magnitude or absence of reward. Few individuals can be expected to have sufficient solicitude for the general good of the citizens of their town as to furnish them with parks and playing fields, or with schools for their children, or with well-paved streets and good roads for the conduct of their social and business activities. The value of such services is immeasurable, and by contributing to the health, welfare, and efficiency of the people they materially affect the productiveness of the community as a whole.

In the provision of such public utilities it is now generally agreed that State intervention is necessary, although some controversy exists as to the extent to which it should proceed. But the direct interference and activity of the Government in business spheres are subjects of acute controversy in most countries of the world. Should the State interfere with the free flow of goods between itself and other countries, as by the imposition of restrictive tariffs or by the payment of subsidies or bounties on exports? Is the control of the postal services, of the railway system, of the mines, and, indeed, of industry generally, a reasonable and proper function of modern government? How far is Government interference justified as between employer and employed, or as between consumer and monopolistic producer? To what extent should the chosen representatives of a people interfere to regulate the productive activities of that people, and intervene to arrange a different distribution of wealth from that which results from the play of such economic forces as have been already discussed in this book?

These and many similar questions arise in connection with the functions of the modern Government. Some of them are dealt with in other chapters in this volume, but the existence of such controversial issues clearly indicates the important part now played by the State in business and in social life. They enable us to appreciate also that there are two broad divisions of State activities: (*a*) those which are generally regarded as *necessary*, and (*b*) those which are *optional* and subject to controversy. J. S. Mill[1] defines the necessary functions of the State as those "which are either inseparable from the idea of a government or are exercised habitually and without objection by all governments"; examples are the provision of defence, the framing of laws concerning property and contracts, the provision of the police force and judiciary system, and the raising of necessary revenue for the discharge of State functions. Similarly, he defines the optional activities as those the exercise of which "does not amount to necessity, and is a subject on which diversity of opinion does or may exist". Examples of these activities are interference with trade by tariffs or bounties, the imposition of restraints on trusts and monopolies, and the control of money-lending operations by usury laws.

[1] *Principles*, Book V. I. i.

In regard to other State functions Mill accepted the general principles of non-interference or *laissez faire*, but suggested four broad spheres in which interference may be justified: (*a*) Where some individuals have undue power over others, as in the case of employers over unorganised labour; (*b*) Where the consumer is not competent to judge a commodity or his own interests, as in the case of manufactured foods and the provision of education; (*c*) Where private enterprise would be suitable but not forthcoming, as in the case of canal and railway enterprises in some countries; (*d*) Where State interference may be necessary to carry out the wishes of the parties concerned or to protect the interests of a class, as in the case of arbitration or of the protection of workers in certain "sweated" trades.

This analysis is undoubtedly useful, although it is possible that Mill did not clearly foresee the great changes in the field of State functions which were necessitated by the great advance of society since his day. The subject of State interference is necessarily one of great difficulty and controversy. Despite its great utility in many spheres, the possibility of its abuse cannot be ignored. Incompetence and ignorance on the part of administrators, the well-known defects of bureaucracy and officialdom, and the innate objection of people generally to Governmental regulation and State interference with their natural freedom of thought and action all point to dangers which must be avoided wherever possible. Nevertheless, much of the controversy which surrounds the subject is political rather than economic, so for our present purpose we may accept the general principle that the government of the community is for the good of the governed, and that the best criterion of State interference and of State expenditure in any form is whether it will directly or indirectly benefit the community as a whole.

"Any State expenditure, then, which directly or indirectly develops the natural or human resources of the nation or leads to their more economical use may be expected to increase national prosperity by increasing the national wealth, and may thus be expected ultimately to 'pay for itself'—given the important qualification that the gain due to the increased expenditure is not less than the loss caused by the heavier taxation".[1]

Productive State Activity.

If we adopt this view we may regard as justifiable and productive any State functions which afford a definite economic service to the community, or which may be expected to give an ultimate return on the capital invested.

In this class is included State expenditure on railways or canals which would not be undertaken by private enterprise, either because of the magnitude of the undertaking or its uncertainty

[1] M. E. Robinson, *Public Finance*, p. 7.

of success, or because the prospect of a low return to invested capital for a long period would not be attractive to the private investor.

In the same class will be placed expenditure and control by the State in afforestation, such as we find in Switzerland, Canada, and Britain; on harbours and roadsteads, such as we find in most sea-girt countries; on the reclamation of land, as in Holland and Germany; on the provision of wireless chains and wireless stations, now undertaken by most Governments. Many more examples may be quoted of action taken by the State to preserve or to develop the natural resources of the community, but those given clearly illustrate the fact that modern communities are inclined to an extension rather than a limitation of State interference so long as a general benefit may be expected to accrue.

Equally justifiable, although not so obviously productive, are those activities of the State which may be regarded as being directed to the conservation and development of the *human resources* of the community, and which private enterprise could not be relied upon to institute or to undertake. In this class may be mentioned the State organisation and promotion of educational facilities, the institution and upkeep of libraries and museums for the general pleasure and profit, the control of public health and sanitation, the regulation of factory conditions and the elimination of the anti-social employment of women and children. All such services may be expected to promote and to increase the general physical and mental well-being of the inhabitants of the community, and therefore in the long run to add to their general usefulness and productiveness as members of society.

In so far as this object can be achieved State interference is clearly justified, but there is necessarily a limit to the annual expenditure on such matters, as the present generation, which may be already heavily taxed and which may not reap any of the resultant benefits, should not assume too great a burden of taxation for the benefit of generations to come.

Unproductive State Activity.

But although much State activity and large amounts of public money are thus applied for purposes which are directly or indirectly productive, far greater effort and much greater sums are expended on functions which make no addition to material wealth and from which a return cannot be anticipated. The outstanding example is, of course, the expenditure of valuable effort and wealth on armaments and war. No thinking student will need to be reminded of the enormous burden now borne by our country in consequence of her part in the Great War, but not many would care to say that such expenditure was unjustified. In an economic sense, it can scarcely be regarded as productive, but

it is clearly imperative that every ounce of energy and wealth should be thrown into the protection of national security and national ideals. Under present conditions it would appear that expenditure on wars is inevitable, but it seems clear that it would be to the advantage of each community and of the world in general if some other means were devised for ensuring national safety and for settling international differences.

In modern communities Government expenditure on armaments transcends in importance all other forms of unproductive outlay, but certain other forms cannot strictly be regarded as productive from the economic standpoint. We may mention in this connection Government outlay on the administration of justice, on the care of the mentally deficient, and on old age pensions. Nevertheless, all such functions tend to the greater well-being and security of the State, and in that respect they are economically justified because they lead to the greater happiness and efficiency of its inhabitants.

The line of demarcation between productive and unproductive State interference is therefore not easy to define, but from an economic point of view we can say that no expenditure is justified, however productive it may be, if the imposition of the necessary taxation tends to lessen the efficiency and productivity of the people to a greater extent than the gain which may be anticipated from the outlay.

Forms of State Activity.

We may now proceed to consider the activities of the State under the following headings, noting incidentally that in our use of the term "State" we include also the various classes of local authorities which function in a modern community :—

1. The Provision of External Defence and Internal Security.—This involves "protecting the society from the violence and invasion of other independent societies", and "protecting, as far as possible, every member of the society from the injustice or oppression of every other member of it, or the duty of establishing an exact administration of justice".[1]

2. Direct State Intervention in Business Affairs, as when the State actually undertakes productive enterprises, or assists private enterprise, or, by various systems of regulation and control, intervenes to restrict the free play of economic forces.

3. Direct Social Activities of the State, which have an indirect though extremely important influence on the conduct of business generally, and particularly on the productiveness of the community as a whole.

[1] Adam Smith, *Wealth of Nations*, Book V. I. i. and ii.

4. PUBLIC FINANCE, i.e., the provision and administration of revenue and the allocation and control of expenditure in the performance of the foregoing functions. Treatment of this wide subject is reserved for the three following chapters.

THE PROVISION OF DEFENCE AND SECURITY

In recent years the effort and expense of Governments in providing for the defence and security of the community have reached considerable proportions, more particularly in the case of the leading nations of the world.

The provision of defence entails, on the one hand, the withdrawal from productive activity of a large number of persons, including soldiers, sailors, airmen, and administrative officials. On the other hand, it necessitates the absorption of the energies of numerous workers in armament works, munition factories, dockyards, and so forth. Security is, of course, essential to economic progress, and State outlay to maintain that security is accordingly justified. By the withdrawal of some individuals for purposes of defence others are enabled to work in peace and security, and to give their whole energies to productive work for the general benefit. But under modern conditions the expenditure of government in this direction has reached such enormous proportions that many are induced to ask whether the cost of insuring security is not in excess of the resulting economic and social gain, and whether some agreement amongst the nations would not obviate what is without doubt an enormous unproductive drain on national resources.

Under the heading of security must be included also the State upkeep of the judiciary system and police, for the maintenance of internal peace and security and for the enforcement of justice and individual rights, so essential to the smooth and progressive working of the economic machine.

DIRECT STATE INTERVENTION IN BUSINESS

The guiding principles of economic activity in modern society are freedom of enterprise and the recognition of individual rights in property. The general rule of the present competitive system is that any person is free to act in his own interests in the pursuit of wealth, and that he will be left in unhampered control of such wealth as he may come to possess. In all branches of man's economic activity—production, exchange, distribution and consumption—society relies upon competition for securing justice as between man and man and for obtaining a fair distribution of the product among the various factors of production. Generally speaking, the State does not intervene unless its laws are broken

or unless its assistance is required to enforce the general principles of contract which are essential for the performance of business transactions.

But as we have already noticed, the complete adherence to the policy of *laissez faire*, carried to extreme limits by the fervid supporters of Adam Smith, has been found to be impracticable as society has progressed and the productive organisation has become more complex.

In various directions it becomes necessary for the State to supplement or to regulate private enterprise,—in some cases even to assume the full ownership and control of the undertaking. We may briefly summarise as follows the cases in which State or municipal intervention in economic affairs is justified under modern conditions :—

1. *When the business is of a monopolistic nature*, as in the case of the various social monopolies such as the railway, canal, postal and telegraph systems, and urban gas, electricity, water and transport undertakings. It will be clear on a little consideration that none of these could be entirely unregulated in a modern community : competition therein is generally undesirable, if not quite impossible.

2. *Where private enterprise would not be attracted*, because of (*a*) the unremunerative nature of the undertaking, or (*b*) the absence of return for a considerable period. Included in this class are many of the so-called unproductive services, such as the care of general health and sanitation, particularly in relation to the housing of the working classes. Examples of the second class are railways and canals (such as those of Canada, France, Germany and Belgium), afforestation (e.g., Switzerland), the reclamation of land (as in Holland), and the provision of roads and bridges (as in most countries and particularly in new countries).

3. *Where the economically weak require protection*, as in the case of workers who are exploited in factories and workshops, particularly in the sweated industries.

4. *Where monopolistic combinations exploit the public.*— Trusts and combines may obtain undue gain at the expense of the community generally. Examples of this class are to be found chiefly in the United States, where legislation has been necessary to limit the activities of the great combinations of producers.

5. *Where the consumer's interest may be prejudiced*, as by adulterated foods, unsafe railways or tramways, and by the sale of drugs and intoxicants. Under this heading also may be included the provision of a sound currency and of a good system of weights and measures.

6. *Where State management and control are dictated by political or social as well as economic considerations.*—Under this heading may be mentioned the manufacture of armaments and of war material generally.

We may therefore trace a gradual evolution and extension of the principle of State and municipal intervention in economic affairs: first, through the *provision of facilities* for general economic activity; secondly, in the *direct encouragement* of certain forms of that activity; thirdly, in the *regulation* of economic enterprise, and finally, in the actual *ownership and control* of certain forms of productive enterprise. In the following paragraphs each of these forms of intervention is considered in the order given.

State Endeavours to Facilitate Business.

Possibly the most important means by which the State facilitates economic activities is by the institution and enforcement of statutes relating to contract, without which business could scarcely proceed with satisfaction and security. In every society State regulation and recognition of the principles of contract law are essential to progress, and as the community advances, improvements, extensions, alterations and codifications of that law are necessary in order to keep pace with and to facilitate the conduct of business. Definite rules must be made and enforced concerning the rights and liabilities of parties to contracts of all kinds. For the protection of those parties and for the sake of the simplicity and smooth working of the social and economic machine certain requirements of form and substance may be made compulsory, while the State may in certain circumstances refuse to enforce contracts which are not drawn up in the requisite form or which may be detrimental to one contracting party or to the general interests of the community. In certain cases, also, penalties may be imposed and punishments inflicted with the object of preventing certain abuses which interfere with or restrict economic activity.

In these and in many other ways is the general conduct of business facilitated. Enterprise is encouraged and a greater degree of general security attained by wisely-conceived and carefully-applied laws. Of special importance from an economic standpoint are those laws which govern the constitution and liability of various forms of economic organisation—partnerships, companies, trusts, trade unions, professional bodies and friendly societies. The transaction of business by and with a company, for example, is greatly facilitated by a clear understanding of the liabilities of its promoters, directors, shareholders and auditors, while the community generally benefits from laws demanding the publication and certification of balance-sheets and reports.

In the same important class are laws relating to bankruptcy and insolvency, protecting the creditor against fraud and dishonesty on the one hand, and, on the other, giving the debtor an opportunity of making a fresh start in life; and also laws concerning patents, trade marks and copyright, and those providing for arbitration and conciliation in industrial disputes.

In more direct fashion the State facilitates economic activity by providing a sound and well-maintained currency and a system of weights and measures; by undertaking the collection and compilation of economic statistics, and the publication of reports on industrial and commercial matters; by obtaining information of economic conditions and markets in other countries through its various consular offices; by appointing commissions of enquiry into industrial questions; by organising and regulating local fairs and markets in various centres; and by promoting great exhibitions both at home and abroad for the furtherance of trade and industry. In most countries, also, the State now undertakes research, experiment, and investigation with the object of promoting and facilitating great national industries. In this country, the Ministry of Agriculture and Fisheries, constituted in 1919, and the Development Commission, founded in 1910, undertake research and experiment and make advances of capital with the object of promoting the development of agriculture, fisheries, forestry, rural transport, and canal and river navigation. The aim is to assist private enterprise, and also to open up the field for such enterprise by actually proving the potentialities of the future development of certain industries, whether old or new. The important work of the agricultural experimental stations is well known; to these is due the establishment in this country of the beet sugar industry, of the cultivation of tobacco and flax, and the appreciation by British farmers of the advantages of certain types and rotations of crops, of various artificial manures, and of certain breeds of cattle and sheep. The Development Commission is also responsible for the afforestation and reclamation schemes which have been undertaken in this country, and also for the encouragement of co-operation among small farmers in various districts.

Clearly, these functions of a modern State are of incalculable benefit to the community, and must inevitably add greatly to its economic efficiency and general productivity.

State Encouragement of Economic Activity.

The activities of government considered under the previous heading have the object of promoting the economic activity and progress of the community as a whole. The means of encouragement which we shall now discuss mark a further stage. Their effect is generally more *direct*, and in some cases more *specific*

(i.e., applied to particular forms of activity) than the functions already described.

By far the most important of the methods adopted in various States to encourage economic activity is that of *protection*, with its allied principles, *reciprocity*, *retaliation*, and *imperial preference*. These controversial forms of State activity, discussed in Chapter 28, may considerably influence the production and distribution of wealth within a community, and seriously affect its economic and political relationships with other nations.

An even more direct form of encouragement is that which is applied in the form of *bounties* or *subsidies* to certain industries or in respect of certain products. The main object of protection and of imperial preference is to ensure a market for home products *generally*, and their object may not be successful if foreign competition is too strong or if the protected industries fail to thrive. On the other hand, bounties and subsidies are in their nature *specific*; they consist in a direct encouragement to certain industries or in respect of a certain product by actual payment to the organisations concerned, or by State guarantee of interest on invested capital, as in the case of aircraft manufacturers during and since the war, or by State loans to the industry concerned at low rates of interest.

This form of direct encouragement also has aroused considerable difference of opinion, and has frequently led to political complications of the first importance. In some instances such intervention may be dictated by political considerations, but it is difficult to find economic justification for State intervention of this kind which tends so seriously to interfere with the free play of competitive forces. Nevertheless, even Adam Smith, great exponent of the policy of *laissez faire* as he was, has stated that "if any particular manufacture was necessary for the defence of society, it might not always be prudent to depend on our neighbours for the supply; and if such manufacture could not otherwise be supported at home, it might not be unreasonable that all other branches of industry should be taxed in order to support it. The bounties on the exportation of British-made sail-cloth and British-made gunpowder may perhaps both be vindicated on this principle".[1]

The great objection to such State interference lies in the fact that the subsidising of certain industries may create vested interests, which may never become self-supporting and which may need State assistance for an indefinite period. Furthermore, the general principle of supporting certain industries while others are left to fend for themselves is on the face of it a contravention of the canons both of economic theory and of equity.

[1] *Wealth of Nations*, Book IV. v.

State Regulation of Economic Activity.

Generally speaking, the forms of State intervention discussed under the two preceding headings do not impose restrictions or limitations on the economic activity of individuals in the prevailing competitive system: they tend rather to facilitate and to encourage that activity in whatever sphere it may exist. As we have noted, however, society has long recognised that competition cannot be left entirely unrestricted and unregulated without detrimental effects on some or all sections of the community. The system of free enterprise is based on the assumptions that man may always be relied upon rationally to seek his best interest and that competition will tend to the survival of the fittest in all branches of social activity. But again and again history has proclaimed that, although these assumptions may be generally true, they take too narrow a view of human nature, and that the policy of *laissez faire* results, in practice, in a dreadful exploitation of the poor and economically weak and a survival of the "fittest" from the point of view of the possession of *wealth* only. The rule "to him that hath shall be given" replaces the conception of a just distribution of the product of wealth, in accordance with the relative effort directed to its production.

Thus we find the most notable instances of State regulation, under the general heading of *Factory Legislation*, directed to secure for the workers reasonable hours and conditions of employment, satisfactory sanitary and ventilation arrangements, safeguards against accidents from machinery, explosives and (in the case of mines) after-damp, and restriction of the exploitation of women and of children. More recent developments are the establishment of minimum rates of wages in certain sweated trades, and the organisation of the Trade Boards in certain industries. These matters are more fully discussed in Chapter 21, *ante*. It cannot be questioned that such measures have had the effect of raising the general standard and efficiency of the workers, and of safeguarding them from inhuman treatment by unscrupulous employers. "The difference between the unregulated factory industry of the early nineteenth century and the regulated industry of to-day is the same as the difference between a fight in the street and a fight in the ring under Queensberry rules".[1]

In many other ways the State intervenes to protect the interests of persons engaged in productive occupations and to safeguard those who are liable to be exploited or injured by outside agencies. We may mention the regulations for the safety of ships and of their crews, the State scheme for the compulsory insurance of workers against sickness and unemployment, the enforcement of compensation for workmen who may be accidentally injured, and so forth.

[1] Clay, *Economics for the General Reader*, p. 385.

The interests of consumers, also, are carefully protected by State regulations of various kind, and in some cases by the actual control of the policy and working of private enterprise. In the latter category are included the various forms of social monopoly, such as gas and water undertakings, railways and tramways, and the postal services. Regulation is necessary in such cases for various reasons. In the first place, competition in respect of the supply of these services is undesirable and frequently impossible. Secondly, the charges for essential services must be kept within reasonable limits, otherwise consumers generally may be exploited for the benefit of the few.

Among general State regulations which protect the consumer are those which provide for the safety of railways, tramways, and bridges; for the control of adulterated foods, drugs, explosives, and intoxicants; for the inspection of weights and measures; and for a proper standard of qualification in the important professions of medicine and the law.

The extensive system of rationing supplies of food and material, which was such a pronounced feature of the late war period, was a further striking example of State intervention in economic matters. As a general rule, however, no such interference is undertaken in regard to the essential foods, and State action is confined to those which have harmful effects on life and living.

It will be seen that various forms of State regulation under modern conditions are to be found in every branch of economic activity. In the sphere of *consumption*, the interests of the consumer are protected in the many ways discussed in the preceding paragraphs. The State intervenes in *production* to protect the workers and the general interests of the community. In *exchange*, State activity is responsible for the provision of a sound currency and for the regulation of the charges for certain essential services. In recent years we have also examples of Government control in the sale and distribution of food and of raw material, in the export and import of gold, and in the general mechanism of the foreign exchanges. Finally, in the department of *distribution*, State interference has resulted in the fixing of minimum rates of wages and in the institution of trade boards, both designed to secure for the worker a greater share in the product for which he is largely responsible; in the passing of the *Truck Acts*, which are intended to prevent the worker from being deprived of some of the income to which he is entitled, by payments in *kind* instead of in money; and in the use of the instrument of taxation with the object of levelling up standards of living as between different classes.

State Ownership and Control.

Government intervention in economic activity reaches its final stage when the State completely supersedes private enterprise

and assumes the ownership and control of productive organisations. During recent years there has been a pronounced tendency for this aspect of State activity to extend considerably, and in many countries a demand has arisen, among the working classes more particularly, for collectivism, i.e., the complete nationalisation and municipalisation of the means of production. This controversial question is dealt with in Chapter 22 *ante*, and need not be discussed at this point.

State and municipal control of economic concerns has hitherto been confined chiefly to (*a*) such services as private enterprise cannot be expected to supply, either because of their unremunerative nature or because the return must be small and extended over a long period; or to (*b*) enterprises of a monopolistic character which may be regulated, but in which regulation is sometimes so difficult as to cause the State or municipality to undertake complete control; or to (*c*) enterprises, such as the production of armaments, which are essential to the defence of the community.

Examples of the first class are afforestation, reclamation of land, roadmaking, bridge-building, the supply of urban water, and the provision of railways and canals in certain areas. In the second class are included gas and electricity undertakings, which although frequently conducted by private enterprise are now largely in the hands of municipalities, and also urban transport undertakings, such as tramways and bus services.

Generally speaking, such services are efficiently and productively conducted by the public authorities, although it is a controversial question as to whether the undertakings would be more profitable and efficient if conducted as private concerns. Furthermore, it would seem that any considerable extension of State activity in these directions should take place only after a careful estimation of the usual disadvantages of Government control, such as the difficulty of selecting suitable organisers when political considerations and patronage intervene, the general slowness of action characteristic of public administration, and the inefficiency which is likely to result from the absence of competition, driving force, and the necessity of earning profits for the owners of the concern. Undoubtedly, State enterprise in essential and productive undertakings is justified when private enterprise is not forthcoming, but whether the State should assume a function which private enterprise could effectively discharge under suitable regulation is quite a different problem, and one which cannot be covered by any generalisation.

DIRECT SOCIAL ACTIVITIES OF THE STATE

It is difficult to draw a clear line of distinction between those activities of the State which are economic and those which have mainly a social bias. Most of the so-called social activities

exert an important influence on the economic activity and efficiency of the community, and have consequently been mentioned in the foregoing pages. The following brief survey of those activities which are social rather than economic should therefore suffice for our present purposes.

The Provision of Educational Facilities.

The term education is extremely wide, and in the present connection embodies far more than the training of the young in elementary and secondary schools. We must include in our conception all those efforts which are directed to the improvement of the knowledge, skill, intelligence, and adaptability of the members of the community, young or old. Clearly the development of the powers of the individual, and the dissemination of knowledge in all its forms—scientific, technical, commercial and professional—must be of the greatest importance in increasing general efficiency and productivity. The recognition of these facts is now universal, and it is not disputed that the State should do all in its power to provide and to foster educational facilities of all kinds within its boundaries. The great disadvantage of the poorer classes of all countries lies in the inequality of opportunity : they have neither the knowledge nor the power to raise themselves to higher levels, nor the opportunity of higher classes to progress socially and economically. It is one of the greatest functions of education to remove this disadvantage, and at the same time to add to the efficiency of those who are more fortunately situated. Naturally, the benefits of the spread of education are cumulative in their effect and are felt chiefly in future years ; a coming generation may be expected to reap the advantages of additional expenditure on such facilities at any period. Therein lies one of the main reasons why the State should accept the task of promoting education, for government must necessarily take the long view and aim at permanent prosperity and progress rather than at immediate gain.

The Provision of Social Amenities.

Closely allied with education is the provision by the central and local governments of such social amenities as public libraries, museums, and picture galleries, the maintenance and control of parks and of places of historical interest. All of these add to the general benefit of the community, and tend to the uplifting and educating of the people, especially of that section which is deprived of the advantages of a broad general education.

The Care of Public Health and of Housing Conditions.

During recent years increased attention has been paid to the care of public health. The State and local authorities now

co-operate to ensure an effective system of sanitation, adequate inspection of dwellings, notification and isolation of infectious diseases, vaccination and care of infants, and the general inspection of food. Here may be mentioned also certain activities already noted, such as the control of the hours of labour, of factory ventilation and sanitation, and of the employment of women and children, all of which have marked influence on the general health of the community. The beneficial effect of these provisions, which in our own country are subject to the control of the Home Office, can be more fully appreciated by anyone who has a knowledge of the conditions which existed in this country as recently as fifty years ago. The general benefit to the community is undoubted: the conditions of life are immeasurably improved for the working classes, the death-rate has fallen and the birth-rate has risen, while the general improvement in health and welfare has added to the efficiency of the great bulk of the population.

The questions of housing accommodation and of public health are intimately related, for the general health must benefit from the State control of overcrowding, sanitary arrangements, and town planning. Since the war the housing problem in this country has become acute, and apart from the mere provision of living room, it is being recognised that the working classes are entitled to better surroundings and improved habitations. Consequently, the municipal housing schemes instituted during the last few years have been welcomed by all social reformers, and in spite of the difficulties with which they have had to contend, have done much to ameliorate conditions of life in many districts. It must be admitted, however, that there are distinct limits to development in this direction. One of these is the difficulty of raising funds for housing schemes, and the other is the burden thrown on the community generally for the benefit of the few. Undoubtedly, State regulation of housing schemes and town planning is of the greatest advantage, but it is debatable whether the financing, control, and ownership of these schemes should be undertaken by the community.

The Care of the Poor, Sick, and Unemployed.

The care of the poor and unfortunate has been recognised for a considerable period as a necessary function of the State. Assistance is rendered in various ways. In this country it takes the form of the provision of workhouses, where destitute persons may be cared for under decent conditions, and of monetary help for the aged and needy, from the councils of counties or county boroughs in the form of "public assistance" or from the central authority in the form of old age pensions. Government intervention of this kind is based on the principle that assistance should be given to those who are poverty stricken through no

fault of their own and as a result of circumstances over which they have no control.

The system of granting relief to the poor in this country is, however, open to many objections and is frequently subject to open abuse. Consequently, as is explained in Chapter 21, endeavours are being made to remove some of the fundamental causes of poverty by an extension of the principle of *Social Insurance*, by the institution of measures for the relief of unemployment, and by the establishment of organisations, such as the trade board, having for their object the safeguarding of the earnings and employment of the workers.

The measures taken have been subjected to much criticism: undoubtedly in some cases they tend to make the workers less provident, and are open to considerable abuse. Nevertheless, it must be recognised that their principle is sound, and that their general result is to prevent the degradation of the workers, to increase their economic security, and to maintain their efficiency as productive units.

It is held in many quarters that the State should definitely assume responsibility for the provision of work during periods of trade depression, in order to relieve that depression and also to preserve the standard of energy and efficiency of the workers. In a few years we shall no doubt be able to judge of the efficacy and results of the State provision of employment, but if the existing State development schemes in this country do all that is expected of them, they should be easily justified both on the score of economic advantage and of social gain.

The foregoing survey of the activities of the modern State proves the statement that government is the greatest employer and the most productive organisation in the modern community. There can be little question as to the economic gain which results from most of the forms of State interference which we have discussed. Many people contend that such intervention should extend continually so long as the State, as representing the collective interests of the community, can turn the wealth of the community to greater account than can unhampered private enterprise. But although State interference may have done much to remove the sordid evils which have resulted from the unrestricted play of competitive forces, it must not be overlooked, as Professor S. J. Chapman has so well stated, "that the system of free enterprise has brought out some of the best qualities in human nature, industry and endurance, self-reliance, courage and enterprise, through which the external world has been progressively subdued to the service of man".

CHAPTER 32

PUBLIC FINANCE AND TAXATION

THE many State activities which we have reviewed in the preceding chapter necessarily entail considerable expenditure, and could not long be continued unless adequate funds were forthcoming from the community which is expected to benefit by those activities. It is the function of that branch of economic science known as Public Finance to consider and to investigate the ways in which such Government revenue is to be obtained, and to discuss how that revenue is to be expended for the common good. It involves an investigation into the theory and incidence of taxation, and also an enquiry into the various methods of State and municipal loaning.

Even in the so-called "normal" times the business of government could be described as the largest single business in existence. The resources at its command are usually very large, exerting a considerable influence on private business generally and particularly on the conditions in the national money market. In consequence of the Great War these conditions have been considerably accentuated, the enormous cost of the conflict having resulted in an unparalleled rise in the expenditure and revenue of the belligerent states. Apart from these more immediate factors, Government activity has tended to increase very considerably in modern times, and has necessitated a corresponding growth in public expenditure and in public revenue.

In the first place, the great increase in population has in itself entailed an extension of State activity and of the necessary outlay. Secondly, as society has progressed and wealth has increased State and municipal enterprise have been extended in the various directions indicated in the preceding chapter, as for example on the provision of schools, public libraries, parks, baths and museums. Furthermore, State interference on behalf of the poor, the sick, the unemployed and the economically weak has not been possible without considerable outlay. Finally must be mentioned the vast increase in the expenditure of modern States, which has become necessary in order to provide for the adequate defence and security of the community.

Illustration of this growth is afforded by the fact that the public expenditure of Britain (exclusive of municipal expenditure) increased forty-fold between 1685 and 1841, during which period population increased only three-fold. The increase was con-

tinued steadily until the outbreak of war in 1914, at which time the annual State expenditure was approximately four times as great as it was eighty years previously. The vast increase caused by the Great War may be judged from the statement that, whereas in 1913-14 British annual expenditure was £197 millions, in 1917-18 it had increased to £2696 millions, and still remains in the neighbourhood of £800 millions, approximately four times the pre-war total.

Classification of Public Expenditure.

Public expenditure falls under two broad headings, *national* and *local*, according as it is incurred by the central government or by one of the various kinds of local authority which exist in a modern community. The former includes expenditure on such general services as defence and the provision of the currency, while the latter refers to expenditure on services which are mainly of local interest and benefit, such as the supply of urban water, street lighting, and the control of sanitation.

Necessarily, however, the two classes must overlap to some extent, and it is usual to recognise an intermediate class known as *semi-national* services, "which are carried out by local authorities but which are not exclusively for the benefit of a particular locality, the State having so marked an interest in their efficiency that it retains a measure of control over their administration, and contributes part of the cost".[1] Examples of services under the joint control of the central and local governments in this country are the provision of education, the administration of the poor law, and the maintenance of main roads. In the case of education much of the control is in the hands of local authorities, and most of the necessary funds are provided by local rates, supplemented, however, by grants from the State, to the extent of one-half of the maintenance fund so far as elementary education is concerned. "Public Assistance" also is administered by the county authorities, and most of the necessary funds are obtained from local rates.

The general tendency in modern communities is to delegate to the local authorities the administration of such matters and expenditure as chiefly concern local interests, the State exercising a general control with the object of ensuring uniformity, simplicity and economy.

In regard to the more detailed classification of public expenditure various methods have been adopted, but, conforming to the treatment of the general subject of State intervention in the preceding chapter, we have expenditure, first, on *defence and security*, internal and external, i.e., on *protective* functions; secondly, on State *economic activities*, or *commercial* functions, including the facilitating, encouragement, regulation, and control of business; and thirdly, on State *social activities*, especially

[1] A. B. Cliff, *Imperial Taxation*, p. 5.

developmental functions, such as education, public health, housing, and poor relief. To these we must add expenditure *on government and administration*, including the cost of the legislature, the civil service, the royal family and its representatives; and *on debt services*, involving the payment of interest on national and municipal debts, and on the necessary services connected with their administration.

British National Expenditure.

In April of each year the national accounts come up for review before the House of Commons, to which the national balance sheet—known as the *Budget*—is submitted by the Chancellor of the Exchequer as the representative of the government. The Budget contains an account of the actual expenditure and revenue during the previous financial year, and includes proposals for raising the revenue necessary to meet the estimated expenditure in the following year.

National expenditure falls under two main headings: (1) *Consolidated Fund Services*, which are permanently authorised by Parliamentary authority and for which annual sanction is not required; and (2) *Supply Services*, which are voted annually by the House of Commons, and are subject to such modification as may be decided after debate in the House. The table on page 581, showing the actual expenditure for 1929-30 and the Budget for the following year, 1930-31, will serve to elucidate the foregoing explanation and at the same time give some indication of the magnitude of the national expenditure and of its appropriation to the various services already described.

British Local Expenditure.

Local expenditure during recent years has naturally kept pace with the considerable increase in national expenditure, but since the Armistice additional outlay on local matters has been necessitated for several reasons. In the first place may be mentioned the appreciable increases in the cost of living, in salaries and wages of officials, and in the prices of materials required for various local services. Secondly, considerable municipal work which was necessarily deferred during the war period has been undertaken since the Armistice, while additional schemes have been instituted in order to provide work for the growing number of unemployed. Thirdly, considerable expenditure has been incurred on building schemes in an endeavour to relieve the housing shortage in many parts of the country, and, finally, an appreciable part of the increase is attributable to the additional number of persons obtaining poor relief in consequence of the abnormal depression.

The extent of the expansion in British local expenditure

during recent years is indicated by the great increase which has taken place in the local revenue. Whereas in the financial year 1913-14 total receipts from local rates in England and Wales amounted to approximately £71 millions (38s. 11d. per head of the population), the total for 1926-27 was in excess of £160 millions (£4, 2s. 2¾d. per head).

Actual National Expenditure, 1929–30, and Budget Estimates, 1930–31.

	1929–30. *Actual.* (000 omitted).		1930–31. *Estimates.* (000 omitted).	
CONSOLIDATED FUND SERVICES:	£	£	£	£
National Debt Services	307,252		304,600	
Sinking Funds, including Terminable Annuities	47,748		55,400	
Total Debt Services	355,000		360,000	
Road Fund	21,882		23,560	
Payments to Northern Ireland Exchequer	5,526		6,000	
Payments to Local Taxation Accounts, etc.	13,314		15,000	
Other Consolidated Fund Charges	3,312		3,300	
		399,034		407,860
SUPPLY SERVICES:				
Army	40,500		40,500	
Navy	55,750		51,439	
Air Force	16,750		17,850	
Fighting Forces	113,000		109,789	
Civil Services	246,535		295,686	
Customs and Excise, Inland Revenue	12,025		12,134	
Post Office Services	58,900		60,275	
		430,460		477,884
Total Expenditure	77925	£829,494	78467	£885,744
Deficit of Revenue, 1929–30 (see Table on page 598, *post*)		£14,523		67342 12464

Central Contribution to British Local Expenditure.

A distinction is sometimes drawn between *onerous* and *beneficial* local expenditure. The former term is applied to expenditure which is enforced by the central authority (through the Ministry of Health) because it may be expected to bring national advantage, as, for example, expenditure on "public

assistance," public health, the maintenance of police, education, and the provision of lunatic asylums. On the other hand, beneficial expenditure is that which is undertaken mainly on local responsibility and is followed by direct local advantage, such as outlay on drainage, water supplies, and street lighting. The distinction is, however, frequently difficult to define with any degree of exactitude. Such services as poor relief are as beneficial locally as they are to the nation generally. An improved high road may be of first national importance, and it may also confer inestimable benefit on private and business persons living in the vicinity.

Nevertheless, the distinction was recognised in practice by the making of annual subventions, called "grants-in-aids", from the National Exchequer to the local authorities, in order to cover part of the so-called "onerous" expenditure. The system was commenced in 1832 with the Education grant of £20,000 for school buildings. Originally all such grants were made by Parliament from the consolidated fund, but although some payments of this nature are still made, most of the contributions from the national exchequer consist of actual appropriations to the Local Taxation Account of fixed proportions of certain national taxes, while the collection and levying of a number of licences (e.g., game, dog, gun and carriage licences) are actually left in the hands of the local powers.

The making of grants from national to local accounts has been the subject of widespread controversy. On the one hand, it is contended that there are distinct limits to the form and amount of taxation which may be raised by a local body, and consequently, if work of national importance has to be undertaken by a local authority, it is only right that it should be financially assisted by the central authority. Secondly, it is maintained that the system of subvention acts as a stimulus to the undertaking by local bodies of work which is of importance from the standpoint of national efficiency, and especially when the local authorities have not the financial means or the initiative to undertake activities which are now recognised as being socially and economically necessary. Thirdly, they are advocated as reducing inequality of burden as between one district and another, and as enabling a relatively poor district to obtain the advantages of such benefits as education and improved conditions of health. Finally, it is held that the system permits of an efficient, uniform, and more directive control by the Government, which can, therefore, apply its centralised experience and knowledge for the benefit of all localities in the country. Such regulation and co-ordination tends to a distribution of advantages, and favourably reacts on national efficiency.

Objection is raised to the principle of subvention because it is said to encourage extravagance in local expenditure, over which there is little Parliamentary control and no guarantee

of economy or of efficient administration. Furthermore, it is held that contributions should be avoided which cannot, by their nature, be arranged on any equitable basis as between one district and another, and which are liable to be affected by parliamentary corruption.

On the whole it would appear that some such form of State assistance is inevitable under modern conditions, with the constant growth in the number and variety of functions discharged by the local authorities, but it is possible that the arrangements which have developed in somewhat haphazard fashion under pressure of emergency may be systematised and still further co-ordinated so as to achieve greater efficiency and uniformity. On the other hand, " the golden mean between local autonomy and bureaucratic control by the national government needs to be kept, and the first and most important step towards securing that ideal is an educated public opinion, enlightened ideals of civic responsibility and a proper sense of public rights and duties ".[1]

The necessity for some degree of reform in the system of contributions by the central Exchequer to local authorities was acknowledged in the passing of the Local Government Act, 1929. By this Act it was provided that in due course grants-in-aid, which were *percentage* grants, should be replaced by *block* grants from the central Exchequer. These grants—known as " General Exchequer Contributions "—include compensation for the derating of industry, compensation for the loss of former Exchequer grants, and a lump sum of new money. The amount of the grant in any particular case is determined neither by reference to the expenditure incurred by the local authority nor by any consideration of loss of revenue, but solely by reference to the need of the local authority and to its capacity to meet that need. By an ingenious formula, the General Exchequer Fund, which constitutes the source from which all payments are made to local authorities, is distributed so as to ensure that the amounts of the grants shall be in proportion to the need of the respective areas and shall have regard to their capacity to bear the necessary expenditure: the greater the need and the lower the capacity, the larger the grant.

Public Expenditure in Relation to Production and Distribution.

It will be clear at this stage without further explanation that public expenditure may have very important effects on production. As we have seen, much of the activity of modern governments is directed to increase the productivity of the community, while in many cases actual productive functions are undertaken by the State itself. In relation to distribution, also, we have indicated that government may intervene to secure

[1] Lever, *Primer of Taxation*, p. 102.

minimum rates of wages and to protect the worker generally against exploitation by unscrupulous employers. In this way government effort and outlay may, in the long run, have important influences on the distribution of the national dividend, but we may note also one or two further effects. In the first place, revenue may be raised by the taxation of one class in the community, and expended in the provision of goods, services, or amenities which mostly benefit other classes, and possibly these *only*. An outstanding example of such direct transference of wealth from one class to another is the provision of old age pensions by the taxation of estates passing at death. A more usual example is that of expenditure on State education and on the social amenities generally. Undoubtedly the greatest benefit of such services accrues to the working classes, although the greater part of the cost of their provision is obtained by the taxation of higher grades of society. Of even more pronounced effect is the provision during recent years of much of the expenditure on defence and armaments by a great increase in the taxation of the wealthier classes. Taxation of small incomes has not been appreciably increased, but larger incomes have in some cases been reduced by approximately one half. In 1924, for example, incomes of £150 a year would be reduced by direct and indirect taxation to the net value of approximately £135, whereas an income of £50,000 would be reduced by practically fifty per cent.

Clearly such measures must have a marked influence on the distribution of the national dividend, and tend indirectly to achieve the great object of many social reformers. If such redistribution results in a more equitable apportionment of the national dividend, and thereby adds to the general productivity of the community, it is justified on both moral and economic grounds. The extension of such principles is, however, subject to two great dangers. On the one hand, the classes which receive such assistance may diminish their efforts to save and to provide on their own behalf, while the classes who are deprived of their savings by heavy taxation may find less incentive to accumulate wealth, and consequently lower the supply of that capital which is of such importance to a progressive and productive community. Moreover, the psychological effects of such redistribution on the minds of producers may so discourage enterprise as to diminish seriously the amount of wealth produced, and thus lower the general welfare by causing an all-round fall in the standard of living. (Refer also to pages 38 and 596.)

Public Revenue.

The provision of adequate revenue to meet the ever-increasing expenditure of the modern State is obviously a matter of considerable difficulty and intricacy, greatly emphasised during

recent years by the enormous outlay of the various countries on defence, armaments, and more especially, war. In normal times every progressive community endeavours to meet its annual expenditure out of its annual income, which is obtained chiefly by *taxation*, but includes also certain smaller revenues such as those detailed below. Few modern states, however, have been able to "live within their incomes", and, in recent years particularly, resort has had to be made to various forms of loaning, from the public or from other nations, in order to cover deficits and extraordinary expenditure. For the present, however, our attention will be confined to the broad question of taxation, and the consideration of public loaning is deferred to a later chapter.

Classification of Public Revenue.

The elements which account for the total annual income of a government necessarily vary considerably in different countries, but the more usual permanent revenues of a modern community may be classified as follows :—

1. REGULAR REVENUES, including

(*a*) *Revenues from State Ownership* of (*a*) land and buildings, or (*b*) of productive undertakings. Examples of the latter are incomes from postal services and railways under State control, and from gas, electricity and transport undertakings under municipal control. Under the former heading may be mentioned the income from the British Crown lands, and from government or municipal building and housing schemes.

(*b*) *Revenues from Private Incomes*, including taxation in all its forms, and fees for non-economic services such as the issue of gun and marriage licences.

2. IRREGULAR REVENUES, including such items as fines, penalties, gifts, indemnities, escheats and forfeitures.

The revenues obtained from State ownership are the result of direct economic charges on *specific* persons for services rendered, as, for example, the supply of gas or electricity, the transmission of letters, parcels, and telegrams, the carriage of persons or of goods by rail and road, and the hiring of land or buildings. In such cases, the State occupies a position little different from that of the private concern, and, generally speaking, the charge made will be based on an economic estimation of the value or benefit of the service provided by the State. Similarly the various forms of irregular revenue are also specific; they are imposed on and obtained from particular persons in consequence of the

peculiar relationship of those persons to the State in its legal and authoritative capacity. The revenue derived from taxation is in quite a different category.

British National Revenue.

The figures on page 598 of the actual national revenue of this country for the financial year 1929-30, and of the Budget estimates for 1930-31, may be studied in conjunction with the figures of national expenditure for the same years given on a previous page. Together the tables include the national balance-sheet items and the Budget estimates for the years in question. The figures in the table on page 598 below will indicate the various sources from which the national revenue is derived, and also the relative importance of those sources.

THE PRINCIPLES OF TAXATION

The Nature of Taxation.

Taxes are levied upon practically all persons in the community to cover the cost of services rendered by the State for the benefit of the community generally. They differ from the *specific* revenues previously described in that they are exacted for benefits *which cannot be traced to particular individuals*, but which are assumed to be equally beneficial to all individuals in the community. Consequently we may define a tax as *a compulsory contribution made to government, under stated conditions, and not in return for a specific service rendered.* If a person wishes to own a motor-car, to carry a gun or to keep a dog, the State decrees that he shall pay a licence for the privilege. But no specific service is rendered by the State in connection with the motor-car, gun or dog. Again, everyone who uses tea or sugar contributes in the price paid a certain proportion to the revenue of the State, but this contribution has no reference to any specific service rendered by the State, and the tax is not intended to apply to any specific individual or individuals. The money is required and is applied for the general purposes of the community and (with a few exceptions) is accordingly demanded from all who choose to live within its boundaries.

Taxes are, therefore, a price paid by individuals in a community for the services of Government, but "the essence of a tax as distinguished from other charges by Government is the absence of any direct *quid pro quo* between the taxpayer and the public authority".[1]

[1] Taussig, *Principles of Economics*, Ch. lxvi. 1.

Classes of Taxes.

Various classes of taxes may be distinguished in most modern systems. *Proportional taxes* are those which vary in direct proportion to the value of the income or property taxed. A general income tax of, say, 1s. in the £ would be an example of a proportional impost, as the amount obtained from each person would be directly proportional to his income. In the same class are included import duties on various commodities, as the amounts of such duties are directly proportional to the weight or value of the commodity taxed.

Progressive taxes are those the *rate* of which *increases* with the increase in the clear net income of the person or clear annual value of the property taxed. The essential of progressive taxation is that the tax should demand a proportional *sacrifice* from the persons contributing thereto. In practice this system is applied by levying increased rates of tax on incomes which fall between certain increasing limits.

Regressive taxes are those the rate of which *diminishes* with the increase in the value of the taxed property or income. In other words smaller incomes are taxed at a higher rate than larger incomes. Examples of this form of tax are difficult to find as they are now generally regarded as unjust.

Degressive taxes involve the taxation of larger incomes at a higher rate than smaller incomes, but they differ from progressive taxes in that the sacrifice entailed may not be proportional; i.e., the tax on the larger income may mean a lower relative sacrifice than on the smaller income.

Rates.—The sums exacted by the central government by national taxation are usually described as taxes, in contradistinction to *rates*, which are levied by the local authorities to defray local expenditure. Although, in a discussion of the principles of taxation, it may be assumed that both forms are included, certain distinctions should be noted. In the first place, rates are invariably a direct charge on the annual value of *real* property, i.e., land and buildings, whereas taxes may be levied either directly on real or personal property (i.e., movable goods or chattels), and may be reckoned on the annual capital value of such property. Secondly, rates vary in amount according to the locality, whereas taxes usually apply uniformly throughout the community.

" *A Direct tax* is one which is demanded from the very persons who, it is intended or desired, should pay it ".[1] The income tax is generally regarded as such a tax, for, as a rule, it must be borne by the person from whom it is demanded, and that person is generally unable to recoup himself from anyone else. In practice, however, business men may include in their charges for goods and services a certain proportion to cover their

[1] J. S. Mill, *Principles of Political Economy*, Book V. III. 1.

anticipated income tax payment. Other examples of direct taxes are death duties and the various licence duties imposed in this country.

"*Indirect taxes* are those which are demanded from one person in the expectation and intention that he shall indemnify himself at the expense of another".[1] Most import duties fall within this category, as, for example, the duties on sugar, tea, and tobacco. They are paid in the first place by the importer, but are ultimately borne by the consumer, to whom they are passed on in the price charged for the various commodities.

The distinction between direct and indirect taxes will be more clearly seen after the question of incidence has been discussed.

Adam Smith's Canons of Taxation.

No discussion of the principles of taxation could be complete without a reference to the famous "canons" of taxation which were laid down by Adam Smith in his *Wealth of Nations*.[2] Although the theory of taxation has been considerably extended since the days of Adam Smith, his propositions are still fundamentally true and form an excellent basis for further inquiry. For the sake of clearness each of the four canons is given under an indicative heading:

1. EQUALITY.—"*The subjects of every State ought to contribute towards the support of the government, as nearly as possible in proportion to their respective abilities; that is, in proportion to the revenue which they respectively enjoy under the protection of the State.* . . . In the observation or neglect of this maxim consists what is called the equality or inequality of taxation".

By "equality" in this connection is meant equality of *sacrifice*, and not necessarily of amount paid. As we shall see below, most discussion concerning taxation centres around the best method of ensuring relative sacrifice, or *equity*, which more clearly expresses the conception.

2. CERTAINTY.—"*The tax which each individual is bound to pay, ought to be certain, and not arbitrary. The time of payment, the manner of payment, the quantity to be paid, ought all to be clear and plain to the contributor, and to every other person*".

A tax which is to meet this requirement should be such that the taxpayer may know certainly and without difficulty how much he will be called upon to pay, so that he can if necessary adjust his expenditure accordingly. Furthermore, it should be certain from the point of view of the State; i.e., the Government should be able to estimate the probable

[1] J. S. Mill, *Principles of Political Economy*, Book V. III. 1.
[2] Book V., Chap. II. II. See also Chapter 35.

yield of a tax with a fair degree of accuracy, and it should be able to determine fairly accurately when the funds derived therefrom will be placed at its disposal. Certainty, therefore, implies adequate publicity, and also the elimination of any element of speculation which may be avoided by the exercise of ordinary care on the part of the Government. It also involves an absence of arbitrary exaction, either by the State itself or by those of its representatives who are responsible for tax collection, and so an avoidance of that economic waste which is inseparable from an irregular or uncertain system. The publicity and discussion given to the Budget proposals in the English system of taxation and the necessity for obtaining Parliamentary sanction are guarantees of the certainty of the taxes imposed. The expression "an old tax is no tax" admirably expresses the advantages of a tax which is well known and well provided for in the monetary calculations of business men and of private individuals. The community cannot immediately adapt itself to a new tax, and in the adjustment much inconvenience and inequity may be caused.

3. CONVENIENCE.—"*Every tax ought to be levied at the time, or in the manner, in which it is most likely to be convenient for the contributor to pay it.* A tax upon the rent of land or of houses, payable at the same time at which such rents are usually paid, is levied at the time when it is most likely to be convenient for the contributor to pay; or when he is most likely to have the wherewithal to pay". A convenient tax is justified on the grounds of productivity and good government, and also from the point of view of the taxpayer, particularly when he belongs to the poorer class in the community. The greater the convenience the less the waste of time and of resources involved in the collection and payment. Taxes on commodities usually conform to this requirement because they are paid in very small amounts in the price paid by the consumer, and are consequently not noticed at the time of payment. Taxes on luxuries are specially convenient as the consumer may choose the time and manner of his expenditure on such articles, and consequently pays the impost when his convenience is best suited. An attempt to meet the principle of convenience is made also in connection with the British income tax on manual workers, who may, if they so desire, make their contribution to the Exchequer by purchasing stamps at their own convenience. On the other hand, the income tax may be regarded as contravening the canon of convenience in so far as it makes necessary the compilation of complicated returns, and frequently necessitates interviews with Government officials and the employment of accountants to make the necessary returns.

4. ECONOMY.—"*Every tax ought to be so contrived as both to take out and to keep out of the pockets of the people as little as possible over and above what it brings into the public treasury of the State*".

To conform with the principle here established, a tax should be so levied that as much of it as possible is received by the State for State service, with the least possible cost of collection and administration and the least possible economic disadvantage to the taxpayer and to the country as a whole. In other words, the cost of collection and the loss to the individual and to the community should be small in proportion to the proceeds. Taxes break this rule if a large and expensive staff is required for their collection and supervision, or if they impose restrictions on trade and industry, or if they cause unnecessary vexation on the part of the payers, or if third parties benefit from the tax. An example of the last condition may arise in the case of a tax on raw material rather than on the manufactured commodity, because, in the first place, each middleman tends to add a certain proportion of profit to the price which he pays, and that price may include the amount of the tax, and secondly, a greater outlay of capital and interest is required at each stage to cover the tax which has previously been paid. Third parties also benefit if the proportion of tax which may equitably be applied to a given article is smaller than the usual business fractional price, in which case the nearest ½d. or 1d. per article may be charged, to the detriment of the consumer.

Taxes on commodities which are detrimental to consumers, e.g., drugs and alcoholic liquors, are economical in so far as they not only perform a useful social service in discouraging detrimental and unproductive expenditure, but also yield a revenue at the same time. The canon of economy may be regarded as being extended in the general economic principle that a tax should interfere as little as possible with the productive activities and general efficiency of the community. Taxation of any kind is clearly uneconomical if it aims at securing a maximum revenue without allowing sufficiently for the effects on national productivity of the various taxes imposed. A tax should not check the growth of capital or cause it to emigrate to other countries.

The system of storing imported taxable goods in bonded warehouses under Government supervision tends not only to greater convenience so far as traders are concerned but also to an economy in expense, for interest on the tax payment is saved by the importer from the time of arrival of the goods to the time of removal from bond.

Further Principles of Taxation.

The following further principles for a good system of taxation have been added by later writers to the four canons laid down by Adam Smith :—

5. PRODUCTIVITY.—From the point of view of the Government, a tax should be productive of revenue. Consequently, one large tax which is known to be productive is to be preferred to several small taxes the collection of which involves much time and expense. On the other hand, the endeavour to ensure productivity should not be based on too short-sighted a view, and no tax should be imposed which may tend to diminish the economic resources of the community.

This principle was recognised by Adam Smith, and led him to advocate that reform of the confused multitude of British customs duties which was afterwards carried into effect. On the other hand, it is sometimes contended that the application of the principle of concentration has been carried to excess in this country, and that the burden of indirect taxes has been accentuated by its imposition on a few commodities rather than on a large number of articles.

6. ELASTICITY.—The system of taxation should contain at least some taxes which will permit of an increase in the rate and in the yield in order to meet sudden or exceptional demands for revenue, without necessitating an increase in expenditure on administration or collection. Under the same heading may be included the advantages of a tax which automatically provides an increased return as wealth and population increase. The income tax is the outstanding example of an elastic tax, and its many advantages in this respect were well exploited to meet the heavy expenditure of the war and post-war years. Increased taxes on commodities may, of course, cause a falling off in the demand for such commodities, and a consequent decrease in the total yield. Taxes on stimulants are said to be an exception to this rule, and tend to give increasing returns as wealth and population increase.

7. SIMPLICITY.—Finally "a system of taxation should be simple, plain, and intelligible to the common understanding".[1]

The great difficulty arises in connection with the first of these canons or principles, or with what is sometimes described as the *political* or *ethical* principle of taxation. Various interpretations have been given to the principle of equality, and these we will now proceed to discuss. Incidentally we may note that the other principles which are summarised above are

[1] G. Armitage Smith, *Principles and Methods of Taxation*, p. 54.

frequently referred to as *Administrative Principles* or *Precepts*: they are regarded as the fundamental rules which should be applied as far as is possible in any fiscal system.

The Political or Ethical Principle of Taxation.

Clearly the most important principle involved in any system of taxation is that of the *equality* or *justice* of the burden imposed on each individual. The functions of government are conducted for the benefit of all members of the community, and it is reasonable that each member should contribute a fair proportion of the expenses necessarily incurred in the discharge of those functions. If all incomes were equal, and if individual circumstances were much the same, it is conceivable that a reasonably fair tax system would exact the same monetary contribution from each person. But in a modern community great inequalities exist both in relative incomes and in relative circumstances. Consequently, much difficulty and controversy has arisen in regard to the method of securing equality and justice in modern systems of taxation, and a number of theories have been propounded with this object, some of which have been applied from time to time in most countries in one form or another.

The Benefit or "Quid pro Quo" Theory.

One of the earliest conceptions regarding taxation was that the contribution exacted from each person should be proportionate to the benefits, such as protection and justice, derived by that person from the State. A tax was regarded as a payment made by each individual in return for benefits received from government. The idea may have originated in the period when feudal services due to the king or to an overlord were commuted for an actual money payment, but it is clearly inapplicable to modern conditions, and tends to absurd conclusions. It would be obviously unjust and also impracticable to demand the heaviest contribution from the weakest members of society, who may be assumed to benefit most from the protection and security afforded by government. Furthermore, if benefit derived is to be measured in proportion to the possession of real property, it is clear that the holder of large estates should contribute most. But as Bastable points out: "If security is to be sold like an ordinary commodity, there ought, on the strictest commercial principles, to be some allowance made to the purchaser of a large quantity".[1]

It is clearly impossible to state what proportion of the benefits of central government accrue to particular individuals, and this theory of taxation is consequently of little modern importance in connection with national finance, although its effects may be traced in the local system of rating, where individual contri-

[1] *Public Finance*, p. 299.

bution is demanded according to the value and size of a house, such standards being apparently regarded as indicative of the relative benefit received from local government.

The Principle of Proportionate Taxation.

In his first canon Adam Smith lays down the principle that the subjects of the State should contribute to its support as nearly as possible in proportion to their *abilities*, and proceeds to explain that abilities may be measured by the amount of revenue enjoyed under the protection of the State. But although the general conception of ability to pay may be accepted, it is clear on a little consideration that ability in this respect cannot be judged merely by monetary income. If, for example, one-fifth of all incomes were taken by the State, a person earning £10 per week would contribute £2, while a workman earning 50s. would be called upon to pay 10s. Obviously the sacrifice in the latter case would be much greater than in the former case. Furthermore, the ability to pay of a man with a large family is clearly not the same as that of a bachelor with the same income. Other inequalities for which allowances should be made are the differences in *real* earnings, due to the many factors which have been discussed in an earlier chapter, such as the probable working life of the earner of the income, the expenses which may be required to maintain his position, and circumstances connected with the employment which may adversely affect the worker's health. Money income alone cannot, therefore, be regarded as a just measure of ability to contribute.

The Principle of Equality of Sacrifice.

The objections to a purely proportionate system led J. S. Mill and other writers to seek some principle which would involve an *equality of sacrifice* on the part of all taxpayers. For example, Mill states: "Equality of taxation, therefore, as a maxim of politics, means equality of sacrifice. It means apportioning the contribution of each person towards the expenses of government, so that he shall feel neither more nor less inconvenience from his share of the payment than every other person experiences from his".[1] But his practical suggestion that a minimum income should be exempt from tax, while all incomes above this should contribute in proportion, did not go far towards attaining equality, although it involved a certain slight *progression* in the amount of tax as the income increased. This principle of progression is, as we shall see below, now recognised as a necessary attribute of a fiscal system.

Mill's contribution to the theory of taxation is important in that he emphasised the necessity for equality of sacrifice, and, in spite of the difficulty of applying the idea in practice, it is

[1] *Principles of Political Economy*, Book V. II. 2.

now widely accepted that taxation should involve a *proportional real sacrifice* from all members of the community, i.e., that, so far as is possible, persons should be left in the same relative positions after payment of taxes as they were before.

The Progressive Principle of Taxation.

In order to achieve this proportional real sacrifice the principle proposed is that of *progression*, the idea that was indicated by Mill, i.e., that the *rate* of tax should increase with the amount of income subject to tax. The conception is based on the following three broad assumptions: (1) that the utility of income to individuals generally may be regarded as equal; (2) that the utility diminishes with each addition to income and that with such additions the amount spent on luxuries tends to increase; and (3) that expenditure on necessaries is more vital to national strength and efficiency than expenditure on luxuries. The last two assumptions are clearly closer to the truth than the first, for it cannot strictly be accepted that the utilities of incomes are equal for different persons: the income of a man with a large family must have a greater utility to its possessor than the utility of an equal income to a bachelor.

The assumptions are, however, sufficiently accurate to form a working basis for a progressive system, in which the essential features are the exemption of a minimum income and the taxation of incomes above the minimum at increasing rates. The basic idea is that, after a certain point, successive increments of wealth bring a diminishing degree of *utility*, and consequently that increasing rates of taxation involve a less degree of *disutility*.

The great difficulty in the practical application of the progressive principle lies in the framing of a rational scheme which will involve equal sacrifices from all taxpayers. By what standard are such relative sacrifices to be judged? Even if we accept the broad view that equal incomes bring equal utility to different persons, it is clearly very difficult to make allowances for the psychological factors involved in the idea of sacrifice, and any system of graduation must necessarily be arbitrary. So much depends on individual circumstances that it is obviously impossible to devise a perfectly equitable basis. Furthermore, it is objected that the system of progression is open to abuse; it may be applied in order to confiscate the savings of the wealthier classes, and is in any case a form of appropriation of property which is detrimental to saving and to production generally, and which may lead to the transference of capital to other countries. However, "on the whole the argument for graduation on a rational and moderate scale seems to be valid; it helps to satisfy the demands of equity and productiveness, if the principle be limited in its application to a few direct taxes in a mixed system. As regards the Estate duty", (i.e., in the English system) "the ability to pay is unquestionably greater

in the case of larger legacies, and it is just that their contributions to taxation, though considerable, should be also at a higher rate".[1] The principle of progression is also recognised in the English system of taxation by the allowance of various rebates to the payer of income tax in respect of children and dependants.

The Financial Principle of Taxation.

The purely proportional system of taxation already considered is sometimes advocated on financial grounds alone. It is maintained that taxation is concerned *solely* with the raising of money for public expenditure, and should not, therefore, be concerned with principles of equity or of ability to pay. The aim of the tax-gatherer, so it is held by the exponents of this theory, should be to obtain the necessary revenue with as little trouble and discontent to the public as possible. "The aim of finance is to raise the largest sum of money with the least trouble". Accordingly, each person should be required to pay in proportion to his income, and the wealthy should pay more than the poor in the degree that their incomes are greater, but in that degree only. The result of such a system would accordingly be to leave undisturbed the existing distribution of incomes between various classes and also the relative positions of different individuals.

A similar financial principle is that which is sometimes described as the "cynical" theory of taxation, which is based on the maxim attributed to the French minister Colbert, "Pluck the goose with as little squealing as possible". In other words, it is maintained by the upholders of this principle that the art of taxation and the essential task of the legislature is to obtain the necessary revenue with as little vexation and opposition as possible on the part of the taxpayers. Consequently, a tax may be regarded as good if it brings in a large net revenue without causing too much protest from taxpayers generally, or at least from those who have political power and influence. Although direct expression is rarely given to the principle here discussed, it nevertheless lies at the root of modern methods of tax imposition and adjustment. Financial ministers are always tempted to follow the line of least resistance, and the great proportion of indirect taxes in modern taxation systems is attributable to the desire to limit opposition as much as possible.

The Faculty Theory or Principle of Taxation.

Most modern economists adhere to what is known as the *Faculty* theory of taxation, which is based on the general principle that the subjects of a State should contribute in proportion to their "faculty" or ability to pay. Faculty in

[1] G. Armitage Smith, *Principles and Methods of Taxation*, p. 52.

this connection is to be judged by the monetary value of a man's taxable capacity, and accordingly the wealthy classes should contribute most because they have most available. Even where the general principle is accepted, however, there is no unanimity as to how faculty or ability to pay is to be measured, and various standards have been suggested, such as consumption, property, and income. The first of these is evidently inapplicable, for the consumption of the poorer classes is out of proportion to their ability to contribute to State expenditure. Property, also, is an inequitable basis. In the first place, property necessarily differs greatly in productiveness, and secondly, many people with little property have large incomes, and have consequently a greater ability to pay than people with large property but small incomes, as in the case of certain landowners in Britain.

Income offers the best standard of ability to pay, and is the measurement usually adopted in modern communities, subject to suitable modifications and allowances to meet the fact that the utility of incomes varies considerably according to the circumstances and responsibilities of the receiver. Thus, the modern conception of the faculty theory allows for the exemption of a certain minimum on the economic grounds that " taxation which diminishes the general efficiency of labour diminishes the whole faculty of the State " (Nicholson). Secondly, the system of progression is advocated because the wealthier classes have the power to pay more than the poorer classes. Finally, an essential of the theory is its conception of the faculty to pay of the community as a whole : it implies that taxation should not interfere with the productivity of the community by so reducing profits as to lower the incentive to enterprise or by so reducing interest as to lower the incentive to accumulation, and thus favour the emigration of capital.

The defect of the faculty theory is that it offers no perfect standard by which relative ability to pay may be measured. Nevertheless, it does not seem possible under present conditions to devise any general rule of equity which would meet all cases.

The Social Principle of Taxation.

Many people who are dissatisfied with the mode of distribution of wealth in the modern State contend that taxation should be applied for socialistic as well as financial objects. In other words, they maintain that taxes should be so imposed as to achieve certain social aims as well as to provide revenue, and more especially to reduce the inequality of incomes and bring about a more equal distribution of wealth as between rich and poor. The attainment of this object would, of course, necessitate the taxation of the wealthier classes *more* than in proportion to their incomes, possibly more than in proportion to their faculty to pay. Taxation on such principles cannot, however, be supported on the grounds of equity or productiveness,

for any such arbitrary exaction could not but reduce saving, discourage thrift, drive capital abroad, and so interfere with production and economic progress. Furthermore, it seems possible that many socialistic and communistic objects can be achieved by a careful application of revenue derived from general taxes to improve the general conditions of the poorer classes, while it has not yet been universally recognised that a redistribution of wealth and of income is a function to be undertaken by modern governments. (See also page 584.)

Taxation for Regulating Consumption.

Taxation is frequently advocated and adopted in practice with the object of regulating and restricting the consumption of such commodities as drugs, alcoholic drinks and luxuries. In the first two cases the aim is said to be moral rather than economic and financial, but it frequently happens in practice that taxes of this type are among the most productive so far as the exchequer is concerned. It has already been mentioned that they comply admirably with the requisite of economy, not only by effecting a social service but also by providing a revenue.

The Practical Application of the Principles.

It is clearly impossible to frame any system of taxation which will meet the views of the advocates of all the principles mentioned, nor is it possible to devise a single tax which could be regarded as satisfactory from the point of view both of taxpayer and exchequer. The name of Mr Henry George is associated with the suggestion that the whole of the national revenue should be raised by means of a "Single Tax" (cp. the *impôt unique* of the Physiocrats, page 661) imposed on land as the ultimate source of all wealth, but it is clear on slight consideration that the apparent simplicity of such a tax conceals insurmountable inequalities and practical difficulties. How would the tax be applied to those whose wealth does not consist of land? On what basis would valuation be effected, and who would accept the vast task involved?

Recognition of such difficulties has led all modern states to institute a *mixed* system of taxation, including both direct and indirect taxes, which are distributed on property, income, and consumption, the whole conforming, so far as is possible, with the various canons already discussed. While the enormous expenditure of modern governments necessarily gives considerable importance to the principle of productiveness, the canons of equity and of economy (in its widest sense) cannot be disregarded. Justice between the various classes is essential so far as it can be attained, and taxation which conforms to the general principle of equity is to be favoured even though it may not yield the maximum economic benefit. Nevertheless, it is not possible to

devise a scheme which will satisfy all classes and individuals in the multitude of different circumstances which may exist in modern society. There are always some cases in which the conditions make the burden press more heavily than it would in other circumstances. But it is no doubt wiser and more satisfactory to adopt certain general principles than to attempt to meet each individual case. By so doing less inconvenience and fewer hardships will result. The best tax systems are based on no one principle; they are usually a compromise between a number of systems, and have been devised as the result of long experience and careful consideration of the peculiar needs of the community concerned.

Actual National Revenue, 1929-30, and Budget Estimates, 1930-31.

	1929–30. *Actual.*		1930–31. *Estimates.*	
	(000 omitted).			
REVENUE FROM TAXATION:	£	£	£	£
Customs	119,888		122,710	
Excise	127,500		129,860	
Motor Vehicle, etc., Duties	4,920		4,950	
Estate, etc., Duties	79,770		83,000	
Stamp Duties	25,670		27,000	
Land Tax	880		800	
Property and Income Tax	237,426		260,000	
Super Tax	56,390		64,500	
Excess Profits Duty (net)	2,250		1,700	
Corporation Profits Tax				
Total Tax Revenue		654,694		694,520
NON-TAX REVENUE:				
Postal net Receipts	£9,200		£10,125	
Crown Lands (net)	1,290		1,300	
Interest on Sundry Loans, etc.	32,640		33,000	
Miscellaneous:				
Ordinary Receipts	10,433		34,500	
Special Receipts	25,932			
Post Office	58,900		60,275	
Road Fund	21,882		23,560	
Appropriation from Rating Relief Suspense Account	..		16,000	
Total Non-Tax Revenue		160,277		178,760
Total Revenue		£814,971		£873,280
Deficit of Revenue, 1929–30	£14,523			

CHAPTER 33

THE INCIDENCE OF TAXATION

In discussing the incidence of taxation we seek to determine by whom the taxes imposed by government are ultimately borne. We know, for example, that although the import duty on cigars is paid in the first place by the importer, it is ultimately borne by the consumer, who pays a certain proportion of tax in respect of each cigar which he purchases. In technical language we say that the *impact* of the tax is upon the importer, whereas the *incidence* is upon the consumer. The impact of a tax is, therefore, upon the person from whom the tax is collected, whereas the incidence is upon the person by whom the impost is eventually borne.

The process by which the burden of a tax is transferred from one person to another (as from the importer to the consumer, in the example given) is generally referred to as the *shifting* of a tax. A careful appreciation of the shifting process in respect of any tax is necessarily essential to a full conception of its incidence. Furthermore, we must observe that the ultimate effects of a tax may be to exact from the bearer of its incidence a greater amount than is obtained in the first place by the State; in the process of shifting from person to person minute additions may be made to the amount of the tax which is strictly payable. This may arise because a middleman who has paid the necessary duty expects to be recompensed for interest and for the advance of capital; or because the amount of tax on an article usually sold singly to consumers may be less than the division of money used in the type of business, and accordingly the next higher unit is charged. For example, if a tax on bread came to one-eighth of a penny a loaf, some bakers may for a time at least demand an extra farthing.

Direct and Indirect Taxes Compared.

The distinction between direct and indirect taxes was referred to at a previous stage in order to facilitate the discussion of the principles of taxation. The understanding of incidence enables us to grasp the difference more clearly. Generally speaking, a *direct* tax is one the impact and incidence of which are upon the same person, that person being the one upon whom the tax is actually levied by the State. On the other hand, a tax is *indirect* when its impact and incidence are upon different persons, as in

the case of the duty on cigars already considered. Sometimes, however, a tax which is intended to be direct is subject to a certain amount of shifting and becomes indirect. For example, the income tax is usually regarded as being direct; it is intended by the State to be paid out of the income of the person upon whom it is imposed. But without doubt it frequently happens that slight additions to cover income tax are made to the charges of business and professional men for goods and services sold to the public.

It must not be supposed that a tax is indirect merely because it is *collected* from one person who pays on behalf of another. For example, the property tax under Schedule A of the British Income Tax is collected from the occupiers of premises, but in cases where the occupier is not himself the landlord but a tenant he is allowed to deduct from his next payment of rent the amount of tax paid by him to the Government. The same principle of taxation at the source is also extensively applied in connection with the income tax, all companies and corporations being required to deduct income tax from dividends paid by them, and to pay the proceeds to the collector of taxes. The original payer of such taxes is, in effect, an agent for the purpose of the person by whom the tax is actually borne. The arrangement is clearly a particularly convenient and economical one for the Government, and is at the same time a safeguard against evasion.

Most tax systems contain both direct and indirect taxes. As a rule the former are imposed on income, house property, land and estates passing at death, while the latter are chiefly taxes on commodities, i.e., the customs and excise duties. There are in each case certain advantages and disadvantages as compared with the other form of taxation, and consequently an endeavour is sometimes made to utilise both forms so that the disadvantages of one may be to some extent offset by the advantages of the other. Gladstone, for example, held that an even balance should be maintained between the two varieties, and for a long period this policy has been approximately followed in our fiscal system. In recent years, however, there is a marked tendency for the amount raised per head by direct taxation to be proportionately higher.

The Advantages of Direct Taxes may be briefly summarised as follows:—

1. ECONOMY.—The cost of collection is low, and as the tax is paid direct to the State by the taxpayer or his agent, no wastage is incurred, and the sum received is approximately that which is demanded.

2. CERTAINTY.—The taxpayer knows exactly what he is expected to pay, while the State is able to estimate the yield fairly accurately, and to adjust its finances accordingly.

3. EQUITY.—The incidence of a direct tax is not difficult to judge, and as a general rule may be assumed to be upon the person taxed. Furthermore, direct taxation permits of a reasonably just system of progression, and permits also of certain adjustments to meet individual circumstances.

4. ELASTICITY.—Direct taxes are very elastic, and their yield automatically increases as wealth and population increase. The numerous adjustments in the British income tax during recent years admirably illustrate this principle, the rate having been subject to considerable increase in accordance with the demands on the exchequer.

5. SOCIAL EFFECT.—In paying a direct tax the payers are made to feel that they contribute in person to the national exchequer. Consequently their civic consciousness is developed, and they take an intelligent interest in the spending of the national revenue.

The Disadvantages of Direct Taxes include :—

1. INCONVENIENCE.—The taxes necessitate a fair amount of inconvenience to the taxpayer, in the compilation of forms and the supplying of returns to the collector. Furthermore, the payment of such taxes in lump sums at certain times is not as convenient as the continuous payment of very small amounts in the case of indirect taxes on articles of consumption. Many people prefer to be taxed " in the dark " ; they unhesitatingly pay a small tax included in the selling price of a commodity, whereas few persons welcome the necessity of paying out a large sum in income tax or rates as their contribution to the national or local finances.

In many cases the demand for direct taxes falls at very inconvenient periods, while the Government is also involved in greater inconvenience than by indirect taxation, for the time of inspectors of taxes and local commissioners in each district is devoted chiefly to matters concerning direct taxation. These disadvantages are now being met to some extent by the simplification of forms and by arrangements for the payment of taxes by instalments.

2. POSSIBILITY OF EVASION.—A direct tax has been called " a tax on honesty ". Evasion of the correct contribution is possible by the making of fraudulent returns, while payment may in some cases be altogether evaded.

3. INEQUALITY.—It is difficult to frame a just basis of assessment for all classes. Any system must of necessity be arbitrary, although long experience and care may tend to remove inequalities.

The balance of advantages and disadvantages is clearly in favour of direct taxation, and the objections are due chiefly to

the methods of application and administration rather than to the principle involved. In this country, particularly, steps have quite recently been taken to remove certain of the objections which have hitherto existed.

The Advantages of Indirect Taxes are :—

1. CONVENIENCE.—Payment of small amounts of taxes on commodities is very conveniently made at the time of purchase, and the taxpayer does not feel the burden as heavily as in the case of direct taxes. From the point of view of the State also such taxes are very convenient, as they are collected in bulk from importers and manufacturers.

2. ELASTICITY.—As a general rule and within limits an indirect tax is elastic, but naturally much depends on the nature of the article, and on the demand therefor. For example, a small tax on necessaries may be slightly varied to meet circumstances; it may be very productive of revenue, and its yield can be estimated fairly accurately. On the other hand, a tax (or an increase in the tax) on luxuries may result in a diminished demand and a falling off in revenue. Indirect taxes are therefore elastic when imposed on articles for which the demand is inelastic, and tend to be less elastic on articles for which demand is elastic. Furthermore, indirect taxes are elastic in the sense that their yield usually increases or decreases with the rise and fall in population. This applies particularly to taxes on necessaries.

3. DIFFICULTY OF EVASION.—It is difficult to avoid the payment of indirect taxes when such taxes are included in the price of commodities purchased.

4. EQUITY.—Indirect taxes usually conform to the principle of equity in that they demand a contribution from all classes, and enable those with small incomes to be reached as well as the more wealthy classes. Furthermore, indirect taxes on luxuries exact contribution from those who are best able to afford such payments.

5. SOCIAL BENEFIT.—Indirect taxes on such commodities as drugs and stimulants perform a social and economic service in restricting consumption of articles which are detrimental to efficiency, and at the same time raising revenue.

The Disadvantages of Indirect Taxes may be summarised under the following headings :—

1. INEQUALITY.—Indirect taxes are not always equitable. On each article the poor pay as much as the rich, i.e., the

taxes are proportionate rather than progressive. In the case of necessaries, the inequality is emphasised because a greater proportion of small incomes is spent on necessaries, and consequently the burden on the poor is relatively greater than on the rich.

2. UNCERTAINTY.—Except in the case of necessaries, the revenue from indirect taxes is not certain, while such taxes on luxuries give a lower yield in times of depression. There is also little certainty as to the amount of tax paid in any individual case, or in regard to the ultimate incidence of the tax.

3. UNECONOMICAL.—Indirect taxes are uneconomical from the taxpayer's point of view because, for reasons already given, he may be compelled to pay more than is actually received by the State, each middleman requiring a small additional allowance in respect of his capital outlay on tax payment, and the cost of an article being frequently raised more than is necessitated by the tax imposed. This is uneconomical from the point of view of the State also. Further, the cost of collecting such taxes is frequently heavy, as where customs and excise officials must maintain a careful supervision. On the other hand, the seller of such articles (e.g., a tobacconist) may be regarded as an unpaid tax collector.

4. SOCIAL SIGNIFICANCE.—The civic consciousness of the payers of an indirect tax is not stimulated in proportion to the payment made. The method of raising such a tax is so indirect that the fact of paying a tax is itself obscured. This fashion of raising revenue is well in accordance with the "cynical theory of taxation", as it permits of "plucking the goose with as little squealing as possible".

The Importance of Incidence in a Tax System.

The question of incidence is clearly of the greatest importance in connection with the framing of a system of taxation where an attempt is being made to adhere to the general canons already discussed, and particularly to the principle of equity or of ability to pay. The imposition of any tax is followed by both immediate and ultimate effects, or what are sometimes described as *primary* and *secondary reactions*. The former can be judged with a fair degree of accuracy, but the estimation of the ultimate results of a tax is a matter of considerable difficulty. Nevertheless, no scheme of taxation which aims at securing a just distribution of the tax burden can fail to take account of the ultimate incidence of its imposts.

Generally speaking, careful attention is paid by Government to the question of incidence. Some taxes which are imposed are

intended to be shifted, others are intended to be borne by the persons directly taxed. The adjustment is left to the free play of competition, and to the interaction of the economic forces of supply and of demand so far as their results can be forecasted. But frequently the ultimate effects are totally different from those anticipated, and the loss or disutility of a tax may be distributed in a way which involves injustice and hardship. In the first place a tax intended for one class may be shifted on to the shoulders of another class, in direct opposition to the intentions of the State. On the other hand a tax intended to be shifted may not be shifted at all, or it may be shifted only in part, or subject to those additions which, as we have already noticed, are frequently imposed by dealers and middlemen. Again, the ultimate effects of the incidence of a tax may have widespread influences, advantageous or detrimental, on the economic and social life of the community. The consideration of a few examples will illustrate these facts.

Taxes on Incomes.

The incidence of taxes upon incomes is usually upon the person taxed, but it is by no means necessarily so. We have already noticed that the income tax of a business man may be shifted in whole or in part on to the shoulders of the consumers of his goods or services, in the form of increased prices for such goods or services. A dentist or doctor may recoup himself for some of his income tax by increasing his fees. On the other hand, if the tax is very heavy, and cannot be shifted because of competition or of the conditions of demand and supply, then may individual efficiency be reduced. If such a tax presses heavily on small incomes, it may in the long run be very detrimental to the community, for the standard of life may be threatened and the general efficiency of the lower classes considerably decreased. Furthermore, a heavy income tax may affect saving generally, cause a decrease in the supply of capital and considerably influence the productivity of the community as a whole. Productivity is diminished not so much because high rates of taxation tend directly to increase prices and production costs, but because their harmful psychological reactions on the minds of business men tend to discourage initiative and enterprise, particularly where these are of a speculative type. (See also page 646.)

THE TAXATION OF "SURPLUS".—The taxation of incomes generally—i.e., including rent, interest, wages, and profits—has been the subject of close analysis by several modern writers.[1] Their conclusions are, briefly, as follows.

As a rule, taxes must be paid out of income. All incomes are divisible into (*a*) necessary costs, and (*b*) surpluses. *Necessary*

[1] See J. A. Hobson, *Taxation in the New State*; M. E. Robinson, *Public Finance*; and E. A. Lever, *Primer of Taxation*.

Costs are economically necessary payments for the maintenance of sufficient supplies of the various agents of production. As has been noted in the chapters on Distribution, there is in any trade a minimum subsistence wage that is necessary if a constant supply of new workers is to be forthcoming. Similarly, there is a minimum rate of interest necessary to induce supplies of capital from the marginal investor, and a normal rate of profit necessary to the continuance of the representative firm. The subsistence wage, the minimum rates of interest and normal profit are necessary " costs " which can have no ability to bear taxation. They are clearly distinguishable from such *surpluses* as pure profits, rent, and quasi-rents, which arise from differential advantages, or from monopoly or chance gains.

Since taxes cannot be borne by incomes representing necessary costs, they tend to be paid out of surpluses. If a tax is imposed on cost, it tends to be shifted on to a surplus. Thus a tax imposed on a subsistence wage will be shifted on to the surplus represented by the profits of the employer, who will be forced to pay a higher wage. If such profits are normal, and cannot bear the tax, it will be shifted to the consumer. Generally speaking, the ultimate incidence depends upon whether the surplus arises from monopoly, a luxury, or necessary. In the case of a monopoly, the producer tends to bear the tax. In the case of a luxury, the demand for which is elastic, the tax tends to be shared by producer, middleman, and consumer. A tax on necessaries will be borne almost wholly by the consumer.

The exponents of this conception thus maintain that taxes cannot be imposed on that part of income which represents minimum costs without causing a reduction in the productivity or supply of the factor concerned. On the other hand, it is held that the taxation of " surplus ", which is in the nature of rent, may prove very productive and involve a minimum of sacrifice. While there may be much that is sound in the general principle, it offers no practical means of measuring or of estimating the amount of the surplus which may be taxed.

Taxes on Personal Property.

Taxes on capital other than land tend to fall directly and ultimately on the owners of the capital, although it is possible that they may in some cases be passed on, as in the case of the income tax.

The effects of the imposition of a heavy tax on wealth have already been mentioned: saving will be discouraged, capital will be induced to emigrate, and production will be deprived of its necessary supplies of funds for development. It is clear that in the long run the effects of such a tax will be felt over a wide field and will extend beyond the class from which contribution is originally demanded. If the tax is on some particular form of such personal property, as, for example, on carriages or

jewellery, the incidence may be wider than on the owners. Demand for such articles may be decreased by reason of the tax, and consequently the producers may suffer in diminished profits. Even if they offer to pay the tax for the consumer, as in the well-known case of the payment of motor taxes by producers in the hope of stimulating demand, the total amount of profit must be reduced unless it can be covered by the greater advantage derived from increasing returns. In cases where the personal property taxed forms a part of business equipment, as in the case of a dentist's machine or a doctor's carriage, the tendency will be for the tax to be paid in increased fees by the consumers of the services.

Taxes on Inheritances or "Windfalls".

It is sometimes stated that a tax on inheritances, i.e., on property passing at death, falls on no *person* in particular; it cannot be said to be borne by the deceased or by the beneficiaries, who are assumed to be incapable of being deprived of what they never possessed. It would seem, however, that as the property of a deceased person devolves upon the beneficiaries on the death of the testator, they may be fairly regarded as suffering the incidence of the tax. In fact, such taxes are usually justified because they are demanded at a time when a person is in a good position to contribute, and because the beneficiary can afford to pass on to the community generally a portion of that wealth for the accumulation of which he is in no way responsible. Furthermore, it is held by many that heavy taxes on inheritances make possible a more equitable distribution of wealth in the community, and tend to remove, in part at least, what is perhaps the greatest source of inequality of opportunity. But in spite of the strength of such arguments and of the general sentiment concerning the taxation of such bequests, it must not be overlooked that heavy taxation may operate to discourage saving and induce reckless expenditure during life.

Moreover, taxes on inheritance may not always conform to the canon of equity, as some property may change hands through death as many as four or five times within perhaps fifty years, while other property may do so once only. This inequality might be lessened by some arbitrary rule as to the freeing of a property from further liability to inheritance duty for a certain period after a change in ownership caused by death. But the inequality always remains in some form.

Taxes on Land.

The fact that the income from the ownership of land frequently contains elements other than pure economic rent complicates the problem of the incidence of taxes on land or land values. It

is impossible to enter into a full discussion of the problem and a few general principles only can be briefly stated.

A TAX ON PURE ECONOMIC RENT generally is a tax upon a surplus, and must fall upon the landowner. It cannot be borne by the consumer of the produce of the land, because the price of that produce is determined by the cost of production on the marginal land, which pays no economic rent and consequently no tax. Neither can a tax on economic rent be borne by the cultivator, for, as has been shown in the chapters on Distribution, he is left by competitive forces with a normal rate of profits only and cannot retain any portion of pure rent. Therefore, if the impact of the tax is on the cultivator, he may deduct it from his next payment of rent, and so shift the incidence on to the landowner. This is true when it can be assumed that the land is "rack-rented", i.e., that the landlord gets the full value of the land in the way of surplus. It must not, however, be forgotten that competition is rarely perfect, and consequently a tax on rent, which is levied on the occupier with the intention that it shall be shifted, may actually be borne wholly or in part by the occupier, who may be unable to pass it on to the landowner. Then again, under certain conditions the tax may be shifted by the occupier on to consumers of his produce.

This will occur if the tax restricts the investment of capital in improvements on the land, for then a less quantity of produce is raised, resort may be had to sub-marginal land, and the consumer will be compelled to pay the tax in an increased price for the produce.

Similar conclusions apply generally in the case of rent of all kinds—pure situational rent or rent of accessibility, rent of ability and quasi-rent. The tax tends to fall on the surplus which arises from differential advantages.

From the foregoing conclusions is deduced the maxim that "High rates make low rents". The rates are paid by the occupier, and he deducts their amount from his annual rent before paying the landlord. Thus the higher the rates the lower the rent *paid to the landlord*. The actual rent borne by the cultivator is of course unaffected.

TAXES ON BUILDING LAND.—The problem of taxation of land is considerably complicated by its use for building purposes. If competition is perfect, and adequate land is available for builders, a tax on building sites will tend to be thrown on to the surplus received by the landowners in respect of situational advantages. Furthermore, on a sale of the property the landowner must lose the capital value of the tax, for buyers will expect to pay a lower price for land subject to such a duty.

Taxes on Buildings.

If a tax is imposed on the rent of buildings and is levied upon the occupier, it will tend to remain with him if the demand

for accommodation is inelastic, but to be transferred to the landowner if the demand is elastic. Generally speaking, however, competition is so imperfect that a tax intended to be borne by the landlord should be levied upon him directly. Even then the incidence may, in the long run, fall upon the occupier of the premises, in the form of fewer repairs and improvements, or, in the case of business premises, it may possibly fall on the consumers of the utilities produced on those premises.

As a general rule, a tax on buildings tends to be borne by the occupier. If the owner is also the occupier then he cannot shift its incidence. But usually buildings are built with the expectation of letting, in which case the burden of the tax is shifted on to the occupiers in the form of a higher rent. The building will not be erected unless the owner has reason to believe that the rent will yield him a *net* return that is at least equal to the return on current investment. Such a tax is reckoned by the owner as being part of the expenses, and therefore will tend as such to be passed on to the occupiers in the form of higher rent. In the case of buildings used for special purposes such as retail trade, the incidence of the tax may be still further extended to the consumer of the goods or services, as the occupier will tend to pass on the burden in the form of a higher price for the goods or services. Furthermore, any tax imposed on an occupier of premises under a lease cannot be shifted but must be borne by the occupier during the continuance of the lease. Thereafter, it may be shifted on to the landlord in a smaller proportion than was originally intended, i.e., the leasehold value or rental may be increased to cover part of the tax.

Taxes on "Unearned Increment".

In various countries attempts have been made to tax the addition to the value of land which has resulted, not from any expenditure of capital or of effort by the owner, but by the natural growth of population and the extension of towns. Certain areas in the neighbourhood of large towns have acquired extraordinary values in this way, and yield very large revenues to their owners who have done little or nothing in the accretion of such value. It is considered as only fair that the fortunate owner of land which has acquired considerable "public value" should contribute at least a part of that benefit for the general good. After considerable controversy the principle of a Land Value Duty was accepted in this country in 1909, and a tax was imposed to absorb 20 per cent. of all increase beyond 10 per cent. in land values accruing after 30th April, 1909, the tax to be payable each time the property changed hands on death or sale. The yield at first was small and expenses of valuation were high, so after a chequered career the tax was abandoned in 1920, although it cannot be said to have had a fair trial in view of its great theoretical advantages.

Closely allied to the problem of unearned increment is that of *betterment*, which may in fact be regarded as a special form of unearned increment. Betterment refers to the increased value which accrues to property as the direct result of the construction of a work of public utility. For example, fields may acquire additional value as building land in consequence of the construction of a road through them by a local authority. It is held by many that as such additional value results from the efforts of the local authority, the community as a whole has a right to at least a portion of the increment, and that it should accordingly be subjected to a special impost.

The main objections to taxing such unearned increment or betterment are (*a*) the great practical difficulty of distinguishing the additional value which is attributable to general causes and not to the owner's improvements, and (*b*) the inequality which must ensue through the imposition of a special tax on land, which is but one form of many investments in which capital is sunk in the expectation of a return from natural or acquired advantages. There are unearned increments in every type of income, and a dangerous precedent is being adopted if the State is to interfere with those rewards which act as a great encouragement to saving and productivity. Clearly the principle has a socialistic bias and should be applied and extended only after the fullest investigation. Furthermore, any equitable scheme should make due allowance for compound interest on the capital which has for a period remained invested in the land.

Taxes on Consumable Commodities and on Services.

Taxes on consumable commodities and services are usually indirect, as in the case of customs and excise duties, but they may also be imposed directly, as in the case of permissive licences to do certain things (e.g., to marry) or to use certain things, such as guns and carriages, or to issue certain documents (e.g., bills of exchange).

Generally speaking, taxes on commodities have the advantages of convenience, in so far as they are imposed in small amounts and are not noticed at the time of payment. Furthermore, if they are carefully imposed they may yield considerable revenue, although the cost of supervision and collection is sometimes high, while account must also be taken of the indirect cost of such taxes in so far as they interfere with trade. On the other hand, while the principle of equality requires that such taxes should be *ad valorem*, i.e., according to the value of the article, rather than *specific*, i.e., according to number or weight, it is not easy to meet the necessity for *certainty* with *ad valorem* taxes because of the difficulty of assessing the values of commodities which are produced in great variety of quality and description. Furthermore, *ad valorem* duties lead to fraudulent valuations with the object of evading some or all of the

taxes, and they may consequently be uneconomical in certain cases.

The incidence of taxes on commodities depends partly on the elasticity of demand (including the possibility of using substitutes), and partly on the conditions under which the commodity is produced, i.e., whether under conditions of increasing, constant, or diminishing returns. In considering the question we must assume free competition and the absence of monopoly.

As a rule, a tax on commodities will tend to reduce the demand of the consumer, but the actual reduction will depend on the elasticity of that demand. If demand is relatively inelastic, as in the case of necessaries, price must rise, and the immediate incidence of the tax will be upon the consumer. The *ultimate* incidence in part may fall on the producers of other articles, the demand for which is lessened by the decreased purchasing power left in the hands of consumers in consequence of the payment of the tax. The incidence of a tax on necessaries may therefore be widely diffused throughout the community.

If, however, the demand for the commodities is relatively elastic, the imposition of a tax will tend to reduce demand, but the ultimate incidence will depend upon whether the commodity is produced under conditions of increasing, constant, or diminishing returns. In all cases the falling off in demand will reduce supply.

Hence, under conditions of increasing returns, the decreased supply can be obtained only at an increased cost *per unit*, and consequently price will rise by *more* than the amount of the tax. The ultimate result of such a tax may be to force out of production the "no-profits" type of producer: the remaining manufacturers may then extend their output, obtain the benefits of increasing returns, and so recoup themselves for payment of the tax.

Under constant returns, the change in demand and supply will not affect costs, hence the consumer will tend to pay the exact amount of the tax. Finally, under diminishing returns, the decreased supply is obtained at a lower cost per unit, hence price to the consumer may rise by less than the amount of the tax. Thus, in the latter case, the loss involved by the tax will be borne mainly by the consumer.

Two important conclusions follow: (1) If a tax is intended to raise revenue, it should not be imposed on commodities whose demand is elastic; (2) If possible, taxes should be imposed on manufactured articles rather than on raw materials, for taxes on the latter tend to be intensified at every stage, and to be considerably increased by the time they reach the ultimate payer. Furthermore, a tax should not be imposed on materials which may stimulate production or which are essential for a great national industry, if it can be avoided.

Taxes on Monopolies.

Very important is the problem of taxes imposed on commodities in respect of which a monopoly exists. In such a case it may be assumed that output has been adjusted so as to maximise profits, and that as a rule the price is already as high as can be imposed. A tax on output will therefore fall on the monopolist unless the tax is proportional to the amount produced, in which case it will be to his advantage to reduce his output and raise prices, since the loss in monopoly revenue after the imposition of the tax would be greater on a larger output. Similarly, if the tax is imposed as a percentage or lump sum impost on monopolistic gains or profits, it will not be shifted to the consumer. A tax imposed as a percentage of gross receipts, or in the form of a lump sum on gross receipts, would also be borne by the producer, since it will not have the effect of increasing or decreasing production or prices ; price per unit is already fixed at that point which yields the highest aggregate net revenue. Therefore, a tax on a monopolist, like a tax on rent, cannot be shifted on to the consumer and will thus tend to be borne by the producer himself.

Import or Customs Duties.

Duties on imported articles are imposed either for purposes of revenue or for the protection of home industries. The imposition of such duties for revenue purposes only on articles which are also produced at home necessarily involves a corresponding taxation of the commodities internally produced, by the imposition of *excise* duties. Frequently also they have a sumptuary aim, i.e., they are imposed in order to check the importation and therefore the consumption of noxious articles.

The question of the imposition of customs duties for protective purposes involves political and social as well as economic considerations, most of which have already been discussed in Chapter 28, *ante*. We are now chiefly concerned with the incidence of such taxes, and may first of all note the following defects of customs duties generally :—

1. Regressive Nature.—Customs duties which are imposed for revenue purposes rather than for protection must be levied on articles of general consumption. But a greater proportion of small incomes than of large incomes is spent on such commodities, hence the taxes press more hardly on the poorer classes. Customs duties therefore suffer from the general defect of indirect taxes in that their result is regressive rather than progressive.

2. Effect upon Industry.—Customs duties imposed for protective purposes interfere with the natural disposition of labour and of capital to seek their most remunerative outlets. (See Chapter 28.)

3. INELASTICITY.—It is said that few taxes are more inelastic than customs duties, as frequent changes interfere considerably with the stability and evenness of business conditions, and tend to diminish general efficiency. They should not therefore be relied upon to meet unusual demands upon the national exchequer.

4. UNCERTAINTY.—Customs duties are subject to the serious disadvantage that they yield least when the need of Government is greatest, as for example, in the period of depression following the outbreak of war. At such times expenditure increases considerably, but the disturbance of international trade causes a reduction in imports and so diminishes the yield from customs duties. Furthermore, receipts from import duties may decline considerably if depressed conditions persist, and tend accordingly to increase the financial difficulties of the State.

The problem of the incidence of customs duties is necessarily complex, inasmuch as international as well as national conditions have to be considered. Where they are imposed for revenue purposes only, and corresponding excise taxes are levied internally, the effects will be those which have been already discussed in connection with general taxes on commodities. As a rule, the home consumer will pay. It is possible that a foreign producer may pay import duties in whole or in part, but only if the importing country offers a sole market for his produce: such conditions are very rare, if indeed they exist at all. Generally speaking, foreign producers will seek new outlets for their goods if the market in one country becomes less profitable through the imposition of a tax on their products. Consequently, if consumers must have those products, they must also pay the taxes imposed by their own governments. Only in the extremely rare cases where the importing country has a *buyer's* monopoly, or where the exporting country has a *selling* monopoly (in which case the general theory of incidence applicable to producer's monopoly will apply) can it be hoped to shift some or all of the burden from the home consumer on to the foreign producer.

Furthermore may be noted the generally disastrous consequences to trade between two countries which frequently follow the imposition of such duties. In the first place, imports may decline and consequently the exports sent in payment must also be reduced. This will tend to put into operation two adjusting forces: (1) The labour and capital employed in making these exports will be diverted into other channels, presumably, but not necessarily, less productive. (2) The demand for home products will be encouraged. The broad effect of the imposition is, however, to lessen the relative advantages of international trade, and the loss will in most cases, and in part at least, fall on the industries of the country which levies the tax. Secondly,

such taxes may lead to the conduct of a " tariff war " between the countries by the imposition of protective tariffs on each other's products. Efficiency and prosperity must be materially affected in both countries concerned, and the ultimate effects of such duties cannot be included in any general statement.

It follows, therefore, that customs duties should be imposed as far as possible for revenue only ; that if they are imposed on necessaries the duties should be as low as possible compatible with the attainment of equity in a mixed system, and that the duties should be imposed on a few commodities only, with the object of lowering the cost of collection and of ensuring productivity.

It may be added that if a protective duty is so high as to prohibit altogether the import of certain goods, then will no gain accrue to the exchequer, while the home consumers cannot but lose, as a general rule, from the cutting off of supplies which were previously needed.

Export Duties.

Taxes on exports of commodities are insignificant in modern systems compared with import duties. In earlier periods such duties formed an appreciable part of the taxation system in this country, as in the case of the " Ancient Customs " duties imposed for many centuries on British exports of wool and leather. Such duties also formed an important adjunct of the Mercantile policy of trade, and were partially continued in this country until the middle of the last century.

Nowadays export duties are the exception rather than the rule, but one or two notable cases have existed in recent years, including the duty on British steam coal, imposed between 1901 and 1906 to meet the cost of the South African War, and the Indian export duty on opium, which was continued until 1917.

Export duties are imposed chiefly for revenue, but only in very special cases can they succeed in exacting a contribution from the foreigner. This may occur when the exporting country possesses an almost complete monopoly of the supply of the commodity taxed, provided that there is a sufficiently strong demand in the importing country. The demand abroad for British steam coal and the demand in China for Indian opium satisfied such conditions, but other examples are difficult to find. In the absence of these conditions, the duty will tend to be paid by the home exporter. The foreigner is not likely to pay the tax if he can obtain supplies elsewhere in the world market, or if he can use substitutes, or if he can reduce his demand.

The Diffusion Theory of Taxation.

The consideration of the incidence of various taxes referred to in the foregoing paragraphs enables us to estimate the import-

ance of the so-called Diffusion Theory of Taxation. This maintains that all taxes tend ultimately to be distributed equally and equitably throughout society by the process of shifting and of accommodation; it holds that in the long run competitive forces tend to diffuse the burden of taxation so that each member contributes in proportion to his ability to pay. Each individual who pays taxes tends to shift some portion of his burden either forward, as in the case of import duties, or backward, as when a consumer reduces his demand for an article because of the tax imposed thereon. Similarly a shopkeeper who pays heavy rates, or a doctor who pays a heavy income tax, passes on some part of the burden in increased prices for his goods or increased charges for his services.

Although there is a certain element of truth in the theory, it is clear from our consideration of the various kinds of taxes that the diffusion principle is of very limited application and certainly cannot be relied upon to distribute the burden equitably in all cases. If it were otherwise there would be little point in the great efforts made by legislators to achieve equity in the tax system. The theory is mainly based on observations of the way in which indirect taxes tend to be diffused throughout the great body of consumers, but we see that even in these cases the ultimate contribution of consumers may be greater than the amount received by the State. The burden is, in fact, *more* than diffused. Furthermore, it has been explained that the burden of the various direct taxes—the income tax, estate duties, and stamp duties—which form a considerable part of modern tax systems, tend generally to remain with the actual payers. That this is so is to some extent indicated by the opposition which is aroused by most new forms of taxation and by any suggested increases in existing taxes. It is proved also by the discontent which certain taxes occasion among certain classes: the objection of the investing classes to the high rates of income tax and the unpopularity of surtax among business men is both well known and well recognised.

Again, many taxes are devised with considerable trouble by finance ministers and exchequer officials with the sole object of exacting contribution from certain particular classes. The estate duties are intended to obtain an increased contribution from the rich and from the rich only. They are based essentially on the recognition of the fact that ability to pay is greater in the case of large than in the case of small incomes, and the attempts to attain equality would clearly fail if the effect of such taxes could be shifted elsewhere.

The principle is therefore of very limited application. A certain amount of repercussion does undoubtedly ensue, for a deduction from most incomes necessarily means that the owners have less to spend on services and commodities, and that others must feel the limitation in demand. But by no means the whole of

all incomes is spent; much of it is saved for future use. And in so far as this saving is reduced by taxation the individual must bear the burden of that taxation. Furthermore, competition is by no means perfect, and, unfortunately, it frequently happens that the economically weak are compelled to bear taxes intended for the economically strong.

Thus we conclude that no government can rely too greatly on the principle of diffusion in adjusting its tax system; as has been already stated, it is essential that both the immediate and ultimate reactions of any impost should be carefully estimated before drastic changes are made.

Double Taxation.

The growing internationalism of business enterprise, with the establishment by large concerns of branches and offices in more than one country, has in recent years brought into greater prominence the problem of *double taxation*, i.e., the imposition of income-tax on the same income by two countries. The matter has been the subject of much investigation and international discussion, and co-ordination of national taxation on enterprises of an international character is now generally recognised as essential. Under the existing arrangements many hardships are imposed, and there is a tendency for those concerned to evade the additional liability by removal of the source of income to another country. A League of Nations Committee, formed to consider the problem, made certain tentative suggestions. Thus, it was proposed that in the case of such concerns as shipping companies, which obviously call for special treatment, reciprocal arrangements should be made whereby the tax would be imposed only by the country in which the real centre of the undertaking is situated, and on these lines reciprocal agreements have been concluded between the United Kingdom and the United States, Denmark, Norway, Sweden, Holland, Belgium, Germany, Finland, Greece and Japan.

An agreement involving the same principle has been concluded between the British Government and the Government of the Irish Free State for reciprocal exemption and relief in the case of residents of (*a*) Great Britain and Northern Ireland, or (*b*) the Irish Free State, who receive income from both countries. Such persons are now assessed only in the country where they reside.

The League of Nations Committee on Double Taxation submitted certain draft conventions for the avoidance of double taxation and fiscal evasion for adoption by members of the League, and, in the course of an interview with the Chancellor of the Exchequer, a deputation from the Federation of British Industries was informed that the British Government is prepared to consider any fair and reciprocal arrangement with any individual

foreign country. The Finance Act of 1930 included a provision authorising the Government to enter into reciprocal agreements with any other government with the object of avoiding double taxation of the nationals of one country who are trading in the other.

THE BRITISH TAXATION SYSTEM

A brief survey of the principal features of the British taxation system will serve to illustrate still further the foregoing explanation, and will also afford an insight into the principles upon which the national revenue is obtained.

The British system of taxation is conducted on a *composite* or *mixed* basis, and includes direct and indirect taxes of several kinds designed to secure a productive revenue and at the same time conform to the general canons which have been previously noticed. The principal sources of taxation revenue are indicated in the table on page 598, *ante*, from which it will be noted that a larger proportion (65 per cent.) of the total is now obtained from direct than from indirect taxes. This is in accordance with a general tendency during recent years to rely upon direct taxes, and especially the income tax, for a considerable proportion of the annual revenue, and to relieve as much as possible the pressure of taxation on the "people's breakfast table." As a general rule, taxes are imposed for revenue only, and accordingly customs duties are usually balanced by corresponding excise duties when the commodities concerned are also produced in this country.

The Customs.

The principal features of customs duties have already been noticed. In this country they are imposed generally on luxuries and semi-luxuries, although the heavy expenditure of the State during the last few years has necessitated a departure from the policy of freeing necessaries as much as possible. The customs duties on such articles as tea, coffee, and sugar have the advantage of exacting contribution towards the national finances from the poorer classes who would otherwise be difficult to reach, whilst those on tobacco and intoxicants are extremely productive. Generally speaking, customs duties on a small number of articles form a productive and economical system, and one which has been found to be capable of appreciable expansion to meet urgent needs.

The Excise.

The British excise duties now yield slightly more than the customs, although their imposition was at one time strongly

resented and as strongly opposed, so that they proved very unremunerative. The present duties are levied very largely on home-produced intoxicants and on those products manufactured at home which would be subject to customs duties if imported from abroad.

Excise duties are subject to the various objections and advantages noted in connection with the customs revenues. Nevertheless, they form a convenient and productive means of reaching the poorer classes, and, in the case of the duties on intoxicants, have the further advantages not only of restricting wasteful and harmful expenditure, but also of restraining conduct which is injurious to individual health and character, and generally detrimental to national efficiency.

It is to be noted that if excise duties do not exactly correspond to the customs duties on the same articles a certain element of protection may result, but this principle is not adopted in this country. Furthermore, the term "excise" is applied to duties other than those on commodities, as, for example, vehicle, livery, dog and gun licences, and licences to conduct certain trades, such as those of pawnbrokers, auctioneers, tobacconists, and publicans. The great part of the revenue from such licences is passed to the Local Taxation Accounts, and thence to the local authorities in aid of "onerous" expenditure.

Motor Vehicle Duties.

During recent years the number of motor vehicles in this and in other countries has increased enormously, and the motor vehicle duty has provided a useful addition to the composite scheme. It permits of an additional contribution from a class which may be assumed to be able to afford a tax if it can afford the luxury of motoring, and is also just in as far as it provides some portion of the expenses of road maintenance, which have been considerably increased with the extension of mechanical traffic.

Estate Duties.

These comprise the duties on real and personal property passing at death, and are graduated so as to press more heavily upon the wealthy classes. In recent years they have been simplified, and now consist of three taxes: (1) *the estate duty* proper, which is based on the principle of graduation, a higher rate being charged as the value of the estate increases; (2) *the legacy duty*, which is charged on personal property, its amount varying with the amount bequeathed to each legatee; (3) *the succession duty*, which is imposed on real property passing to inheritors, its amount varying with the degree of relationship between the deceased and the inheritor.

The estate duties have provided a very productive and easily

collected revenue during recent years, and are justified on the grounds that they obtain a contribution for national purposes at a time when it is conveniently paid, and from those who can generally well afford the contribution. From the socialistic standpoint also they are advocated as ensuring a more equable distribution of wealth within the community. Nevertheless, such imposts undoubtedly partake of the nature of a capital levy, and have the ultimate effect of causing a redistribution of some part of private wealth, the cherished aim of so many social reformers. They also have a tendency to discourage saving and to encourage extravagant expenditure during life, and there is a tendency to evade high rates of duty by the transfer of wealth during life in the form of gifts and other dispositions of property. Such evasions are however to some extent restricted by certain regulations concerning the duties, while in many of the cases to which they apply saving cannot be avoided owing to the extent of the annual income.

Stamp Duties.

Stamp duties are imposed chiefly on various forms of instruments and documents, such as bills of exchange, promissory notes, cheques, receipts for the payment of money, title-deeds, and agreements of many kinds. Payment of the duty is easily enforced in such cases by making the stamping a requisite for legal validity of the instrument. The duties are also payable in respect of various forms of licences and registrations, as, for example, the registration of a company, pawnbroker, banker or, solicitor, and on certain commodities, such as patent medicines and playing cards.

Such taxes have the advantages of being easily collected and assessed, as they are usually graded on an *ad valorem* basis. They yield an appreciable revenue which tends to increase with the growth of business, and especially with the use of cheques and bills for purposes of commercial settlement.

The immediate incidence of stamp duties is upon the parties to the documents or agreements, and they are generally in the nature of direct taxes. Duties on permissive licences to conduct a business are an element of cost and fall ultimately on those who benefit from the utilities of the business, as, for example, the clients of a pawnbroker or solicitor. Taxes on the commodities mentioned are indirect; they are paid first by the manufacturer or distributor but fall ultimately on the consumer.

In some cases these taxes may considerably affect the smooth conduct of business between members of the community. The twopenny duty on cheques is frequently condemned as imposing a restriction on commercial transactions, and many business men believe that the loss to the State entailed by the complete abolition of this tax would be more than counterbalanced by the great gain to the community.

The Land Taxes.

The land tax was first imposed in 1692, but in its present form is merely a survival of a general impost which was intended to be levied on both real and personal property. Since its institution it has been subject to considerable modification, aimed at the removal of certain great inequalities in the rates of duty imposed in various parts of the country. It will be noted from the table of revenues given on a previous page that its yield is now comparatively small. Much of the tax has been redeemed by capital payments, and its high cost of collection and administration is frequently urged in favour of its abolition. Although the original duty was imposed on the landowner, its present incidence is doubtless on the tenants of the property taxed. On the other hand, when such property is sold, the capital value of the tax must generally be allowed to the buyer by the original seller, and consequently the ultimate incidence is upon the landowner.

Under our present fiscal system land is subject to various other taxes. The estate duties, which have already been mentioned, include a fair proportion of the tax applicable to land, while the annual value of both land and buildings is assessed for income tax purposes with other forms of income. Furthermore, an assessed annual value is adopted also as a basis for the levying of local rates, although the annual value for this purpose is not necessarily the same as that used for the assessment of income tax.

In 1909 a new form of taxation on land was introduced in the famous Land Value Duties, which were of four kinds, imposed on the value of land as determined by a special valuation. (*a*) *General Increment Value Duty*, levied on the "unearned increment" of land, and payable when the owner realised the increment by sale, or when the land passed at the death of the owner; (*b*) *Reversion Duty*, payable by the lessor on the termination of the lease according to the benefit gained by him, i.e., according to the increase in value accruing to him. Agricultural land was made exempt, and also leases of which the term was less than twenty-one years; (*c*) *Undeveloped Land Duty*, levied on the site value of undeveloped land, the value of which exceeded £50 per acre, and which had not been developed by the erection of buildings for the purpose of any business other than agriculture; (*d*) *Mineral Rights Duty*, levied at the rate of 1s. in the £ on the rental value of all rights to work minerals, and of all mineral way-leaves.

The valuation of the land and the administration of the tax proved very difficult and expensive, while the question was considerably complicated by the great increase in land values during and after the war. Consequently, the duties have now been repealed.

The imposition of the duties was important in that it

recognised the principle that the State has a right to share in that increased value of land which is attributable to social causes and not to improvements by the owner. Quite recently suggestions have been made for a renewal of this form of taxation, and, in spite of its previous failure, it is quite possible that it will be given a longer and possibly fairer trial at some future time.

The Income Tax.

The income tax is by far the most important tax in the British fiscal system. Not only does it provide a much greater revenue than any other form of impost, but it has also been found to be a sound financial instrument, capable of great elasticity to meet the changing needs of the National Exchequer.

The tax was originally imposed as a war tax by William Pitt in 1799, but it was viewed with such disfavour by the general public that it was abolished and its records were destroyed. Subsequently, however, it was resorted to by Sir Robert Peel and Mr Gladstone to replace revenue which had been lost by the reform of the national tariff and the removal of a number of small and comparatively unproductive taxes on commodities. The income tax is now recognised as a permanent feature of our fiscal system, and resort is always made thereto for additional revenue required for war or other extraordinary purposes. Its yield can be estimated with a fair degree of accuracy, it is very productive, and its administration and collection are economical.

Considerable controversy has been aroused in regard to the equity of the income tax. Gladstone, for example, held that its inevitable inequalities were incapable of being remedied, and he at one time advised its complete abolition. Its chief disadvantage is in the fact that income cannot be regarded as a test of ability to pay, as so much depends on individual circumstances and health. Further, it tends to press very hard on small incomes (particularly of professional workers), and to discourage saving in the case of moderate and large incomes. These objections have been met in the English system by the exemption of a certain minimum income, and by granting allowances of various kinds in respect of dependants and necessary business expenses. The tax is also said to discourage the accumulation of wealth, and so to restrict the supply of capital for productive uses, but this effect cannot be pronounced in a wealthy community where there exist so many incentives to saving. From the point of view of administrative precepts, the English income tax is said to infringe the canon of certainty by its increasing complexity in the form of various classes of abatements, allowances, and exemptions. To some extent this objection is being met by the endeavours to simplify the mode of collection and assessment.

As one tax in our mixed fiscal system the income tax has certainly marked advantages. The exemption of a minimum income is a recognition of the principle of diminishing utility

and of the fact that indirect taxation falls more heavily on small incomes. There is little doubt also that the income tax conforms to the general ideal of taxation that members of the State should contribute to its support in proportion to their faculty or ability to pay, for income is the best single mark of such ability. Furthermore, if it is applied uniformly to all kinds of income it cannot easily be shifted; its incidence is upon the payer, and it has the advantage of bringing home to him his duties as a citizen and his obligation to interest himself in the expenditure of the government. Finally, the method of taxing company dividends and other interest payments at the source makes for certainty of payment and for considerable economy of collection.

Super Tax and Surtax.

Super tax, in the form of a tax at higher rates on large incomes, was first introduced in the Budget of 1909. It was considerably extended during the war and post-war years, but is now replaced by the *surtax*, introduced by the Finance Act, 1927. This provides for the taxation of all income above a certain figure at a rate higher than the standard rate. The principle underlying both these forms of tax is that of the diminishing utility of incomes over a certain figure, and its object is to secure a more equitable contribution to taxation from those who are most fortunately situated. The general objections to high rates of income tax apply in these cases also.

BRITISH LOCAL TAXATION

The principles underlying national taxation also apply generally to local impositions, which, as we have already noted, are usually distinguished as *rates*, differing in one or two respects from national taxes. As a general rule the proceeds of local rates are utilised for the direct benefit of the particular locality in the provision of roads, lighting, sanitation, and other urban conveniences.

Local rates are mainly levied upon real property, i.e., premises and land, the basis adopted being that of the *rateable value* of the property, which is the rent at which it might reasonably be expected to let from year to year free of all the tenant's usual rates and taxes, less the probable expense of annual charges such as repairs and insurance.

Rates are payable by the occupiers of the land and buildings, and their amount in the £ is determined by (*a*) the cost of the local services; (*b*) the proportion of that cost borne by the central authority, and (*c*) the rateable value of all the property in the district.

The system of local rating was extensively revised by the Rating and Valuation Act, 1925, which came into force in April, 1927, and effected a general consolidation of all rates and a con-

siderable simplification of the rating machinery. Overseers of the poor were abolished, and the Council of every county borough and of every urban and rural district was constituted the rating authority for the borough or for the county district concerned. The rating authority in each county borough and urban area is now empowered to levy a consolidated rate, termed the *General Rate*, which replaces the poor rate and any other rate or rates previously levied. Rural authorities, instead of levying a poor rate for each parish, are now empowered to levy a *General Rate* for the whole district, and also a *Special Rate* for services connected with lighting, health, etc.

The Principle of Rating.

Although the general principles underlying national taxation apply also to local rates, a distinction exists in the greater importance attached to the benefit or *quid pro quo* basis of exacting contribution. It is easier to trace the advantages of local taxation to a limited number of individuals than it is to trace the benefit of national expenditure. The owners of property in a given locality undoubtedly reap a direct benefit from local sanitary and lighting arrangements, and from improvements in local roads, bridges, and water supplies. Consequently it has been maintained that the extent of property and the size of houses is a fair standard for the measurement of the benefit derived from local administration. To this it is frequently objected that a man with a relatively small income may require a large house because his family is large, or because it is essential for the conduct of his business (e.g., a dentist) or for the upkeep of his dignity. But although the acceptance of such a basis must necessarily result in inequalities, it is undoubtedly a more equitable mode of assessing local benefit than the local income tax which is sometimes suggested, and is of far greater convenience and productiveness than the *octroi* or local customs duty which is frequently used as a source of local revenue in continental countries.

As a form of raising local revenue the local income tax has the disadvantages, first, that incomes are frequently derived from sources outside the locality, and consequently are unaffected by local improvements; secondly, that it could scarcely be applied in the cases of banks and multiple shops which are merely represented by branches in the locality concerned; and thirdly, that it is a difficult and impracticable basis of assessing the great body of wage-earners who reap much of the benefits of local expenditure. The income tax is far more suitable for national purposes as part of a composite system of taxation.

The Incidence of Rates.

The problem of the incidence of local rates is extremely complicated. Generally speaking, the principles already explained

apply equally to local rates as to national taxes, but one or two further observations may be offered on the subject. Rates on houses are levied on the annual value of the property including the site : they are not imposed separately on building value and site value, although these are frequently owned by different persons.

With regard to the building value, it has been already explained that the tax hereon tends to fall on the occupier, unless the demand for such buildings is very elastic, or unless the building is used for business purposes, when the tax tends to be passed on to the consumers of the utilities supplied. It cannot be borne by the owners, for unless the rent yields a *net* return at least equal to the return on current investment, building will be curtailed and the supply reduced until the occupiers pay the tax. But the proportion of the tax which applies to the site value must generally be borne by the ground landlord, for anyone taking the land tends to allow for the proportion of rates he will have to pay in the rent which he is willing to offer. Landlords cannot restrict the supply of land in consequence of the tax, and consequently they must bear the impost if they desire to rent their property.

But the fact that competition is not perfect and that the whole rate is levied on the occupier in the first instance tends to leave the tax with him, at least for that period required for the full working of competitive forces. On the other hand, if rates in one district are very high in comparison with rates in a neighbouring district, certain occupiers may find redress by moving their place of abode to a low-rated locality. The rates will, therefore, press more heavily on those who, by reason of poverty or business ties, cannot afford to move. For example, a business magnate may be able to live outside London in a low-rated district, whereas his clerks must remain in comparatively high-rated suburbs in order that they may be able to reach their place of business without incurring undue travelling expense or loss of time.

In the long run, however, part of the differential rate, i.e., the difference between the high and low rates, will tend to be borne by the landlords, for the movement of population will cause a decreased demand for houses in the highly-rated locality, and to attract occupiers a lower ground rent must be charged which will make up part or the whole of the difference between the rates in the two localities.

Finally, we may note that the position of occupiers is always weak if the demand for accommodation is inelastic and high in relation to supply, i.e., when a shortage exists. In such cases the occupiers tend to pay not only the whole of the rates and a normal return on invested capital, but also a scarcity rent as well. These conditions will continue until a decreased demand (e.g., as the result of an efflux of population) or an increased

supply (e.g., as the result of a local housing scheme) places competition between tenants and owners on a more equal basis.

Objections to the Rating Principle.

It has already been stated that objection is frequently taken to the system of rating because the value of a house is not necessarily an indication of the occupier's ability to pay. The system is also criticised because the rates per £ vary in different areas, and consequently investors in house property in highly-rated districts tend to be penalised as compared with similar investors in low-rated districts. To this it is replied that so far as new investment is concerned, landlords are free to choose the most profitable outlet for their capital, while in regard to old investment, the tendency is for the long standing charge embodied in old rates to become capitalised, and to cause little inequity in the burdens on landlords in different districts. The objections to differential rates which result from varying degrees of *onerous* expenditure (see page 581, *ante*) are more easily justified. Frequently such expenditure, incurred for national rather than local advantage, is particularly heavy in poorer districts and imposes a greater relative burden on investors of capital in property in those districts.

Thus, so far as this complaint applies to new taxes it may be well founded, but in regard to old taxes the rule " an old tax is no tax " undoubtedly applies. Furthermore, the inequalities are to some extent removed by the system of grants-in-aid, already explained.

Finally, we may note the objection to the principle of differentiation from the point of view of a district as a whole, for if local rates are high compared with those of other districts, the tendency will be for manufacturers to move to the lower-rated localities, particularly if their products are subject to strong competition from producers in more favourable localities. Thus the district as a whole tends to suffer from the absence or diminution in the number of local productive enterprises.

Recognition of these objections led to the passing of the Local Government Act, 1929, which has attempted to relieve industry of part of the burden of local rates by its provisions for the de-rating of certain properties, and for more equitable contributions from the central Exchequer towards the vast expenditure on such national responsibilities as poor relief and highways. As from 1st October, 1929, *Agricultural Buildings and Land* are entirely exempt from local rates; *Industrial and Mining Properties* are rated at one-fourth their assessable value; and *Railways* are rated at one-fourth their assessable value, but the money saved in the latter case is to be devoted wholly to the reduction of freight charges on certain classes of goods.

CHAPTER 34

NATIONAL AND MUNICIPAL BORROWING

THE guiding principle in public finance, as in private or individual finance, is that annual expenditure should be met out of annual income. But even in a time of normal State activity it is not always possible to attain this ideal. The arrangements for the collection of revenue for any financial year must necessarily be made some time in advance, while it is not possible to estimate with exactness what expenditure will be incurred in the period under review. Extra demands of small or large amount almost always arise, and various circumstances may result in the yield from taxation falling short of anticipation. Thus it frequently happens that normal public revenue fails to cover normal expenditure, and, in the absence of public treasure, which was such a feature of earlier fiscal administration, resort must be had to temporary loans, which may be repaid out of the surplus revenue of more productive years, or may be met by increased taxation.

In modern times, however, extraordinary expenditure in most communities has rapidly increased. Central and local authorities have incurred obligations in various directions which could not be covered by any system of taxation. By far the largest item has consisted of expenditure on war and its aftermath, but in many communities heavy sums have also been expended on developmental functions which could not fairly be charged against annual revenue, even if this course were possible. In the latter class is included State expenditure on railways and canals, and municipal expenditure on docks, harbours, housing schemes and the provision of water supplies.

As far as possible, the rule is generally followed that extraordinary expenditure should be met by increased taxation, but there are distinct limits to the amount of taxation which can be imposed in any community without serious reactions upon its economic and social life. Oppressive taxation is deadening to industry and enterprise, it hampers progress and must ultimately result in a reduction of national efficiency and productivity. Furthermore, it tends to discourage saving, and thus reduces that accumulation of capital which is necessary for productive uses in a developing community. These facts were remarkably illustrated in a speech by Sir Robert Horne, an ex-Chancellor of the Exchequer, in connection with the Finance Bill, 1924–25. The speaker dealt with the crushing

effect on British industry of the existing high rate of taxation. He pointed out that, so far as individuals were concerned, many people were spending freely because they thought it hardly worth while to save. Business enterprise was being checked by high taxation, which, combined with high local rates, added so much to the net cost of production that British firms were unable to compete with those of other countries in world markets. As an example he indicated that whereas in pre-war days rates and taxes added 2s. 9d. per ton to the cost of finished steel, they now added 21s. 4d., with the result that other countries could undersell our merchants to the extent of 30s. or £2 per ton, and were consequently obtaining contracts which would otherwise fall to our own manufacturers.

It is clear, therefore, that taxation should never pass that point at which any further exaction would impair the productive powers of the community, and decrease its capacity to produce that wealth which is the source of future taxes and future saving. "Should an increase in taxation be greater than increase in current production, it will tend to act as a spur to greater efforts by those who desire to maintain their customary standard of living. Generally speaking, however, increases in taxation in normal times should not absorb the whole of increased production, in order that there may be a margin left for a general raising of the standard of living, and as an inducement to still greater production. When taxation increases at a greater rate than production, comforts and luxuries have necessarily to be reduced, and eventually a stage would be reached when lesser efficiency of producers, or social disturbances, would cause a reduction in output, and indirectly lesser exchequer receipts. When taxation exceeds the economic taxable capacity of a community, it will usually disclose itself in growing social discontent".[1]

The recognition of these facts has induced most modern states to meet a considerable proportion of extraordinary expenditure by raising loans, either for national or municipal purposes. In the years prior to the outbreak of the Great War, the vast extension of State and municipal activity had resulted in a wide application of the principle of public loaning. It was estimated that the national debts of the world amounted in 1914 to approximately £7,800 millions, while in England and Wales alone the various local bodies had contracted loans to the amount of nearly £700 millions. Since that time, however, the obligations incurred by various countries in connection with the late War have brought the totals of national debts to figures which can only be described as colossal. In Britain alone the national debt outstanding in 1927, totalling £7,701 millions, almost equalled the combined total of the debts of all nations in 1914, while the present yearly interest charge on the debt is

[1] Kirkaldy, *British Finance*, 1914-21, p. 211.

more than *fifty per cent.* greater than the *total* revenue of the country in pre-war days. These figures enable us to understand why the problem of heavy national indebtedness is one of the most difficult which has to be faced by the present generation in many countries of the world.

Public Credit.

The present system of public borrowing has been made possible by the development of the banking and credit mechanism in modern communities, while its growth has been facilitated by the organised money markets and stock exchanges the important functions of which have been already discussed in this volume. In earlier times funds for extraordinary purposes, such as war and increased defence provision, were provided from State hoards of treasure, but such mediæval methods became quite inadequate for the growing needs of sovereign and state. So we find the germ of the modern system in the loans obtained by kings and princes on their own account from the more affluent of their subjects, and the later development of the principle by the pledging of the national credit as security for loans granted to the king or to Parliament. In this way our own National Debt originated in 1694, with the loaning of £1,200,000 to the State by the Governor and Company of the newly established Bank of England.

The recognition of public credit as independent of private or individual credit marked a considerable advance in the history of society. The existence of public credit depends essentially on the existence of an organised community, on behalf of which obligations may be incurred by its government or representatives. Public credit is good or bad according to the degree of ability and willingness with which such obligations can be entered into, and is therefore based on the security and stability of the State, and on the confidence reposed in its leaders and institutions. It necessarily varies with the stage of development of the State, with the wealth, productiveness, and business capacity of its members, with its freedom from revolution, catastrophe and war, with the condition of its currency, and with the development of its banking and credit organisation.

Thus we may expect to find that public credit is normally high in such leading commercial countries as Britain, France, and the United States, while it is lower in countries which are subject to revolution and war, as the Balkan countries, or which are in a comparatively undeveloped state, as are the Argentine or Brazil. As has been mentioned in the chapter on Interest, the rate paid by a government or municipal authority for its loans is an important indicator of the confidence of investors generally in its credit and security. The lower the degree of

confidence, the greater the proportion allowed in the gross interest to cover the element of risk. Accordingly, for many years prior to the Great War, Britain was able to borrow sufficient for her public needs at approximately 3 per cent., while the less developed countries of South America and the more revolutionary countries such as China and Brazil were compelled to pay interest at rates varying from 5 to 8 per cent. Likewise, a first-class municipality such as Liverpool or Birmingham can borrow from the money market at a lower rate of interest than a smaller and less progressive town, and at a considerably lower rate than most foreign municipalities.

In this respect of differing degrees of security, public loaning is in no way different from private loaning, but one or two important distinctions must be noted. In the first place, the affairs and finances of a state are public property, and there is consequently little possibility of concealing from investors its true economic position. Thus no government, national or local, can hope to borrow on good terms unless its affairs are well conducted, its undertakings wisely conceived and its expenditure carefully and economically regulated. Secondly, the State is a perpetual entity and its debts may therefore be permanent. This is, of course, rather an advantage to investors than otherwise. It provides them with a permanent investment at a rate of interest which may be assured and unchanged for a long term of years. On the other hand, there is a tendency with the growth in the demands on the public purse for supposed temporary loans to become more or less perpetual. The frequent changes in the constitution of the government accentuate this tendency, for the debt-reducing policy of one government may not be carried out by a succeeding government, which may be committed to an entirely different policy.

Finally, we note a factor which has achieved great prominence in recent years—the fact that no government can be compelled to repay its debts, raised internally or externally, except perhaps by the uncertain resort to revolution in the first case, and to international joint action against the delinquent country in the second case—courses which are rarely followed. This arises from the facts that a sovereign state is not subject either to a higher authority or to the laws of other nations, and that there is little effective means of bringing pressure to bear on a government which has made default. Furthermore, one government may repudiate the obligations of its predecessors.

Public credit is, therefore, subject to great variation, both as between different states and in the same state at different times. But it may be added that once confidence in the credit of a state is lost, it is extremely difficult to restore it to the extent that investors will be again induced to entrust their capital to its keeping.

Methods of Providing National Funds.

Funds for national purposes may be raised in a number of ways of which the following are the most important :—

1. By Temporary Loans, from individuals or from banks to cover casual deficits or to tide over temporary shortage. Temporary loans are sometimes described as *Unfunded or Floating* debt, although not all unfunded loans are correctly described as floating debts.

2. By Permanent or Long Period Loans.—These are resorted to in order to obtain funds for heavy expenditure such as that on war or on a great national undertaking, e.g., state railways. Long-period loans are embodied in stock for convenience of transfer and sale, and are usually funded, i.e., they involve a permanent charge upon the revenue *fund* of the nation.

3. By Issues of Inconvertible Paper, either in place of or in addition to a metallic currency.

4. By Sales of Land or from Stores of Treasure.—The latter method is nowadays comparatively unimportant, chiefly because it would not be possible to cover a tithe of the enormous expenditure of present-day communities by the hoarding of treasure, and also because the system of credit, as is indicated below, is far more economical. Nevertheless, one or two notable instances of the hoarding of the precious metals for war purposes have occurred in modern times, as in the case of Germany and Russia. It is well known that £6,000,000 in bullion (being part of the indemnity paid by France after 1870) was hoarded by Germany, and the gold utilised during the recent war for payments to foreign countries.

The raising of funds by the sale of land is also comparatively unimportant, except in new countries, where this method is still practised to some extent although it cannot be regarded as a fruitful source of funds.

The first three methods are discussed in the following paragraphs.

Temporary Loaning.

Resort to temporary loans may be made by the State when its annual expenditure exceeds its actual receipts, or when its income is received at certain fixed times, while expenditure is necessary throughout the year. Such conditions exist in this country, where the bulk of the receipts are obtained from income tax, etc., in half-yearly payments, and interim expenditure is met by temporary loans from the Money Market on Treasury

Bills, or from other public departments and the Bank of England on " Ways and Means Advances ".

Temporary loans of this nature are not regarded with favour because they are incurred by State departments, are not easily controlled, and are liable to be carried to excess. There is an absence of that publicity which characterises loans from the public, while the existence of a large floating debt engenders distrust in the national finances and a lack of faith in national stability. Again, the borrowing by the Government of a considerable proportion of floating capital is to be deprecated, particularly when the funds are employed for unproductive State purposes. Then active business men may be deprived of a proportion of the short-term loans which they are able to use productively for the general benefit of the nation. Furthermore, when temporary loans reach appreciable sums, they tend to be constantly renewed, as fresh demands arise which prevent their repayment, and consequently much of the resources of the money market are indefinitely locked up and cannot be employed in active and remunerative business. Finally, it may be observed that temporary borrowings almost always result in inflation. This effect, so far as it concerns our own country, will be explained at a later stage in connection with the discussion of our floating debt. As a general rule, therefore, temporary borrowing should be avoided unless early payment is possible or is contemplated.

On the other hand, temporary loans are a suitable method of covering temporary deficits, provided there is a reasonable prospect of early repayment. They enable the State to pursue its activities without difficulty, and obviate the disturbance and inconvenience of floating a long-dated loan for a purely temporary purpose. They frequently provide the banks with a convenient and secure outlet for their surplus funds, and thus enable use to be made of capital which is collected by the banking institutions in numerous small amounts from the length and breadth of the community.

Furthermore, temporary loans are best when rates of interest are high and funds are difficult to obtain. In such cases it is obviously unwise for the State to undertake long-period borrowing at a rate which is likely to fall, while the system of temporary borrowing enables it to absorb savings as they are made without disturbing conditions in the money market, and at rates which may be adjusted to changes in the interest level. Thus one short-period loan may be paid off as it falls due with another similar loan obtained at a lower rate of interest. This system of maintaining a proportion of *unfunded* or *floating debt* was resorted to on a large scale by the British and other governments during the Great War and is still continued.

As a rule temporary loans are obtained *internally*, generally from Government bankers, private individuals, or, as in this

country, from other Government departments. Only in exceptional circumstances is resort made to sources outside the country for temporary accommodation.

Long Period and Permanent Loaning.

Long-period loans are usually necessary and are certainly advisable when heavy expenditure has to be incurred on a national or local object, as, for example, a war of defence against aggression, or the restoration of areas destroyed by a natural calamity such as earthquake, flood or fire, or the provision of a social necessity of first importance, such as a trunk railway, a canal system, or irrigation works. In the case of war, the outlay may be unproductive, but has frequently to be undertaken if national security and ideals are to be protected. Expenditure on the restoration of ruined areas is necessary if the economic life of a community is to be resumed to its full extent, while, as a rule, the cost of such economic necessities as railway, canal and irrigation systems is more than counterbalanced by the ultimate gain, although the return in the immediate future may be small in comparison with the outlay.

In all these cases it is rarely possible that adequate funds can be raised by temporary loans or by increased taxation without detrimental and possibly crippling effects on the social and economic life of the community. On the other hand, the raising of long-period loans can be defended on a number of grounds, if they are incurred for one or other of the objects mentioned.

In the first place, permanent or semi-permanent loans permit the expenses and sacrifices incurred for the good of the nation to be distributed over a longer period. They enable trade to be developed and wealth to be created out of which repayment may be made in the future at a smaller relative sacrifice. As a rule the interest charged on long-dated loans is lower than on temporary borrowings, because, as has already been explained in the chapter on Interest, many investors will sacrifice some proportion of interest for the convenience of a long investment. Consequently, the burden on the State is lighter in the years when funds are most needed and most difficult to obtain. Again, future generations cannot share the misery of a long war or the labour of a great national undertaking, but as they may be expected to derive much of the resulting benefits, it is only just that they should contribute some part of the cost in the form of interest and repayment of capital.

Long-dated loans are also convenient as providing an outlet for savings, for the investment of bank and industrial reserves and for trust funds, while they result in a transference to the State of the resources of individuals who can afford to lock away their capital for a considerable period. They tend to

encourage patriotism and the spirit of citizenship by giving the individual an interest in the national finances, and this, in turn, fosters a vigilant watch over State expenditure and the use of public money. The direct contact established between Government and citizen acts as an incentive to saving and to industry, and permits all classes to take a direct interest in State welfare.

Further, all members of the community are cognisant of the totals and kinds of long-period loans, while the State can make definite financial arrangements to meet the payment of interest as it becomes due, and also for the redemption of the loans at par or at market price whenever it is convenient to apply surplus funds for the purpose. This is not only an advantage to the State, but tends also to maintain the market value of the securities.

On the other hand, the system of long-dated loans is subject to a number of objections, which have been greatly accentuated during recent years by the enormous growth in the debts contracted by states and municipalities. Some of these are considered below in connection with the general disadvantages of public credit. One of the greatest defects lies in the ease with which funds can usually be obtained by long-dated loaning, as opposed to the difficulty of raising funds by taxation. There seems little reason to doubt that modern states would be much less likely to undertake or to prolong costly wars if the necessary expenditure had to be covered by current income, and if it was impossible to resort to long-period loans, which leave much of the burden to posterity. Again, it is in many respects inequitable that a burden of debt should be imposed on future generations who can have no voice in the decision to incur the expenditure. Costly schemes instituted by one generation may bring none of the anticipated benefit, while the miscalculation, ambition or faulty diplomacy of the statesmen of one period may result in expensive defensive measures or conflicts which may prove ultimately of little avail, but may yet impose burdensome contributions upon future generations who will be faced with their own problems and their own burdens.

Where interest rates are high and capital is scarce, the system of long-period loans may in any case be a disadvantage, for it is clearly inadvisable for government to commit itself to large loans and high interest charges for a long period when it is quite likely that prices and rates of interest may fall in the future. For if this is done, the total amount of *money* borrowed and of interest paid will remain constant, whereas falling prices will send up the value of the money, and thus make repayments ultimately more burdensome, while falling interest rates will increase the relative *cost* of the debt charge. In such cases temporary loaning may be resorted to with advantage, as was actually done by the British Government in order to obtain much of its requirements of funds during the Great War.

The creation of a large burden of debt cannot be justified except in very exceptional circumstances, and whatever may be the advantages of permanent loans, there can be no doubt that the existence of the debt itself and the payment of an enormous annual charge, as in the case of this country at present, act as a drag on trade and industry and hamper progress, enterprise and future economic development.

Long-period loans may be of two kinds: (*a*) *internal*, i.e., raised within the community itself; (*b*) *external*, i.e., raised entirely abroad, although possibly held in part by home investors. Generally speaking, external loans are raised only by the less wealthy countries, either new colonies and republics which are in the early stages of their development, or such countries as China which have little accumulated wealth available for public uses.

Internal loans may be *forced* or *voluntary*. Actual examples of forced loans are now rare, although such methods were resorted to by certain European belligerents in order to obtain the necessary funds for their mighty efforts. Nevertheless, we may find many instances of disguised forced loans in the issues of inconvertible paper which were so marked a feature of war and post-war finance.

Issues of Inconvertible Paper Money.

Many modern states have obtained funds for emergency expenditure by the issue of inconvertible paper. Since the outbreak of the Great War this method has considerably extended, in some cases to an inordinate degree, enormous quantities of paper currency having been issued against totally inadequate reserves. The economic effects of such issues have been discussed earlier in this book. They tend to inflict incalculable loss on the community by disturbing trade and the foreign exchanges, inflating prices, and damaging public credit. As the community is compelled to use the paper for effecting exchanges, and must accept it in discharge of public obligations, while currency of real intrinsic value is withdrawn for state reserves or for export purposes, it is clear that such issues are well described as forced loans. Furthermore, the danger is accentuated because of the constant temptation to increase the issues as the demands on the public treasury increase, while every additional issue makes the prospect of redemption and of return to specie payments ever more remote.

In the community itself the inflation which follows inconvertible issues causes considerable hardship. Reference to this has been made in the earlier discussion, but at present we may note the inequality which ensues in so far as the issues may be regarded as a forced loan. The result is to exact a greater relative contribution from the poorer classes, for the higher

prices of food and clothing affect them more than the rich. Thus the general result is comparable with that of a purely proportional tax, which, as we have previously noted, infringes the canon of equity. Furthermore, a period of rising prices is a paradise for speculators and profiteers who are enriched through no effort of their own, partly at the expense of the wage-earners ("prices go up by the lift, but wages by the stairs"), but still more at the expense of those with fixed money incomes.

Undoubtedly the over-multiplication of the currency in most European countries not only aggravated the disasters of the war, but is also directly responsible for much of the economic difficulties and social friction of the present day. The history of this type of forced borrowing is almost always one of ultimate disaster, and, in spite of its frequent application by modern states, it cannot be justified on economic grounds.

The Advantages of Public Credit.

The system of public loaning is attended by certain material advantages. Apart from the fact that reliance on hoarded wealth is clearly inadequate for modern needs, the withdrawal of money from active circulation is economically wasteful and costly. "Economic science has shown that money is best left to fructify by use in the hands of its owners; if required, it can then be drawn upon in the form of taxes or loans; and meanwhile, wealth is better engaged in carrying on productive industry, which will add to its power of contributing loans for public wants in times of need, than by being stored away in guarded cellars".[1] The system of public credit is but one phase of the great economy and convenience of the modern credit mechanism.

In regard to its more obvious benefits, public credit has made possible the provision of social necessities, such as improved roads and pure water supplies, which on account of their costly nature could be provided only with difficulty out of current revenue. It has enabled new countries particularly to raise funds in older and wealthier communities for productive outlay on developmental work, such as roads, railways, canals, irrigation and harbours. Thus, the economic development of such countries has been promoted, while the world generally has benefited from the extended field for international trade and by the increased resources made available. Furthermore, countries which have suffered severe loss from war or natural calamity are enabled to obtain funds for restoration and rehabilitation of their damaged and ruined areas.

In many respects, the use of the system of public credit in order to raise funds for defence and war cannot be regarded as advantageous. Nevertheless, we have seen that the first

[1] Armitage Smith, *Principles and Methods of Taxation*, p. 122.

essential of a state is the defence of its territory and ideals, and in so far as the mechanism of public credit makes possible the raising of the necessary capital, it must at least be regarded as necessary, if not beneficial.

So far as Britain and other lending countries are concerned the system of public credit may be said to have a number of specific advantages. In the first place, it provides a usually secure and remunerative outlet for the surplus savings of the people. At the same time it gives investors a direct interest in the affairs of other nations and particularly in their economic development. This tends indirectly to foster trading relations with the borrowing states, particularly as they in turn are favourably disposed to commercial intercourse with an accommodating country. Secondly, the industry of the loaning nation and its overseas trade tend to benefit because the proceeds of loans are usually expended in the lending country: this is frequently made a condition of the granting of the loan. Thirdly, overseas loaning is ultimately beneficial in its effects on the balance of indebtedness: the interest and instalment payments provide a regular income which assists in the maintenance of favourable foreign exchanges.

The Disadvantages of Public Credit.

Although the system of public loaning is thus attended by very marked advantages, there are a number of objections to its extension which have naturally been emphasised in recent years with the enormous growth in public debts. The most material defect is its tendency to encourage extravagance. State departments and officials can scarcely be expected to be as careful with public funds as are individuals with their own capital and income; in many cases they have achieved notoriety for extravagance and waste. This tendency is accentuated by the increased facility with which public loans can be raised at the present day. Thus, many expensive schemes are undertaken which would scarcely be considered if their cost had to be met out of current income. Reference has already been made to the tendency of governments to resort to long-period loans for unproductive expenditure on war, and to the tendency of present generations to incur heavy outlay which may or may not prove beneficial, but in any case imposes a burden on future generations.

In new countries particularly the system of public credit is likely to be abused by too much external borrowing, sometimes to the lasting detriment of the nation concerned. Young colonies and new republics are naturally anxious to progress as rapidly as possible and to develop their resources with the utmost speed. But this ambition frequently results in wasteful and extravagant expenditure, in speculative enterprise, in excessive loaning and in

burdensome taxation which tend ultimately to retard economic development and to hamper rather than to promote progress. Cases have arisen in which such states have incurred obligations out of proportion to their capacity, with the inevitable result that they have been forced into bankruptcy and repudiation of their debts, with a consequent collapse of their credit in foreign markets.

There can be no doubt that the method of borrowing from other countries should be exercised with moderation and discretion. It is much better for a nation to proceed slowly and surely than to attempt too rapid progress at the sacrifice of economic independence. Within limits loans from other countries may be of the greatest advantage and may tend ultimately to improve general productiveness and increase wealth throughout the world. On the other hand, external loaning involves the necessity of making an annual interest payment to a foreign state: it means that part of the home income must be transferred to another nation. So long as the ultimate return is greater than the cost all may be well, but unfortunately there is frequently a tendency for the obligations incurred to be in excess of profitable borrowing. Under such circumstances, an annual drain for foreign payments has to be met by taxation, further borrowing, or inflation; productivity may be checked, and the evil is intensified with the impoverishment of the paying country and with the growth of its burden. The very wealth which should contribute to progress and development is thus exhausted by the necessity of meeting the annual debt charge.

It follows, therefore, that, so far as is possible, expenditure should be met by increased taxation, and resort should be made to loans only when such a step is inevitable or when the ultimate benefit and return are assured. Whereas a loan involves a more or less permanent imposition, taxation is borne once and for all. The former necessitates an annual provision for interest and a periodical search for funds for repayments, whereas special taxation may cause but one sacrifice. Finally may be noted the fact that the burden of public debt and of the annual charge increases with every fall in the general level of prices, and thus imposes on the community a growing burden. Similar conditions do not, of course, apply to special taxation, although they may be applicable to taxation which is imposed over a long period. Thus the advisability of proceeding slowly applies equally to state or municipality, new colony or youthful republic. Progress is better achieved by measured steps than by ambitious haste.

Limits to National Loaning.

Just as there are certain definite limits beyond which it is inadvisable to increase the burden of taxation, so also are there similar limits to the amount of loans which may be obtained

from any community. Elsewhere in this book it has been shown that the progress of society involves a constant demand for new capital for the maintenance and extension of its productive organisation. National borrowing cannot encroach on the amount of capital required for this purpose without serious detriment to the future development of the community. Thus the first limit to the absorption of capital for state purposes is set by the amount required for the normal business requirements of the nation. Under stress of national emergency it is possible that even this limit may be lowered, and that the productive organisation will be compelled to rest content with just enough to enable it to function efficiently but not progressively. The upper limit is the total amount of capital which can physically be saved by the people under the stimulus of patriotism and in face of pressing government demands for additional supplies. It is conceivable that the State may borrow the whole of the capital between these extremes, but to attempt to borrow more would be to exact from the community more than it can afford, and to make inroads into its necessary capital. Industry would be hampered and the general well-being would undoubtedly suffer in consequence of its deprivation of essential requirements. Resort may then be had to external borrowing, or to the issue of inconvertible currency. The limits to the amount which may be obtained from abroad will depend on a variety of factors, such as the state of the national credit abroad, and the ability and willingness of other states to provide the necessary accommodation. In regard to the issue of paper currency, it is difficult to define any limits to the amount which may be so forced out of the hands of the community, but it is clear that the resort to such methods becomes increasingly dangerous and if continued must inevitably be ruinous. The constant rise in prices diminishes the power of the people to save that wealth from which future borrowings can be made, and also lessens the purchasing power of the funds which pass into government control.

THE BRITISH NATIONAL DEBT

Since its inception in 1694, the British National Debt has almost constantly increased with expenditure on numerous wars, and, in spite of appreciable reductions which were made at various periods, it stood in 1914 at approximately £650 millions. The enormous increase which has since been entailed has already been mentioned, so that at the time of writing in 1930 the outstanding debt amounts to over £7,600 millions.

The National Debt consists of the following parts :—

INTERNAL DEBT.

1. *Funded Debt*, i.e., consols, etc., which are embodied in

stock and are a practically permanent form of debt. In 1914 this portion formed almost the whole of the national debt, but it is now but a small part of the whole.

2. *Terminable Annuities*, i.e., the capital liabilities of the State in respect of annuities payable by it for various terms of years. By issuing these annuities the liability of the State in respect of both capital and interest on a portion of the permanent debt is automatically wiped off.

3. *Unfunded Debt.*—This includes the various forms of loans issued during and since the Great War, such as the 5 per cent. War Loan, Treasury and Exchequer Bonds, and National Savings Certificates.

4. *Floating Debt*, including Ways and Means Advances from the Bank of England and Public Departments, and Treasury Bills outstanding and unpaid.

5. *Other Capital Liabilities.*—These include loans contracted for telegraph and telephone extension and for the purchase of land or buildings for government offices.

EXTERNAL DEBT.

This consists of the loans contracted by this country from the British Dominions, the United States, and other countries.

The whole of the British funded and unfunded debt has been created by subscriptions from the public after public advertisement of the loans. The method of negotiating loans through certain banks or through a financing house, frequently applied in the case of foreign loans, is not adopted in regard to British Government issues. Subscriptions are received by any banks in the kingdom and are forwarded to the Bank of England, by which the whole operation is conducted as agent of the Government. Certain Post Office issues during the late war were raised by the acceptance of subscriptions through the numerous post-offices in the Kingdom, and in such cases the control is in the hands of the General Post Office and not of the Bank of England.

The Floating Debt.

The great increase during post-War years in the size of the Floating Debt of the country gave rise to much anxiety in economic and financial circles. The total amount outstanding on Treasury Bills and on Ways and Means Advances has been considerably reduced since the War period, but in November 1930 it was still as high as £737 millions.

The advantages and disadvantages of temporary loaning have already been discussed, and they are, of course, applicable to the two forms of borrowing here mentioned. Although the system of short period loaning does undoubtedly enable the State to borrow at decreasing rates on a falling interest market, and also

enables it to obtain advantage from any influx of funds by reducing its commitments at least temporarily, there can be no doubt, on the other hand, that the vast temporary borrowings of the British Government during and after the war period were largely responsible for the great inflation of the war and post-war period, and accentuated the depression which naturally resulted from the inevitable collapse in prices.

Most of the Treasury Bills are held by the joint-stock banks as investments for their surplus funds. Consequently, if at any time the banks require to increase their funds at the Bank, a most convenient method is to omit to renew part of their holding of Treasury Bills. This results in a transfer of funds from Public to Bankers' Deposits, and possibly also in increased borrowing by the State on Ways and Means Advances. As we have seen, credit balances at the Bank of England are regarded by the joint-stock banks as a reserve, against which they create credit to nine or ten times the amount so held. Furthermore, the banks can at any time withdraw their credit balances at the Bank in the form of Bank notes. Thus the existence of a large floating supply of Treasury Bills was responsible for much of the inflation by extended bank credit and by excess issues of treasury notes which took place after 1914.

In emphasising the necessity for the reduction of the outstanding floating debt, it must, of course, be recognised that the Government difficulties were and are considerable. Money for urgent State payments had to be found in some way, and frequently at very short notice, and the existence of large floating supplies on the Money Market, due largely to the absence of industrial demand, obviously offered a solution to the problem of raising funds. Furthermore, it can be argued that there are advantages in continuing part at least of the temporary loans while conditions are so unsettled and while interest rates are on the downward grade. On the other hand, the great disadvantage of such loaning lies in the fact that it leads to a constant expansion in credit which can be restricted only with difficulty.

The urgency of reducing the burden of floating debt was strongly emphasised in the Interim (August, 1918) and Final (December, 1919) Reports of the Committee on Currency and Foreign Exchanges after the War, and we cannot do better than quote the following extracts which admirably explain the dangers to which the economic structure is exposed by the existence of such large floating obligations.

Necessity for the Cessation of Government Borrowings.

" If a sound monetary position is to be re-established and the gold standard to be effectively maintained, it is in our judgment essential that Government borrowings should cease at the earliest

possible moment after the war. A large part of the credit expansion arises, as we have shown, from the fact that the expenditure of the Government during the war has exceeded the amounts which they have been able to raise by taxation or by loans from the actual savings of the people. They have been obliged therefore to obtain money through the creation of credits by the Bank of England and by the Joint-Stock Banks, with the result that the growth of purchasing power has exceeded that of purchasable goods and services. As we have already shown, the continuous issue of uncovered currency notes is inevitable in such circumstances. This credit expansion (which is necessarily accompanied by an ever-growing foreign indebtedness) cannot continue after the war without seriously threatening our gold reserves and, indeed, our national solvency".[1]

"This process has had results of such far-reaching importance that it may be useful to set out in detail the manner in which it operates. Suppose, for example, that in a given week the Government require £10,000,000 over and above the receipts from taxation and loans from the public. They apply for an advance from the Bank of England, which by a book entry places the amount required to the credit of Public Deposits in the same way as any other banker credits the account of a customer when he grants him temporary accommodation. The amount is then paid out to contractors and other Government creditors, and passes, when the cheques are cleared, to the credit of their bankers in the books of the Bank of England—in other words, is transferred from Public to 'Other' Deposits, the effect of the whole transaction thus being to increase by £10,000,000 the purchasing power in the hands of the public in the form of deposits in the Joint-Stock Banks and the bankers' cash at the Bank of England by the same amount. The bankers' liabilities to depositors having thus increased by £10,000,000 and their cash reserves by an equal amount, their proportion of cash to liabilities (which was normally before the war something under 20 per cent.) is improved, with the result that they are in a position to make advances to their customers to an amount equal to four or five times the sum added to their cash reserves, or, in the absence of demand for such accommodation, to increase their investments by the difference between the cash received and the proportion they require to hold against the increase of their deposit liabilities. Since the outbreak of war it is the second procedure which has in the main been followed, the surplus cash having been used to subscribe for Treasury Bills and other Government securities. The money so subscribed has again been spent by the Government and returned in the manner above described to the bankers' cash balances, the process being repeated again and again until each £10,000,000 originally advanced by the Bank of England has created new

[1] *First Interim Report*, Section 16.

deposits representing new purchasing power to several times that amount. Before the war these processes, if continued, compelled the Bank of England to raise its rate of discount, but, as indicated below, the unlimited issue of Currency Notes has now removed this check upon the continued expansion of credit ".[1]

" A primary condition of the restoration of a sound credit position is the repayment of a large portion of the enormous amount of Government securities now held by the banks. It is essential that as soon as possible the State should not only live within its income but should begin to reduce its indebtedness. We accordingly recommend that at the earliest possible moment an adequate sinking fund should be provided out of revenue, so that there may be a regular annual reduction of capital liabilities, more especially those which constitute the floating debt. We should remark that it is of the utmost importance that such repayment of debt should not be offset by fresh borrowings for capital expenditure. We are aware that immediately after the war there will be strong pressure for capital expenditure by the State in many forms for reconstruction purposes. But it is essential to the restoration of an effective gold standard that the money for such expenditure should not be provided by the creation of new credit, and that, in so far as such expenditure is undertaken at all, it should be undertaken with great caution. The necessity of providing for our indispensable supplies of food and raw materials from abroad and for arrears of repairs to manufacturing plant and the transport system at home will limit the savings available for new capital expenditure for a considerable period. This caution is particularly applicable to far-reaching programmes of housing and other development schemes ".

" The shortage of real capital must be made good by genuine savings. It cannot be met by the creation of fresh purchasing power in the form of bank advances to the Government or to manufacturers under Government guarantee or otherwise, and any resort to such expedients can only aggravate the evil and retard, possibly for generations, the recovery of the country from the losses sustained during the war ".[2]

" *Government Borrowings on Ways and Means Advances from the Bank of England.*—We desire to draw attention to the extensive use made during the war of the system of Ways and Means Advances from the Bank of England. We referred to this matter in our Interim Report and explained its effect in causing credit and currency expansion. The powers given to the Government by Parliament to borrow from the Bank of England in the form of an overdraft on the credit of Ways and Means were, as the name implies, intended to enable the

[1] *First Interim Report*, Note to Section 10.
[2] *Ibid.*, Section 17.

Government to anticipate receipts from Revenue or permanent borrowings for a brief period only. Indeed, Parliament, by expressly providing that all such advances should be repaid in the quarter following that in which they were obtained, showed that it had no intention of bestowing upon the Government the power of securing an overdraft of indefinite duration and amount. Under the exigencies of war finance the Government found it necessary to reborrow in each quarter on the credit of Ways and Means the amount needed to enable them to comply with the statutory requirement that the previous quarter's Ways and Means Advances should be repaid, with the result that the total outstanding advances remained for a long time at a high figure. We are glad to see that efforts are now being made to reduce this overdraft to more moderate dimensions ".

" We, therefore, hope now that conditions are less abnormal, that the Government will confine its use of Ways and Means Advances from the Bank of England to providing for purely temporary necessities. Such advances afford a legitimate method of tiding over a few weeks' shortage, but are entirely unsuitable for borrowings over a longer period ".[1]

Methods of Reducing the National Debt.

The enormous total of the debt now carried by the country naturally occasions great anxiety in all quarters, and consequently considerable importance attaches to the methods by which the burden may be reduced.

The following are the arrangements at present adopted to reduce the deadweight debt :—

1. SINKING FUND METHOD.—Several sinking funds are at present operative, to which contributions are made by the Exchequer on certain defined principles for the redemption of the deadweight debt. The general principle of a sinking fund is that a stated sum of money should be set aside annually in respect of a given loan so that the accumulated total, including compound interest, will be sufficient to redeem the loan concerned at the requisite time. This method is applied in the case of the *Victory Bond Sinking Fund* by means of which certain bonds are drawn for repayment on the 1st of September in each year, and also for the Conversion loan of 1923. Other State operations which are not strictly in accordance with the foregoing explanation are frequently described as sinking funds, as, for example, the *Depreciation Fund* established under the *Finance Act*, 1917, by which sums are issued by the Exchequer and applied for the redemption of Government stocks, and

[1] *Final Report*, Section 5.

also the New Sinking Fund established in 1923 by Mr Baldwin, then Chancellor of the Exchequer, whereby amounts of forty to fifty millions sterling were to be definitely applied to debt redemption out of current annual revenue. The method of immediate purchase of outstanding securities on the open market is frequently adopted in national finance because of the difficulty and disturbance which would necessarily be involved in any attempt to redeem a large amount of debt at one time. The principle is also extensively adopted by local authorities for the reduction of their obligations, and appropriations are made annually for this purpose out of revenue.

2. Application of Surplus Revenue.—This is the principle of the so-called "old sinking fund", but it has generally been of little effect in recent years, as finance ministers have experienced difficulty in providing sufficient revenue to meet expenditure. Accordingly the principle has been established of making—

3. Specific Appropriations of Revenue.—Under the War Loan Act, 1919, War Loan was accepted in payment of death duties, provided that the security had been in the hands of the holder for at least six months before his death. This arrangement is based on sound principles, as it recognises that the duties, which are a tax on capital, should be applied for capital and not revenue purposes. Further, amounts of war loan surrendered in payment of national taxes are similarly applied.

4. Redemption by Purchase of Stock in the Market.—This method is provided for by the Depreciation Fund already mentioned. Exchequer officials are enabled to purchase stock on the market whenever conditions make the operation profitable. Thus they may borrow at lower rates to redeem stock carrying high rates, so reducing the net burden of debt, or they may apply surplus revenue for such reduction as is possible. Clearly such operations must be conducted with considerable care, otherwise prices may be so advanced by the purchases as to wipe out the anticipated gain.

They are nevertheless based on sound financial principles, for money applied to pay off the debt returns at once to the investment market for industrial and trading purposes.

5. Terminable Annuities.—These have been previously referred to as a separate form of debt. The principle is the substitution of an annuity for a fixed period in place of a certain amount of permanent debt. Naturally the amount of the annuity is greater than the interest charge on the

surrendered stock, and thus involves a greater temporary drain on the Exchequer, but ultimately a certain amount of debt is completely wiped off.

6. CONVERSION.—This method involves the conversion of one loan into another bearing a lower rate of interest. Such operations may be made optional or compulsory. For example, in 1923 holders of the 5 per cent. War Loan were given the option of conversion into a longer dated loan bearing a lower rate of interest. Thus the annual burden of debt is reduced and repayment is left until a future period. A conversion scheme may be made compulsory in the case of loans which are repayable at any time by offering holders the alternative of a lower rate or repayment of their holdings. This method was adopted in connection with consols in 1888, and it is anticipated that with a settlement in general conditions and a fall in the prevailing interest level, similar operations will be undertaken on a considerable scale.

Successful conversion operations imply a good state of public credit, prudent administration and punctual payment of interest, and as Mr Baldwin pointed out in his Budget speech of 1923, future operations will be impossible unless public credit is fortified by an avowed and sustained policy of debt redemption out of annual revenue.

REVOLUTIONARY PROPOSALS FOR DEBT REDUCTION

The foregoing methods are considered by many to be quite inadequate for the reduction within any reasonable period of the enormous burden of debt which now weighs upon the country, and accordingly a number of drastic proposals have been made for a national effort to reduce the burden. These include proposals for (1) Repudiation of the debt; (2) Forced reduction of interest; (3) Increased taxation of higher incomes; (4) A capital levy.

Repudiation.

The proposal for a repudiation of the British national debt involves a refusal by the State to recognise its obligation both in respect of the capital sum and the interest payments. The idea is by no means new, as there have been in recent years a number of repudiations, notably by certain South American republics, and by certain states of the U.S.A. In these instances, however, the cause has usually been revolution, or sheer reckless extravagance or destructive war: there has been no case where an economically and socially sound nation has deliberately refused to acknowledge its obligations.

There is, of course, little effective remedy against a state which has determined on such a course, but it involves an acknowledgment of national bankruptcy and a complete collapse of the national credit in foreign states. For this reason alone it is unlikely that the proposals will find wide support among our own people, who attach so much importance to the national reputation for honesty and fair dealing,

Repudiation is unquestionably as economically unsound as it is morally dishonest and ethically unjust. So far as external obligations are concerned it cannot be defended on any grounds. Internally, it involves the penalising of investors in State loans, while investors in other securities do not suffer ; it also involves the penalising of the prudent and thrifty members of society for the benefit of other less prudent members. It would mean a discrimination against a particular form of wealth, and its effects could scarcely be other than revolutionary. In this connection many of its ardent supporters frequently overlook the fact that the holding of national securities is by no means limited to the wealthier classes : repudiation would mean the deprivation of many people of their hard-won earnings and life savings, possibly to such an extent as to force them to fall back upon State support. Furthermore, the taking of such a step would most certainly drive capital out of the country, and would injure the nation both socially and economically.

Greater justification can be found for the recent proposal made by several well-known economists and business men for a mutual repudiation or cancellation of the debts incurred between the Allies in the late war. There is little doubt that if some such arrangement could be made on an equitable basis, it would hasten the revival of international trade, assist the stabilisation of the foreign exchanges, and remove a great cause of international friction. Some economists go even further than this, and consider that if Britain would forego the debts due to her from the Allies while still acknowledging her own obligations to the United States, the ultimate economic gain would more than compensate for the loss.

But the practical difficulties are considerable. The debts are in several cases owed to individuals and not to governments, and it is hard to see how this obstacle can be overcome. A real cancellation would involve the ignoring of the rights of such holders—a proposal as revolutionary and even more contentious than the proposal for internal cancellation. Furthermore, on what basis shall debts contracted in dollars, in sterling, and in francs be offset ? Clearly the problem of exchange would require very careful adjustment. Nevertheless, if an international agreement for this purpose were practicable, it would undoubtedly prove beneficial. The principal difficulty appears to be the disfavour with which the suggestions are received by the American public.

Reduction of Interest.

Similar objections apply to the proposals for a forced reduction of interest on the Government debt. Investors in Government loans would be penalised for the general benefit, while investors in other securities would be unaffected. From the point of view of the community it would be morally and financially unsound to suggest such a breaking of contractual obligations, and unquestionably the result would be to make future borrowings extremely difficult. On the other hand, it is held to be reasonable that interest should be varied on long-period loans if the general level of the interest rates prevailing in the community has fallen considerably since the loans were contracted. This contention, however, ignores the fact that many of the present holders have bought their holdings in the open market at values fairly representing the interest-earning capacity of the securities.

Increased Taxation of Higher Incomes.

Quite recently much controversy has been aroused by proposals that the rates of taxation on higher incomes should be considerably increased for purposes of debt reduction. Generally speaking, the economic objections to an undue increase in the ordinary rates of taxation apply equally to the higher incomes as to others, but one or two further vital objections to such proposals must be noted. In the first place, any considerable increase in taxation on higher incomes will practically amount to a capital levy, for it must not be overlooked that much of the new capital which flows to industry is obtained from these sources. The rehabilitation of industry and trade and the provision for the increasing population of the country can be made only out of savings, and much of these come from the very sources which it is proposed to "dry up". Saving from large incomes is an indispensable part of the mechanism of all industrial states.

More important still is the likely effect of such taxes on the entrepreneur class and speculative capitalist. Mr Otto Kahn, the great American banker, has stated that the capital of a country which "continually watches for productive opportunity" —the capital which performs the initiatory and pioneer work in the modern industrial community—is in the hands of a relatively small body of individuals, and if it is drained away by State exaction "advantage can be taken of so many fewer productive opportunities, production and efficiency are cut down, and the so-called state benefits are more than offset by the one vast state-created evil of impoverished idleness". We may quote also a well-reasoned statement by Lord Faringdon, governor of the British Trade Corporation, to the same effect: "One would like to find some cause for the disease from which the commercial

community seems to be suffering at the present time. There is no doubt that the burden of our huge war debt presses heavily, and that the taxation of to-day is responsible in its incidence for a lack of the spirit of enterprise which in the past has built up the commerce of this country. A number of trading and financial risks are not of the nature that can be undertaken by the small capitalist or by the great banks, whose directors are the trustees of the depositors who look to them to use their moneys with extreme caution: neither are the risks referred to such as can be undertaken by the investment trust companies, who naturally seek such securities as can be relied upon to give safe and certain returns. In the past the risks that I have in my mind were financed, in the early stages, by rich men who could afford, out of their surplus incomes, to run risks that could not be taken by shareholding institutions. Such rich men are extremely scarce to-day, and promising industrial and other ventures, perhaps golden opportunities, are passing to other and more enterprising countries".

It is clear that any unbalanced policy of taxation may have the most vital effects on the future of the country, and business men generally are agreed that the present strain upon industry is as heavy as can possibly be borne if British products are to maintain their place in the world's markets and if Britain is to retain her position as a leading commercial nation. The flow of necessary capital and the supply of able leaders must not be cut off, for competition in the world's markets can be maintained only by a constant search for economy in production, by a continuous re-equipment of existing plants, and by the institution of better and more modern methods, all of which involve increasingly large sums of money and increasingly prudent management. Finally, it must not be forgotten that Britain is even now the most highly taxed country in the world, and it is interesting to speculate as to how much this fact accounts for the prevailing depression and unemployment in the country.

The Capital Levy.

The proposal for a levy on capital has probably aroused more class feeling and political controversy than any other social problem of recent times. The suggestion was largely socialistic. It received strong support from the Labour Party and from the working classes generally, but it was also backed at one time by an appreciable section of economic opinion. The general proposal originally contained two distinct suggestions: (*a*) that a levy should be made on all capital; (*b*) that a levy should be made on war wealth only, i.e., that increase in wealth which can be attributed to gains made in consequence of war conditions. The latter proposal had the advantage that it was intended to exact contribution from a class that could well afford

to pay, but its great practical difficulties led to its abandonment, and it is now clearly too late to consider its practical application. The first proposal is more fundamental, and will now be considered.

The main features of the general proposal are that the State should impose a levy on capital values, carried out on a progressive basis, with the object of reducing the national debt to about one-half of its present total. It is intended that the levy should be applied once and for all, that it should be on an individual basis, and that its proceeds should be used exclusively to reduce the national debt. Companies, corporations, and businesses would be exempt, while it is generally suggested that no individual with capital holdings below £5,000 would be affected.

It is impossible to do more than glance at the numerous arguments advanced for and against the proposal. Its essential object is to reduce the annual interest charges on the national debt. These constitute nearly one-half of the nation's total expenditure, and so long as they continue to absorb so much of the national income, it is clearly impossible to increase expenditure on such necessary social services as education, housing, and public health.

The principal moral justification advanced in favour of the levy is the supposed inequality between the sacrifices made by the workers in the recent war and those made by the capitalist or propertied class. The former, it is said, have paid terrible toll in life, limb, and health, whereas the latter have added considerably to their wealth, and now receive £300 millions a year in interest on their contribution to the national effort. Further, the bulk of this interest is contributed by the working classes, and they are therefore involved in a double sacrifice for the benefit of the more wealthy and fortunate members of the community.

In reply to these claims it is pointed out that many workers as well as employers profited during the war period, and while there was much controversy over excess profits, little consideration was given to excess wages. Again, the workers suffered heavier casualties because they form the larger section of the community, while equally high losses were suffered by other classes in proportion to their numbers. Furthermore, the provision of funds was as essential to national defence as the supply of men. Part of such funds was provided by the workers themselves, who receive their due share of the total interest, an appreciable proportion of which is supplied by other classes in the community.

On the score of equity it is further argued that some reduction of the capital debt would be but just, in view of the great fall in prices which has occurred since the loan was issued, resulting in a considerable increase in the *real* burden both of the capital debt and of the annual charge. Wages have fallen with the collapse in prices, but the income of the rentier class has remained little affected; it has, indeed, been increased by the reduction

in the rate of income tax. If prices are likely to fall in the future, the burden of the debt will be correspondingly increased, so that the holders of State securities will gain at the expense of the taxpaying community.

Again, it is maintained that a capital levy is no more unjust than high taxation, while it would be incalculably better to suffer one impost than to bear an annual burden for approximately the 150 years which will be required to wipe off the debt by the present sinking fund methods. The relief from taxation would relieve unemployment, improve the conditions of the masses, and make possible an increase in wealth and productivity which would more than make up the loss occasioned by a levy. Furthermore, it is contended that the adoption of a system of progression would tend to ensure equality of sacrifice, and the scheme would, in fact, be no more than an extension of the present system of surtax and death duties, which are presumably tolerated because it is recognised that the wealthier classes are " able to pay ". Finally, it is maintained that in a great national emergency the State is as much entitled to conscribe the wealth of its citizens as it is to conscribe their lives and services.

The arguments against the proposal are almost as numerous as its opponents. By many people it is condemned as immoral and confiscatory ; it would, they contend, be revolutionary for a great modern nation to lay hands on the property of its citizens. Britain could scarcely do so without imperilling its international reputation and shattering confidence in its economic stability, while the chaos in Russia is sufficiently suggestive of the ultimate results of the adoption of such principles. Undoubtedly one of the first results would be to discourage saving, to drive capital abroad, and to induce a " flight " from visible property of all kinds. Once the security of individual rights had been endangered, few people would believe that the precedent established would not lead to more drastic steps in the future.

From the economic standpoint, it is urged that wealth is best left to " fructify " in the hands of its owners, so that a fund may be produced from which future taxes may be raised without detrimental effects. The transfer of credit from individuals to the State would deplete the sources from which industry is financed. Trade would suffer, unemployment would result, and in the end the community would be little better off. To this contention exponents of the levy reply that its ultimate result would merely be to *redistribute* wealth among members of the community, as the title-deeds and securities obtained from the levy would be transferred, through a form of state clearing house, to the holders of Government stock in repayment of the debts due to them.

Clearly the practical difficulties are immense. The levy would apparently involve a great realisation of securities and

property, with a consequent incalculable dislocation of values which would undoubtedly harm the social and economic structure. But how are individual contributions to be equitably adjusted ? On what basis would be assessed the contributions of a professional man with a large income but little capital, and of a similar man with a small income but much capital ? Are the prudent and thrifty to be penalised while the careless and extravagant go free ? How is it proposed to evaluate personal effects and household goods ? Would they be subjected to the levy, or would it apply only to invested capital ? If so, the investing class would be unfairly penalised, although it is even now compelled to bear a heavier burden of taxation.

To these contentions the exponents of the levy reply that no great realisations would be necessary, as much of the adjustment would be made by the simple transfer of title-deeds and securities to the creditors of the Government. Undoubtedly, however, the process would be extremely costly and would involve a considerable staff.

In face of such conflicting opinions it is difficult to form a clear and unbiassed opinion of the ethical and economic advantages of a levy on capital, but it would appear that while such a measure would undoubtedly diminish the burden of internal debt, its reactions on business confidence might be so serious as to involve a net social loss.

Furthermore, it would appear that the psychological moment for making the levy is now past. It could have been imposed with least difficulty in the post-war boom period when values were inflated and individual wealth was in a better position to stand the strain of a heavy deduction. At that time the levy might have had beneficial results in restricting speculative activity, but its imposition in the present period of depression could not but intensify the prevailing lack of confidence.

The widespread objection to the capital levy proposal has caused it to be temporarily shelved, but it has been succeeded by other proposals, as, for example, the late Earl of Oxford's plan for the reduction of the national debt by a system of *tax-commutation*, and by the adoption of the Socialist proposals for a *surtax* on all incomes over £2,000 a year. The former plan is in the nature of a voluntary capital levy, and its essence is that persons who are in a position to do so should be given the option of handing over to the State such portions of the national debt as they hold, in return for a certificate of exemption from part or the whole of their annual income tax. The scheme is not likely to be adopted as it involves great practical difficulties as well as being subject to several objections which cannot be dealt with here.

A consideration of the various proposals seems to lead to one conclusion : that there is no short-cut to debt redemption. Only by patient and laborious effort, by an unstinting care of national

credit, and by a well-conceived economy can the burdens of the State be reduced. Some people contend that reduction of the rate of income tax is to be preferred to immediate debt reduction, but although relief in the second case is less direct, it is none the less widespread and penetrating in its benefits. It is followed by an improvement in the national credit which lowers the rates at which money can be borrowed for Government, and, indirectly, industrial purposes and facilitates future conversion schemes.

THE BRITISH MUNICIPAL DEBT

During the last half-century considerable sums have been borrowed by the various local authorities in this country in order to meet extraordinary expenditure which cannot easily be covered out of current revenue. As a general rule, loans are resorted to only in order to provide funds for capital undertakings such as gas, electricity and water works, harbours, piers, docks and quays, public baths and cemeteries, railways, tramways and canals. In recent years, however, loans have also been raised for municipal housing schemes, which have been undertaken with the object of relieving the shortage of accommodation.

As a general rule, no local authority has legal power to borrow unless expressly or impliedly authorised to do so by statutory enactment, and usually its borrowing powers are under the control of the Treasury, Home Office, or Ministry of Health, from which sanction is necessary before loans can be contracted. Careful centralised control of such loans and of the arrangements for repayment is essential if waste and extravagance are to be minimised, and also because wide publicity, intelligent criticism and knowledge of financial principles are often wanting, while local administration is liable to be affected by local interests and prejudices. The necessity for control and co-ordination is accentuated with the growth in the functions of the local bodies, and with the continuous increase in the obligations incurred by them.

Methods of Municipal Borrowing.

Loans for municipal purposes may be raised in several different ways, of which the following are the most important :—

1. By the Issue of Stock.—This method has become increasingly popular in recent years and is resorted to under powers given by Act of Parliament. The stock may be issued at a fixed price but is frequently subscribed for by tenders over a fixed minimum price. Large sums are raised from the public in this manner, and the system possesses the following advantages over other methods :—

(*a*) As the stock is secured upon all the rates, revenues

and property of the local authority, it forms an attractive investment which is at all times freely saleable.

(*b*) The nature of the security enables the stock to be issued on more advantageous terms than would otherwise be the case.

(*c*) The period during which redemption can be made is usually lengthy—often as long as sixty years—subject to an option to repay at any time after a fixed shorter period.

(*d*) The work involved in the administration of the loan is minimised, as interest is at the same rate on the whole issue and falls due on the same date in each case.

2. By the Issue of Mortgages on Property and Rates.—This method is commonly resorted to where the local authority has no power to issue stock or does not wish to do so. Mortgages may be issued (*a*) for fixed short periods; (*b*) for short periods, but repayable after notice by either party; (*c*) for fixed long periods; (*d*) for a long period, but repayable on notice by either party; or (*e*) for a long period subject to repayment by periodic instalments.

The larger municipal bodies usually resort to short-period borrowing for temporary purposes, or pending an issue of stock. This method has certain marked advantages. In the first place, if interest rates fall the loan may easily be repaid and the necessary amount borrowed again at a lower rate of interest. This is clearly an advantage when rates of interest are high or when it is anticipated that they will fall in future years. Secondly, short-period loans tend to encourage small investments by local citizens, who may not be disposed to lock away capital for a long period.

Long-period loans are more often obtained by the smaller bodies from insurance companies and banks, from other local authorities, or from the Public Works Loan Commissioners, whose duty it is to lend to local authorities money raised on the national credit. The disadvantage in the case of a long-period loan is that the rate of interest has to be fixed to cover the whole period, so that the borrowing authority may be committed to the payment of high rates during periods when low rates prevail in the community.

3. Bank Overdrafts.—This method is sometimes resorted to for temporary purposes, and has the practical advantage that such loans are easily negotiated and can be repaid at any time, while as a rule interest is charged only on the *net* balance in favour of the bank. The authority thus obtains the benefit of interest on any temporary credit balances which it may have available.

4. By the Issue of Bills of Exchange.—This method can be utilised only when the necessary powers are contained

in the local Act, but is often resorted to for the purpose of meeting capital expenditure pending an issue of stock.

The Repayment of Municipal Loans.

When loans are raised for the purchase of assets, or for other expenditure of a capital nature, they must be redeemed within the period fixed by the Ministry of Health or other department concerned, and this period must not exceed the life of the asset or other work for which the loan was granted. The methods usually adopted for repayment are :—

1. THE FIXED INSTALMENT SYSTEM.—The loan is repaid out of local revenue by equal instalments of the principal sum borrowed during the whole period of the loan, interest being paid on the diminishing balance. This method is generally utilised when the borrowing authority is in a sound financial position, and has no reason to doubt that the necessary surplus of revenue will be available. A possible disadvantage is that the charge is heavier in the earlier years, when it is possible that revenue may not be large, and diminishes gradually throughout the period, reaching a minimum when increased revenue, anticipated in many cases from the expenditure of the loan, may be coming in. This may occur, for example, in connection with an electricity supply station, which during its early years yields little revenue, but in later years may prove very remunerative. The method is therefore most suitable when no ultimate or increasing monetary benefit is expected from the expenditure of the money borrowed.

2. THE ANNUITY SYSTEM.—In this case equal instalments, consisting of principal and interest, are repaid each year, the amounts being so adjusted by careful calculation as to wipe out the loan and interest thereon when the last instalment is paid. The net charge to the ratepayers is thus equalised over the period of the loan, and for this reason the system is most suitable where benefits of a permanent character are anticipated.

3. THE SINKING FUND SYSTEM.—This method has been briefly mentioned in connection with national borrowing, but is probably more strictly applied in the case of loans by local bodies. When repayment is made by this system interest is paid on the whole amount of the loan for the full period, and the loan is repaid in one amount at the end of the period for which it was sanctioned. The amount required for repayment is provided by appropriating from the revenues of the years during the continuance of the loan equal sums which, with compound interest added, will at the end of the period equal the total amount borrowed. The sums thus appropriated may be left on deposit with a bank at an agreed rate of interest, or they may be invested in outside securities of reasonably certain value and of constant yield. In the calculation of the amounts of

the necessary appropriations, due allowance must be made for income tax and for any anticipated depreciation in the value of the investments. The annual interest on the loan will, of course, be paid out of the revenue of the local authority, which, as stated, will also be debited with the amount of the annual appropriations.

This method is probably the most common because money can usually be borrowed on more favourable terms when it is repayable in a lump sum, and when a definite annual interest payment can be anticipated by the investor; the yearly charge to revenue is uniform, and the method is suitable for both long and short period loans.

The method of borrowing or repayment resorted to in each case depends upon the requirements and the powers of the authority desiring to borrow, and will also vary according to the amount to be borrowed, the purpose for which the funds are required, the financial position of the borrowing authority, and the period over which repayment is to be made.

THE DEVELOPMENT OF ECONOMIC THEORY

CHAPTER 35

FROM EARLY TO MODERN TIMES

To trace the stream of economic thought to its source is neither possible nor desirable for our present purpose, which is to give a necessarily brief outline of the development of economic theory and of its gradual co-ordination into a science of the first importance. So while we must acknowledge our indebtedness to the conceptions and ideas of thinkers of the now distant past, we cannot here devote much attention to their early speculation concerning economic activity. Indeed, the science of Economics as known to us is of comparatively recent growth, and owes much of its increased importance in modern times to the vast development of commercial relations and to the rapid strides of industrial organisation during the last century and a half. As industry and commerce progress it is only natural that increased attention should be focussed on a science which seeks to determine the why and the wherefore of man's actions in the ordinary business of life, and which attempts to analyse his conduct and habits when in pursuit of that wealth which is the basis of all economic aims and achievements.

The Ancient World.

It is probable that the rudiments of the study of Economics existed in times before any of which we have reliable record. Wherever thought was given to the activity of man in the community, or wherever governing principles were laid down concerning such activity, then can it be said that some kind of economic theory was in being. When the sages of old laid down rules governing the conduct of man in every direction—in his daily vocation as well as in the communal worship of the tribal deity—then such rules of conduct, based on the fruit of past experience, were a form of rudimentary Economics.

Thus we may trace the earliest expression of thought on matters economic to the *Oriental Theocracies*, those systems of government by a priestly caste as representative of the tribal or national deity. In these communities rules were formulated and strictly enforced governing not only the relations between man and the deity and between man and the state, but also the activities of man in his efforts to gain a livelihood. For example, in the first Books of the Old Testament will be found the elements

of a rudimentary economy as interpreted by the leaders of the Israelities, and similar records survive of Oriental theocracies of an almost equally distant past. Here, then, is where we find the embryo of an economic theory, however dissimilar it may appear to us who are familiar only with the science in its modern form.

Greece and Rome.

More recognisable as a science of Economics is the fruit of the philosophy of *Ancient Greece*. In the speculation of the Old Greek philosophers we find the first serious attempts to discuss and to consider the many problems confronting man in his daily activities. Little need be said in detail of these wonderful philosophers, for magnificent as was their contribution to thought and knowledge, their contribution to economic thought in particular is of little practical use to the modern economist. The conditions of life in Greece were fundamentally different from those of the modern age ; all manual labour was regarded as fitting only for the slave, whose master was thereby freed to devote all his energies to the service of the State. The result of this conception was an undue exaltation of mental over physical labour, both of which are now regarded by the economist as being equally productive.

Further, the philosophical speculations of the Ancient Greeks, masterly and scholarly as they were, contained strong elements of an ethical, religious and political bias ; consequently, the most fundamental activity of man in his struggle for a means of sustenance was ignominiously relegated to a position of minor importance. The writings of Aristotle, Xenophon, Plato and Thucydides treated to some extent of what we should call political economy, but such treatment consisted only of abstractions concerning the ideal State, or of an economy which was mainly domestic. Nevertheless, it must be admitted that Aristotle recognised a distinct science of Economics, in that he divided his doctrine concerning the State into the separate sciences of Ethics, Politics and Economics.

In later years, when *Rome* became the centre of knowledge and of power, we find the same obstacle to a modern utilisation for economic purposes of her genius. Her philosophy followed closely that of Greece, and, in the same way, all commercial and industrial activity was contemptuously dismissed as a sphere unworthy of the energies and attention of a free man. With this brief consideration we may proceed to notice the contributions to economic thought of the theorists of a much later period in the history of the world.

The Middle Ages—A.D. 400-1300.

Little of importance was added during the Middle Ages to the general body of economic thought. During this period in

history conditions were generally anything but conducive to the development of the science. Europe was in the melting-pot; wars were frequent both at home and abroad; new nations were being moulded and new governments were coming to birth, while the feudal system held complete sway.

Thus were both agriculture and industry still held in the toils of custom, and restraint upon free economic activity gave little or no impetus to the investigation and solution of such economic problems as then existed. At this period also the peoples of the world were more concerned with the political organisation of their respective communities than with economic structure as such. While national boundaries were uncertain and the subject of constant conflict, there was little or no opportunity for the growth of a considerable economic organism and much less for an organised study of economic problems. The insularity and isolation of Britain brought her comparative freedom from such strife, and to this she owed much of her subsequent rise to the leadership of commercial nations.

The First Modern Period.

As mediævalism began to give place to the Age of Discovery, and the bonds of feudalism slackened as the system slowly disintegrated, commercial enterprise was encouraged in every direction. Money acquired a new and increasing significance in all countries, and with the advent of capitalism economic problems presented themselves in increasing variety and complexity. One of the earliest questions to attract the attention of politicians and merchants was the subject of usury; whether interest should or should not be paid on money borrowed. Forbidden by the Canon Law, the justice of its prohibition was questioned by the growing spirit of doubt manifested in the Revival of Learning, and, consequently, the old controversy concerning a payment for the loan of money, which was often used unproductively, raged fiercely once more, although it was destined to remain unsettled until a much later period. During this time several thinkers devoted their attention to economic problems, and in some cases their speculations anticipated economic theories which were to be developed by succeeding economists.

By the end of the sixteenth century the great development of trade and commerce following the discovery of the New World and of new resources emphasised the growing importance of economic problems, and especially were those which concerned the monetary system of exchange forced upon the attention of thinking men. The currency of England, in common with that of other countries, was not only debased by sweating and clipping but also had decreased in value owing to the output of silver from South America. Several writers were thus impelled to

consider the place and functions of money in the community. An outstanding name of the period is that of *Sir Thomas Gresham*, financial adviser to Queen Elizabeth and founder of the Royal Exchange, who gave such prominence to the previously recognised doctrine concerning bad and good money that it has since become known as "Gresham's Law". Others who contributed to economic thought in the reign of Elizabeth were *Bacon*, in his "Economia", and *William Stafford*, who in 1581 wrote a comprehensive treatise on current economic problems in his "Briefe Conceipte of English Policy". These writers devoted much attention to the functions of money and in particular to the abuses present in the English currency of the time.

The policy of the time was no doubt greatly influenced by the attention thus drawn to monetary matters, and the importance of the precious metals was emphasised by the great power of Spain, the greatest rival of England at this period. Her vast power appeared to rest upon her boundless supplies of silver from the new world, and it was thus only natural that the possession of bullion was considered in all countries as of the first importance. In fact, the "*Bullionists*" of this age regarded the precious metals as being the only source of wealth, and thought that national trade should be so directed as to encourage the inflow of such metals and to restrict their outflow as much as possible.

Later writers developed a refinement of this policy and emphasised the necessity for increasing the national power and wealth, and the need for directing the course of foreign trade with the object of conserving and developing national industries, and of inducing the inflow of the precious metals. Such was the origin of the doctrine of *Mercantilism* which was to control the national policy of several countries for some hundreds of years.

The Policy of Mercantilism.

From the breaking up of the mediæval organisation of commerce in the form of the gilds, to the time of the Physiocrats, the policy of European nations was based on the Mercantile System, which has already been explained and criticised in Chapter 28. In England particularly it held undisputed sway, while in France the same principles were applied in the form of *Colbertism*, so called after the French minister Colbert, a vigorous practical exponent of Mercantilism. In our own country, the Mercantilists applied their policy with the following aims:

1. The encouragement of British shipping by various Navigation Acts, with the object of maintaining the nucleus of a navy in the form of a strong mercantile marine. These Acts aimed largely at the retention for British vessels of carrying trade to and from the country.

2. The protection and development of agriculture by means of the Corn Laws in order to make England independent of foreign supplies of food.

3. The protection and establishment of home industries on a sure footing (*a*) by discouraging the import of manufactures through the imposition of heavy duties, and (*b*) by encouraging the import of raw materials and the export of finished goods with the payment of bounties.

4. The maintenance of a favourable " Balance of Trade ", or an excess of exports over imports, so that the inflow of the precious metals might be encouraged and an outflow made unnecessary.

During the seventeenth century, when the policy of Mercantilism was at its height, many of its doctrines were attacked by a number of writers on economic subjects, of whom *Thomas Mun* was the chief. He agreed with the necessity for the maintenance of a favourable trade balance in the aggregate, but not necessarily with each country. He showed that an unfavourable balance of trade with one country might mean a favourable balance with another, and pointed out that, in some cases, it might be advisable to export money in order that the country might eventually reap a still richer reward. Other thinkers in this country, notably *David Hume* and *William Locke*, attacked the system on various grounds, while on the Continent also it had many vigorous opponents. By the middle of the eighteenth century its decay was well marked in most countries, although for many generations it persisted in Germany to a remarkable degree.

The Physiocrats—" Laissez Faire ".

Towards the end of the eighteenth century industry and commerce were shaking themselves free of restrictive shackles. On all sides, conditions were shaping for a vast increase in economic activity, and the stage was being set for the enormous industrial and commercial expansion which was to be such a feature of the close of the eighteenth and the beginning of the nineteenth centuries. Mercantilism was doomed to follow closely in the footsteps of the restrictive gild system; both were thrust aside by the sudden bold activity of private enterprise and individual initiative. The change in general conditions is reflected in the revolution of economic thought in France, as embodied in the tenets of the Physiocratic School, the basic conception of which was that man's economic and other activities should be guided by the Law of Nature, and that man should be left to shape his own ends free from any restraint or State control.

The new doctrines obtained a firm hold in France, where the Physiocrats or Economistes were headed by *Quesnay*, the learned

physician of Louis XV., and from that country the new ideas were diffused over all Europe. The Mercantile system had to its credit the fact that it had made possible a great growth of private wealth, the development of credit and banking, and the gradual although somewhat hesitating stimulation of individual enterprise. But the Physiocrats gave the older system its final blow. Their ideas changed the whole structure of political economy, and their teaching did much to give economic science its true place in the theory of the social organism. They answered the question of how a nation could be made wealthy in a way fundamentally different from that of previous economic theorists. They were directly opposed to the mercantile method of controlling commerce and industry in order to increase wealth; they maintained that national production like individual enterprise should go its own way, unhampered and unhindered by legislative interference. Then, they supposed, the production of wealth would automatically regulate itself in the best possible way. Their faith was founded on the freedom of competition; their policy was that of "let alone" and of natural liberty, summed up in the famous phrase "*laissez faire, laissez passer*".

Quesnay stoutly upheld free trade and said that "to obtain the greatest possible increase with the least expense, or better still, the least painful labour with the greatest enjoyment, is the perfection of economic conduct". In this respect the Physiocratic doctrine contained much that is sound, but, unfortunately, their arguments were frequently based on false assumptions. Their insistence that land is the sole source of wealth deprived their theories of much of their value, and gave them entirely incorrect views both of wealth and of the laws which control its distribution. "Agriculture holds a dominant place in human industry", they believed, "because food is more necessary to life than anything else". Also they held that "agricultural labour is the only labour which increases the wealth of a country. When the expenses of cultivation, of the renewal of working capital, the profit of the cultivator, and the seed for the following year are deducted from the raw product of the ground, the owner still clears an income or *produit net*. Nothing similar exists in any other industry, particularly not in those connected with the production of articles of luxury; the purchasers of manufactured goods repay the sellers the cost of production and the profit of the traders. These goods yield nothing further, their value is approximately equal to the value of the raw materials used by the workmen and traders either for carrying on the business or for their own support—this does not yield a *produit net*".[1]

The Physiocrats thus maintained that no addition is made to wealth by manufacture, which merely changes the form of things in the same way as commerce merely distributes them. Land alone yielded a "surplus", and consequently, in their view the

[1] Palgrave *Dictionary of Political Economy.*

only justifiable tax was a single, direct tax on land—an *impôt unique*.

The views of Quesnay were developed and, in some respects, modified by various other economists, notably *Gournay* and *Turgot*. To the former belongs the distinction of having originated the phrase "*laissez faire, laissez passer*", while Turgot deserves a place in the history of economic science for his systematic presentation of its doctrines in his "Reflexions on the Production and Distribution of Wealth" (1766).

Although the ideas of the Physiocrats were, in many respects, confused, they nevertheless rendered valuable assistance to the development of economic thought by their criticism of the older theories and by their treatment of the subject of political economy as a distinct branch of social science. Their conception of the surplus in agriculture not only paved the way for Ricardo's famous theory of rent, but also enabled them to lay bare the fallacy of the theory of the balance of trade, for although they were deceived as to the nature of wealth and identified it only with land, they realised at least that wealth does not consist of money alone.

Adam Smith: The Wealth of Nations.

It is frequently imagined that the science of Economics had its beginning with *Adam Smith*, whose famous "Inquiry into the Nature and Causes of the Wealth of Nations" (published in 1776) has taken its place amongst the world's greatest books. As we have seen, this is entirely incorrect: not only was Adam Smith himself greatly influenced by the teachings of the Physiocrats, but for a time at least he was an avowed follower of Quesnay, and came into contact with Turgot and other members of the Physiocratic school. Nevertheless, the "Wealth of Nations" is regarded as the foundation of modern Economics; for not only did it co-ordinate and arrange the theory of political economy as it was then developed, but it also paved the way for its modern treatment as an independent and systematic body of knowledge.

Adam Smith drew freely upon the works of his English predecessors, including those of Mun, Hume, and Locke. But to him belongs the achievement of taking the raw material supplied by others, of adding to it from his own genius, and of moulding it into such a form that without losing any of its scientific value his book achieved immense popularity and was widely read. The "Wealth of Nations" appeared at a time when great changes were taking place—the Industrial Revolution was just beginning—and it created a tremendous impression on the minds of men. Its lasting merit was that it succeeded in imbuing all classes with the idea of freedom and liberty.

Industry at this time was already crying out against State interference, against its restrictions, and strangulating regulations. Adam Smith gave voice to the need for greater liberty,

and the response to his call was immediate. Throughout the book the doctrine of self-interest is given first prominence: a doctrine which had much in common with that of the Physiocrats, but was in direct opposition to the teaching of Mercantilism. Yet, although Adam Smith was such a strong opponent of the Mercantile System, it must not be supposed that he altogether agreed with the tenets of the Physiocrats. Indeed, he spared no effort in exposing the fallacy of their theory of the supreme importance of agriculture, and although he adhered to the principle of freedom of trade he supported the Navigation Acts because he considered that the defence and security of the community were of greater importance than the accumulation of wealth. (See *ante*, page 571.)

The "Wealth of Nations" has been much criticised, but the development of economic thought since the time of Adam Smith has been largely based on the theories enunciated in his book. Many of his views stand to-day in the form in which they were stated by him, and others formed the basis on which are built the theories of modern economists. Some of his views have been extended, many have been adjusted and developed, but few have been dismissed as of no value. Some refinement of his theories has been made necessary by the change in economic conditions since his day; for instance, his views on production were formulated when the domestic system of industry was supreme. Yet even here his treatment of the principle of division of labour is unrivalled. Even in his analysis of value, which had grave defects, his views were important in so far as they formulated a problem of general value which was not solved until a later date in the history of economic theory. Special mention should be made of his four famous canons of taxation, which are accepted now as the classic principles governing taxation policy for all time.

The influence of the "Wealth of Nations" can scarcely be over-estimated. Not only did it form a scientific basis on which future economists could build, but also its interpretation by numerous disciples of the great economist resulted in a too great and harmful reliance on the principle of economic freedom. Thus have many of the evils of free enterprise and the refusal of governments to intervene to protect labour and to improve factory conditions been attributed to the teachings of Adam Smith instead of to the over-rigid interpretation of his teaching by his too zealous followers.

Bentham and Malthus.

The next contribution of value to Economic Science was that of *Bentham*, the founder of the Utilitarian School, the object of which was expressed in the phrase "the greatest happiness of the greatest number". Bentham contributed to the development of economic thought by his defence of interest, which finally

settled an ancient controversy and led to the repeal of the restrictive Usury Laws.

Malthus, who followed, was responsible for a work on Political Economy, but is remembered now for his famous " Essay on the Principles of Population ", published in 1798. His theory of population was somewhat modified in successive writings, but his reasoning led him to three distinct and pessimistic conclusions. In the first place, he dealt with the supply of labour and stated that the growth of population, unless retarded by such checks as poverty and vice, disease and war, continence or celibacy, would be both rapid and continuous. From this premise he dealt with the demand for labour, and stated that the effective demand of Nature for labour is the amount of produce which she supplies for the maintenance of the population. Up to the time at which he wrote no country had been able to supply the necessaries of life freely after it had become fully populated ; hence he maintained that the supply of population had been growing in excess of the demand for it. From these two arguments he proceeded to his conclusion that unless the growth of population was checked by voluntary restraint it would overtake the limit of subsistence until curtailed by the " positive checks " of disease, famine, war, or some other form of suffering. Both his second and third conclusions required to be modified by the changed conditions of existence since his time, and particularly by the great advance in man's control over nature. Consequently his theory is no longer accepted in its entirety, although his work was of great value in its enunciation of the important but intricate problem of population.

The Classical School of Economists.

Ricardo was the first economist after Adam Smith to contribute to the general advancement of the science. He was greatly influenced by the " Wealth of Nations ", but his " Principles of Political Economy and Taxation " (1817) unquestionably struck into a new path. Instead of regarding economic science, as Adam Smith had done, as " an enquiry into the nature and causes of wealth ", Ricardo considered it from the standpoint of " an enquiry into the laws which govern the division of the produce of industry amongst the classes who concur in its formation ". His methods of reasoning were almost purely hypothetical and theoretical ; the human element was largely obscured in the abstraction and dogmatism of his argument. It is therefore not surprising that he made many mistakes in attempting to foretell the future trend of economic activities from conditions existent in his day, and that the work of him and of his followers was largely responsible for the characterisation of Economics as " a dismal science ". Nevertheless, Ricardo contributed much of permanent value to Economics ; his famous theory of rent and his teachings on international

trade and money are practically unchanged to-day after a century of further investigation. In other directions also he opened up the path by which economic inquiry was eventually enabled to progress towards the truth.

After Ricardo the next economist of mark was *N. W. Senior.* Senior was a disciple of Ricardo, and carried almost to excess the abstract and deductive methods of economic analysis. He nevertheless showed much originality of thought, particularly in his attempt to condense the science of Economics within the limits of four sweeping generalisations or premises, but he is remembered chiefly for his abstinence theory of interest. (See *ante*, page 299). *James Mill*, the father of John Stuart Mill, and *M'Culloch*, also helped to develop Ricardo's theories but contributed comparatively little to the advancement of the science.

John Stuart Mill.

John Stuart Mill was the last of the classical school. His "Principles of Political Economy", published in 1848, is still a valuable treatise, containing as it does much useful historical and descriptive detail. He contributed little of permanent value, however, and many of the theories enunciated by him, notably his Wages Fund Theory, have since been discredited. Nevertheless, what Adam Smith did for the science in its younger days John Stuart Mill accomplished for it in his time, although to a less degree. Mill attempted to sum up and weave into one complete system the disjointed economic theories of the time, and though, as we have said, his work has many weaknesses his attempt was not altogether unsuccessful. His contribution was sufficiently important to place him next to Adam Smith among the world's great economists, and his wide knowledge and experience of social affairs permitted him to approach his theme from a more practical standpoint than his predecessors had done. Mill showed that although freedom of enterprise was generally beneficial, it should nevertheless be subject at times to State control. He was able to emphasise that welfare and not merely material wealth was the object of social advancement, and by his linking up of Economics with practical affairs he did much to relieve the "dismal science" of the charge of abstraction.

Many economists appeared on the Continent during the period between the appearance of the "Wealth of Nations" and Mill's "Principles", the chief of these being *Say*, *Dunoyer*, *Cournot*, *Sismondi* and *Bastiat*, in France; *Hermann*, *Thunen*, *Nebenius* and *Rau* in Germany. Most of these followed and further developed the classical doctrines, and relied largely on the abstract method of analysis and of deduction. This method was followed also in England by the group known as the Manchester School of Economists, which used the tenets of the classical school to glorify the policy of *laissez faire.*

The Historical School.

The writings of J. S. Mill had, however, foreshadowed a movement away from the classical methods of economic investigation, and there was gradually a widespread reaction against the purely theoretical conceptions, and a desire to place the science on a more practical and historical basis. Although Mill must be regarded as a member of the old classical school and not as one of the first exponents of the historical school which was now to arise, he did much to show that Ricardo and his followers conceived Economics as a purely hypothetical science based on unreal or at least one-sided assumptions, the most essential of which was the existence of the "economic man", the imaginary being who was influenced by two motives only—those of acquiring wealth and of avoiding exertion. Senior had protested in vain against this fault and had seen that the practical value of the science was much impaired by such an unsound and abstract conception.

The adjustment of this failing was directly due to the Frenchman, *Auguste Comte*, 1798-1857, who can be described as the founder of the Historical school of economists on the Continent. Sociology, as he conceived it, was essentially one science, the principal method of which was to be that of historical comparison, although other methods were not to be entirely excluded. It was to recognise moral ideas and notions of social duty, and its aims were to be accomplished by means of evolution rather than revolution. Primarily, the field of research for the purposes of Economics was to be the field of history in its widest sense, including, of course, contemporary fact. This new method of treatment became widely accepted, and spread from France to other countries in Europe.

In Germany particularly were historical methods applied in support of socialist doctrines. The names of Karl Marx, Engels, Rodbertus and Lassalle are famous in this connection. The former is noted particularly for his championship of the Labour Theory of Value, and for his view that the capitalist system of industry contained in itself the germ of its own destruction. He stressed the antagonism of capital and labour in distribution, concluding that, with the ultimate collapse of capitalist enterprise which appeared to him inevitable, labour would come into its own, and the nationalisation of the processes of production or the communist control of industry would be made possible. Marx gave a great impetus to socialistic teachings, and his work has maintained its importance in spite of certain modifications which have been made in some of his doctrines. The name of Lassalle is associated with the Iron or Brazen Law of Wages (see *ante*, page 268), and that of Engel with his *Law of Family Expenditure* or of *Domestic Consumption*. This maintains that as the income of the family unit increases (1) the

proportion spent on food increases; (2) that spent on clothing remains approximately unchanged; (3) that expended on rent, fuel and light is invariable, while (4) the proportion expended on such items as education, health and recreation tends to increase. The importance of the law lies in its illustration of the evil effects of certain taxes which press unduly on those items in the family budget the proportion of which must be maintained if a reasonable existence is to be continued.

Meanwhile a reaction was taking place in England also against the method of the old classical school. The teachings of *Thomas Carlyle* had turned many against a science which seemed imbued with the somewhat sordid maxims of the Manchester School of economists, who had used the science of Economics as a tool for the furtherance of their own materialistic aims, and although the application of their views had proved of inestimable benefit to manufacture, yet that benefit had been achieved at the cost of the most squalid misery to the worker ever known in the history of the world. *Ruskin* in his writings had not only indicated the unlovely spirit of the creed, but had also pointed out some of its weaknesses as a scientific theory.

The new school obtained its inspiration from Germany, and the influence of the economists in that country can be traced in the writings of the English pioneers—Bagehot, Leslie and Jevons.

Walter Bagehot (1826-77) pointed out in his "Economic Studies" that the traditional classical system of political economy rested on certain fundamental assumptions, which instead of being universally true in fact were only realised within very narrow limits of time and of space. But Bagehot is famous rather for his work on monetary problems, and his book, "Lombard Street", survives to-day as a classic of its kind.

Cliffe Leslie has been described as the first English author of a systematic statement of the philosophical foundation of the historical method. In his "Essays Moral and Political" (1879) he points out the vague and loose nature of the principle of the "desire for wealth" to which the classical economists attributed all economic activity, and he maintained that the intellectual, moral, legal, political and economic sides of social progress are indissolubly connected. To him, an understanding of existing economic relations was impossible without tracing their historical evolution, and he is to be remembered as the first to point out the fallacy of the "wage-fund" theory of wages, a theory which was not entirely discarded until it was finally overthrown by the late Dr. Marshall.

To the trained scientific mind of *W. S. Jevons* (1835-82) the theory of Economics owes much of its modern evolution. His application of the historical method resulted in most valuable contributions to the ever-developing science. In his book on

"The State in Relation to Labour" he refuted the brutal callousness of the doctrine of "*laissez faire*", while his work on "Money and the Mechanism of Exchange" stands beside Bagehot's "Lombard Street" as a classic. To Jevons also is the modern economist indebted for the first conception of the principle of marginal utility, called by him "final utility," and for brilliant contributions to the theory of trade cycles and to the history of price movements.

Among other famous names of this period may be mentioned those of *Thorold Rogers*, *Arnold Toynbee*, *Sidgwick* and *F. A. Walker*. To the last of these is due the clear conception of profits as a distinct share of the product of industry. He also did much to assist students of economic science by the clearness and lucidity of his exposition of some of its most difficult branches.

Brief mention should also be made of the Austrian School of economists, including Menger, Weiser, and Böhm-Bawerk, who made important contributions to the development of subjective value theories and the theories of interest and distribution.

The Unification of Economics.

The modern science of Economics probably owes more to the late *Dr. Alfred Marshall* than to any other writer. Rightly may he be described as the doyen of recent English economists, and as the father of modern Economics. To him is chiefly due that unification of the science which is such a pronounced feature of its modern development. Marshall dealt with both the practical and abstract sides of the subject to which he devoted his life, and before his death was enabled to see the fruits of his labours in the modern conception of Economics as a coherent and unified body of knowledge. Although Marshall disposed of Ricardo's cost of production theory of value, he nevertheless used it in conjunction with Jevons's theory of marginal utility to found that fundamental theory of value which he showed as applicable in every department of Economics. His belief in and elucidation of the principle of the continuity of Economics is, in fact, the most characteristic feature of his work and teaching.

Before Marshall's time the science of Economics, in England at least, was a disunited and incomplete collection of disconnected and often contradictory theories. "Marshall immensely broadened the study of Economics beyond the narrow field to which Fawcett and his predecessors had confined it. For the first time a great English economist brought the science into contact with the stream of Teutonic thought of which we were in insular ignorance, and marched abreast with the leading economists of all countries. His great service to economic theory was the classification of the theory of value. Ricardo's cost of production theory was easily disposed of. Jevons' theory of final utility was less open to criticism. But Marshall may be said to have put the theory of value upon a firm footing

of dualism, the contact between the curves of supply and demand, each curve varying in shape with quantity and price—a new and luminous analysis of the thought-saving phrase that 'price is determined by supply and demand.'" [1]

Marshall proved by his scientific analysis and synthesis that the true explanation of value was to be found, not in terms of demand or of supply alone, but in terms of both supply and demand. This, of course, had been recognised before it was left to Marshall to give exact expression to the law of demand and supply and to weld the hitherto disconnected theories into a symmetrical whole of interdependent parts. Not this only but he subjected Distribution to the same analysis and showed that the same theory of value could be applied to each of the factors of production, and thus laid the foundation for a new continuity and unity in our conception of the economic system. He showed that the remuneration of each factor is determined on the demand side by its marginal productivity, while on the supply side the remuneration is determined in the long run by the marginal cost of production of each factor where this cost may be said to exist.

His teaching is embodied in the world-famous books, "The Economics of Industry", the monumental "Principles of Economics", "Industry and Trade", and "Money, Credit and Commerce". For the second alone of these great works Marshall is entitled to rank in history with Adam Smith and J. S. Mill, while the importance of his contribution to economic science is indicated also by the fact that there now exists a very definite Cambridge School of Economists, which includes such well-known men as Professor Pigou and Dr J. Maynard Keynes.

[1] *The Times* (Obituary Notice), 14th July 1924.

APPENDIX

LIST OF AUTHORITIES AND SELECTED WORKS

The following list of authorities and of selected works, which have from time to time been found useful by the Author, is included in the hope that it will assist readers who desire to make a more detailed study of Economic Science or of one of its branches.

Elementary General Works

Cannan, E.	*Wealth.*
Chapman, S. J.	*Outlines of Political Economy.*
Clay, Henry	*Economics for the General Reader.*
Ely & Wicker	*Elementary Principles of Economics.*
Gide, C.	*Principles of Political Economy.* (Translated.)
Jones, J. H.	*Social Economics.*
Do.	*The Economics of Private Enterprise.*
Marshall, A.	*Economics of Industry.*
Nicholson, J. S.	*Elements of Political Economy.*
Walker, F. A.	*Political Economy.*

Classical Treatises

Adam Smith	*Wealth of Nations.*
Mill, J. S.	*Political Economy.*

Advanced General Works

Marshall, A.	*Principles of Economics.*
Do.	*Industry and Trade.*
Taussig, F. W.	*Principles of Economics.*
Pierson, N. G.	*Principles of Economics.*
Pigou, A. C.	*Industrial Fluctuations.*
Do.	*The Economics of Welfare.*

Specialised Works on Various Departments

Value and Distribution

Carver, T. N.	*Distribution of Wealth.*
Fisher, Irving	*The Nature of Capital.*
Henderson, H. D.	*Supply and Demand.*

The Theory of Money and Prices

Cannan, E.	*Money.*
Cassel, Gustav	*Money and Foreign Exchange after* 1914.
Fisher, Irving	*The Purchasing Power of Money.*
Do.	*Stabilising the Dollar.*
Horton, S. D.	*The Silver Pound.*
Jevons, W. S.	*Money and the Mechanism of Exchange.*
Keynes, J. M.	*A Tract on Monetary Reform*
Do.	*A Treatise on Money.*
Layton, W. T.	*Introduction to the Study of Prices.*
Marshall, A.	*Money, Credit and Commerce.*
Robertson, D. H.	*Money.*

Credit, Banking and Foreign Trade

Bagehot, W.. . . *Lombard Street.*
Bastable, C. F. . . *The Theory of International Trade.*
Gregory, T. E. . . *Foreign Exchange.*
Hawtrey . . . *Currency and Credit.*
Lavington, F. . . *The English Capital Market.*
Spalding, W. F. . *The Money Market.*
Do. . . *Foreign Exchange and Foreign Bills.*
Sykes, E. . . . *Banking and Currency.*
Thomas, S. E . . *Principles and Arithmetic of Foreign Exchange.*
Withers, Hartley . *The Meaning of Money.*
Do. . . *Money Changing.*
Do. . . *Stocks and Shares.*
Do. . . *Bankers and Credit.*

Labour Problems and Movements, Combination, etc.

Ashley, Wm. J. (Ed.) *British Industries.*
Beveridge, Wm. . *Unemployment.*
Cole, G. D. H. . . *Self-Government in Industry.*
Dalton, H. . . . *The Inequality of Incomes.*
Duncan, J. C. . . *The Principles of Industrial Management.*
Goodrich, C. L. . . *The Frontier of Control.*
Hobson, J. A. . . *Incentives in the New Industrial Order.*
Hoxie, R. F. . . *Scientific Management and Labour.*
Money, L. C. . . *Riches and Poverty.*
Robertson, D. H. . *The Control of Industry.*
Silverman, H. A. . *Economics of Social Problems.*
Webb, B. & S. . . *Industrial Democracy.*
Do. . . *The Consumers' Co-operative Movement.*
Do. . . *History of Trade Unionism.*

Public Finance and Taxation

Armitage-Smith, G. *The Principles and Methods of Taxation.*
Bastable, C. F. . . *Public Finance.*
Cliff, A. B. . . . *Imperial Taxation.*
Fisk, H. E. . . . *English Public Finance.*
Hobson, J. A. . . *Taxation in the New State.*
Kirkaldy, A. W. . *British Finance*, 1914-21.
Lever, E. A. . . *Primer of Taxation.*
Robinson, M. E. . *Public Finance.*
Withers, Hartley . *Our Money and the State.*

Economic History

Ashley, W. J. . . *The Economic Organisation of England.*
Bradshaw . . . *Social History of England.*
Fay, C. R. . . . *Life and Labour in the Nineteenth Century.*
Knowles, L. . . . *The Industrial and Commercial Revolutions in Great Britain.*
Price, L. L. . . . *History of English Commerce and Industry.*
Slater, L. . . . *The Making of Modern England.*
Warner, T. . . . *Landmarks in English Industrial History.*

The History of Economic Thought

Ingram, J. K. . . *History of Political Economy.*
Palgrave. (Ed.) . . *Dictionary of Political Economy.*
Price, L. L. . . . *History of Political Economy in England.*

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