STATISTICAL AND SOCIAL INQUIRY SOCIETY OF IRELAND.

SOME RECENT DEVELOPMENTS IN ECONOMIC THEORY.

By Professor GEORGE O'BRIEN, D.Litt.

(*Read on Thursday, 31st October, 1940.*)

The outbreak of war has produced, among its consequences, a complete change in the type of economic problems confronting statesmen and their economic advisers. Many of the problems which engaged the attention of economists during the last war and many novel ones arising out of the peculiar circumstances of total warfare have come to the foreground, and it is inevitable that in the course of their solution, or of their non-solution, as the case may be, many developments in the realm of economic theory will take place. Economic theory has developed to a large extent side by side with practical problems. It has been in analysing the issues underlying a concrete situation that the theoretical issues involved have clearly emerged. Professor Cannan stated that " when economic questions get into politics, though they are often somewhat roughly handled, they are really thought about." After an abrupt change of interest such as that caused by the war, it may prove useful to attempt to review briefly some of the matters which were agitating the world of economic theory in the last years of the disturbed and unstable peace. Such is the purpose of the present paper, which is designed to explain some of these issues to an audience mainly composed of amateur rather than professional economists.

The period between the two wars falls into two clearly-defined sections of practically equal length. The ten years between the Armistice and the onset of the great depression of 1929 were largely devoted to repairing the damage to the world's trade, finance and monetary systems caused by the war. The restoration of sound currency and credit conditions was the particular concern of this period, and it is not surprising that the greater part of the theoretical controversy was devoted to monetary problems. Many advances were made in monetary theory in those years of fruitful and hopeful reconstruction. The depression which began in 1929 produced a condition of international economic anarchy greater even than that produced by the war. In the thirties a new series of problems engaged the attention of statesmen in all countries. The attempts to revive economic activity gave rise to innumerable experiments in the field of practical policy accompanied by a great deal of theoretical controversy. The topics now discussed were principally the cause and cure of the trade cycle. The recession which began in 1929 was, however, so exceptionally severe that many economists diagnosed it as something more than a particularly bad example of a normal slump. The field of the debate widened to include such major issues as the practicability of the successful working of capitalism in the modern world and the possibility of replacing it by some alternative system that would prove economically rational. As a side issue to these major engagements there was conducted a lively discussion in the methodological field. Economists were arraigned on the mutually inconsistent charges of being neutral regarding the ends of economic policy and of being grossly partial under the pretence of a false neutrality.

The indictment of economists collectively upon the same charges suggests that there is general agreement amongst the professors of the science to-day. In spite of the impression which prevails to the contrary, this is, to a large extent, the case. The great majority of professional economists are agreed on a corpus of doctrine which may be described as the neo-classical school. This doctrine derives in part from the classical school and in part from the marginal utility and Lausanne schools. While professing loyalty to Marshall, the neo-classical economists have refined and extended the theory of the great Cambridge professor under the influence of the Swedish and neo-Austrian schools. Outside this circle the main dissent comes from the Marxian socialists, who, while uniting in reviling the neo-classical school, are split by serious differences of opinion on the interpretation of their holy writ.

Needless o say complete unanimity on every point is unattainable in any healthy or progressive science, controversies and disputes being a necessary accompaniment of the evolution of scientific truth. The points of disagreement are more evident than those of agreement. The former are the occasion of verbal and literary warfare while the latter are allowed to rest in a comfortable silence. The area of agreement in modern economics is far wider than the area of disagreement. A perusal of the summary of foreign scientific periodicals which appears in every number of *The Economic Journal* reveals the great similarity of the theoretical controversies in every country to-day in spite of the fundamental differences of the institutional environment in which they are conducted. An admission by a hostile witness is always regarded as valuable evidence. Nobody has attacked orthodox economists so violently as Mrs. Wootton, one of whose charges is their failure to agree. Nevertheless Mrs. Wootton is forced to admit[1] that "while there are differences of opinion about refinements and incidentals, there remains a core of economic analysis the correctness of which is not now disputed within the ranks of economists themselves." Professor Morgenstern rightly argues that it is the unanimity and inflexibility of professional economists in rejecting the easy courses and specious remedies of amateur economists that is the cause of their unpopularity.[2] "A complaint," Professor Morgenstern states, "that is continually being raised by the practical man and the political world against theoretical economics is the accusation of 'doctrinairism'. This apparently means nothing else than a rigid adherence to propositions of economic theory and their continued repetition whenever theorists are called upon to pronounce on matters of economic policy. . . . It is psychologically very understandable that both should be rather displeased always to hear the same things from the side of the economic scientist. These are things which, nevertheless, do not betray a lack of adaptability as the prevailing opinion contends, but actually give expression to immutable fundamentals, and what is a monstrous event for the practical man often represents for science only a typical illustration of a much more general phenomenon."

While the alleged failure of economists to agree on matters of theory is popularly exaggerated, it is true that a considerable difference of opinion arises among economists when they are asked to tender advice in a concrete situation. Many reasons can be adduced to explain and to excuse this disagreement. The modern economist professes strict neu-

[1] *Lament for Economics*, pp. 23-5.
[2] *Limits of Economics*, pp. 134-5.

trality between different policies of action : his science deals with means and not with ends. He is far more akin to the physiologist, who studies the working of the body and the interrelated action of its various organs, than to the doctor, who treats individual cases. One reason for this distinction is that, whereas the doctors may differ regarding the means of treatment, they are all agreed regarding its end, which is the restoration of health. Economists possess no such agreed end of action even within the sphere of material welfare, which has come to be regarded as their peculiar domain. If the greatest average wealth per head of the population be inconsistent with the greatest total population, if progress can be attained only at the cost of instability of output, if the attainment of the maximum national income entails great inequality of distribution, it is not for the economist to pronounce which of these various alternatives are to be preferred. His task is rather to indicate the inconsistency of the different objectives of economic policy, to demonstrate the type of measure best calculated to attain each objective, and to reckon the cost in terms of alternatives foregone of the pursuit of every competing criterion of welfare. Economics can be defined as the science of not having it both ways, of not having one's cake and eating it.

It must be remembered, however, that the field of public policy extends far beyond the sphere of maximising material welfare, and that in the modern world much of the most important activity of nations, for example war, is designed to destroy rather than to create wealth. The economist frequently finds himself working in an environment in which all his values are flouted and treated as of secondary importance. The greater part of public policy, for example, in the last few years has been devoted either to the preparation for war or to the giving of employment. In those countries where preparation for war was the principal preoccupation of the government, the economic system was strictly controlled for the attainment of this single end. Private investment was allowed only in so far as it did not compete with the capital requirements of the State, the disposition of labour was similarly regulated, the foreign exchanges were rigidly controlled, and no particular regard was had to the standard of living of the industrial population. While it is interesting to observe the working of an economic system so controlled, no lessons calling for a modification of current economic theory were learnt from these observations. The physiologist was presented with the spectacle of a human body living within the confines of a strait waistcoat. In other countries the relief of unemployment was the principal aim of public policy. There again no great advance was made in the study of economic theory. It did not need the experiments of Mr. Roosevelt and M. Blum to demonstrate that the outpouring of public money will provide temporary employment, that raising costs of production will stifle rather than stimulate private enterprise, and that the reduction of working hours may result in additional employment without adding anything to the national income. Indeed many of the failures of the French and American experiments were foretold by professional economists, and the governments of the totalitarian States, in many cases, paid more respect to the tenets of economic orthodoxy than those of the democracies. The popular notion that the reconstruction of German economic life under the National Socialist régime disproved the validity of the generally accepted economic laws is quite erroneous. The end of economic policy, namely, military strength, was clearly defined, and the exceptionally complete machinery of control of labour, investment and the foreign exchanges rendered possible experiments which could not have been made in a freer environment. In democratic countries no such clear definition of the ends of economic policy and no such machinery for finding the appropriate means of implementing policy existed before the outbreak of war.

Assuming that the ends of economic policy were clearly understood and defined by the statesman, great difficulties would still confront an economist invited to advise on an appropriate course of action. Economic communities, no two of which are closely similar, are in a state of constant flux and change. Theoretical discussion is possible only by the fullest use of the assumption that other things are equal, whereas in the real world everything is changing all the time. Some totally unforeseen event in the political or in the international scene, for example an assassination, a revolution or a war, may completely change the background of the economic situation, while, even in the narrow economic field itself, unforeseen variations in demand or supply may upset all calculations. Every business man knows that his best laid plans are liable to be defeated by changes of circumstances which he could not reasonably have foreseen. How much greater must be the area of uncertainty when plans are being made for the whole community.

Having admitted so much regarding the possibilities of disagreement among economists in a concrete situation, I must correct any suggestion that may have arisen that the opinion of economists is useless as a guide to policy. Most of the errors that have disfigured the economic policies of many countries in recent years have resulted from the statesman's failure to seek or to follow professional advice. Examples are also to be found of countries in which resort to professional economists has led to the adoption of wise courses or has corrected the result of past unwisdom. The recovery of Australia from the world depression was largely the result of the politicians having followed the advice of professional economists. Sweden is also governed largely in the light of such advice, and Germany has always relied upon its administrative class possessing a sound knowledge of economic theory. Even in the sphere of practical precept, there are numerous matters on which economists will be found to be in complete agreement. The necessity of preserving equilibrium in three important balances, namely, the external balance of payments, the normal budget and the level of costs and prices, the undesirability of inflationary finance, the costly results of autarky carried beyond a certain point, the evils of restrictionism, monopoly and imperfect competition are some matters on which unanimity could be secured among economists. These are the subjects upon which errors in public policy are most frequently experienced owing to the politicians' flouting of professional advice.

The great depression was followed by a train of consequences of such great importance in the economic, social and political fields that public attention was naturally attracted to the problems connected with the cause, cure and, if possible, prevention of business recessions. As a consequence of this awakened interest, the literature on the trade cycle grew to very large dimensions, and a vigorous controversy continued to rage until the outbreak of war distracted attention to other and graver problems. The discussion of cyclical fluctuations led to a more profound study of economic dynamics, without which the course of the fluctuation could not be intelligently traced, and it became generally accepted that the branches of economic theory relating to money, capital and interest call for dynamic rather than static analysis. Money and claims to money, i.e. loans of all kinds, are the bridges that connect present and future, and cannot be isolated from the passage of time, which is what distinguishes dynamic from static economic theory. Even within this admittedly controversial subject the agreement among economists is far greater than is generally believed. It is at the frontiers of debated territory that conflicts occur. Moreover, many of the differences of opinion that prevail in dynamic theory are the result of the changing environment of the modern world. Recent developments in the capital market and in the habit of savers have brought about new conditions which have tended to obstruct recovery from depression, and the question has arisen whether the trade cycle is not a minor manifestation of a major tendency to disequilibrium in the economic system.

One of the most useful actions performed by the Economic Intelligence Service of the League of Nations was the publication of Professor Haberler's work entitled *Prosperity and Depression*, which is an attempt to co-ordinate recent analytical work on the recurrence of periods of depression. Students of economics will find this book, particularly the second edition, published in 1940, of the greatest possible value. The differences of opinion between the authors whose views are analysed are undoubtedly very numerous ; but Professor Haberler is at pains to emphasize more than once that many superficial differences conceal underlying agreement on fundamentals, and that many of the greatest disputes are purely terminological. " It is a natural thing," he states in the Introduction, " that most writers are inclined rather to dwell on the controversial issues than to stress the points of general agreement. Here the opposite principle will be followed, and it will be shown how theories which seem *prima facie* to contradict one another can sometimes be reconciled." Later, he says : " The majority of modern writers are careful to point out that a whole set of factors, and perhaps not always the same combination of factors, contribute towards producing an alternation of prosperity and depression. Frequently the difference between different theorists is rather a difference in the emphasis laid upon the different factors than a difference in the enumeration of contributing causes and conditions." In the second edition, referring to the literature which has developed around Mr. Keynes's *General Theory of Employment, Interest and Money*, Professor Haberler comments as follows : " Those theories suffer from the fact that their authors have not been able to make clear in all cases whether apparent differences between their views and those of other writers rest on different empirical assumptions or only on a different usage of terms ; in other words, whether differences are of a material kind or of a purely terminological nature. There can be no doubt that, in recent years, the discussions on saving and investment and the possibility of their being unequal, on hoarding, liquidity-preference and the rate of interest, and similar topics have made it increasingly evident that purely verbal misunderstandings and slight differences in the definition of terms have played a very great role. The exaggerated impression of importance which prevailed with respect to the real (as against purely terminological) differences between different schools of thought has already been modified." Finally, he suggests that, in some instances, " the new theories amount to nothing more than a terminological innovation and cannot be said to be in material contradiction to the traditional views".

On no subject has the terminological war been so keen as on the definition of the terms "saving" and "investment." For this Mr. Keynes must be held chiefly responsible. In his earlier work *The Treatise on Money*, Mr. Keynes explained the trade cycle on the lines suggested by Wicksell as resulting from inequalities in the rates of saving and investment, while, in his later work *The General Theory of Employment, Interest and Money*, he adopted new definitions of these terms in which the two magnitudes must necessarily be equal. The resulting confusion has been almost incredible, and much valuable energy has been wasted on trying to clear up difficulties that need never have arisen. I shall not weary my listeners with a recital of the efforts to distinguish saving in the singular from savings in the plural, saving with a capital from saving with an uncial, saving *ex-ante* from saving *ex-post* and the similar distinctions in the case of the fellow cause of confusion, investment. One cannot but sympathise with Professor Machlup who, in the introduction to his book *The Stock Market, Capital and Credit Formation*, apologises "in order to appease terminological fanatics who refuse to understand terms in any meaning other than that which they have been assigned in the newest Keynesian language," and expresses the hope that "the terminological prejudices that have developed in recent years will soon give way to the desire to understand what the others say no matter in what language they say it."

Closely connected with this great controversy is the dispute regarding the true nature and function of interest. On the one hand there is the "pure" theory of interest explaining the rate of interest as the price of capital, determined by the marginal productivity of capital in a technological sense and by certain psychological factors (time-preference) influencing the relative urgency of present and future needs. On the other hand there is the monetary theory of the rate of interest which runs in terms of demand for and supply of loanable funds or credit or claims. Beside this real dispute there has arisen what Professor Hicks[1] entitles a "sham dispute between those who adhere to the monetary approach." Some writers of this school allege that the rate of interest is determined by the supply of and the demand for loanable funds, while others, including Mr. Keynes, prefer to say that it is determined by the supply of and the demand for money itself. Here as elsewhere, there is room for compromise. There is no such thing as "the" rate of interest but rather a group of rates applying to loans of different length. The long rate is largely determined by non-monetary factors, whereas shorter rates are sensitive to conditions in the money market. The main question in dispute is the extent to which the long rate responds to variations in the shorter rates. Ever since Wicksell's time the distinction has been drawn between the "natural" (long) rate of interest which is the rate which preserves equilibrium between saving and investment and the market (long) rate which is the rate at which borrowing can actually take place. If the market rate is below the natural or equilibrium rate borrowing is encouraged and an expansion is engendered, while if the market rate is above the natural rate borrowing is discouraged and the symptoms of business depression appear. To the extent to which the long rate is responsive to changes in the shorter rates, which are admittedly determined by the quantity of money available for borrowing and by the importance attached by those who possess savings to the respective advantages of money income and liquidity, monetary policy, by exerting influence on those two factors

[1] *Value and Capital*, p. 153.

is able, within limits, indirectly to vary the long market rate, and thus, to prevent or counteract deviations from the natural or equilibrium rate. Without digressing to consider the very real difficulties which beset every step in such a programme of monetary policy, it is possible to appreciate the great importance of these concepts for those who hope that the trade cycle may prove amenable to monetary treatment. In particular it must be clear that the maintenance of low market rates of interest must exert a healthy influence on the economic system by widening the field of profitable investment. Too much hope, however, must not be placed on the effect of cheap and abundant credit if conditions are otherwise unfavourable. The demand for credit is as vital for enterprise as the supply, and recent experience has proved that borrowers cannot be tempted to borrow even on the most favourable terms if the business outlook is obscure. Cheap money is a necessary but not a sufficient condition of extensive private investment.

With every extension of investment that takes place the field for further profitable investment narrows, and, in the absence of a steadily expanding demand for capital, the rate of interest must be progressively reduced if the rate of investment is to be maintained. There are reasons for believing, however, that the downward movement of the rate of interest, at least on long loans, cannot be continued beyond a certain point determined by the desire for liquidity of the holders of savings. It is this possibility that has given rise to the conjecture that an advanced capitalistic society suffers from a disease far more serious than the recurring slumps associated with the trade cycle. As Professor Robertson[1] puts it in his essay entitled *The Snake and the Worm*, there are grounds "to detect, lurking beneath the coils of the cyclical snake, a more insidious enemy still. This alleged enemy is a chronic and endemic tendency towards the stifling of enterprise, the leakage of thrift and a consequent running-down of the whole system—a sort of worm seated at the very heart of the institutional bases of our society, and battening on the very growth of wealth which he strives unavailingly to prevent." This is the central theme of Mr. Keynes's latest book, wherein he criticises the classical theory of equilibrium on the ground that the latter assumed that the factors of production are always fully employed. On such an assumption consumption and investment stand in a competitive relation to each other ; if one is increased the other must be reduced. Mr. Keynes argues that the equilibrium position assumed by the classical economists is but a limiting point of a whole range of possible positions of equilibrium, and that in the actual conditions of modern capitalism equilibrium is reached at a point far below full employment. If this be the case, he argues, investment and consumption stand in a complementary rather than a competitive relation and an increase of either will raise the level of both.

The principal reason why full employment fails to be reached, according to Mr. Keynes, is that the downward movement of the rate of interest "jams" at a certain point, and that a large number of investment opportunities that would arise if interest rates were lower fail to be realized. The reason for this jamming of the downward movement of the rate of interest can be broadly explained by the desire of the owners of savings to keep them in liquid form. Every loan involves a certain amount of expense and risk and the current rates of direct taxation make a serious inroad on the gross returns on loans. When interest

[1] *Essays in Monetary Theory*, p. 111.

rates reach a certain point in the downward direction the liquidity-preference of savers tempts them to keep their resources in liquid form. All the available statistics corroborate this conclusion. Whenever the long period rate of interest in mature economies has deviated from about 3½ per cent. it has shown a tendency to return to a norm at that level. Mr. Keynes's proposals for overcoming the chronic under-investment and under-employment resulting from this rigidity in the rate of interest are three-fold. In the first place, the national income should be redistributed in the direction of greater equality with the object of stimulating consumption and reducing saving. Secondly, in so far as the rate of interest can be reduced by monetary management, "cheap money" should be regarded as a desirable policy. Finally, the government and other public authorities should undertake considerable investment.

If such drastic interferences with the free working of an individualist system are necessary in order that it may work well, one is tempted to ask whether capitalism is not completely out-of-date as a method of maintaining economic activity. The great period of progress associated with the prevalence of *laissez faire* as the guiding maxim of economic policy was an age of quite exceptional character. The rapid increase in the world's population was unprecedented and, as we now know, temporary, the opening up of new territories and continents was a process which in its nature could not continue indefinitely, and international movements of labour and capital took place on a scale that was possible only in an atmosphere of assured international peace. Everywhere to-day the rate of population growth is slowing down, many of the areas opened up in the nineteenth century have been exhausted and have become derelict, and international movements of labour and capital have practically ceased. Moreover, the great inventions of last century all called for considerable amounts of capital. The railways, steam navigation and the electric telegraph are but a few examples of inventions that created a large demand in the capital market. In modern times many inventions, for example, wireless telegraphy, have been capital-saving. Professor Hicks,[1] while warning the reader that the trend of innovation in the future is very difficult to forecast, continues: "Nevertheless, one cannot repress the thought that perhaps the whole industrial revolution of the last two hundred years has been nothing else but a vast secular boom, largely induced by the unparalleled rise in population." He adds: "If this is so, it would help to explain why, as the wisest hold, it has been such a disappointing episode in human history."

To people of my generation balancing the budget annually has always appeared to be an unquestionable test of sound economic policy. The condition of the public finances of the world during the last war and much of the deficit financing of the recovery programmes of recent years have always appeared reprehensible, to be justified, if at all, by inescapable necessity. The reason for this state of mind is probably that, in the years of our childhood and youth when our views were being almost unconsciously moulded by our environment, the private demand for capital was always fully able to absorb the available supply. Government borrowing was regarded with disfavour as something which would increase taxation to pay the interest on the debt and would increase the rate of interest against private borrowers. It may be, however, that the circumstances of those years were exceptional rather than

---

[1] *Value and Capital*, p. 302

normal, and that public expenditure may have been necessary in the past and may be necessary in the future to maintain economic progress. Professor Hansen points out in his excellent book *Full Recovery or Stagnation* that, in the years between the Revolution of 1688 and the end of the Napoleonic war, the British budget was balanced only in the rare intervals between wars, and deficits were the rule rather than the exception. The vast government borrowings of those years helped the evolution of credit instruments and banking institutions and stimulated many of those changes in the technique of production which are subsumed under the general term "the industrial revolution." For the hundred years between the Napoleonic and the four-year war British government borrowing was discontinued, and it is reasonable to argue that progress and investment would have tended to decline, had it not been that the period witnessed a quite exceptional growth of population, exploration and invention. "Private investment," Professor Hansen states, "filled (though not adequately in all decades) the gap left by the cessation of government loan expenditures. This century of expansion was clearly, however, a unique episode in human history." In many countries public debt, the result of public investment, grew continuously, sometimes for the production of income-earning assets and sometimes for purposes which, though politically justifiable, resulted in no direct revenue-yielding capital. Is it possible, one is tempted to ask, that the age when individualism could rely on private investment to maintain progress is a thing of the past?

There is a certain danger in discussions on this subject that sufficient distinction is not made between conditions in countries at different stages of economic development. The greater part of the literature on the subject with which Irish students are familiar comes from English and American writers who are concerned primarily with the conditions in very mature economies where the exploitation of investment opportunities and the habit of saving on a large scale can be regarded as normal. Even in respect of countries such as these it is unsafe to predict that quite unforeseen inventions will not create new opportunities for private investment in the future. A singularly good example of the folly of prophesying in economics is afforded by Sidgwick's prophecy on this very point, namely, the coming tendency for the demand for capital to fail "because war has become a thing of the past." Moreover, there is room for considerable investment in improving the quality of the populations of even the most developed countries. For reasons which are well understood by economists but into which it is not necessary to enter, investment in nurture and education tends to fall far short of the optimum, and there is a possibility of investing capital productively on these objects It is one of the charges against the great capitalist countries that they have neglected the welfare of the working population. In recent times much has been done to dispel that accusation, but much remains to be done. The fact that the nurture and education of children is one form of the investment of national savings has not been generally seen in the correct perspective, possibly because the investment takes the form mainly of the consumption of "consumer's goods."

If the world be regarded as a whole, it is absurd to suggest that saving has outgrown the possibility of profitable investment since large areas are undeveloped and are clamant for capital for all sorts of purposes. The material destruction caused by the war will create a vast demand for capital for reconstruction and replacement. The real problem is how to break down the impediments on international lending and how to restore an atmosphere of confidence in international dealings. Such a development would not only open up endless opportunities for profitable investment, but would also reduce the liquidity-preference of savers, whose desire to maintain liquidity is largely the result of the unsettled times. Peace is the first and indispensable condition for the exploitation of the less developed countries and for the international capital movements that would take place in consequence. The profitability of such investment will depend upon the economic policies pursued by the wealthier nations which provide the demand for the products of the colonial world. The less mature countries are unable by their own monetary and banking policy, however enlightened, to add a cubit to their stature, and their prosperity ebbs and flows with fluctuations in the demand for their products in the great industrial countries. These larger and wealthier nations thus possess a grave responsibility for maintaining prosperity in the world as a whole, and the problems connected with their management both of cyclical depressions and of a tendency towards chronic underemployment are of vital interest to all mankind. Mr. Colin Clark estimates that the four great industrial countries, in the years before the present war, enjoyed not far short of half of the world's entire income of goods and services and that they "predominate in the world's economies."[1] The question arises whether prosperity and full employment can be maintained in these mature communities in peace time by means of private investment.

The experience of the United States, one of the most mature economies and the greatest creditor nation, suggests that private investment, left to itself, has not been able to make use of current savings. It is generally agreed that the "pump-priming" effects of public expenditure have not been realized, and that the cessation of public investment would produce, even now, a deep depression. While this may be explained partly by the private investor's lack of confidence in the government's attitude towards business, it partly reflects the paucity of promising investment opportunities of the type that attracted the nineteenth-century entrepreneur. Demand has been shifting towards better housing, improved communications, and other public utilities and services which are essentially suitable for public investment. The tendency for the tertiary industries to grow more rapidly than the primary and secondary exerts a similar influence. At the same time a change has taken place in the nature of saving. Much saving in recent times has been done by insurance companies and public institutions, which are neither well-advised nor disposed to take risks. The very fact that more saving is being done by or on behalf of the poor reduces the supply of capital available for untried inventions. Capital is becoming less venturesome and more timid, and investment is being financed more and more by fixed interest securities. These changes in investment needs and saving habits will result in the sphere of public investment becoming of wider importance in peace as well as in war. The capital market is not working as well as it did, and it is the duty of the government to undertake some of the functions of an investment banker. Owing to the operation of the well-known principle of the "multiplier" every act of investment generates a chain of activity far greater than the initial expenditure. A relatively moderate amount of public investment may, provided its good effects are not neutralized by in-

[1] *Conditions of Economic Progress*, p. 57.

consistent policy in other directions, help to keep economic activity at a high level, and may lead to considerable private investment in the consumption goods trades and in many capital goods industries. There is plenty of room for public and private investment to proceed side by side. It is desirable, however, that the public investment sector should be reduced to a minimum compared with the private, for two reasons. In the first place, all the capital created by such investment will probably not prove directly remunerative, and, in so far as it fails to pay for its own redemption, such investment will add to the dead-weight public debt. In the second place, the larger the share of total activity that is conducted by private enterprise the larger will be the area in which the profit and loss calculation will enable a rational allocation to be made of the factors of production. This second consideration is very important as it gives rise to one of the great economic problems of socialism.

The pricing system in a freely working individualist economy secures that the wishes of consumers are obeyed by producers and that the most remunerative use is made of the available productive resources. The characteristics of such a system are consumers' sovereignty and the rational allocation of the factors of production. One of the most debated questions of recent years is the extent to which a socialist economy could secure these advantages. Of course it must be assumed that they are advantages. It cannot be gainsaid that the making of such an assumption involves a value-judgment such as the modern economist is taught to regard with abhorrence. If it be denied, on the one hand, that consumers should be regarded as the best judges of what should be produced, or, on the other hand, that resources should be combined so as to minimize costs of production, the whole discussion is idle and pointless. The majority of socialists who have taken part in the controversy admit these two criteria as tests by which the success of an economic system can be measured, and argue, not only that they would be attained as fully under socialism as under capitalism, but that they would be even more perfectly realised. We shall, therefore, assume that they are agreed upon for the purpose of our present discussion.

Nobody is so foolish as to pretend that any existing economic system is worthy of unqualified approval. As will be explained later, capitalism develops certain evils which admittedly need to be corrected. Subject, however, to all that must be said regarding inequality of distribution, the ignorance of consumers regarding what is good for them, the distortion of demand by misleading advertisements and the failure of the pricing mechanism to produce some of the most essential collective needs of society, the present system ensures at least in a rough way that production is guided into those directions that consumers desire. In any system of planned economy the sovereignty of the consumer would necessarily be reduced. Productive decisions would be undertaken by the authoritative decree of some public authority and consumers would be faced with an array of products, between which they would have a a certain range, possibly quite a wide range, of choice. The existence of such a range of choice would not ensure anything approaching the power of consumers in a capitalist system, the essence of which is that all productive decisions are made with the object of correctly forecasting the demand of the market. Numerous suggestions have been made for machinery whereby the desires of consumers could be made known to the planning authorities before the productive decisions are taken, but none of them appears to possess the same efficiency as the free pricing system whereby—again subject to all the reservations that have to be made regarding monopoly, restrictionism and the deflection of demand—producers produce what consumers require or perish. A planned economy would no doubt possess many advantages. Much of the wasteful, ostentatious and socially noxious consumption of modern times might be avoided, but, judged by the criterion of consumers' choice, it must be adjudged relatively unsuccessful. Actually the regard paid to consumers' liberty of choice by socialist writers is largely lip service. Most sincere socialists believe that public officials are better judges of what consumers should want than are consumers themselves. This is of course the old problem of the antithesis between needs and wants which has very deep roots in all proposals for economic reform. The true socialist always desires to make other people consume what he thinks is " good for them." Judged by the first criterion of a successful economy, the fulfilment of the wishes of consumers, socialism compares unfavourable with capitalism. The second criterion, the most remunerative use of productive resources, remains to be discussed.

The question whether a rational allocation of resources is possible in a socialist economy is a problem which the earlier socialists, bemused by Marx's labour theory of value and ignorant or contemptuous of the modern method of marginal analysis, never attempted to solve. The problem of a rational allocation of resources is one of valuation, that is of ascertaining the relative economic significance of the primary factors of production. It must be possible to evaluate these factors if calculations are to be made in regard to their employment. Economic calculation is indispensable if costs are to be minimized in combining the factors of production, and if the costs of production are to be covered by the prices at which products are sold. Without economic calculation there must be a great misdirection of resources and consequent waste. The virtue of a capitalist economy is that it provides a criterion for a rational allocation of resources. As a result of competition for profit, a capitalist economy tends to minimize costs, and to make the selling price of the product equal to its marginal cost of production. Any economy that claims to be superior must show that there is a reasonable presumption that it do these two things ; otherwise it is open to the charge of failing to economize its resources.

Professor von Mises has caused the greatest confusion among socialists by an attack on socialism in general along these lines. A rational allocation of resources, he alleges, is impossible in a socialist state on the ground that public ownership of the instruments of production does away with the market for capital goods. It follows that, where there is no market for capital goods, there can be no prices for them, and without prices, which indicate the relative importance of the factors of production, economic calculation is impossible. A socialist economy would degenerate into an affair of wild guesses and random decisions made by irresponsible bureaucrats. The socialist reply to this attack was anticipated by Barone who, in an essay published in 1908, outlined a system of accounting prices for a socialist economy which would be as significant as the market prices of a competitive economy. This line has been followed in recent times by, among others, Mr. Oskar Lange. who argues that the absence of a market does not prevent the setting up of accounting prices or provisional valuations for the purpose of allocating resources. Von Mises replies that, in the absence of a market for capital goods, these accounting prices would be quite arbitrary and without economic significance.

More recently a second line of attack on the socialist position has been adopted by Professors von Hayek and Robbins, who argue that even allowing that a rational allocation of resources is theoretically possible in a socialist state, it could not be worked out in practice. Assuming the existence of an actual planning board charged with the duty of making productive decisions, such a board, in order to determine the prices which goods would bear, would have to have complete lists of the different quantities of all commodities which would be bought at any possible combination of prices of the different commodities that might be available. The board would have to solve thousands, even millions of calculations—simultaneous equations—before economic decisions could be taken, and, with any means known at present, these calculations would not be solved except after many years, during which all the data would have completely changed. The impossibility of making such calculations was pointed out many years ago by Pareto, and the proposal for a socialist system based on these foundations has recently been described by Professor von Hayek as "a chapter in the economics of socialism that may be regarded as closed."[1]

The third stage in the discussion was reached when certain proposals were advanced for what may be described as a competitive socialism. This new type of socialism would rely to some extent on the competitive mechanism for the determination of prices. The suggestion is that prices, instead of being determined directly in the market, should be fixed by a central authority, and that the state of the market for a particular commodity, that is the relation of demand to supply, would merely serve as an indicator whether the prescribed prices ought to be raised or lowered. As Professor von Hayek points out in an article wherein he examines these proposals,[2] the question is not whether a socialist economic system should be guided by the same formal laws as a capitalist system, but whether it can be so guided in the absence of a competitive market. The desire to prove this possibility is a curious commentary on the socialists' dislike of competition. Actually the difficulties that confront such proposals are considerable. The rapid adjustment of prices to changing data of demand and supply, the policy in regard to new and untried inventions, the method of pricing the large number of commodities that are normally made "to order," the method of discriminating between efficient and inefficient producers, and the effects of the exclusion of competition by lowering prices are some of the matters which have not been satisfactorily explained. The need of a large number of arbitrary decisions is admitted by the proposers of these schemes. whose critics assert that the area of arbitrariness would almost inevitably cover the whole field. If this be the case, the proposal is only superficially different from that of complete centralized planning; whereas, if price formation is to be influenced by conditions of demand and supply in the market, it is difficult to see wherein the advantage lies over a capitalist system. The question arises why, if the economic processes of socialism are to be identical with those of capitalism, any change from the existing system is desirable.[3]

---

[1] *Economica*, May, 1940, p. 125.

[2] *Ibid*

[3] Since this paper was written there has appeared in the *Economic Journal* (vol 50, p 270) a review of a book, written unfortunately in Norwegian, in which the problems of economic calculation under socialism are exhaustively discussed The author's argument is ably summarized by Mr. H. D. Dickinson in the review.

The reply to this question usually takes the form of pointing to the defects of capitalism in practice and stating that these defects could be avoided in a socialist system. Before giving a few examples of the arguments of this kind that are met with, two observations must be made. In the first place, no defender of capitalist institutions suggests that they work perfectly in practice, and, as will be demonstrated later, a great deal of the literature of modern orthodox economics is concerned with the discussion of the evils which are found in individualist economies. In the second place, much of this criticism is based on value-judgments that assume a great deal that requires to be proved, if indeed, it be capable of proof. To say that resources would be allocated "better" under one system than another is to pronounce judgment on ultimate values which lie far outside the scope of the economist and call for the services of the moralist or the politician. The only value-judgments that can be admitted are those on which the whole discussion is based, namely, that consumers' sovereignty and the rational allocation of productive resources are desirable objectives. If these assumptions are not admitted the whole argument becomes groundless, but that is no justification for the tacit introduction of other value-judgments which make no claim to unanimous acceptance.

It is claimed by socialists that the system of trial and error possible in a socialist economy would be superior to that in a capitalist economy. Divergences between private and social utility and between private and social cost could be taken into account by the planning authority, and output could be regulated so as to maximise the advantages derived from external economies of production. These are, however, matters that are neglected in no book dealing with capitalist economics, where the subject of deviations between private and public welfare and the advantages of the public operation of many industries and services are constantly stressed. Moreover, it must be remembered that, even on the assumption that the number of errors made by producers were reduced, the consequences of those errors that remained would be borne not by those who make them but by the community, either as consumers or as taxpayers. The great virtue of free economic institutions is that the risks of production are undertaken by voluntary risk-takers who are prepared to shoulder the consequences of their own mistakes. This is the essential function of entrepreneurship the performance of which in a socialist economy has never been satisfactorily explained. Ingenious schemes have been suggested for varying the remuneration of socialist managers according to the success or failure of their plans; but it is difficult to understand how the true function of risk-taking can be performed when all the capital used in production is publicly owned.

Closely connected with the claim that errors would be reduced in a socialist economy is the further claim that the instability of production would also be reduced. In so far as the trade cycle is the result of cumulative errors of private investors influenced by successive moods of optimism and pessimism, the abolition of private investment would of course abolish much misdirected activity. In so far, however, as the trade cycle reflects irregularities in investment caused by the imperfect divisibility of capital assets and the durability of such assets or the discontinuous nature of the flow of new inventions, it is difficult to see why fluctuations of activity should be materially reduced. Of course such fluctuations could be reduced if new wants and new productive processes were not to be allowed to appear in the market when they were calculated to disappoint existing expectations. This is simply to say that the arrest of progress would enable economic life to be more stable, a proposition which nobody will deny. However, it is generally admitted by orthodox economists that considerable public investment is a desirable part of policy directed against instability and industrial fluctuations; but there is no reason why individualist institutions need be abandoned in order that the benefits of such investment should be realized

Another respect in which socialism would, it is claimed, improve upon the allocation of resources in a free economic system is that it would secure a more equal distribution of income. In a society in which incomes are widely unequal, demand prices, which represent what consumers are willing and able to pay, do not reflect the relative urgency of the needs of different persons, with the result that the luxuries of the rich are produced while the poor are doomed to forego many necessaries. This is a commonplace of modern economic theory and occupies a leading place in every discussion on the relation between the allocation of resources and the maximization of welfare. It is a matter which will be referred to again. All that it is necessary to say at this point is that to decide on any one method of distributing the national income in preference to another is to make a value-judgment in which a great deal is assumed without proof. If it be assumed that an equal distribution is the most desirable, the attainment of such equality may entail adverse consequences in the field of production. Finally, if equality be accepted as the ideal, it may be possible of attainment, to a large extent, within the framework of capitalist institutions.

The apologists of socialism also point out, rightly as we have already seen, that capitalism is not doing its work as well to-day as it did in the past. This is the result partly of the decline of investment opportunities, and partly of the growth of restrictionist and monopolist practices. Competition is excluded from a large part of the economic field and innovations and inventions are resisted with the object of maintaining the value of existing capital. These tendencies are traced to two main causes, the growth of the size of modern productive units and the divorce between the management and the ownership of capital. There is no questioning the existence of these tendencies. It is admitted generally that many of the best features of capitalism depend upon active competition and that the growth of monopoly and imperfect competition are problems which every capitalist system has to meet. No doubt there are many cases, especially public utilities, in which competition would be wasteful, and, if monopolist production is desirable, it may be that a public authority may prove a better monopolist than a private company. In so far as the resistance to innovation with the object of maintaining existing capital values is a danger, there seems to be a greater possibility of the resistance in the case of publicly owned than privately owned enterprises. Publicly owned concerns tend to be conducted on a very large scale, and the amount of capital written down by the introduction of a successful invention is correspondingly great, while the capital has probably been raised in the form of loans bearing a fixed rate of interest, which, in the event of the investment becoming obsolete, becomes dead-weight debt. Public authorities also possess powers of excluding competition which are not possessed by the most powerful private monopolist.

The advocates of socialism in fact allege that such a system would possess all the virtues of capitalism together with peculiar virtues of its own. The elasticity and adjustment secured by the pricing system could still be enjoyed, while errors would be reduced, stability increased, distribution improved and restrictionism defeated. It is this claim which the critics of socialism contest. They do not for a moment suggest that socialism is impossible; indeed it is being witnessed in practice in many countries to-day. What they do allege is that a planned economy would not possess the mechanism for effecting the changes necessary to give effect to changes in the consumer's demands and to inventions and innovations. Planning for stable conditions is easy; but planning in a dynamic economy involves great difficulties. In spite of the admitted defects which they have developed in actual working and of the meddlesome interferences and restraints to which they have been subjected, free economic systems have succeeded in permitting progress to take place in the past and would continue to do so if they were given any sort of chance. In making comparisons between rival systems, they must be compared at their best. It is not fair to compare capitalism in practice with socialism on paper. If the normal type of economic system were socialist and if such a system had had sufficient time to develop the numerous defects and maladjustments which every system develops when it is in practical operation, reformers could paint a wonderful picture of the attractions of an economic system based on the free choices of producers and consumers. It could be shown how, in such a system, resources would be allocated in a manner that total satisfaction would be maximised. The theoretical arguments in favour of a competitive capitalist system would be almost unanswerable. But we who have experienced such systems in practice know that there is a considerable difference between the blue prints and the actual working model. It is not unreasonable to believe that similar deviations between the ideal and the real would appear in the working of socialist institutions. The record of government interference in economic life in the past does not furnish ground for much optimism regarding the result of its extension. It may be that governments could surmount the technical difficulties of increased production very efficiently, but that is not the issue in question, which is whether a system in which the place of the price mechanism is taken by bureaucratic decisions can succeed in allocating the available resources so as to maximise the satisfaction of the community. On this, the vital problem of economizing, the socialist claim has not yet been proved.

Are economists, it may be asked, so enamoured of an individualist system that they regard alternative systems with disapproval? If so, how does this fit in with their claim to be neutral between different ends of economic policy and different types of economic institutions? The accusation has recently been made by more than one socialist author that all the professed indifference of economists regarding such matters really cloaks a biased prejudice for an individualist system. Here we must draw a distinction between assuming the institutions of individualism and defending them. It is only natural that economists should assume for the purpose of their discussion the type of society with which they are in fact acquainted. As the science of economics grew up mainly in a capitalist environment, it is inevitable that the institutions of capitalism should have been almost taken for granted in economic literature. To assume the existence of certain institutions is by no means the same thing as to approve of them. It would have been quite possible for economists to have studied the working of the capitalistic system in order to show how badly it works with the object of having it abolished. This is in fact what was done by Marx and the Fabian socialists, who were keen students of classical economic theory. Contemporary economists are accused by their critics of studying it with the intention of showing how well it works in comparison with possible alternative systems, and thus to have constituted themselves defenders of the existing order. This charge is made by, amongst others, Mrs. Wootton[1] who says : " The economists have to face the fact that they are widely suspected of being somehow in league with the powers of darkness, or at least of not being so disinterested as they should be. All their elaborate theories are, it is said, at bottom just a system of apologetics for the particular economic system under which we of Western Europe and North America are now living. Under pretence of impartial diagnosis and scientific study they are insidiously advocating biased policies . . . The suggestion that the economists are openly or tacitly committed to the support of the market economy or capitalist system as we know it is just a way of saying that their economic theory identifies market equilibrium with the ideal equilibrium of the economic norm ; that they accept the method of measuring alternative ends which the market offers, and accordingly regard the resulting distribution of resources in actual markets as a rational distribution . . . Opposition to planning rests upon the belief that it is definitely retrogressive, that it frankly substitutes the irrational for the rational, darkness for light."

Before attempting to discuss how far these accusations are well-founded, it is only fair to draw attention to two other passages in Mrs. Wootton's book. In one[2] she states that " generally the identification of market equilibrium with economic optimum is only made subject to far reaching reservations, but there is no agreement amongst economists as to just what these reservations should be, and the processes of the market offer such a beautiful image of perpetual movement towards an apparent optimum that there is real danger of these reservations being forgotten in practice, and the illusory passing off as the substantial optimum." By the admission that the economists proclaim their satisfaction with the market mechanism only " with far reaching reservations " the charge of propagandist justification is immediately refuted. The statement that there is " no agreement " regarding the nature of the reservations is a gross exaggeration, and the existence of disagreement on some matters is what one must expect in a developing science. To complain that the reservations tend to be forgotten is only to state, what everybody knows, that every writer on economics, or indeed on any other science, is not always perfectly consistent. The second passage[3] is as follows : " Uncompromizing identification of market equilibrium and economic optimum is, happily, not common among contemporary economists *when they are being careful to express themselves with due precision*. Those who are understood (or misunderstood) to hold these views generally turn out to have some safeguards tucked away somewhere. Their approbation of the market is conditional, not absolute ; and any fair (not to say useful) criticism of the normative significance that economists really mean to ascribe to the market must take these into account." Those passages water down the charge of unqualified and unquestioning satisfaction with the working of the mechanism of a free market so seriously that there does not seem much of the original indictment left standing. It may be well nevertheless to discuss the degree to which economists do approve of individualist institutions.

---

[1] *Lament for Economics*, pp. 33, 145, 159.
[2] p. 181.
[3] p. 183.

Economic efficiency consists in creating the maximum surplus of satisfaction over effort, or, to use an alternative terminology, of utility over disutility. The criterion for judging an economic system is the degree to which it attains this result. Economic efficiency is not to be measured in physical quantities of goods produced, but in the satisfaction of consumers relative to the costs of producers. In a monetary economy, money costs are prima facie those to be minimized, but attention is paid at a later stage to the relationship between money and real costs. The claim made for capitalism is that it is economically efficient in this sense. Consumers allocate their incomes so as to produce equi-marginal returns in every line of expenditure and between the last unit spent and the last unit saved. Producers, under the stimulus of competition, combine the factors of production in such proportions and on such a scale as to reduce costs to a minimum. Consumers' demands regulate what is produced by means of the mechanism of pricing in the market, and consumers reap the fruits of progress on account of the constant tendency of prices to be lowered as costs of production are reduced. The competition among entrepreneurs for the factors of production ensures that they will be employed in the most productive uses. The result of free choice in the allocation of resources by consumers on the one hand and by producers on the other is that resources will be allocated in a manner calculated to maximise the surplus of satisfaction over effort and thus to give the economic optimum result. This is roughly the justification of a free economic system.

It is important that the limitations of the economist's claim in favour of such a system should be understood. All that is alleged is that, in the circumstances of any given situation, the process of choosing between alternative arrangements of one's resources will tend to bring about the optimum arrangement. It is never denied that, in different circumstances, a higher maximum could be achieved. The prisoner in his cell will try to make the best of the very poor situation in which he finds himself. If he were restored to freedom, he would still continue to make the best of his new situation; the compass of his choices would now be much greater than it was before; but the type of calculation would be precisely similar. The beggar who, given twopence, attempts to apportion it between bread, tea and a cigarette is making the very same type of calculation as the millionaire deciding between spending the summer in his country mansion or on his yacht. The amount of felicity attained in the two cases is probably different (we cannot say certainly because modern economics refuses to compare the subjective states of different persons); but in each case the maximum position possible in the circumstances is the attempted aim. The circumstances in which each person economizes are largely the result of institutional factors capable of being altered by public interference, and, as we shall see, it is admittedly the duty of the State to improve the institutional environment so that each person will be economizing in a wide rather than a narrow field. To use a metaphor, every person will climb to the summit of the hill on which he finds himself, but some hills are much higher than others. If, by means of public interference, some of the lower hills could be raised the average elevation of the climbers would be increased provided that, in the process, the higher hills were not correspondingly reduced. Each individual person can be trusted to attain to a maximum height by his own exertions; but interference by the State may be necessary if the maximum maximorum is to be attained. Every treatise on economic theory devotes a great deal of attention to the imperfections which upset the perfect working of the ideal capitalist economic system. The need for considerable interference by the State to ensure the conditions of its successful operation is admitted by all economists, although it is true that differences of opinion are to be found regarding the degree and the direction of such interference.

It may be of interest to refer to three authors, two English and one American, who are unquestionably among the ranks of the orthodox, to illustrate how far short of satisfaction is their attitude towards the workings of capitalism in practice. Professor Pigou's *Economics of Welfare* sets forth the conditions necessary for individualism to produce its best results. Men must be assumed to know where their enlightened self-interest lies, and must be in a position to pursue whatever course their enlightened self-interest dictates. These conditions are frequently not realised ; the former is defeated by ignorance and the latter by immobility. But, even assuming perfect knowledge and perfect mobility, it does not follow that the pursuit by each person of his own self-interest will maximise the welfare of the community. In other words, there may be a conflict of interest between the individual and the community. Such a conflict is always to be prima facie assumed when one of the parties to a contract is a monopolist. Even in conditions of competition such conflicts of interest may arise : many socially desirable goods and services may not be produced under the free play of private enterprise, the interests of the future may be neglected through insufficient foresight, and many social costs may elude the calculations of the pricing mechanism. The distribution of the national income may be such as to favour inequality of opportunity and consequent immobility ; divergencies constantly arise between money, real and social costs of production. The tendency towards cumulative error may produce an unstable production marked by slumps and depressions. To counter these manifold evils by way of prevention or cure extensive public action is not only legitimate but imperative.

The second English author whom we shall quote is Mr. J. E. Meade, whose *Economic Analysis and Policy* contains a discussion on the evils of capitalism on similar lines. Mr. Meade points out that, in order that an economic system should succeed in providing the highest possible standard of living for a population, four criteria must be obeyed. First, there must be no involuntary unemployment of the factors of production ; second, the available economic resources must produce in the greatest possible quantities those products which consumers most desire ; third, the national income must be distributed so as to give the maximum satisfaction ; and fourth, the supply of the factors of production must be forthcoming in the optimum amounts. He has little difficulty in demonstrating that the four aims are not fully attained in conditions of *laissez-faire*. Even if perfect competition prevails certain evils arise. For example, many essential public utilities will not be provided under the pricing system, ignorance will prevent the optimum distribution of resources, deviations between private and public costs of production will arise, and income will tend to be distributed unequally. But perfect competition will be the exception rather than the rule. When competition becomes imperfect new evils will be experienced. Prices will be higher than marginal costs of production, the factors of production will be paid less than the value of their marginal products, discrimination in prices will be practised, and waste, such as that caused by competitive advertising and cross transport, will be liable to occur.

All these evils, whether of perfect or imperfect competition, are capable of being remedied by public interference .

Professor Knight, a very distinguished American economist, explains in his book, *The Ethics of Capitalism,* why the assumptions of the perfect functioning of an individualist economy are not realized in practice. Many contracts are entered into under a certain amount of duress caused by unequal bargaining power, ignorance or fraud. Much consumption is ethically, biologically or socially injurious. Demand is irrational, impulsive and imitative. This of course raised the never-ending controversy about the difference between needs and wants. Imperfect foresight is responsible for a considerable amount of mis-directed investment, which is intensified by the immobility of frozen resources. Cumulative errors of investment give rise to cyclical fluctuations. Economic life is conducted with money and banking systems which are far from perfect and sometimes positively injurious. Many contracts are productive of injury to third parties or are socially noxious, and many of the real costs incurred by the contracting parties themselves are not reflected in the monetary terms in which the contracts are expressed. The growing demand for security is tending to render the system rigid and inelastic. Security for the worker is provided by the social services, which, excellent as they may be for other reasons, reduce the mobility of labour. Security for the investor is sought by the development of monopoly and restrictionism and by the substitution of bonds for equity shares. The method of regulating distribution by relating incomes to contributions to production, while possibly necessary in a system where effort is undertaken in the hope of a reward, leads to inequality, which in its turn is the cause of inequality of opportunity and all its evil consequences. These are some of the defects which Professor Knight indicates as likely to mar capitalism in practice. Yet he prefers capitalism on economic grounds to any alternative system. This short summary of the views of three leading orthodox economists should be sufficient to dispel the erroneous notion that those who favour free economic institutions live in a fool's paradise of blind complacence.

It is always necessary to distinguish between the tendency of bargainers in a capitalist system to attain a position of maximum satisfaction and the tendency for the maximum maximorum of satisfaction for society to be attained. Consumers and producers will always strive to allocate whatever resources they possess so as to produce the best possible result but the amount and the distribution of the resources which they possess can be largely influenced by legislation. Without begging any questions, it may, for example, be admitted that a greater degree of equality of distribution is preferable to a less, and that, subject to all that must be borne in mind about possible repercussions on production, legislation designed to reduce inequality will probably increase the satisfaction of the community. The successful allocation of resources is impossible unless the resources are mobile. Legislation to reduce immobility of labour and of capital must be received with approval. Conflicts of interest between producers and consumers must be assumed when monopoly is present. Legislation to preserve competition, or, if monopoly is inevitable, to prevent it giving rise to abuse, has a prima facie justification. The State must incessantly strive to secure that the conditions necessary for the successful working of individualism can be realised in practice. At the same time, as has already been stated, the sphere of public investment is widening in the modern world, and there is room for public and private activity side by side. The efficiency of activity in the public sector will be increased by the existence of a free market for the factors of production in the private sector, in which the pricing mechanism is performing its valuable work. The objections to socialist planning of the whole economic system do not apply to the operation of an island of public investment in a sea of private enterprise.

Subject to the numerous reservations and qualifications which have been mentioned, economists do believe that a free economic system succeeds better than alternative systems in allocating scarce resources in such a manner that consumers' preferences are satisfied at the minimum cost. This qualified expression of approval of a certain type of institution carried no ethical implications. All that the economist argues is that the system succeeds in producing the results which it is trying to produce. Whether these results are right or wrong, judged by ethical standards, is outside his sphere. There are no doubt reasons for approval and for disapproval of the capitalist system on ethical grounds. Certain virtues and vices may tend to flourish in a system marked by competition and the keen pursuit of self-interest. The many wants which consumers desire to satisfy may be in part derived from the method by which their incomes are earned. These are matters on which the economist in his professional capacity refuses to pass judgment. Whatever opinions he may have about them he will take from the ethical authority which he obeys. When the behaviour of consumers is being studied their demands are taken as given. Good and bad desires give rise to an equally effective demand Similarly the behaviour of producers is taken as given. Sweated labour, usurious rates of interest and exploitation of the poor by monopolists must be regarded as part of the data of price formation, however opprobious they may be. The system of distribution resulting from free bargaining in a competitive market does not necessarily conform with the canons of distributive justice. Distribution under capitalism depends upon the correlation of effort and reward. This method is not necessary ethically justifiable. Regard must be had to needs. The feeble members of society may be entitled to a larger distributive share than they are able to earn. Even if the correlation of effort and reward be admitted as the criterion of just distribution, the economic system fails to provide any method of measuring real, as distinguished from money costs. The real costs of the contributions to production made by the owners of the different factors of production cannot be reduced to any common measure. The imputation of productivity to the factors of production by the marginal analysis does not justify the retention of the incomes so produced by the persons who happen to own the factors concerned. The explanation of rent and interest does not justify the income of the landowner or the rentier. For all these reasons it is impossible to deduce any ethical implications from the successful allocation of resources in an individualist economic system.

Economists are not indifferent to ethical considerations. The economic man, who is the object of their study, is a real man and not an abstraction. Every man acts on some moral standard, but moral standards differ from time to time and from place to place. The moral standard of modern Rome is not that of pagan Rome ; the standard of Christendom is not that of Islam. The economist assumes that the economic man will normally act in accordance with his ethical philosophy and creed. Moreover, it is the duty of the State to provide that justice will prevail between its citizens, and the economist is entitled to assume that the institutional framework within which the economic man lives is designed to prevent unjust and, in so far as it is possible, immoral behaviour. The study of distribution based on an exposition of the theory of marginal productivity satisfactorily explains the mechanism of the pricing of the factors of production. The actual system of distribution which such a mechanism brings about depends largely on the institutional environment, which, in its turn, depends largely on current judgments of what is right and wrong. In a society where slavery was recognised the remuneration of labour would be different from what it is in a system where labourers are free to bargain about their wages and, if necessary, withhold their labour. The degree of inequality of income, wealth and opportunity, the extent to which the means of production are privately owned, and the freedom of groups to combine are but a few samples of the type of institutional data which have a direct bearing upon distribution. In most civilized societies to-day, need is recognized as being a valid title to some share in the national income. Poor relief, unemployment assistance, minimum wage laws and family allowances are all based on the claims of need rather than on the correlation of effort and reward. In every community at the present day the primary distribution of income is influenced by innumerable interferences by the State designed in the interests of justice, and a secondary distribution, usually effected by public taxation and expenditure, is frequently adopted with the object, among other aims, of attaining distributive justice. It is evident that the mere process of economizing resources, whatever justification it may possess on other grounds, cannot be relied upon, by itself, to produce results that are morally good or socially just. The economic optimum makes no claim to ethical approbation.

This rigorous separation of the economic and ethical aspects of valuation is a modern development in economic theory. Prices in primitive communities are usually fixed on a basis of justice determined by custom or tradition. In the Middle Ages, prices were fixed so as to conform to the current canons of justice, and the just price was an accepted feature of mediaeval economic life. Mediaeval writers never suggested that just prices would be arrived at by open competition in a free market, but laid down certain principles on which they should be fixed. One of these principles was that the amount of labour used in making an article should be taken into account in reckoning the price that should be charged for it. As Professor Cannan points out in his interesting discussion on this subject,[1] it was an easy transition from justifying prices by the amount of labour employed to stating that the amount of labour employed was what caused the price to be what it was. "From this," he continues, "arises the crude semi-ethical, semi-economic theory that the value of things is properly or 'really in the long run' determined by the quantity of labour required to produced them; and most of the earlier economists' thought on the subject of value was directed either towards modifying this doctrine so as to make it more plausible or towards explaining why prices fluctuated above and below this proper or permanent price." By the time of Adam Smith the distinction had come to be drawn between natural or intrinsic value in some way related to costs of production and market value determined by conditions of supply and demand. Gradually the pure labour-cost theory gave way to a cost of production theory in which quantity

---

[1] *Review of Economic Theory,* pp. 155, *et seqq.*

of labour appears as only one of the determinants of value instead of as the sole determinant. Marshall's loyalty to the classical economists led him to support a theory of value based on money costs or "expenses" of production, which " expenses " were, somewhat obscurely, related to the real efforts and sacrifices incurred by the owners of the factors of production. The addition by Professor Pigou of uncertainty-bearing to the factors remunerated in selling prices constituted, according to Professor Cannan, " the last dying kick of the doctrine that value depends on ' real costs ' in ' efforts and sacrifices.' " The relation between the money costs of the factors of production and the real efforts and sacrifices undertaken by the owners of these factors is so indefinite and immeasurable that the theory of normal value based on money costs or expenses of production has lost every claim to justify prices on ethical grounds. Such a claim was always impossible to establish in the case of naturally scarce commodities or factors of production whose value was obviously unrelated to any efforts or sacrifices on anybody's part. The matter cannot be better summarized than in the words of Professor Cannan :[1] " If anything is both desired and sufficiently limited in quantity, the laws of its value are unaffected by its origin, whether that be ascribable to nature or to men."

The uncompromizing exclusion of ethical considerations from economic valuation tends to be constantly defeated by the normal man's ineradicable sense of right and wrong. Over fifty years ago Sidgwick pointed out that " not a few enthusiastic persons have been led to the conclusion that the whole individualistic organization of industry, whatever its material advantages may be, is open to condemnation as radically demoralizing. . . . Such moral aversion is certainly an important element in the impulses that lead thoughtful persons to embrace some sort of socialism."[2] Mrs. Wootton says that the line between the economic and the ethical grounds for criticizing capitalism is not a hard and fast one, " for it is impossible to judge the efficiency of an economic system unless you know what job that system is supposed to be doing, and that job cannot be defined without introducing ethical considerations."[3] However the economist insists on his indifference to the ends of welfare which an economic system postulates as desirable, questions regarding the justice as well as the economic efficiency of the system cannot be silenced. Sidgwick stated that " the conclusions of economic science have always been supposed to relate ultimately—however qualified and provisional—to actual human beings, and actual human beings will not permanently acquiesce in a social order that common moral opinion condemns as unjust," and, later, that " the prevalent acquiescence in the results of competitive distribution is largely due to the more or less definite conviction that free competition affords the best realization possible of the principle that ' every man should have the opportunity of obtaining a fair return for his labour.' "[4] It may be that current notions about the justice of prices is a more important fact in the whole machinery of price-formation than is admitted by many economists. Cannan pointed out that " inquiry into the justice of prices seems always to precede inquiry into the causes of prices or price-

[1] *Op. cit.*, p. 249.
[2] *Principles of Political Economy*, p. 592.
[3] *Plan or No Plan*, p. 103.
[4] *Op. cit.*, pp. 501-4.

movements. It is so with children and uneducated adults even in our own time and country. The first thought that anyone has about a price is that it is 'wrong.' So long as prices are what he has always been accustomed to, he does not think about them at all."[1] Sidgwick also drew attention to this. "The pre-economic morality, whether of the vulgar or of philosophers, considered services and products as possessing 'intrinsic worth'; and the same conception still governs the moral judgments of the vulgar even in the present stage of economic culture," and he suggested that "the old pre-economic identification of 'customary price' and 'fair price' has not altogether lost its influence even with the disciples of economists."[2] To quote a much more modern authority, Professor Hancock in his brilliant *Survey of British Commonwealth Affairs*,[3] states that, when the bottom fell out of the market for agricultural products during the great depression, farmers appealed from market prices to "just" prices that would have some relation to the labour which they had expended. The labour theory of value dies hard.

There are certain aspects of economic life where no discussion seems possible without the introduction of notions of what is right, or just or fair. Problems of taxation, for example, always give rise to such considerations, and complaints of unfair competition, profiteering and the exploitation of poor borrowers by moneylenders all assume ethical norms to which prices can be related. There is one price in particular which is customarily related to such a norm, namely, the price of labour. As has already been pointed out, the explanation of the distributive process by the mechanism of marginal productivity conveys no ethical implications. Nevertheless, so strongly is the feeling of equity rooted in men, even in economists, that wages have come to be discussed on the basis of their "fairness" among circles whose orthodoxy is above suspicion. Mrs. Robinson, in that most austere of treatises, *The Economics of Imperfect Competition*, confesses that, in the book devoted to the remuneration of labour, "the temptation to stray from the path of analysis and to offer reflections of a moral character is here too strong to be resisted." Hence the question of the fairness of wages has come to occupy a place in every discussion on wages. Sidgwick defined "fair wages" as "market wages as they would be under the condition of the least possible inequality of opportunities."[4] Professor Pigou refines and elaborates this definition as follows: "Provided that the wages paid to workpeople in all places and occupations were equal to the values of the marginal net product of their work, and provided that the distribution of all grades of workpeople among different places and occupations were ideal (in the sense given to that term in Chapter IX), subject to the existence of local differences in the cost of living, there would be established between different peoples' wages a certain relation. That relation I define as fair."[5] There is no necessity to inquire how far this conception of fairness agrees with other conceptions based on purely ethical considerations. The only point is that economists have evolved out of their own price mechanism what Professor Robertson

[1] *Op. cit*, p. 154

[2] *Op. cit.*, pp. 504, 591.

[3] Vol. II, p. 270.

[4] *Op. cit.*, p. 506.

[5] *Economics of Welfare, 3rd Edn.*, p. 549.

describes as "rough canons of economic pseudo-justice."[1] Professor Hicks enlarges a little on this subject. "In order to explain the rigidity of wages, we have to assume in the parties to the wage-bargain some sense of normal prices, hardly distinguished perhaps from 'just' prices. The rigidity of wages extends over precisely that time during which the parties concerned persuade themselves that changes in related prices (whether prices of the products of labour or of the things labour buys) are temporary changes. Once they become convinced that these changes are permanent changes there is a tendency for wages to change; in situations of extreme instability, when they have lost their sense of normal prices, negotiators have recourse to automatic sliding scales and the rigidity of money wages ceases altogether."[2] Professor Hicks suggests elsewhere that it is the presence of "price-rigidities, and, ultimately, beyond price-rigidities, people's sense of normal prices" which arrest the downward course of a depression and prevent the emergence of "a slump without a bottom, in which the instability of capitalism would declare itself in a complete breakdown." The price of labour in particular is liable to be kept rigid by such considerations; a limit will soon be reached in any fall of wages and a point will be arrived at where "wages will stick."[3] One of the characteristic evils of capitalism in its modern form is that the extreme desire for liquidity has led to the creation of an ever-widening range of liquid assets whose market value is liable to unjustifiably wide fluctuations. In such conditions, instability tends to be exaggerated, and might become so great as to render the whole system unworkable if it were not for the presence of compensating values of a high degree of rigidity. Wages may be fixed stars of the economic system.

This discursive discussion of the economic controversies that were being waged in the last years of peace should serve to dismiss two of the charges brought against professional economists by their critics. The charge of failure to agree on the fundamentals of economic theory has been shown to be grossly exaggerated and the charge of complacency with the evils of individualism has been shown to lack foundation. It is generally admitted that capitalism has not been working as well in its modern environment as in the period of expansion in the nineteenth century. Involuntary unemployment is rife, imperfect competition is evident on all sides, distribution is unequal, and depression has become a periodic, if not a chronic, malady. It is questioned whether the mature capitalistic structure is capable of making the adjustments necessary to secure a steady progress. From the standpoint of justice the system is also adversely criticized. Gross inequalities of opportunity and reward offend against the generally accepted canons of equity. The case for the substitution of a different system, however, remains unproven. The comparison of the actual and the ideal is always fraught with danger, and it must not be overlooked that any alternative system would give rise to unsolved problems of its own. The difficulties in connection with the allocation of productive resources in a socialist economy have never been clearly resolved, and the distribution of the national income in such a system would involve the settlement of ethical questions on which there is at present scant agreement. Nothing that can be said about the

---

[1] *Essays in Monetary Theory*, p 141.

[2] *Value and Capital*, p. 270.

[3] *Op. cit.*, p. 298.

achievement of capitalism should blind us to the need for reforming it, and nothing that can be said about the difficulties of socialism will prevent its being adopted if such reform does not take place. Criticism of economic institutions based on the ground of injustice should never be neglected, so strong is the sense of right and wrong in the normal man. If the working of capitalism provokes a widespread feeling of injustice, its fate is sealed, and it is only a matter of time until it is displaced by some other system, which, because it is different, is not necessarily superior.

DISCUSSION ON PROFESSOR G. O'BRIEN'S PAPER.

Professor G. A. Duncan (proposing a vote of thanks) said that in Dr. O'Brien's masterpiece of lucid condensation he wished first to underline seven points of particular value to the layman, and then embroider them a little. These seven points are: the real agreement upon economic fundamentals (an international committee could probably produce an agreed statement of the accepted kernel of doctrine); the verbal nature of many apparent differences (much controversy about the monetary "cure" for depression has arisen from differences in the psychological and institutional assumptions made); the failure of recent "experiments" to add to theoretical knowledge (though they added many ingenious practical devices); the "errors" of practical policy (which, being unnecessary, suggest that economic pessimism may be excessive); the economists' condemnation of capitalistic abuses; the false antithesis between real "capitalism" and paper "socialism" (these unsatisfactory terms might be replaced by "individualism" and "collectivism"); and the relative simplicity of planning for war.

The position of our present age in historical perspective has been distorted by the darkness of the past 30 years; much analysis, even professional, of depression has been vitiated by neglecting the deflationary and risk-increasing effects of arbitrary *interventionisms.* This, coupled with the growth of rigidities (largely non-economic in origin), is one cause of that apparent narrowing of the "range of investment possibilities" which gives rise to the query whether such contraction is *inherent* in developed economies. Perhaps, as Shaw said of Christianity, we do not know whether capitalism would work or not, since in recent years it has not been tried. The stifling of enterprise is a different problem. The nineteenth century "secular boom" is perhaps, like the thirteenth and sixteenth centuries, an hyper-active phase in the development of European economic (not moral) society, now being followed by a temporary set-back, a long-term stagnation or a collapse. The more serious prognoses are supported on four different grounds: the Keynesian model of the process of saving and investment (chronic under-employment is factually established, not as a *property* of the existing situation, but only as an *accident* induced by extra economic events); the psychological and institutional stifling of enterprise (Robertson); the instability induced by higher standards; and the intractability of problems of readjustment in a world of arbitrary interventions and rigid institutions, giving rise to irreconcilable cleavages of interest. This field is not yet properly explored; one may note the inconsistency between the pessimists' remedies, public action being urged by some to stimulate consumption and by others to increase investment.

PROFESSOR SMIDDY, in seconding the vote of thanks, said that there is undoubtedly a corpus of doctrine on which economists agree. But this agreement is mainly confined to the underlying principles of the theory which are helpful in the interpretation of the facts of economic life. But by themselves as they are of an abstract nature, and deal with the tendencies that are always at work but often more or less counteracted in their operation, they are insufficient in themselves in interpreting complex reality. In so far as the economist confines himself to these abstract principles and makes deductions from them his conclusions are hypothetical and positive and therefore non-ethical. His conclusions have got to be tested by facts and modified accordingly.

The economist cannot divest himself of the task of analysing economic conditions at a given time and place and drawing inferences therefrom without reference to their ethical significance. But if he is to confine himself only to *what is* and has not in view *what ought to be* and does not suggest means to realize his end, he will be regarded by the public as "ploughing the sands." In fact, nearly all outstanding economists do analyse economic conditions at a given time and place and suggest remedies.

There are still fundamental differences among economists as to money, bank notes, deposits and other credit instruments. There has been little advance since the days of Richard Cantillon—two hundred years ago—who distinguished clearly between money and bank notes and other credit instruments. John Law maintained that bank notes were money and to create bank notes was to create wealth which is similar to the assertion we often hear to-day that deposits are money and that banks create deposits and money. Money according to him was only a voucher to purchase and hoarding was an offence. In 1730–34 Cantillon showed the difference between money and bank notes and asserted and showed there was no difference between bank notes and deposits. He even pointed out that the transfer of deposits historically preceded the issue of bank notes and that the creation of credit meant the increased velocity of circulation of money and that banks normally need maintain a ratio of cash to deposits of 1 : 10. John Law's writings already contain the ideas which constitute the equipment of currency cranks.

After congratulating Dr. O'Brien on his helpful and important paper, LIEUT.-COL. K. E. EDGEWORTH remarked that the chief impression created in his mind by the paper was that economists appeared to be well satisfied with themselves, and this naturally led to the question as to whether other people were equally satisfied with the economists.

One of the purposes of scientific knowledge is to act as a guide to conduct, and it is a matter of common knowledge that, in the modern world, unemployment exists extensively side by side with unsatisfied wants. The ordinary man believes that it is the function of economic theory to suggest a cure for this undesirable state of affairs.

No doubt some progress has been made and is being made towards the understanding of the causes which are responsible for unemployment, but no satisfactory remedy would appear to be in sight. Almost the only remedy which has been tried or suggested, by orthodox and unorthodox alike, is a programme of public works financed by means of borrowed money, and it is quite clear that this expedient provides only temporary relief. In the long run it aggravates the trouble instead of curing it. In this connection the expression " pump priming " has been particularly mischievous, because the analogy between the pump and the economic machine is entirely false.

Progress is not stimulated by an atmosphere of satisfaction with things as they are. It is to be hoped that Dr. O'Brien and other economists will endeavour to instil into their pupils a sense of profound dissatisfaction with the present state of affairs.

Rev. Father Coyne, S.J., said that more than the Society will owe thanks to Professor O'Brien for his paper because in the coming decades what will be most needed in Ireland will be a sound knowledge of the fundamentals of economic theory and the realities and possibilities of economic practice. Nothing could be more dangerous to a country than ignorance and errors on economic possibilities. Professor O'Brien's paper has contributed very materially, and will contribute if it is widespread, to the advancement of economic education in the country. He (Father Coyne) had not the requisite knowledge to comment on the paper, but Professor O'Brien and he would disagree on one point. He would be inclined to attach much more importance to the ethical aims that economists should set themselves. The economist, in giving them remedies, must know, for instance, what constitutes health, and he must bring in much wider considerations than purely economic ones. Professor O'Brien had gone a long way to show that ethical considerations do enter into economic practice. Public investment of capital goods may be necessary in the near future. It should be explained to them how that could be done with safety. It was a technical question for the experts.

Colonel O'Brien said that the author suggests that neither the complete socialisation of industry and agriculture nor the individualistic system is likely to meet the future conditions satisfactorily, but before this can be usefully discussed it is necessary to have some idea of what future conditions are likely to be ; though it will be neither necessary nor desirable to enter into such flights of fancy as have been indulged in by H. G. Wells or Julian Huxley or indeed even J. B. S. Haldane.

It is an interesting but rather academic point as to whether economics can be called a science : there is no doubt, however, that if economists want to look into the future, they should make full use of the spread of scientific knowledge and of the new discoveries which in the last few years have tended to cause a revolution in educational standards, standards of living, and generally in the life of the mass of the population.

In a couple of generations a great improvement is likely to take place in the health and longevity of the people of the more civilised white races due to improved knowledge as to what are the conditions most favourable to both the physical and intellectual life : at the same time the progressive introduction of labour saving devices is likely to lead to widespread unemployment.

It seems likely that except in the case of what are termed public utilities the individualistic or capitalistic system will continue either openly or disguised by some totalitarian or socialistic euphemism so far as industry is concerned : the socialisation of the agricultural industry is a probability because if ever any industry can be termed a public utility, the production of food can be so called.

Professor Dillon, joining in the vote of thanks, said that economists stood to statesmen in the same relationship as physiologists to physicians. Doctors had no clear idea what the essential prerequisites of health were until the physiologist elucidated them. Doctors were slow to adopt the teaching of the physiologist, and the result was a great deal of avoid-able misery. For instance, if people choose to drink strong tea, if they choose to abandon porridge and milk and substitute other foods or to eat white bread instead of brown, we can tell them what the results will be, but it takes about a generation to convince the doctors and another to convince the public. That is exactly the position of the economists. The only criticism he would make was that he found a lack of the experimental urge. He would say that economists were on the whole inclined to withdraw their feet from the cold water rather than plunge in. Economists had not sufficient inclination to meddle. As a fellow scientist he would like to congratulate Professor O'Brien on his lucid survey.

Lord Glenavy joined in the praise of the paper that Dr. O'Brien had given them. He thought there could have been few papers in the annals of the Society that compared with it for vitality of style and depth of suggestion. Even for those, like himself, for whom parts of the economic argument were perhaps too technical, Dr. O'Brien had created the vision of an international brotherhood of economists devotedly concentrating on the study of cause and effect in human activity. And he had not omitted a vein of lighter relief; who, for instance, at the repeated mention of Mrs. Wootton's opinions could avoid wondering what the home life of Mr. Wootton was like!

Dr. O'Brien seemed concerned with the question whether the work of economists was a moral work. There was undoubtedly a coming, if not an actual conflict in the world between those who wished to build on man as he is and those who cherished conceptions of man as he ought to be. For the past 100 years or more the social structure had evolved from man as he is, from his natural productive impulses. On another occasion, under the auspices of the Society, he (Lord Glenavy) had suggested that it was a misnomer to call the result "the capitalist system," its essence being the absence of a system. Now we were in for an era of systems, of living to patterns which others consider will be good for us. Though the era now passing of man as he is had admittedly great imperfections, he (Lord Glenavy) felt doubtful of a future constructed on man as (according to his neighbour) he ought to be. The economists who, judging from their works, studied man as he is with a detached integrity seemed unquestionably moral; the reformers, on the contrary, immoral so long as, while rigidly determined on their ends, they neglected an adequately humble study of the means.

Mr. O'Donovan agreed with Mr. Colin Clark (in *The Conditions of Economic Progress*) in deploring what he described as "the preoccupation with economic theory," as distinct from factual investigations, in English universities.

On the other hand he thought there were certain trends recently observable which held out more hope for the future. It was noticeable that all contributions in the *Economic Journal* were written with very great care from the point of view of expression. That meant at any rate that men were training themselves in accuracy. Even such a work as the *Economic Journal* could occasionally come down to points which interest the ordinary man.

Professor O'Brien, replying to the vote of thanks, said there would not be time to deal with all the points raised in the discussion. He was very grateful to Professor Duncan for his thoughtful and illuminating speech. They had all learned a great deal from his contribution. He also valued what Professor Smiddy said. As to whether price stabilization was a good or a bad thing was a matter of disagreement. Assuming it to be desirable, there was a difference of opinion as to how it could be carried out. Colonel Edgeworth had raised more points than could be dealt with in reply. A great deal remained to be done in the study of the problems of unemployment, but it was a fair comment that the advice of economists had been frequently frustrated by politicians and others. With regard to Father Coyne, one could not proceed to practical reform without a great deal of theoretical consideration. Modern economists approached things in a different way from those in the past. Curiously enough Professor Dillon used the same metaphor as he himself had used in his paper about doctors and physiologists. Many discoveries of the physiologists are resisted by the conservatism of the medical profession. The economist may be a voice crying in the wilderness, but he has got to go on crying and possibly some time someone will listen to him. Commenting on Mr. O'Donovan's plea for a greater use of statistics in economic discussion, he said that he had Mr. Colin Clark's complaint on this score in mind when compiling the paper. The difficulty was that economic plans were going to be operated in the future and the only available statistics referred to the past. Problems of the future were not necessarily to be solved by the experience of the past.