The Crisis in the Italian Balance of Trade is examined by Prof. Giulio Pieranza in an article which discusses the chief factors leading to the heavy deficit of 1953-54. These are: the world textile crisis; the restrictions placed by other countries on imports from Italy; Italian trade liberalisation measures and the policy of expanding imports in order to facilitate the economic development programme aimed especially at improving conditions in Southern Italy; the shortage of an export policy corresponding to the special measures adopted by other countries in favour of their exporters.

In spite of the deterioration of the situation in 1953, the relevant authorities in Italy have not yet thought it advisable or followed other countries in the direction of export drives and import restrictions. Italy's special economic conditions and her dependence on effective international cooperation make it advisable for her to direct her commercial policy along orthodox lines, continuing to support trade liberalisation and the trend towards import restrictions. Only if other countries were to continue restricting imports, while increasing aid to exports, would Italy perhaps be obliged to abandon her present policies.

The Italian trade crisis thus resolves itself into a problem of international cooperation, which alone can meet the fundamental needs of the Italian economy, suffering as it does from structural disequilibria between natural resources and population. Unfortunately, international cooperation, however generous it has been in the field of economic aid, has until now been disappointing in other directions of special importance for Italy, such as emigration; the more serious therefore would be a failure in the field of international trade.

The first stage of the Enquiry into Unemployment in Italy sponsored and carried out by an ad hoc Parliamentary Committee, was completed at the end of March, 1955. The Committee undertook a series of investigations concerning all the aspects of the many-sided phenomenon, the results of which have been brought together in 15 volumes of Proceedings now being published. The most important investigations are the four fundamental statistical enquiries into the labour force (carried out on a sample basis by the Central Institute of Statistics); the regulations at the Labour Exchanges (made by the Ministry of Labor, under-employment in agriculture (made by the National Institute of Agricultural Economy) and labour turnover (made by the Institute for Economic Studies). These enquiries complete one another, and make it possible for the first time to ascertain, even if only approximately, the measure, the limits and the principal characteristics of unemployment and of the labour market in Italy. The fundamental aspects of the four enquiries have been summed up and discussed by Dr. Giorgio Ruffolo, in the article entitled "The Parliamentary Enquiry into Unemployment in Italy." The main conclusions reached are summed up on page 73.

In a "Rationalisation of Banking Services at an International Level" (A letter from a banker), an Italian banker calls attention to the drawback from the lack of co-ordination and of uniformity in the attempts at rationalisation now being made by the banks of various countries, and urges the advisability of co-ordinated action at an international level.

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Fundamental Errors in Recent Anti-Keynesian Literature

by ERICH SCHNEIDER

I.

It is nearly twenty years since the appearance of Keynes' General Theory of Employment, Interest and Money (1), and this work has now, by the overwhelming majority of economists, been digested and, in many ways, developed. A number of recent publications, show, however, that here and there important misunderstandings are still current with regard to the text and range of Keynes' contribution to economic theory. These misunderstandings are even to be found in the writings of some recognized economists (2), one of whom even goes so far as to formulate the conditions for a "peace formula" between

(1) London, 1936.
(2) I am concerned especially with the following writings:
(4) W. Böhm, Das Problem der Konjunkturwirtschaft, Zürich, 1954, p. 36 ff.
(6) A. Wehner, Der Kredit auf den Landwirt, Eine Einleitung in die Agrarfinanz, Nürnberg, 1955.
(9) W. Böhm, Was lehrt Keynes?, in Finanzwissenschaft, Wirtschaftswissenschaft, 1954.

II.

Let us begin with the proposition that the world of economists is today divided into the two hostile camps of 'Keynesians' and 'anti-Keynesians' (5), or into the representatives of the 'New Economics' and the 'Old Economics' (6). The inept reader who comes across this thesis inevitably must get the impression that these 'Old' and 'New' Economists are based on articles of faith which can be accepted or rejected according to taste or inclination, and not on scientific theorems which must be regarded as either true or false by anyone capable of logical reasoning. It is again from the same point of view that it is argued that what Keynes contributed was neither a revolution in thought nor a scientific achievement (7), but a "general Confu-
section 8). Now even the most superficial reader of the General Theory must know that Keynes' approach offers a "Wolfgang Schonau" but a theory. The book is entitled "General Theory of Employment, Interest and Money", and Keynes describes the question which he intended his theory to answer as follows: "The present object is to discover what determines at any time the national income of a given economic system... the amount of its employment" (9). It is to be noticed that Keynes states his objective as being a theory of employment, not as has so often wrongly been said — of a theory of full employment (10).

The questions we have to ask are: (a) whether Keynes' theory is true or false; (b) whether the theories developed by Keynes invalidate our previous knowledge or only extend it; and (c) what are the consequences for economic policy which follow from Keynes' theoretical propositions, assuming that these are correct. It is not clear that questions (a) and (b) can never divide the world of economists into two hostile camps. Anyone maintaining the opposite has never understood the nature of theoretical propositions, the theoretical reasoning and the nature of W. Leontief's distinguished essay on the use of Economic Theory (11), (Was leistet die ökonomische Theorie?). Theoretical propositions are always conditional in the form, "If X, then Y". If these or those postulates are satisfied, then those or these relationships are valid. "Theory" as Lotze said, is "can not be inserted with what is and what happens; but tells us what must be and what must happen if certain conditions are satisfied" (12). Theoretical propositions always possess analytical necessity and, under the assumption made, are always either true or false (13). One cannot therefore accept or reject a theoretical proposition as one may a dogma. One can simply say that a allegedly relevant theoretical proposition is irrelevant at any particular moment because the assumptions from which it is deduced do not coincide with the existing situation (14). This does not mean that the proposition is false, but simply that the proposition, though true, is not relevant. The propositions of the theory of oligopoly are obviously not relevant when conditions of oligopoly do not exist. Nevertheless, they always remain true. Our theoretical tool-boxes consist of logically necessary propositions, only a part of which are relevant at any particular moment.

W. Röpke does not agree with this point of view. Quoting in support J.M. Clark, he argues that "the Keynesian revolution has split political economy into two realms of logic. What is sense in one realm is nonsense in the other" (15). It is true that one of the most important achievements of Keynes consists in the demonstration that for an economy in a condition of full employment different theorems hold good than in an economy with under-employment. Röpke admits this and adds that the mass unemployment of the 30's could not be explained by "the Old Economics", that is, by means of theorems deduced under the assumption of full employment: "In this case a deficiency of 'effective demand' was the true cause of mass unemployment which it was the duty of economic policy to remove, and which called for a reversal of sound economic thinking (6), and the laying of the foundation of expenditure and on an "increasing effective demand". It was then the economist's duty to refuse to be frightened by the danger of inflation and not to wait upon previous supplies of saving (17). Röpke agrees also that there may be cases where an increase in the national debt represents a lesser evil (18). But it is wrong to believe that a different sort of logic operates in the theory of the underemployed economy from that which operates in the theory of the fully-employed economy. The logic is the same in the two cases. It is simply the assumptions from which the theorems are deducted which are different. In Euclidean geometry different propositions are valid than in non-Euclidean geometry, but the logic is the same in the two cases. Keynes underlined with great precision the differences between a world with full employment and a world with under-employment, and emphasized that the propositions valid in the one case lose their validity in the other. It is quite simply false when Röpke states that Keynes attributed general validity to relationships obtaining in a world of underemployment. These and all other propositions are always only valid under particular assumptions (19). Any further conclusions drawn from these propositions are likewise tied to the original assumptions (20).

There is at least, in the realm of economic theory, one sense in which we can speak of "Keynesians" and "non-Keynesians". The theory of employment developed by Keynes uses a special terminology which a majority of economists — but not all — today use. One could therefore describe those economists who reject the Keynesian terminology as non-Keynesians. But the number of these economists is getting smaller, and there is very little sense in employing this distinction in this way (20).

The case is different with regard to question (c). Here, a decision depends not on processes of logic but on the subjective inclinations, impressions and wishes of the individual. Here, only, can we really speak of a division between economists. Keynes himself has, as we shall examine later, drawn particular conclusions for economic policy from his theoretical propositions, in accordance with his own particular inclinations and values. These consequences, of course, have not got the character of logical necessity, and he himself simply regarded them as one particular possibility, as is clear from the title of Chapter XXIV of the General Theory: «Concluding Notes on the Social Philosophy towards which the General Theory might lead» (italics added). One may accept these conclusions and the economic policies they represent, or one can reject them. In this sense one may speak of "Keynesians", or "anti-Keynesians", but it must be noticed that this distinction only makes sense on the plane of economic policy and not on that of theoretical analysis. As Leontief (21) has shown, one must distinguish very precisely between Keynes' theoretical analysis and the consequences for economic policy drawn by Keynes. A rejection of the latter does not imply a rejection of the former (22), as forgotten in recent discussions. The antipathy with which Keynes' conclusions for economic policy are met is often carried over against Keynesian theory. As J.H. Williams has rightly said: "Few laymen could have known much about Ricardo's Theory of Value and Distribution, any more than most laymen today (who like to divide us all into 'Keynesians' and 'anti-Keynesians') have any understanding of the economic thinking (6), and the laying of the foundation of expenditure and on an "increasing effective demand". It was then the economist's duty to refuse to be frightened by the danger of inflation and not to wait upon previous supplies of saving (17). Röpke agrees also that there may be cases where an increase in the national debt represents a lesser evil (18). But it is wrong to believe that a different sort of logic operates in the theory of the underemployed economy from that which operates in the theory of the fully-employed economy. The logic is the same in the two cases. It is simply the assumptions from which the theorems are deducted which are different. In Euclidean geometry different propositions are valid than in non-Euclidean geometry, but the logic is the same in the two cases. Keynes underlined with great precision the differences between a world with full employment and a world with under-employment, and emphasized that the propositions valid in the one case lose their validity in the other. It is quite simply false when Röpke states that Keynes attributed general validity to relationships obtaining in a world of underemployment. These and all other propositions are always only valid under particular assumptions (19). Any further conclusions drawn from these propositions are likewise tied to the original assumptions (20).

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Keynesian system, but base their bias, for or against, solely on what they conceive to be the policy implications (23).

Recent German discussions provide many illustrations. The thesis that 'Keynesism' is identical with 'inflationism' (Röpke), is one example of this kind of fallacious argument. This amounts to saying that to apply the proposals of 'Keynesian' theory necessarily leads to an inflationary economic policy. Another illustration is the proposition that Keynes' theory leads directly to a centrally-controlled and centrally-administered economy. But it is absurd to suggest that a theoretical proposition provable by means of logical processes can necessarily lead to any particular measure of economic policy (24). As 'The Economist' of 27/1/1951 has remarked: 'His (Keynes') economic analysis did not arrive automatically at inflationary conclusions; it is a two-way street.' The propositions of Keynesian theory are, like other theoretical propositions, not tied to any political creed. As W. Fellner has rightly said, any one who supports a policy of economic intervention to the General Theory is reading between the lines, or else is placing more emphasis on certain specific statements in the book than on others. It is possible to construct a highway from Keynesian analysis to certain varieties of socialism. Yet it must be emphasised that Keynes himself did not build this highway. It is possible also to construct a bridge from Keynesian analysis to policies of a very different sort, which are garbage as well as to the level of employment. To say that Keynes advocated a policy of this sort would be no less arbitrary than to say that he built a highway to socialism. The truth of the matter is that the Keynesian theory stops short of this dilemma (25).

Keynes certainly recognized that involuntary unemployment is not only a disaster to those who suffer from it, but also that the future of the free market economy depends essentially on whether it is possible to stabilise employment at a high level within the framework of this economic system. This conviction is surely shared today by every intelligent and responsible supporter of the free market economy (26). But Keynes did not believe that involuntary unemployment can simply be abolished by bringing into being a competitive economic order, however precisely this may be functioning. Keynes would certainly have rejected completely propositions like the following, just because he was a liberal (27): 'Let us establish a free and genuine competitive order internally and externally, and then the problem of employment will solve itself. It is the destruction of competition by monopoly and by the intervention of the state which betrays the market economy and causes unemployment' (28). There is simply no truth in Röpke's view that Keynes and his followers regarded as obsolete and irrelevant the workings of the price mechanism as a method of regulating the economy (29). He tells us precisely what he understands by a given economic system: 'We take as given the existing skill and quantity of available labour, the existing quality and quantity of available equipment, the existing technique, the degree of competition, the tastes and habits of the consumers, the diversity of different intensities of labour ...' (30).

Let us turn now to the real achievement of Keynes, that is his discovery of the determinants of national income. His problem was, as we have already said, to discover what determines at any time the national income of a given economic system and ... the amount of this income (31). He says explicitly what he understands by a given economic system: 'We take as given the existing skill and quantity of available labour, the existing quality and quantity of available equipment, the existing technique, the degree of competition, the tastes and habits of the consumers, the diversity of different intensities of labour and of the activities of supervision and organisation, as well as the social structure including the forces, other than our variables set forth below, which determine the distribution of the national income. This does not mean that we assume these factors to be constant; but merely that, in this place and context, we are not considering or taking into account the effects and consequences of changes in them (32).

These assumptions which underlie the entire Keynesian model must be carefully observed. Many misinterpretations can be traced to a neglect of them. In particular, when we have carefully examined these assumptions it will be at once clear that the Keynesian theory is a theory of the short period, that is, a period in which net investment is so small in comparison with the initial stock of capital that only the income effect of investment is relevant, while the effect on productive capacity, that is, the fact that investment increases productive capacity, can be neglected. Keynes' construction can, therefore, explain the fluctuations of income and employment in the trade cycle, but can not explain the trend of income and employment. For this, other analysis is necessary which, as well known, has been the subject of recent research. Anyone who has followed these developments will recognize the degree of novelty with which Keynes has been virtually impossible without the Keynesian theory, but that they directly build on that theory (33).

We must also notice that Keynesian analysis is not restricted to a closed economy without economic activity on the part of the State. The problems of the influence of the balance of payments and of the economic activity of the level of income and employment are treated in the General Theory. The discussion of these problems belongs to post-Keynesian development, which is again a direct continuation of Keynes' work. One only needs to compare the standard work on international trade of the year 1932 (G. Hahn, International Trade), with the latest account by J. E. Meade (The

(26) Cf. for example, Röpke: 'A practical experience has shown that it (Keynesian theory) has become one of the main pillars of contemporary inflationary polities.' (See Röpke, Was lobe Keynes? 10th ed. (Munich, 1951), p. 349.
(27) This thesis of Keynes' basic attitudes is directly on application of Keynesian 'General Theory' (The Economic Conflicts, New York, 1939).
(31) But with all the differences in method and construction in the economic thought of Keynes and that found in the theoretical work of Keynesian, the last letters of the oracles which discloses the development of German economic thought in the twentieth century, contains one of the little mistakes in the social philosophy of Keynes and that of Herbert von Storchs and the Nationalsozialismus. H. Faust, in: Wirtschaftswissenschaftliche Zeitsschrift, Vol. 48, 1953, pp. 49-68.
(32) Cf. the notes above. 'It is a mistake only exploitable as grounds of Ignorance or blindness made by self-appointed enemies of these (i.e., Keynes' monetary and fiscal) policies, when they argue that the proponents of Keynesian policies are not for a sort of "cold socialism", or a revolutionary transformation of our most important economic and social institutions, even though they are powerless to change the point of view by stage.' In fact, the extent opposite is the case, for Keynesian policies are advocated as necessary because it is said that only by their means can we preserve what is worthy and capable of preservation about the existing institutions. (Frankenehre und Alteen Hausbetreuung, and Hausbetreuung, in: a Handbuch der Finanzwissenschaft, Vol. I, 1957, p. 927).
Balance of Payments, London, 1905) in order to see what intuitive advances have been made under Keynes' influence. As for public finance, one has only to compare any account of that subject from the year 1952 with, for example, that of F. Neumark (Grundbegriffe und Arten der Haushaltshaltung und Fiskalwirtschaft, in the new Handbuch der Finanzwissenschaft, Tübingen, 1952) in order to perceive the difference.

The reasoning which led Keynes to his solution of his problem is fundamentally simple. In a closed economy without economic activity by the State, the national income is by definition always equal to the sum of consumption and investment, whether we regard these quantities in real or in monetary terms. If we denote consumption with \( C \), investment with \( I \), and national income with \( Y \), then the following definitional equation holds good:

\[ Y = C + I \]

Now real consumption is a function of real income, or what comes to the same thing, consumption in monetary terms is, with a given level of prices, a function of money income:

\[ C = C(Y) \]

Further, investment, real or monetary, is, with given expectations of profit, a function of the rate of interest (Keynes assumed for the sake of simplicity but only a single rate of interest exists in the economy, that is, only a single kind of interest-bearing claim):

\[ I = I(i) \]

Function \[ 2 \], the so-called consumption function, expresses the propensity to consume of households, and function \[ 3 \], the so-called investment function, expresses the propensity to invest by entrepreneurs. Functions \[ 2 \] and \[ 3 \], therefore, relate to the modes of behaviour of households and entrepreneurs.

Between the four variables \( Y, C, I, i \), and \( i \) there are three relations, one of which can be reduced to a relation between two variables if we rewrite \[ 7 \] with the aid of \[ 2 \] and \[ 3 \], in the following form:

\[ Y - C = (Y - I)(1) \]

Our problem therefore possesses a single degree of freedom. We assume that the level of the rate of interest is determined by the banking system, and then relation \[ 4 \] determines the equilibrium level of income — either real income, or money income at the ruling prices. Equation \[ 4 \] may also be interpreted in the following way: with a given rate of interest and a given propensity to consume, the equilibrium level of income must be at such a level that consumption out of this income plus investment is exactly equal to the equilibrium level of income or, what is to say the same thing, that voluntary saving is equal to voluntary (or intended) investment.

Relation \[ 4 \], of which we have just given the economic interpretation, is Keynes' answer, reduced to the simplest terms, to the question as to how, at any point of time, national income and employment are determined in a closed economy without State activity. All the rest is merely of support and elaboration. In particular, the so-called «liquidity» theory of interest is not an essential part of the core of Keynes' theory of employment. The liquidity theory of interest comes in if we wish to assume that the level of the rate of interest is not exogenously determined, but is itself a variable which has to be explained. We have then in addition to equations \[ 1 \] and \[ 3 \] the further equation:

\[ Y = C(Y, i) = Y(M) \]

On the left side we have the demand for money for transaction and speculative purposes represented as a function of \( Y \) and \( i \), while \( M \) represents the quantity of money existing in the economy. But we must notice that the addition of equation \[ 5 \] not only increases the number of equations by 1 but also the number of variables by 1. The quantity of money is introduced as a new variable. The Keynesian model has as before a single degree of freedom. One can therefore now ask how \( Y, I, i \), and \( M \) are determined with a given quantity of money fixed by the banking system. But one can also, more realistically, ask how \( Y, I, M \), and \( i \) are determined with the rate of interest fixed by the banking system.

This construction, as far as we have developed it up to now, gives a static explanation of the equilibrium values of particular variables. For any essential understanding we must ask how the equilibrium values behave with changes in data, that is, we must carry out a comparative-static analysis. We must, for example, examine with the aid of relation \[ 4 \] how income varies «contra pari passu» with a change in the rate of interest or a change in the propensity to consume or invest. Such a comparative static analysis leads us to the well-known theorems which make up the central content of the General Theory. On the assumptions set out these theorems are unassailable. It is simply incomprehensible how Hans Mayer can come to the conclusion: «It (the Keynesian system) is above all not a system in the usual sense of a logically uncontradictory combination of partial relationships and partial truths brought together in a comprehensive view of the problems as a whole» (34). On the contrary, the Keynesian system is as logically free from contradictions as the system of Walras. It is, in fact, a very simple consistent system (35).

What may be the subject of controversy are simply the assumptions and nature of the Keynesian model. Some writers (Mayer and Röpcke) have raised basic doubts against the use of macro-economic quantities and relationships. Such quantities are, according to Mayer, concepts «which because they are made up of unhomogeneous and therefore unsummable phenomena cannot be significantly brought together in a total or aggregate» (35). Therefore, the Keynesian analysis is «a peculiar kind of theory which has nothing in common with what has previously been described as theory» (37). In fact, the macro-economic method of treatment is a regression: «The whole progress of economic theory up to now has coincided with the abandonment of the global or «macro-economic» treatment and the basing of theory on elementary, given, and directly experienced phenomena» (36). Furthermore, Keynes' construction suffers because it uses the problematic concept of «equilibrium» which is one of the «fetishes of economic theory» (39).

Now it is quite certain that the concept of equilibrium was not introduced by Keynes. It is as old as economic science itself. The whole of economic theory from Adam Smith to Ricardo, Mill, Walras, and Marshall, down to modern times, gives this concept a central place. No theoretical economist up to now has disputed the significance of equilibrium analysis for the understanding of economic phenomena. This is, of course, not to say that the analysis of processes is not just as, or even more, important. But economic theory cannot get on without equilibrium analysis. Mayer must stand alone in maintaining that economic theory has up to now been pursuing a «fetish».

Similarly, Keynes is, of course, not the originator of macro-economical analysis. This, too, is as old as economic theory. The Physiocrats employed it with great virtuosity, as did the English classical. One could, in fact, say that the economic thought of the classics is predominantly macro-economical. Only with Walras, Marshall and the Austrian school is there a trend to micro-economical analysis, or to a total analysis based on «microeconomic» concepts, which attains to its most masterly perfection in the work of Walras. To see this development as a definite step forward as compared with the classical total analysis on a macro-economic basis is, surely, only true within limits. Each of the two methods of treatment has its advantages and disadvantages, and both therefore, must be cultivated and applied. As contrasted with the neglect of macro-economic relationships since Marshall and Walras, the emphasis of Keynes may be seen as a return to the modes of thought of the classical economists (60) and, at the same time as an important advance in the practical relevance of economic theory.

Macro-economic analysis permits of economic relationships being surveyed in their broad lines, while certainly leaving the details.

(34) H. Mayer, op. cit., p. 42.
(35) J. H. Williamson (op. cit., p. 6) describes this system as follows: «In the classical (or Keynesian) system, the interest rate is given by the equation, Y = C(Y, I) = Y(M)».
(36) H. Mayer, op. cit., p. 47.
(37) «The entire concept of equilibrium is the answer».
out of account. Micro-economic analysis, on the other hand, penetrates to the actions of individual subjects, the total analysis of which has to work with such a large number of variables that it cannot provide practical and applicable results and is not capable of quantitative treatment. Especially when we are interested in practically applicable theories, macro-economic analysis will always be more significant. Anyone concerned with economic policy has to think in macro-economic terms (41). In particular, all theories of the trade cycle up to now have been macro-economic theories. Provided that one remains conscious of the limitations of micro-economic analysis it can be an extremely valuable and useful tool. Röpke has lately come to this conclusion that the macro-economic treatment has its advantages, and he now believes that analysis in terms of macro-economic quantities has been refined by the methods of the ‘New Economics’ (42). Previously he was one of the most vigorous opponents of such methods (43). But he is still wrong in thinking that Keynes believed that analysis in terms of the aggregate quantities of the economic circulation (‘Kreislauf’) was the only method worth while and worth cultivating in the long run, and that Keynes claimed that his method and theory should be the exclusive and dominating one (44). One is compelled to ask where on earth Keynes ever said that! In all his writings I have not been able to find even the faintest hint of such exclusive claims. I know also of no follower of his who has made such a claim. Micro-economic analysis will, as Keynes never concealed, his significance alongside macro-economic analysis.

How far one wishes to go in constructing aggregate concepts will depend, of course, on the particular problem. The larger the aggregates, the cruder the picture of the relationships involved. Anyone who criticises the Keynesian model for using too crude aggregates simply has to refine them into partial aggregates. This is to increase the number of variables and equations, and relationships previously obscure will then become apparent. The Keynesian model will not lose its value. But the great advantage of this model consists mainly in its simplicity, comprehensiveness, and its possibilities of development. It is, of course, wrong for Mayer to hold that aggregation cannot significantly be carried out because idiosyncratic and unsummable phenomena are being brought together in a total aggregate. Does he mean that national income, total consumption, total investment, profit, contractual incomes are all senseless aggregates? Then any statistical year-book would be a collection of senseless figures. Any aggregate quantity, of course, the sum of similar partial quantities, and micro-economic functions can always be constructed and conceived as the sum of micro-economic functions.

If one derives, for example, the consumption function (C = C(Y)) from individual demanded functions, then this aggregation implies a constant distribution of income or a particular relationship between individual incomes and the national income. The consumption function can also be interpreted in another way, as the individual functions of individual consumption functions, that is, as an assumption, statistically expressed, about the behaviour of a group or groups. But in whatever way the consumption function is interpreted, the question always remains as to what income it is which determines consumption (the actual present income, the income expected in the next period, or an average of the income expected over several periods) and the question also remains as to whether income is the sole determinant of consumption. We cannot here discuss these problems at length. Since the appearance of the General Theory they have been the subject of various detailed studies.

(42) See R. Stenström, Einleitung in die Wirtschaftswissenschaften, 1931, p. 325; also W. Wray, Konjunktur, Zins, Schriftlichkeit und Problematik, Thull. 1931, p. 5 ff.
(43) W. Krös, Was leitet Keynes?
(45) W. Krös, Was leitet Keynes?

Some of Keynes’ original formulations have been shown to be untenable, for example his proposition concerning the unidirectional sensitivity of the consumption function. It has also been shown that the consumption function cannot always be expressed in the simple form C(Y), but that expected changes in income and other factors must be taken into account [(40)]. But it must be remembered that the introduction of new variables into the consumption function also implies the introduction of new variables into the demand functions as used by Walras. The macro-economic consumption function is the exact counterpart of the micro-economic individual demand function of the Walrasian type. It represents the individual consumption of a period as a function of the ruling prices of goods and of the income of the same period. The summing of individual demand functions, or consumption functions, of the Walrasian type gives us the Keynesian consumption function.

It would be obvious that macro-economic analysis is an instrument which is not simply applicable to a particular kind of economic system. The proposition of Mayer that the global method is more convenient for planners, and the opinion of Röpke that operating with ‘collective’ quantities leads directly to collectivism, are simply absurd. The Physiocrats were no planners; and a statistical handbook surely does not of itself prepare the way for collectivism. In any case, the consumption function, that is, the function which describes the dependence of consumption on the variables which determine it, remains as one of the essential pillars of the theory of income and employment [(47)]. The Keynesian form of the function C(Y) is to be regarded as a simple first approximation.

Mayer also criticises the Keynesian system for being purely static: ‘Keynes did not succeed, as he apparently thought he did, in constructing a dynamic system (to use the modern catchword), but particular dynamic elements in his work, in particular in his theory of expectations, are in direct contradiction to his fundamentally static system’ [(48)]. It is true that Keynes’ analysis is formally a comparative-static analysis and that Keynes himself did not make his system dynamic, although his verbal arguments often have a thoroughly dynamic character. But it is not too difficult explicitly to ‘dynamise’ his system, and this has already been well advanced. Moreover, the knowledge obtained by his comparative-static analysis remains of the highest importance.

Mayer also believes that the Keynesian system fails to determine the end of the economy as a whole as the optimal satisfaction of human needs, as was done by the Austrian school, Marshall, Pigou and others. To make full employment the end is to confuse means and ends. The end must be the meeting of needs by the creation of income [(49)]. Can Mayer seriously believe that Keynes would have disagreed?

Mayer also goes wrong when he argues that Keynes’ attention was devoted almost exclusively to the sphere of money and credit and that he has little sense of the ‘real’ processes involving goods and services [(50)]. Such a mistaken judgement can only be based on an insufficient study of Keynes’ work. For in fact the opposite is the case. Not only did Keynes not overlook or neglect the ‘real’ processes, but rather he first tried to study the material function of the ‘real’ and monetary processes: ‘Nobody before him, as far as I know, had brought all the relevant factors, real and monetary at once, together in a single formal scheme, whereas the old disentangle could be coherently investigated’ [(51)].
IV.

Let us turn now to some of the details of Keynes' analysis which are still the subject of misunderstanding. It is said that Keynes did not succeed in reconciling free competition with the existence of unemployment (52) that rather an equilibrium condition with under-employment can only occur with rigid wages and not in the empirically most frequent case of flexible wages. In the first place, flexible wages, upwards and downwards, have for a long time not been the empirically most frequent case. The assumption which corresponds today with the real world is that wages are only freely alterable upwards. But let us assume that wage-rates are alterable upwards and downwards. The question now arises as to whether the system can settle in a condition of under-employment. Keynes examined this problem in great detail. It is wrong to suggest, as Hahn has suggested, that Keynes in his analysis always used the assumption of constant wage rates. In his Chapter XIX (Changes in Money Wages) and XXI (The Theory of Prices) Keynes studied in detail the effects of a general change in wage-rates on employment and prices, and the question as to whether involuntary unemployment can be removed by a general wage reduction. All the main points raised by this problem have already been touched on by Keynes himself (53). In contrast with the classical economists that complete flexibility of wage upwards and downwards unemployment can never exist, and that in a free market economy full employment will always come about (54), Keynes comes to the conclusion that 'there is no ground for the belief that a flexible wage policy is capable of maintaining a state of continuous full employment... The economic system cannot be made self-adjusting along these lines' (55). Keynes' argument has been repeatedly confirmed by more recent study. L.G. Raynoroli comes to the conclusion in a recent paper: 'It is possible to construct several quite plausible models in which a one-for-all cut in money wage rates would yield a new equilibrium position with a higher level of employment. Second, it is doubtful whether such an equilibrium would be approached very rapidly, or even approached at all, because of repercussions set up by the initial wage cut: i.e., failure of other data to remain constant as they must do in equilibrium reasoning. Third, the issue is not of much practical importance anyway because real demand can be increased more quickly and with less social strife by monetary and fiscal measures. Blanket wage reductions, even if feasible, would not be a very useful prescription for depression unemployment' (56).

V.

Equally unfortunate misunderstandings can be also found repeated in discussions of saving and investment, or saving and investing, and the role of the rate of interest. Hahn, for example, continues to maintain the conservative opinion that saving does not reduce effective demand (op. cit., p. 52), that 'saving creates its own investment opportunities' (p. 99 and 102), and that 'saving does not create unemployment' (p. 103). As for the classical economists, the problem of filling the gap between saving and investment does not exist for Hahn (p. 196). He assumes that voluntary saving out of a particular national income is automatically adjusted by means of the rate of interest with voluntary investment of an equal quantity. It is one of the most important conclusions of recent theory that the classical mechanism of the interest rate is not always effective, and that, when this mechanism is not effective, the balancing of voluntary saving and voluntary investment comes about by means of changes in income. If more is saved from a particular level of income, corresponding with a particular level of employment, than entrepreneurs voluntarily invest, then a process of contraction is started which continues to reduce income until saving corresponds with the level of voluntary investment. It is in this emphasis on the effects on income that the decisive differences between the now theory and the classical theory exist as to the conditions of disequilibrium being repayable by changes in prices (or price effects with employment unchanged. A. H. Hansen is completely correct when he states: 'The "income effect" on total realised savings was formerly not understood. It is impossible to give back over the process of an anonymous of statement in this period, or even the writing of economists, without being profoundly impressed with the fact that erroneous policies sprang from a preoccupation with "price effects", and a failure to recognise the "income effects" (58). If one compares, for example, the theory of international trade before 1936 with the theory as it is today, one can see the profound changes which have come about by trying to emphasise such "income effects".

It is equally incomprehensible how some writers still fail to perceive that in a closed economy without economic activity by the State, investment at the end of any particular period, however long, must necessarily be exactly equal to saving, that is, that the total actual saving in the economy is identical with the total actual investment (59). If one defines the actual saving of the year 1952 as the difference between the income and the consumption of the year 1952, then it follows from the definition of income as the sum of consumption and saving that saving in 1952 was exactly equal to investment in 1952. In saving and investment we, of course, include both the intended and the unintended saving and investment.

This ex post proposition must not be confused with the theorem that a lasting increase in intended investment by a particular amount will lead necessarily to an increase in income, the marginal propensity to consume being less than 1, so long as voluntary saving from this level of income is exactly equal to the intended level of investment. The equation:

\[ I_{\text{vol}} + I_{\text{int}} = S_{\text{int}} + S_{\text{vol}} \]

is an identity and always holds good. The equation:

\[ I = S \]

is, on the other hand, an equilibrium condition, and only holds good in a condition of macro-economic equilibrium.

A. Weber remarks with reference to Forstmann's analysis' that the proposition that every investment creates the necessary saving in the sense of a genuine (or voluntary) saving can be shown to be false' (op. cit., p. 414). We can only say that such a proposition has never been put forward by Keynes or any other writer. The equality of investment and "genuine" saving only comes about through time by the operation of the multiplier process. It is also incorrect when Weber argues in this connection that in Keynes' analysis there is "implicitly no place for the processes of deflation and inflation, just as for Keynes there can be neither profit nor loss in the economy as a whole" (op. cit., p. 414). It is well known that the analysis of processes of deflation and inflation has a central place in Keynes' work, although in the General Theory the study of inflationary processes is comparatively in the background as contrasted with deflationary processes. It is in his work on 'How to Pay for the War' (London, 1939) that we find a detailed treatment of inflation by the same tools of analysis as Keynes had earlier applied to processes of deflation. Of course, the profits and losses of entrepreneurs
in the economy as a whole play a decisive part in Keynes' work, though more so in his Treatise on Money than in his General Theory. But even if it is not explicitly set out in the model in the General Theory, it is easy to see that profits and losses have a part to play if one divides total saving into the saving of non-entrepreneurs and the saving of entrepreneurs. It then holds ex post for every period:

I = S\text{non} + S\text{e}

or:

S\text{e} = I - S\text{non}

It is in this form that the Keynesian investment equation appeared in the Treatise on Money. From this equation it follows that if non-entrepreneurs do not save:

S\text{e} = I.

In this special case investment will always be equal to the unconsumed part of total profit. This shows that the distinction between the incomes of entrepreneurs and of non-entrepreneurs, and between the consumption and saving of the two groups, gives us a deeper understanding of the mechanism by which an increase in the propensity to consume works itself out in the economic system. Keynes clearly understood this, as can be seen in his preface to the German translation of his Treatise on Money. He says there: "If windfall profits and losses are included in income (as Keynes did not include them in the 'Treatise')...and if saving is regarded as the excess of income so defined over consumption spending, then it follows that saving is in all cases exactly equal to the value of current investment. That is, the volume of saving causes to be an independent factor. Its level can no longer be affected by the independent decisions of the different receivers of income and by their decisions as to the quantity of their income which they consume. It depends rather on the level of current investment. Keynes at the time found this to be a paradox (66)."

But one can see very plainly here, and at other places in his Treatise (61), how he was already turning towards the problems which he only fully clarified in the General Theory. It is clear also how right Keynes was when he remarked in the Preface to the General Theory: "What in my own mind is a natural evolution in a line of thought which I have been pursuing for several years may sometimes strike the reader as a confusing change of view." We can explain Keynes' failure to retain in the General Theory the distinction between the savings of entrepreneurs and non-entrepreneurs simply by the fact that his theorem did not require this distinction. The model was more simple, though, of course, certain relationships were no longer explicit. In this respect the model constructed by C. Föhl in his profound and illuminating work (Geldschöpfung und Wirtschaftswachstum, Munich & Leipzig, 1927) is superior to the simpler construction of Keynes (62).

To conclude these remarks on the equation I = S we shall make two points:

(a) The equation holds only ex post in a closed economy without economic activity by the State. In an open economy with economic activity by the State, the equation is replaced by the following:

\[ S + \text{IM} + (Ex - Im) + (G - T) \]

where \( Ex \) stands for exports, \( Im \) for imports, \( T \) for the tax receipts of the State, \( G \) the expenditure of the State on goods and service plus transfer payments by the State and plus subsidies. This equation is, of course, one of the foundations of all social accounting (63).

(b) The equation is not absolutely necessary for the theory of income and employment. All the relationships can be just as well expressed by using consumption (or the consumption function) instead of saving (or the saving function) (64).

VI.

Closely connected with these confusions about the relation between saving and investing is the thesis that Keynes brandished saving as a vice and encouraged the public to spend wastefully. Rößke, for example, writes: "It is one thing to discover a number of problems relating to the process of saving not previously investigated, but it is not possible without serious consequences to destroy in men the idea that they are doing right if they save from their income and build a reserve for themselves and their descendants instead of using up the whole of it (65)." But where did Keynes ever say that saving is always and in all circumstances economically disastrous? I know of no passage in all his works where he ever hints at such a conclusion. What he really said was this: in condition of under-

employment at all stages of the process of production, more will only result in a further fall in the real income and in employment. A rise in the national income and in employment can, with a given propensity to consume, only be obtained by additional investment and for the carrying out of this investment no previous voluntary saving is necessary.

The validity of this proposition is no longer the subject of controversy and would probably not be contested even by Rößke. Keynes has never denied that in a state of full employment an expansion of investment presupposes a previous increase in the propensity to save, if an inflationary process is not to result. But here we see clearly the distinction between a world with under-employment and a world of full-employment. What holds good for the one does not necessarily hold good for the other (66).

By a world of under-employment we mean here one where there is general involuntary unemployment with the apparatus of production otherwise intact. So-called structural unemployment, that is involuntary unemployment which arises because some parts of the apparatus of production have been destroyed, or because an apparatus of full employment has suddenly from outside received a new stream of workers able and willing to work, does not come under the definition of involuntary unemployment. In this case, the criteria necessary for the additional invest-

(66) For example, see R. Neunmann, in his article Der Mythen des Keynesianismus, in Zeitschrift für Allgemeine Betriebswirtschaft, 20, 1939; and also E. L. Abelard, in his book Der Keynesianismus, 1939, which is one of the most penetrating articles on the subject.

(61) The exposition in the General Theory is more complete than the exposition in the "Treatise," which is really a single paragraph in the middle of Chapter II: "It is only a single proposition, with which I am now dealing, that says that all the investment which takes place at any given time is at the same time saving, and vice versa, on the same scale along the same lines as Keynes, and which ever since my article in Economica in 1935 has been developing and which has been the basis of my work in this paper."
ment must correspond with an equal voluntary saving, so that an inflationary process is not to result. Keynes would never have contested this, though happily he had no reason to examine these cases. In his General Theory, he wanted simply to direct the attention of economists to these theories with which good in a world of general under-employment with the apparatus of production intact, which had previously been neglected. But he was hardly guilty of any exclusive emphasis on these kinds of problem. On the contrary, it is those critics who are wrong who hold that the national income can only be increased if there has previously been some voluntary act of saving, and who hold this proposition as a generally valid theorem.

VII.

I turn now to a misunderstanding which brings us to the question as to whether the General Theory is really "general" or only a special theory valid for particular cases. H. Mayer, in the course of his recent lecture, thought that he could bring down the Keynesian theory by denying the proposition that the marginal propensity to consume can generally be regarded as lying between 0 and 1.

(1) "Anyone earning a bare subsistence wage and receiving a small addition to his income will, in this situation, spend the entire increase on consumption." (2) "If he receives a larger increase, then higher tastes and cultural needs will arise, which are in principle unlimited. There is therefore no guarantee that any of the increase will be saved. The so-called law propounded by Keynes, that therefore, psychologically and economically false. In my own country we battle desperately with the exact opposite of the Keynesian law, that is, with a preponderance of consumption even when there is a thing income." (3) Now it is quite true that Keynes assumed that the marginal propensity to consume alters ways between 0 and 1. But nothing prevents us from studying within the framework of Keynes' analysis how the results will be affected if the marginal propensity to consume is equal to 0, or is assumed to be greater than 1. If the marginal propensity to consume is greater than 1 then an increase in investment will lead to a non-convergent process of expansion. A convergent process of expansion only occurs if the marginal propensity to consume is smaller than 1. It is therefore, therefore, than Keynes only considered a particular case which nevertheless can be regarded as the regular case.

That Keynes in his General Theory was interested mainly in special cases becomes particularly clear if we ask how an increase in the propensity to invest affects the level of national income through the general equations [4] and [5], that is, if there is a shift of the investment curve to the right. If we denote the change in the investment function as $\Delta d$, then the change in the equilibrium level of income, after the process of adjustment has worked itself out, will be given as follows:

$$\frac{dy}{dt} = \frac{1}{s} \frac{dL}{dt} - \frac{1}{d} \frac{dy}{dt}$$

This "general multiplier relation" (69) is not discussed by Keynes. The Keynesian investment multiplier is rather the reciprocal of the marginal propensity to save. This multiplier is, however, as can easily be seen, a special case of the general multiplier for the case, that is, when either $s = 0$ (i.e. when investment is perfectly inelastic in relation to the rate of interest), or when $\frac{dy}{dt} = \infty$ (i.e. when the demand for money is perfectly elastic in relation to the rate of interest). Keynes in fact only considered two special cases: the case when investment cannot be stimulated by a fall in the rate of interest however large, and the case where an increase in the quantity of money by the banking system does not lead to any change in the rate of interest — two cases which, as is well known, are characteristic of a state of depression (70). Keynes' theory of employment is, therefore, a special theory to the extent that Keynes was predominantly interested in these two cases. But the model we have set out in equations [4] and [5] is, of course, not subject to these limitations. This cannot be sufficiently over-emphasized. Within the framework of a comparative-static analysis, all conceivable cases can be studied. One can give any conceivable value to the relevant co-efficients measuring the rate of increase of the consumption function, the investment function, or the liquidity function.

It is therefore quite clear that the Keynesian model described by equations [4] and [5] is in no way limited in its applicability to the case of a depression. The Keynesian theory is by no means exclusively a theory of depression, even if its intellectual roots go back to the great depression of the 30's, and even if Keynes was led to the questions he asked and to his apparatus of analysis by the conditions of the 30's and made the world of under-employment the main subject of his analysis. Even such a leading theoretical economist as J.R. Hicks wrote in 1937 in his well-known article on "Mr. Keynes and the Classics": "It may be that the general theory of employment is the economics of depression" (71). The same author, however, declared in 1945: "The great changes which have taken place in the world since 1936 have provided an opportunity for applying Keynesian analysis to new problems. Some of these new applications considerably modify our view of the theory itself. In 1936 unemployment seemed (at least in England and America) to be the most important of all economic problems. It was therefore quite natural for Keynes to have directed his work at the problem of unemployment. Most of us would at first have agreed that this was its central significance. I myself in 1937 went so far as to write that the General Theory was the economic theory of depression. We now know that this was a mistake. The theory has been considerably revised and it has gained the support of economists who at first were very sceptical (such as Beveridge and, up to a point, Robbins). We have discovered now that the theory is no less applicable to conditions which are the extreme opposite of depression, those of a boom in an economy mobilised for total war (72). What Hicks is saying here is now generally accepted. The fact, that an economic theory arises out of a situation with a serious inflation of the economy does not limit its applicability. Nearly all economic theory has been built up out of a concern with the burning questions of the day. Already in his General Theory, Keynes (in Chapter X, "On The Theory of Prices", set out in full detail why and in what circumstances inflation may set in before full employment is reached. The role of bottlenecks was set out with full clarity (73). As J.H. William-Roberts rightly pointed out, no better analysis could be desired as to why we experienced the inflationary conditions of 1936/37 on a comparatively low level of employment and nothing further would be needed to explain the much more serious inflation of the 'war period' (74). Keynes later in his famous work "How to Pay for the War, A Radical Plan for the Chancellor of the Exchequer" (London, 1940), has proved the value of his analysis for the planning of inflation in his Chapter IX ("Voluntary Saving and the Mechanism of Inflation"). The recommendations as to policy which he there advances are completely different from those for the fighting of a depression. As Hansen rightly remarks: "Some superficial critics assume that a Keynesian always wants to spend more, and tax less. That, of course, is completely false. The Keynesian policy is designed to secure a balanced and growing economy with monetary stability." (75)


(70) See H. Boynton, op. cit.


(72) See J. R. Hicks, "La Théorie de Keynes après quatre ans", in "Revue d'Économie Politique", 1946, p. 124. See also, for example, A. Pigou, "Money, Credit and Race", in "Quarterly Journal of Economics", 1946, p. 319.


equilibrium... Therefore, if there develops an inflationary situation caused either by a large increase in private investment expenditures, or by a necessary increase in governmental expenditures as, for example, in the current defense programme, Keynesian policy aims at curtailment of aggregate demand... So Keynesian economic policy is in fact not one-sided. It is not just expansionist. It is just as applicable for inflationary problems as it is for depression problems... Hansen adds that it was not new, because, indeed, in World War II the countries that most successfully coped with war inflation attacked the problem in terms of Keynesian analysis (79).

VIII.

How is this thoroughly sound observation of Hansen to be reconciled with the statement of Keynes's meaning of inflationism... and that all countries which have let themselves be guided by the Keynesian theory... that is, the so-called full employment countries... have been caught up in a whirlpool of inflation? According to Rüüke, Keynesianism is the general theory of a permanently threatening deficiency of demand, which leads to an economic policy which must be constantly on the alert in order to cover this deficiency, even in the case of full employment. This is, according to Rüüke, the real revolution in economic thought attributable to Keynes... It is the theory or ideology which puts all the emphasis on the fear of deficits, not on full employment at any price, on expansion and expenditure... Keynesianism stands even at its best always for latent inflationism (79).

...We touch here on one of the decisive points in the current misunderstandings of Keynes's theory: that is, the confusion, or identification, of the Keynesian theory of employment with the so-called stagnation thesis, or with what John Maynard Keynes called the thesis of Permanent Depression (79). The Keynesian theory of employment answers the question as to what determines the level of national income and employment in the short period. The stagnation thesis is, however, a theory at all, but an unproved and unprovable guess that in mature capitalism the economy voluntary investment, owing to insufficient profitable outlets, will always lag behind the level of voluntary savings out of full-employment income, and that the full employment output is not possible to be taken seriously into account, and against which to take timely precautions, has not been undertaken by Keynes by means of demand by means of American economists (Hansen, Schumpeter, etc.) (80). We must underline here that a full proof of the actuality of the stagnation thesis has not been produced. It can, on the other hand, be shown, as has been done especially by Terborgh, how many tendencies there are which contradict this thesis (82).

If particular countries after the war, expecting a wave of unemployment, have taken effective expansion measures and have adopted a policy of full employment, in spite of the fact that Keynes assumed that they expected the public confidence in the ability to use the full employment output was not actually come to pass, then naturally neither the Keynesian theory nor the stagnation thesis has been able to have any effect. This, in fact, has only confirmed the correctness of the Keynesian theory of income. The present

one (79), and it may very well be sensible to examine how in these conditions employment can be stabilised at a high level without destroying the foundations of the free market economy. But in the General Theory the stagnation thesis has no central part. The thesis of declining investment opportunities in mature economies is only referred to on the margin of that work (80). What Keynes had to say on that subject is rather by way of illustrating the applications of his theory. The full employment of the stagnation thesis as a practical possibility can be taken seriously into account, and against which to take timely precautions, has not been undertaken by Keynes by means of demand by means of American economists (Hansen, Schumpeter, etc.) (80). We must underline here that a full proof of the actuality of the stagnation thesis has not been produced. It can, on the other hand, be shown, as has been done especially by Terborgh, how many tendencies there are which contradict this thesis (82).

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IX.

Keynes was ever sensitive to the changing conditions of his time and country (80). Anyone acquainted with his work (82) will very well realise that he was above all the very opposite of a doctrinaire. He knew that there was no panacea valid for all situations which would stabilise employment at a high level whatever the initial conditions in which

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the economy found itself, and that varying monetary and fiscal measures would be necessary. Some writers have drawn the conclusion from this intellectual adaptability of Keynes that at the end of his life he threw over the conclusions of his General Theory and returned to the classical theories. Support is sought for this view in his last posthumous article (88) in which he speaks of "how much modernist stuff, gone wrong and turned sour and silly," is circulating in our system (88). We can see Keynes put this remark in its context, and I shall therefore quote the relevant paragraphs in extenso:

"A friend of mine, not for the first time, reminded me of the time honored doctrine of the classical economists that there is no permanent truths of great significance, which we are liable to-day to overlook because we associate them with other doctrines which we cannot now accept without much qualification. There are in those matters deep and underlying in work, natural forces one can call them, or even the invisible hand, which are operating toward equilibrium. If it were not so, we could not have got on even so well as we have for many decades past. The United States is becoming a high-living, high-cost country beyond any previous experience. Unless their impact is, as well as their external, economic life is to be governed by the Miasms, they will discover ways of life which, compared with the ways of the more fortunate regions of the world, must tend towards, and not away from, external equilibrium."

Admittedly, if the classical medicine is to work, it is essential that import tariffs and export subsidies should not progressively offset its influence. It is for this reason that one is entitled to draw some provision and comfort from the present mood of the American Administration and, as I judge it, of the American people also, as embodied in the Proposal for Considex for an International Conference for Development and Employment. We have become more thorough-going proposals, advanced on behalf of the United States, expressly directed towards creating a system which allows the classical medicine to do its work. It shows how much modernist stuff, gone wrong and turned sour and silly, is circulating in our system, also incongruously mixed, it seems, with age-old poisons, that we should have given so doubtfully a welcome to this magnificently clear and convincing article (88), which a few years ago we should have regarded as offering an incredible promise of a better scheme of things.

I must not be misunderstood. I do not suppose that the classical medicine will work by itself or that we can depend on it. We need quicker and less painful aids of which exchange variation and overall import control are the most important. But in the long run these expedients will work better and we shall need them less, if the classical medicine is also at work. And if we reject the medicine from our systems altogether, we may just drift on from expedient to expedient and never get really far. At the same time it is more than met by the criticism that Keynes, his disciples and are opposing the work he was doing in the United States in the British press, as the account of the words "turned sour and silly." He felt that these writers were presenting a parody of his own views and overlooking his own belief, that his views were reconcilable with many of the "wiser generalizations of traditional economics." (Halifax address; letter of October 24th, 1933.)

There can no longer remain any doubt on this subject for anyone who understands the logical character of economic theory and is able to distinguish between the correctness, and the relevance of applicability, of a theory. If this interpretation of Keynes, which can hardly any longer remain a matter of controversy, has not been obvious from the start this may partly because the publication of the General Theory was in a sense premature. The author evidently felt that he had no time to lose in giving his ideas to the world. Consequently he published them without having given them a fully definitive elaboration or a final form. Perhaps the same thing happened in Keynes's case as happened with the Principles of Ricardo. In the two cases the matter left the larger part of the subject largely unexplored. R. F. Harrod, one of his closest collaborators, and fully acquainted with the origin and development of Keynes's ideas, has written to me along the above passage in Keynes's posthumous article as follows:"

"... I can affirm quite categorically that Keynes's views as expressed in the article to which you refer should not be interpreted as a renunciation of his main positions taken up in the General Theory. In so far as the article embodied a change of view it was one about practical possibilities... In his discussions during the war in the United States he was much engaged with the question of how many Americans who were concerned with international economics were already Keynesians, and he therefore began to take quite a different view about practical possibilities. If international economic cooperation could be conducted along the line of Keynesian economics rather than old fashioned economics that would be the ideal solution. He drew hope from the affirmed willingness of many Americans to come his way... At the same time he was much vexed by economists, particularly publicists who claimed to be his disciples and were opposing the work he was doing in the United States in the British press, as the account of the words "turned sour and silly." He felt that these writers were presenting a parody of his own views and overlooking his own belief, that his views were reconcilable with many of the 'wiser generalizations of traditional economics.' (Halifax address; letter of October 24th, 1933.)

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boration to his readers. When a work is proceed with much discussion is necessary in order to set out clearly the theoretical framework and to recognize its content and range (63).

The third and last reason for the misunderstandings of Keynes' theory lies in exaggerations by the master and above all by some of his disciples which have given his work the superficial appearance of being "revolutionary", a quality which in fact it did not possess, and which, according to the intentions of the master himself, it was not meant to possess. It is quite understandable that Keynes put special emphasis on the divergences in his approach from that of the classical theory. He wanted to call attention to the iniquities of the classical theory and to the necessity for a thorough rethinking of the problems of a market economy. It is quite simply incorrect when Mayer writes as follows about the Keynesian theory: "It is presented today, and was originally presented, with most exaggerated claims, as being the modern economic theory, "the New Economics", its "exclusiveness" was especially emphasized, and it was regarded as finally superseding all previous theoretical systems (64), and least to say, as something to take its "as it is all in" the General Theory which contains the whole truth on economics and makes a study of all previous works impossible. Keynes' theory does not replace the classical theories. According to it and allegedly makes it more useful: "Even those who found their bearings before, and on whom the General Theory did not impose in their formative years, experienced the salutary effects of a fresh breeze. As a prominent American economist put it in a letter to me: "It (the General Theory) did, and does, have something which supplements what our thinking and methods of analysis would otherwise have been. It does not make us Keynesians, it makes us better economists (65)."

Of course, insofar as Keynes added to our knowledge he built on the work of his predecessors. It can in fact be shown that essential elements in Keynes' theory, down even to details, have been anticipated by previous economists. For example, the whole "savings-investment building block" — as Klein has called it — had already been completely set out in 1958 by Johnstone. Johnstone had also discovered the principle of the multiplier for the determination of income, and had actually given it that name. Wicksell had discovered essential elements of Keynes' theory in his Lectures (1896) and later in his Lectures (1922). Important discoveries in the same field of problems are owing to D.H. Robertson. As Lange has shown, parts of the liquidities theory of interest can be found in the work of Walras. This theory is, in fact, simply a reformulation of the lendable fund theory of interest for the case where only a single kind of interest-bearing claims exist in the economy (66).

Those anticipations, however, relate only to particular elements of Keynes' theory and not to the theory itself. Keynes original achievement consists in having combined these elements together, added in the consumption function, and given us a new analysis which opens up new vistas and leads to visibly unknown theories. But this creative achievement of Keynes was hardly a revolution: "There merely was evolutionary progress along Wickellian-Rosenius-Keynesian lines. The next generation of the old Keynesian model will be just as essentially Robertsonian and Swedish as Keynesian, regardless of what they will choose to call it" (67). Keynes' great theoretical achievement will always remain in the construction of this theoretical apparatus, which is to say, it was shown to be extremely fruitful and applicable to the most differing actual conditions. Robbins, in "The Times" of 26/1/1951, has said of this achievement: "It has made an impact on our mode of approach which is lasting." Keynes himself referred to his difference with the classical theory as a "difference of analysis" (68). This "difference of analysis" has given us an insight into the functioning of the market economy which the classical theory never gave us and never could give us (69).

H. Mayer, on the other hand, regards the Keynesian theory as a misconception and as a crude invasion of the world of economic science (100) as an "Einbruch der Unbildung in die Welt der Wissenschaft", which must be rejected. Indeed, he means if for decades to come, the continuity of intellectual progress is not to be broken, if we are not to be diverted from more profound ways of analysis, if the methods of fruitful research are not to be thrown away — and also, if disastrous consequences are not to follow for the shape of our economic lives. To an audience which does not know Keynes' work, such a point of view (which can only be based on a deficient knowledge or a deficient understanding), may make some impression. Anyone who has really followed the work of Keynes and the subsequent developments can only say that the "true position is precisely the reverse. The continuity of economic science will be broken and the way of advance to more fruitful intellectual territory will be cut off, if the classical theory is regarded as the last and final stage of economic thought and the problem of "liquidation" after Keynes' death (as Pigou has called it) is treated as non-existent or of only secondary importance. Then, indeed, economic theory loses its power to shape and direct policy for it will be faced with situations to which it is not applicable. We could, of course, refer to the Great Depression of the '30's as an example. We could, of course, again call attention to Röpke's admission that such a situation could not be properly understood by the old economics. If we today have a better understanding of the market economy than 20 years ago, and are better equipped against the ups and downs of the trade cycle, we owe this to the theoretical achievement of Keynes, who has made economic science again a really effective instrument of policy and a decisive factor in our society. There can be no better proof of the practical value of Keynes' theory than the fact that it is applied today by representatives of quite different political tendencies.

There can really not be differences of opinion on these topics among those who have followed professionally the development of economic theory. Can we really speak of the need for a "peace formula" between representatives of the "New" and the "Old" economists which has still to be worked out? Röpke holds that for such a peace formula the two concessions must be made by the representatives of the "New" economics: first, that the "New" economics is today simply a technique of thinking, and secondly, that the Keynesian ideology is responsible for the inflationary tendencies existing in many countries. On the first point we would simply say that the General Theory is a theory which sets out the determinants of national income and employment. A theory is always a technique of thinking, Schumpeter or Euler surely made that finally clear. The second point has already been discussed. "Keynesianism" as an ideology is here, wrongly, identified with the stagnation thesis, which, as we showed, has nothing to do with Keynes' theory. Where, then, are the points of difference? Is there any longer any sense in speaking of an "Old" and "New" economics where the "New" economics does not contradict the "Old" but only extends it? Economic theory consists (and here we return to the starting point of this paper) in an organon of propositions which are valid under various assumptions, and which are applicable to the extent to which the assumptions correspond to the economic situation. Economic propositions are true or false. It is, therefore, only significant to distinguish between false and true theories. What
Keynes did was to add to the already true propositions of economic theory new and true propositions and new techniques of analysis.

These propositions and techniques of analysis must be mastered by all economists. If some people find this difficult for one reason or another, they must remember that in science, as Madame Curie said — the subject is everything and personal elements count for nothing. In our article (in *' der Zeit* of 23/8/1955) from which we have already quoted, we proposed that "no one should use the name of Keynes who had not, at least in the previous month, carefully studied one of his theoretical works." If this proposal was adopted, it would contribute much to the removal of the misunderstandings which unfortunately are still to be met with today. The way would then be free for work on the really controversial questions of contemporary economics, questions which to-day reach far beyond the original presentation of Keynes' work, but which cannot be approached without a knowledge of that work (101).

(101) The new environment of the post-war period has sent us upon a new search for an acceptable "complex of stabilisations" and Keynes' theory, as theory, is becoming rapidly submerged. (Wheaton, op. cit., p. 16).

The Relationship of Savings to Some Important Variables in the Business Cycle

by MONTGOMERY D. ANDERSON

I

The cash savings of an individual are by common-sense definition equal to the difference between his cash income and his cash expenditures. Thus if a salaried man with no property income received $500 cash for his services in a given month and expended a total of $400, he would consider that he had saved $100 in cash that month. His rate of cash saving at any given moment, s, may be designated by $s(t)$, while his rate of cash income and rate of cash expenditures at the same moment may be represented by $y(t)$ and $x(t)$ respectively. All three of these variables will be of the dimension dollars (or lire, etc.) per period of time. Then, from the common-sense point of view, one may write

\[ s(t) = y(t) - x(t). \]  

(1) In strict logic most individuals do not have a continuous rate of cash income, as is implied by writing $s$ as a function of $t$, because they receive their cash in "lumps" at intervals of time, with no variation at all during the interval. However, one may conceive an individual to have a continuous rate of cash income which is a continuous function of time in the manner outlined in the cash income of the individual from hired to any given time, setting a value for each date on which money was received. Now if a smooth curve to this accumulated series and differentiate the curve. The resulting derivatives will be a continuous function of time, and its value at any given moment may be used to represent the constructive rate of cash income at that moment for the given individual. In the sense that the definite integral of this function over any considerable duration of time will give a close approximation to the moment of cash received by the individual during the period of time covered by the integration.

From similar considerations one may conceive an individual to have an instantaneous rate of expenditure at cash. The difference between these two rates will give the rate of cash saving for the individual in the same manner the definite integral of the difference between the two functions of time, when taken over

which states algebraically that the rate of cash saving at a given moment is equal to the difference between cash income and rate of cash expenditure.

Now, if any given individual, natural, corporate, or governmental, does not have precious metal to the mint, does not print paper money, and does not borrow or lend (or steal), then his cash savings will be equal to the increase in his stock of money. If $w(t)$ represents the rate of increase of his stock of money then under the stipulated restrictions one may write the following equation:

\[ w(t) = y(t) - x(t) - s(t). \]

Let $m(t)$ be a continuous function of time with continuous derivatives which approximates the amount of money an individual has at any given moment. The existence of this function is, of course, implied by the use of $m'(t)$ in formula (2), because $m'(t)$ is the instantaneous rate of change of $m$. Let $x$ be a variable function of time which is defined by the following definite integral:

\[ m(t) = \int_{0}^{t} y(s) \, ds, \]

while restrictions above are maintained.

Formula (3) requires the cash income (i.e., the rate of receipt of cash, under the restrictions) to be integrated backward in time from any given moment, $t$ until such time is reached that the accumulation of past receipts of cash is exactly equal to the stock of money held by the individual at time $t$. This lower limit

any considerable period of time, will approximate the difference between cash income and cash expended.