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FOR A NEW ECONOMIC THEORY:
THE "EQUILIBRIUM TRAP"**

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RESUMO

Este artigo trata da coexistência de aspectos revolucionários e conciliadores na *Teoria Geral* de Keynes. Propõe-se que a conciliação não era uma necessidade de ordem lógica e que, além disso, dificultou o desenvolvimento de um paradigma não-neoclássico. Argumenta-se que, de um lado, Keynes subestimou o impacto de suas idéias (como sua teoria das decisões sob condições de incerteza) sobre questões microeconômicas; dessa forma, o escopo de sua teoria "geral" foi desnecessariamente limitado ao âmbito de uma disciplina particular, a *"teoria da produção e do emprego como um todo"*, vale dizer, a macroeconomia. De outro lado, a adoção do método do equilíbrio teria sido, em última instância, prejudicial. A estática comparativa foi entronizada como método legítimo para a teoria macroeconômica; em consequência, a demonstração, pela Síntese Neoclássica, da existência de condições sob as quais a economia se encontra sob equilíbrio de pleno emprego pôde facilmente ser interpretada como representando a derrota da revolução keynesiana. Opondo-se a tal interpretação, o artigo sugere que a teoria keynesiana, liberada das limitações impostas pelo próprio Keynes, oferece o arcabouço teórico necessário a um paradigma alternativo, baseado no método da dinâmica e no conceito de tempo histórico.

ABSTRACT

This article is concerned with the coexistence of revolutionary and conciliatory elements in Keynes' *General Theory*. The contention is that conciliation was not a logical necessity and, besides, that it has imposed some obstacles to the development of a non-neoclassical paradigm. It is argued that, on the one hand, Keynes played down the impact of his ideas - as, for instance, his theory of decisions under conditions of uncertainty - upon microeconomic issues; by that means, the scope of his "general" theory was unnecessarily restricted to

the *"theory of output and employment as a whole"*, i.e., macroeconomics. On the other hand, it is argued that the adoption of the equilibrium method proved ultimately misleading, because it enthroned comparative statics as a legitimate method in macroeconomic theory. As a consequence, Neoclassical Synthesis' banal theorems on the existence of a full employment equilibrium were easily interpreted as the undisputed defeat of Keynes' theory. In contrast, this article suggests that, once freed from the limitations imposed by Keynes himself, Keynesian theory provides the theoretical framework for an alternative paradigm, based on dynamics and on a historical concept of time.

KEYNES'S ECONOMICS AND THE SEARCH FOR A NEW ECONOMIC THEORY: THE "EQUILIBRIUM TRAP"

Antonio Carlos Macedo e Silva (*)

"There is an irresistible attraction about the concept of equilibrium - the almost silent hum of a perfectly running machine; the apparent stillness of the exact balance of counteracting pressures; the automatic smooth recovery from a chance disturbance. Is there perhaps something Freudian about it? Does it connect with a longing to return to the womb? We have to look for a psychological explanation to account for the powerful influence of an idea that is intellectually unsatisfactory" (Robinson, 1962: 75-76)

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For many years, Post Keynesian economists have been engaged in a relentless struggle to demonstrate the revolutionary character of Keynes' Economics. Notwithstanding the merits of such effort, the present text is mainly concerned with the limitations of Keynes' attempted revolution in the *General Theory*. For the latter can be interpreted, to a certain extent, as a conciliatory book. There is conciliation, for instance, in the way Keynes defines the position of his "general" theory inside Economic Science: to Keynes, the "*general theory*" is the "*Theory of Output and Employment as a whole*", which comes to be a discipline amongst many others. Through this reasoning, Keynes himself overlooks the potentiality of many of his insights as contributions towards a non-neoclassical, general Economic Theory - general in the sense of being able to unify micro and macroeconomic concerns. There is conciliation also in the adoption of the equilibrium method, which may have paved the way to Hicks' IS/LM model and to the Neoclassical Synthesis.

1. How "general" is the *General Theory*? Macro and Micro issues

With the *General Theory*, Keynes reached the summit of his long battle against *laissez-faire*. In chapter 24, for example, his vision of both virtues and failures of capitalism is clear-cut. The "invisible hand" co-ordinates private agents, but without any commitment to the attainment of desired levels of social welfare. The world in which we live is far from being the best of all possible worlds, and it urges to reform it. Clearly enough, an economic theory that assumes permanent full employment and, thus, full efficiency of the invisible hand, would be neither willing nor able to accomplish the "*final task*" Keynes assigned to his own theory, that is,

"to select those variables which can be deliberately controlled or managed by central authorities in the kind of system in which we actually live" (G.T.: 247). ¹

An economy which is likely to suffer involuntary unemployment should be analysed within a more general theoretical framework, in which aggregate employment would not be a datum but a variable. Unfortunately, such a discipline - the *"Theory of Output and Employment as a whole"* - had been banished from economic books (VII: xxv; XIV: 85). Keynes' attempt to revolutionize *"the way the world thinks about economic problems"* (XIII: 492) needed, first of all, the restoration of such discipline. In order to achieve this goal, it was necessary to give a more rigorous form to the insights of many heterodox economists cast aside along the history of Economic Science (G.T.: 371). Nevertheless, such revolutionary purposes were kept within limitations deliberately imposed by Keynes himself: in his opinion, "classical" theory is not essentially wrong. Rather it is a particular, or a *"limiting case"* of his own theory (Keynes, 1937a: 106) ². But there are more self-imposed limits. The adjective "general" is also employed by Keynes in a different sense:

"I have called my theory a general theory. I mean by this that I am chiefly concerned with the behaviour of the economic system as a whole, - with aggregate incomes, aggregate profits, aggregate output, aggregate employment, aggregate investment, aggregate saving rather than with the incomes, profits, output, employment, investment and saving of particular industries, firms or individuals. And I argue that important mistakes have been made through extending to the system as a whole conclusions which

¹ Throughout this text, G.T. refers to the original edition of *General Theory*. Roman numerals refer to the volumes of *The Collected Writings of John Maynard Keynes*.

² It is worth noticing that, for him, the particular character of classical theory does not condemn it to irrelevance. See Keynes' oft-quoted remarks, in chapter 24, on the nature of his criticism of classical theory. An interesting (but doubtful) interpretation of that passage can be found in Kohn (1986: 1202).

have been correctly arrived at in respect of a part of it taken in isolation" (VII: xxxii) ³.

A list of such "*conclusions*" would have been enlightening. It does not seem plausible that Keynes intended to mean such obvious points as the statement that an individual's income is "*independent of what he himself consumes and invests*" (VII: xxxiii). Perhaps the clue can be found in chapter 21, where Keynes makes his view clear on the disciplines that should constitute Economic Theory. Having rejected the dichotomy between the Theory of Value and Distribution and the Theory of Money and Prices, he states that

"The right dichotomy is (...) between the Theory of the Individual Industry or Firm and of the rewards and the distribution between different uses of a given quantity of resources on the one hand, and the Theory of Output and Employment as a whole on the other hand" (G.T.: 293).

The familiar dichotomy between microeconomic and macroeconomic theories can be easily recognized here. In a quite curious way, the "general" theory reveals its particular character, in the sense of being just one more discipline within Economic Theory. The relevance of the new dichotomy is beyond all doubt ⁴, especially if it does not mean conciliation between Keynesian macroeconomics and neoclassical microeconomics. Yet, it seems that Keynes was thinking exactly along these lines:

"So long as we limit ourselves to the study of the individual industry or firm on the assumption that the aggregate quantity of employed resources

³ Kahn (1984: 121) considers this passage - taken from Keynes' Preface to the French Edition - "*a far more fruitful exposition of the meaning of the word 'general' - the result of three years of discussion and thought*".

⁴ A "*synthesis between micro and macroeconomics, if it is possible, is still far away. In the meantime the reciprocal autonomy of both disciplines should be carefully safeguarded. It is particularly important to defend the autonomy of macroeconomics, as today this is greatly jeopardized by [new classical] views (...). This does not imply that we should give up making serious efforts to provide rigorous micro-foundations for our macroeconomic statements, if that means searching for greater consistency between the two disciplines*" (Vercelli, 1991: 236).

is constant, and, provisionally, that the conditions of other industries or firms are unchanged, it is true that we are not concerned with the significant characteristics of money. But as soon as we pass to the problem of what determines output and employment as a whole, we require the complete theory of a Monetary Economy" (G.T.: 293).

Keynes gives the impression that his contribution consists basically in removing the full employment assumption and other fallacies of composition from "classical" theory. Part of the old building remains on its feet and becomes microeconomic theory. The remaining part is rebuilt on rubble, with a few additions. Keynes does not justify what, from a post Keynesian viewpoint, seems to be unjustifiable: his apparent belief that the theory of "industries" and "firms" is allowed to ignore the "significant characteristics of money". Why would the role of money as a "link between the present and the future" pertain only to the "Theory of Output and Employment as a whole"? ⁵ Should the "monetary theory of production" be considered an inherently macroeconomic (aggregate) theory? ⁶

It may be interesting to examine a brief list of some of the most remarkable theoretical achievements of Keynes' *General Theory*:

⁵ Besides the dichotomy between micro and macroeconomics, Keynes refers to the dichotomy between the "theory of stationary [or "static"] equilibrium" and the "theory of shifting equilibrium" (or "dynamic theory of value and distribution") (G.T.: 293; XIV: 511). It is difficult to understand the precise relationship between these dichotomies. It is not evident that Keynes uses the concepts of stationary and shifting equilibrium to describe his own alternative approaches, as Kregel (1976: 216) seems to suggest. In any case, my question is: to what extent non-monetary, stationary and equilibrated (micro or macro) theories can be considered adequate to study of (intrinsically monetary, dynamic, non-ergodic) capitalist economies?

⁶ Unfortunately, in the *General Theory*, Keynes abandoned the somehow more microeconomic approach which can be found in some of his drafts. According to Rotheim (1981: 574), these drafts "conclusively show that Keynes intended to construct a new microfoundation for macroeconomics, what we might call a monetary theory of value". However, it is not at all clear whether the inclusion of those important insights in the *General Theory* would have avoided the predominant interpretation of the book as an exercise in general equilibrium analysis.

the attempt to create a theory which is, partially at least, "in time" (Hicks, 1975) or in historical time (Robinson, 1953, 1975);

- the conception that there are, in capitalist economies, important asymmetries between agents, and that the dynamic of these economies responds, essentially, to the decisions taken by entrepreneurs;

- the concept of uncertainty and its crucial implications for a theory of economic decisions, including the elements of a theory of expectations and a theory of conventional behaviour;

- the "scarcity theory" of profitability of assets (G.T.: ch. 16);

- a general theory of capital assets and of portfolio selection, involving the discussion of the liquidity-premium of assets, as well as the use of the concept of liquidity in the theory of value (Towshend, 1937); the study of demand for money as a demand for an asset among others;

- the study of production and investment decisions as peculiar portfolio decisions; having in common the direct impact they exert on employment and income (but differing as for the kind of expectation on which they are based)

Elements as such should be in the core of any economic theory - micro or macro - deeply rooted in the world "in which we actually live", as seen by Keynes himself. In fact, both disciplines - micro and macroeconomics - are concerned with the study of individual decisions taken under uncertainty, in the context of market processes along which agents interact ⁷. Both should be expected to focus, in conformity with Keynes' view, on the means through which wealth-owners strive to increase the value of their wealth. We move from micro

⁷ According to Hahn, "About two thirds of the *General Theory* deals with the theory of the action of agents (...). It is a consequence of intellectual coarseness and not of Keynes that university syllabuses are so frequently divided into watertight macro and microeconomics courses. Even if it is granted that in the manipulative (...) stages of Keynesian economics, relative prices play a subordinate role, it is after all the case that Keynes argues that the actions of agents in markets would not result in the equilibrium posited by his predecessors. It is hard to see how this very important proposition is to be understood without microtheory" (Hahn, 1973: 64-65). See, on the subject of Keynes' microeconomic contributions, Carvalho (1988) and Possas (1990b).

towards macroeconomics whenever the study of agents' decisions and their interactions falls under the subject of analysing the dynamics of the economy as a whole, in which case some microeconomic details may "fall into the background."

Evidently, Keynes' priority was his "theory of output and employment as a whole", which meant a subordinate role for microeconomic concerns. However, that should not have prevented Keynes from making the impact of his ideas on microeconomic concerns explicit.⁸ Conciliation was not a logical necessity. How then is it to be understood? It may be argued that it was a matter of tactical convenience, for a global attack on "classical" theory could exacerbate opposing reactions. But it seems that the stumbling block was Keynes' own belief that orthodox depiction of the working of markets (labor market apart) was sufficiently accurate⁹ (whether or not this means that, for him, something close to perfect competition should be taken as the most general case¹⁰). Keynes'

⁸ Keynes' answer to Viner was, in fact, meant to stress the fact that "any theory that took the existence of uncertainty and expectations seriously would have to formulate decision-making processes, indeed human behavior, differently from the traditional theory" (Kregel, 1976: 498). However, Keynes' comments were, as usual, directed towards macroeconomic concerns.

⁹ In a letter to Keynes in 1936, Shove writes: "I thought you were too kind to the 'classical' analysis as applied to the individual industry and firm. Unless very artificial assumptions (e.g. perfect and instantaneous fluidity of resources) are made, it seems to me either wrong or completely jejune. I have been groping all these years after a re-statement of it on lines similar in some respects to your solution for the system as a whole, stressing in particular 'expectations' and the influence of current and immediately past experience upon them". Keynes answers: "What you say about the classical analysis as applied to the individual industry and firm is probably right. I have been concentrating on the other problem, and have not, like you, thought very much about the elements of the system" (XIV: 1).

¹⁰ This is, of course, what he thought of decreasing returns, "one of the very few incontrovertible propositions of our miserable subject!" (XIV: 190). In the *General Theory*, he only states that the "degree of competition" (G.T.: 245) is given (Kregel, 1987), without discussing what this "degree" is or tends to be.

unconcern may also have been fostered by the absence, at that time, of an approach to market and pricing theories more or less on his own lines ¹¹.

At any rate, the discussion of Keynes' motives is rather unimportant, compared to the discussion of the possible consequences of his playing down part of the revolutionary content of *The General Theory*. It seems to me that Keynes made it easier the task of those who would soon imprison him in the strait jacket of too narrow a discipline for his ideas ¹², i.e., macroeconomics. After Keynes, economists continued to find themselves "*sometimes on the one side of the moon and sometimes on the other, without knowing what route or journey connects them*" (G.T.: 292). The ultimate consequence was the misleading debate on microfoundations, the aim of which was precisely to "discover" the route between Keynesian macroeconomics and neoclassical microeconomics! In the end, this debate came to restore the classical (real versus monetary) dichotomy, either in the long run (monetarists and mainstream keynesians) or in the short run (new classicals) ¹³.

For those of us Keynesians who refuse mainstream Walrasianism (or Neoclassicism in general), the search for microfoundations should assume a completely different meaning. The aim of "integrating" micro and macroeconomics should mean, first of all, to restore to Keynes' theory a unity

¹¹ After all, the sole consequence of Sraffa's onslaught on perfect competition had been the imperfect and monopolistic competition theories of Joan Robinson and Chamberlin, a not very far-reaching formalization of ideas already found in Marshall; Kalecki's important (but extremely laconic) work on prices would only be first published in 1938. At any rate, it is my contention that Keynes' insights are consistent with - and conducive to - more sophisticated microeconomic theories than those provided by Robinson, Chamberlin and Kalecki.

¹² I partially agree with Brothwell's opinion: "*the Keynesian revolution in theory never succeeded, because he [Keynes] did not simultaneously and deliberately discard much of neoclassical micro-theory*"; furthermore, the Post Keynesian efforts would have been "*undermined by Keynes's failure to purge The General Theory of neoclassical marginalism*" (Brothwell, 1986: 532-533). However, I will argue that there were other important "Keynes' failures".

¹³ For a critical evaluation of the microfoundations debate, see, for instance, Kregel (1982).

which was underestimated (if ever accomplished) by Keynes himself, and afterwards disregarded by the Neoclassical Synthesis. Once unified in the above sense, Keynes' theory can possibly claim to be at least as general as the imposing neoclassical building, as I will try to put forward in the present text. It can even claim to be more general, for it deals with less demanding and more plausible theoretical hypotheses concerning rationality and time, making room for a more realistic account of the dynamics of interaction processes between microeconomic units (agents, firms, industries).

Nevertheless, "unity" is not enough, if one is interested in the development of an alternative paradigm. On the one hand, it is necessary to incorporate advances in the fields of microeconomics and industrial organization which were made outside both Neoclassical and Post Keynesian traditions ¹⁴. Many subjects traditionally ascribed to those disciplines can (and should) be reinterpreted in the light of a more general (Post) Keynesian theoretical framework. Some examples are:

a. there is a tight link between uncertainty and the adoption of routines (Heiner, 1983) ¹⁵; the behaviour of agents who interact in a complex and non-ergodic (Davidson, 1988) world is better understood with the help of such concepts as "bounded" or "procedural" rationality (Simon, e.g. 1978 and 1979; Nelson & Winter; 1982, Dosi & Egidi, 1991; Vercelli, 1991) ¹⁶;

¹⁴ For instance, Bain (1949), Labini (1956) and, more recently, Nelson & Winter (1982), Dosi (1984) and other evolutionists (or neo-schumpeterians). An appraisal of the neo-schumpeterian contribution can be found in Possas (1990a).

¹⁵ Vercelli (1991: chap. 5) provides a very interesting synthesis between Heiner's contention (more uncertainty implies more behavioral rigidity) and the Keynesian tradition (more uncertainty implies more flexibility, to be obtained, for instance, through assets with a higher liquidity-premium).

¹⁶ "[S]trong substantive [Keynesian] uncertainty will always be associated with procedural uncertainty" (Dosi & Egidi: 151). Some discussion on the affinities between Simon's behaviourism and Post Keynesianism (as well as some remarks about the limitations of Simon's approach) may be found in Loasby (1989), Garner (1982), Hodgson (1989) and Kay (1989).

b. mark-up pricing and price leadership are examples of conventional (collective) behaviour, aiming especially to reduce the uncertainty which permeates decisions to produce and set prices ¹⁷. To reduce uncertainty can, incidentally, be seen as the intent of those "*monopolistic practices*" discussed with particular insight by Schumpeter (1942: chap. 8), among others;

c. market structures affect competitive strategies of firms through their effects on expectations. The effectiveness of existing barriers to entry is assessed by firms on the basis of expectations concerning decisions of competitors and potential entrants in the market ¹⁸;

d. assets are not only acquired, but "created" and protected by capitalists, by means of strategies aimed at increasing the scarcity of these assets. The purchase of equipment embodying an innovation, as well as the resort to patents and industrial secrecy, advertising and learning are different ways of hindering access of competitors to assets and of increasing their owners' degree of monopoly over them and over the market for their products ¹⁹.

On the other hand, Post Keynesian macroeconomics could be enriched by taking into account such subjects. The relationship between Post Keynesian macroeconomics and microeconomics has been damaged by the noise produced by the orthodox controversy on microfoundations. Surely Post Keynesian struggle to oppose the "imperfektionist" reasoning (Milgate, 1982) which bases involuntary unemployment on price rigidities is legitimate and indispensable: price flexibility does not entail automatic equilibrium (not even convergence

¹⁷ Both (individual) routines and (collective) conventions must be viewed as institutions, to be explained by a theory of (rational) behaviour under uncertainty. See, for instance, Lawson (1985)

¹⁸ It seems that a fully developed "*theory of money-prices*" (which is the "*theory of value in a capitalist economy*", according to Townshend, 1937: 167) cannot be achieved without the help of a theory of market structure and of strategic behaviour.

¹⁹ Possas (1993: 16) suggests that the relationship between profitability and scarcity, originated in the Marshallian concept of quasi-rent, may provide a "*difficult - but not implausible - integration of Keynesian and Schumpeterian elements*". On the links between Post Keynesianism and Neo-Schumpeterianism, see also Possas (1990b) and Canuto (1992)

towards it) in any product market, let alone in the labor market. However, the same effort should be devoted to explore the possible implications of the existence, in the real world, of interacting flex and fixprice markets. Besides developing the contributions of Kalecki (e.g. 1954) ²⁰ and Steindl (1952), it might be desirable to incorporate Hicksian (e.g. Hicks, 1989) and New Keynesian insights. That, of course, by no means should be taken to imply the acceptance of price rigidity as an explanation of unemployment (or of the demand for money; see Kregel, 1990). ²¹

All the same, theory completeness may also require overcoming some limitations which the superficial approach to microeconomic questions and the adoption of the equilibrium method imposed to Keynes' theory of employment.

2. Why not dynamics?

In the *General Theory*, Keynes was not concerned with settling, in an exhaustive way, the relationship between his contribution and the many branches of existing economic theory. Explicit dialogue was practically restricted to that held with the so-called "classical" theory, depicted as an orthodoxy whose "presuppositions", "atmosphere" and "method" had "remained surprisingly the same" (VII: xxxi). Curiously, such orthodoxy, though long-lived and coherent, had not produced a canonical and comprehensive rendition, in which its own

²⁰ Writing about demand-determined and cost-determined prices, Kalecki (as Hicks later on) stressed the constitutive presence, in modern capitalist economies, of two basic types of price formation (e.g. Kalecki, 1954). However, since he was not really concerned with the theory of markets and pricing, he contented himself with a few and rather cursory remarks. Moreover, a substantial part of his macrotheory assumes given prices. That may render macro theory easier (though incomplete).

²¹ Keynes was aware of the dichotomy between flex and administered prices (XIII: 628), but he seems to have thought that both its practical and theoretical importance were negligible. On the contrary, this should be reckoned an exceedingly important point; unfortunately, most macroeconomic theories deal either with flexprices or with fixprices, leaving aside the study of the interaction between different market structures, which may condition the dynamics of prices and quantities of the whole economy.

postulates were made clear (cf. Keynes, 1937a: 106). Keynes therefore framed his opponent by adding pieces of Ricardo and Marshall to Pigou's *Theory of Unemployment* ("the only detailed account of the classical theory of employment which exists"; 1936: 7). In the "classical model" thus rebuilt, there is always full employment (provided there is wage flexibility), money is neutral in the long and in the short run, and the interest rate is determined by the "real forces of abstinence and thrift". The "classical dichotomy" is made absolute.²²

Most of Keynes' fellow economists could not recognize themselves in that picture, which was severely criticized, both as an account of the Marshallian tradition which culminated in Pigou and as a representation of the prevailing state of art in economic theory. Part of the polemic was probably due to Keynes apparently considering himself the only "non-classical" economist among his contemporaries. The economic intellectual scene in the 20s and 30s was far richer than the *General Theory* suggests. Actually, there was "an embarrassment of riches" (Kohn, 1986: 1197), and Keynes knew it perfectly well²³. In fact, there are many passages in which the heterodoxy of Robertson, Hawtrey, Hayek and Ohlin is recognized²⁴. However, this would not satisfy his critics, as the following remarks by Haberler make evident:

"I am glad that you interpret 'classical economist' now in such a broad sense. If Hawtrey, Robertson, Ohlin are not classical economists, then Wicksell isn't one either, nor Pigou in his Industrial Fluctuations, and

²² This merciless and somehow unfair rendition of the classical theory may be deemed one of the least interesting aspects of Keynes' heritage. One of the side-effects was its contribution to the concealment of the fact that, to a certain extent, monetarism merely brought back the flexible quantitativism which prevailed in the Cambridge pre-*General Theory*; short-run non-neutrality of money was not as novel as Friedman claimed it to be.

²³ Keynes wanted to put an end to "the deep divergences of opinion between fellow economists which have for the time being almost destroyed the practical influence of economic theory, and will, until they are resolved, continue to do so" (1936: vi).

²⁴ E.g. XIV: 15, 24, 94; XXIX: 270; see also Keynes, 1937a: 202-203n. It is not clear whether Keynes classified them all in the same school, as "neo-classicals", nor which would be the defining characteristics of the school. Anyway, it seems that neither Hawtrey nor Robertson felt comfortable with this classification.

not even Marshall in many passages. Everybody is then classical and non-classical at the same time. In business cycle theory Say's Law is quite out of place and there is no doubt that cycle theory has more and more encroached upon general economic theory, relegating full-employment equilibrium to a special case" (XIV: 271).

When characterizing "classical theory", Keynes makes *tabula rasa* out of the already extensive literature on business cycles. His omission of Marshallian tradition is particularly surprising. Business cycle had been a concern for Marshall, Lavington, Pigou, Robertson, and for Keynes himself, before the *General Theory*. Now, wherever there are economic fluctuations, there may be, at least, involuntary unemployment. Let us suppose a recession caused by a fluctuation in pessimism or a monetary disturbance: the ensuing unemployment cannot be deemed purely frictional; it does not originate from real wages being superior to an equilibrium level and it is not evident that it can be reduced through a cut in nominal wages, for there is a dynamic process related to expectations or to credit contraction. What else would be necessary to assert the involuntary nature of that kind of cyclical unemployment? ²⁵

It seems that Keynes thought that a dialogue with Marshallian theories of the cycle would not be fruitful. Clearly enough, such theories were not satisfactory. First of all, because they did not rule out the possibility that workers, supposedly able to determine their real wages, could be responsible for unemployment. Thus the fact that those theories could allow for other causes of unemployment would not make them acceptable. Moreover, there are signs that Keynes believed those dynamic theories (as well as economic policies suggested by his most heterodox contemporaries) to be inconsistent with the "hard core" of

²⁵ In a 1921 article, Bigg writes, Pigou "used Marshall's cumulative depression to explain how unemployment spreads from one industry to another (...) Pigou stressed the involuntary nature of this unemployment. Although each firm chooses to reduce its output in the face of decreased demand (which in turn leads to further reductions in effective demand) the resultant unemployment is entirely involuntary when seen from the viewpoint of household, as the suppliers of labour". Bigg (1990: 127-128). On this point, see also Kregel (1976 e 1977) and Milgate (1982).

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²⁵ In a 1921 article, Bigg writes, Pigou "*used Marshall's cumulative depression to explain how unemployment spreads from one industry to another (...) Pigou stressed the involuntary nature of this unemployment. Although each firm chooses to reduce its output in the face of decreased demand (which in turn leads to further reductions in effective demand) the resultant unemployment is entirely involuntary when seen from the viewpoint of household, as the suppliers of labour*". Bigg (1990: 127-128). On this point, see also Kregel (1976 c 1977) and Milgate (1982).

the Marshallian "research programme". Should it be the case, a consistent depiction of "classical" theory could not be very different from that presented by Keynes; it would not be worth discussing the varied adhocery provided by Marshallians. (Perhaps, by the same token, a careful analysis of other attempts at dynamic analysis should be discarded.)

There are some other possible reasons: Keynes may well have thought that dynamic theories were too dangerous. For cyclical unemployment may be considered transitory, and transitory unemployment may be considered irrelevant; therefore, something the invisible hand can cope with (Possas, 1986: 298; see also Kohn, 1986: 1207). Besides, he certainly thought such theories were too difficult and imprecise (XIV: 180), having himself abandoned this field "somewhere about 1931 and 1932" (XIV: 184). Now, part of the danger resided precisely in that difficulty and imprecision: the prevailing chaos disseminated by contemporary conflicting dynamic theories ²⁶ was impressive. Thus Keynes had good reasons to fear that any dynamic theory he could conceive would be deemed just another idiosyncratic and particular dynamic theory ²⁷.

Above all, dismissal of dynamic "classical" (or "neoclassical") theories allowed Keynes to frame the debate in static terms, as a dramatic opposition between the "classical theory" which assumed involuntary unemployment away and his "general theory" in which employment was a dependent variable: "full employment equilibrium" versus "equilibrium with involuntary unemployment".

²⁶ Each author devised "a sequence analysis of his very own (...) The selection of the unit period depended on the approach taken and varied from theory to theory. Each author adopted his own set of definitions for common terms such as saving and investment and frequently invented a host of new terms specific to his own theory. The analysis being literary rather than formal, very few definite results emerged". This is Kohn's description of the "embarrassment of riches" (1986: 1197) that characterized the outburst of "neoclassical monetary analysis", of which the *General Theory* would have been both the summit and the nemesis.

²⁷ According to Presley, besides Keynes' interest in creating a simple theory so as to obtain more repercussion, his option for comparative statics may have been fostered by his conception that the system could find itself locked in a "resting place below full employment". In contrast, "Robertson's system is a dynamic one which never comes to rest", the study of which requires a dynamic theory (Presley, 1986: 387).

Obviously enough, the terms of the question predetermined the answer: of course the second option was preferable (it would suffice to look at unemployment queues!). That was masterly rhetoric, which has proved tremendously effective. However, its success may have been obtained at a considerable cost, for it also meant the enthronement of comparative statics as an appropriate method in macroeconomic theory.

3. "Equilibrism" and the point of effective demand

The out-of-time character of the multiplier theory ²⁸ was, according to Hicks, the reason why the Keynesian revolution "*went off at half-cock*" ²⁹. Keynes' theories of investment and liquidity preference, on the other hand, would really be "*in time*". I think this is still too optimistic an opinion. In order to obtain a precise result, as shown above, Keynes resorted to the equilibrium method, in several respects, in his production, portfolio and consumption theories. "Equilibrism" assumptions are required to determine the position the point of effective demand and to assure its character as a "centre of gravity". Thus presented, both the determination of investment and the multiplier story become part of the many (and very much) traditional tales of the existence of and convergence towards equilibrium: to tell them, it suffices to ignore path-dependency and to treat processes which take place in time "as if" they were movements in space (Robinson, 1953 and 1978).

²⁸ Following Hicks (1976: 289), "*the multiplier theory (and indeed the whole theory of production and prices which is - somehow - wrapped up in the multiplier theory)*" is out of time. "*A state of equilibrium, by definition, is a state in which something, something relevant, is not changing, so the use of an equilibrium concept is a signal that time, in some respect at least, has been put to one side*". See also Asimakopulos (1978, 1991).

²⁹ "*The equilibrists (...) did not know that they had been challenged. They thought that what Keynes had said could be absorbed into their equilibrium systems; all that was needed was that the scope of their equilibrium systems should be extended*" (Hicks, 1976: 289). Hicks' opinion makes one wonder about which would have been the consequences of a more radical challenge to "equilibrism". One may argue this

It is not difficult to specify the set of conditions according to which a single agent may be considered in some kind of "equilibrium". The notion of equilibrium is, of course, fairly vague: it may be stated on the basis of conceptions of substantive rationality, maximizing strategies and rational expectations or (preferably) on the basis of procedural (or bounded) rationality, satisficing strategies and sensible expectations (e.g. Davidson, 1987; Dow, 1985: chap. 5). It may mean that the agent's expectations were fulfilled or that, in spite of some disappointment, he managed to do (what he thought was) the best in prevailing market conditions; or else that this disappointment was not so significant as to produce a change in his routines (for instance, in the method used to formulate expectations; see Hahn, 1977 and 1984). Depending on the chosen definition and on the situation analysed, some inferences about the subsequent decisions of the agent may be suggested.

It is much more difficult to specify equilibrium conditions when there is more than one agent involved, for it raises problems related to differences and asymmetries between agents as well as problems regarding the timing of the market processes considered. Furthermore, the meaning of those conditions is much more elusive. We all know that the existence of equilibrium is not to be confused with the convergence towards it. The relevance of an equilibrium whose character as a "centre of gravity" cannot be proved is quite limited (but see again Hahn, 1977). In face of this, economic theory often invites us to an act-of-faith in the efficacy of convergence processes which, given initial conditions, will bring the market (or the whole economy) to that equilibrium conditions previously specified ³⁰. *"Pretty and polite techniques"* have been devised to "tame" actual

would have been a mere tactical mistake, entailing nothing but short-run disaster and long-run annihilation. Who knows? On the other hand, there would have been sown the seeds of quite a different trajectory for economic theory: maybe a more significant part of the profession would now be willing to invest in a non-equilibrant, evolutionist research programme. At any rate, the relevant question is to discuss what we will do from now on, and not what Keynes should have done.

³⁰ I entirely agree with Vercelli's contention that *"...equilibrium is not fully intelligible unless it is interpreted within a dynamic framework. Therefore we must study the*

market processés: Marshall's hypothesis about the irrelevance of the income effect, Edgeworth's recontract, and Walras' tâtonnement are some of the most conspicuous examples (see Hicks, 1989); comparative statics has been insistently used by mainstream economics as a (dubious) surrogate for serious consideration of path-dependency and the problems of historical time.³¹

My contention is that Keynes did not refrain from using some "*pretty and polite techniques*" in shaping his notion of underemployment equilibrium and of the effective demand principle. Keynes' concept of macroeconomic equilibrium, however, is not simplistic; in Vercelli's terms, it is a "*dynamic*" (rather than a "*syntatic*") concept (Vercelli, 1991). In fact, attempts to take time into account can be found in all the theories involved: the theory of production, the theory of portfolio (including investment decisions) and the theory of consumption.

Underemployment short-period equilibrium presents the following features:

- a. Short-term expectations are supposed to be confirmed; to each producer, expected and realized proceeds are equal, which means that (aggregate) "effective demand" equals income³²;

dynamic behaviour of a system not only in equilibrium but also in disequilibrium. Moreover, as is well known but too often forgotten, only the analysis of the dynamic behaviour in disequilibrium can provide the necessary foundation for equilibrium analysis (...) This is the only way to make an equilibrium fully intelligible. New classical economists have asserted that macroeconomics must have an equilibrium foundation. Whether this is true or not, we need a dynamic foundation of macroeconomics" (Vercelli, 1991: 22-23).

³¹ In a word, competition is seen as an adjustment (and restoration of uniformity) process, which is just one of its dimensions; the other one is rupture (and creation of asymmetries). Few economists dared to theorize about the last one, Marx and Schumpeter being outstanding exceptions, when discussing technical progress. Even they were seduced by the almost "*irresistible attraction*" to equilibrium ideas, as can be seen by Marx's assumption of a tendency towards equalization of profit rates and Schumpeter's assumption of convergence towards circular flow. For a reflection on the concept of competition, see Possas (1989: chap. 3 and 1985: chap. 4).

³² "*Incomes are created partly by entrepreneurs producing for investment and partly by their producing for consumption*" (Keynes, 1937b: 120). That applies to most income flows, but not to profits (and therefore to aggregate income), for "*income*,

- b. Marginal efficiencies of all assets have been brought to equality, that is to say, all portfolio owners ³³ are in equilibrium and investment is determined;
- c. Consumers, who to some extent were rationed in the labor market, have realized their preferences through the management of their income flow; the community is now on a point of its consumption function - the multiplier effect has vanished;
- d. The real wage is greater than the marginal disutility of employment;
- e. The economic system is, in some sense, in a "stable equilibrium" (G.T.: 30), often compared to Marshallian short-run equilibrium (e.g. Hicks, 1985), owing to the assumptions of given quality and quantity of equipment, given technology, etc.

The measurement of income and employment presupposes the choice of an accounting period. To any single firm, the relevant accounting period is Keynes' "production period" (XIV: 179). Employment and expected income (*ex ante*) are simultaneously determined. At the end of the period, it is possible to compare expectations to results, e.g. income (*ex post*) and profits. In the light of this comparison, production decisions and competitive strategies may be reassessed.

The definition of an accounting period to be used in aggregate income and employment analysis is a subtle task. A macroeconomic period can be defined as an arbitrary length of calendar time, as in National Accounts systems

i.e., realised results as distinct from effective demand, only exists for entrepreneurs" (XIV: 180; see also XIII: 424-425); profits can only be calculated in the end of the production period, taking into account costs, proceeds and (according to chapter 6 of the General Theory) the estimated value of capital equipment (the value of the stock of finished goods, for instance, is prone to significant fluctuations). If capitalist consumption depends, to some extent, on current profits, aggregate consumption cannot be inferred from current employment.

³³ For some authors, portfolio theory has to do only with liquid assets; allowance made for the specificity of the many existing assets (liquidity premium, etc.), I see no reason for not adopting a wider definition to represent Keynes' intentions.

34. An alternative, embraced by Keynes (and by Keynesian tradition), consists in the adoption of a "theoretical" definition, according to which the period comprises the "logical" time which is necessary for some "processes" to work out. For Keynes (at least in chapter 3 of the *General Theory*), the macroeconomic period begins with the determination of aggregate employment; it ends with the attainment of macroeconomic equilibrium³⁵.

The beginning of the period seems to be a point in time³⁶. There is a point on the aggregate supply curve at which entrepreneurs expect to maximize their profits. In the simplest formulation of the model, this "initializing point" is, by assumption, the "point of effective demand", if one defines the later as the point at which short-period expectations are fulfilled³⁷. In this "*model of static equilibrium*", "*the system moves instantly to the point of effective demand*" (Kregel, 1976: 214). It is not clear whether the same applies to aggregate income (since production periods are different and some delay between income and expenditure should be expected). Anyway, this is made irrelevant by the basic assumption: only the initial instant of the macroeconomic period matters, for it is then that production decisions are taken and their effects begin to work out.

In the absence of a hypothesis of preconconciliation, it must be stated that, in general (even from a theoretical standpoint), the "initializing point"³⁸ does not

34 This option, in my opinion, does not prevent theoretical work, and offers advantages which may compensate for the loss of (possibly dangerous) precision.

35 In some of the drafts of the *General Theory*, Keynes used the microeconomic production period as the macroeconomic accounting period (XXIX: 63-65). This approach seems to require some bold assumptions, such as the existence of a single firm in the whole economy (Asimakopulos sees traces of this assumption in the *General Theory*) or that all production periods are equal and synchronized.

36 To make sense of this, a simplifying assumption is required: all production decisions are taken simultaneously (Possas, 1987: 78n). There is a never-ending discussion on the correct specification of aggregate supply and demand curves which will not be summarized here. See, for instance, Casarosa (1981)

37 This idiosyncratic and awkward definition of effective demand was regretted by Hawtrey, who also noticed the ambivalent usage Keynes made of it (e.g. XIII: 596-597). It seems that Keynes only admitted the ambivalence in his exchange with Robertson after the publication of the *General Theory* (XIV: 95).

38 Which Chick (1983) and Asimakopulos (1982) call the point of effective demand...

coincide with the "effective demand point". Forecast errors, so far as they affect short-term expectations (G.T.: 47), will generate some kind of dynamic process which, of course, cannot be assumed to be instantaneous. In fact, in the *General Theory*, it is not. What Keynes does assume is that such process converges towards the point of effective demand. The eventual attainment of it marks the end of the macroeconomic period ³⁹.

It seems that it is the property of this point of somehow being a "centre of gravity" that renders macroeconomic equilibrium "stable" (see Asimakopulos, 1982: 32). Keynes apparently assumes that the "forces determining the position of equilibrium" are not affected by the "higgling of the market", i.e., the process of "trial and error" (XIV: 182) by means of which entrepreneurs discover where the position is. Thus, the point of effective demand is assumed to be stable in regard to expectations (and all kinds of decisions) respecting production, costs, prices and stocks ⁴⁰. In this case, the "fundamental psychological law" that rules consumption becomes the sufficient condition for the dynamic stability of the system ⁴¹ (although this system is "structurally unstable"; see Vercelli, 1983 and 1991). The model becomes similar to Kregel's "model of stationary equilibrium".

³⁹ Cf. Asimakopulos (1991: 5). The adjustment process might, perhaps, be described by means of a series of comparisons between a fixed point of effective demand and an indeterminate number of income levels. It is immaterial, to the present discussion, whether these income levels can be defined in a precise way (probably not), so as to define sub-periods in the path towards equilibrium.

⁴⁰ "For, it would all come to exactly the same thing if one were to suppose that the decisions of employers were not brought about by any rational attempt to foresee on the lines I indicate, but merely functioned by modifications at short intervals solely based on the method of trial and error. For, the method of trial and error would lead to exactly the same results" (XIII: 603). For Kregel (1976: 215), in the "model of shifting equilibrium" - "Keynes's complete dynamic model" - disappointment of short-period expectations may cause changes in the point of effective demand. However, in spite of the plausibility of such kind of interaction, textual evidence of it can hardly be found in Keynes.

⁴¹ At least in so far as the theory encapsulates itself in a single macroeconomic period (and refrains from examining the possible connections between macroeconomic periods, for instance, through a theory of long-term expectations and investment).

Keynes' confidence in the stability of the point of effective demand perhaps may explain the virtual disappearance of supply-side concerns after chapter 5 ⁴² (the same applies to the aggregate demand and supply approach Post Keynesian economists have been trying to preserve) ⁴³. It should be noticed that, for Keynes, that stability appears to be a property of the real world ⁴⁴ (at least a good approximation to it), and as such, can be included in the theoretical model without further caution ⁴⁵.

In the process of writing the *General Theory*, Keynes had come to grips with a "contraption of formulas of processes of all sorts of lengths depending on technical factors" (XIV: 180). In the *General Theory*, the Gordian knot is bypassed (rather than really cut) with a (great) help from a (dubious) friend: the

⁴² In chapter 5, a kind of simple adaptive expectations mechanism is assumed, so far as short-term expectations are concerned. In the beginning of book III, the relevance of supply considerations is dismissed once more: the aggregate supply function, "which depends in the main on the physical conditions of supply, involves few considerations which are not already familiar" (G.T.: 89). However, the specification of these conditions is merely one aspect of the characterization of (different) market structures and competitive strategies! Would it be too unfair to point out that, investment decisions apart, Keynes' firms seem to operate in conditions of "procedural certainty"? (Dosi & Egidi, 1991: 149)

⁴³ That "confidence" probably explains why Keynes claims "to have shown (...) what determines the volume of employment at any time" (G.T.: 313, my emphasis); this only makes sense if one assumes that differences between the employment at any time and the equilibrium employment are irrelevant (see Asimakopulos, 1991: 5).

⁴⁴ In a letter to Hawtrey, Keynes writes: "You are usually concerned with the higgling of the market, the short-time lags lasting a few weeks during which everybody is discovering what the demand really is; whereas I am concerned with the forces determining the demand, i.e., the forces which are pretty soon discovered by the higgling of the market, and I am not much interested myself in the brief intermediate period during which the higgling of the market is discovering the facts" (XIV: 27; emphasis added).

⁴⁵ For Kregel, the convergent character of the process of trial and error is essentially an analytical device; however, he also recognizes that "Keynes seemed to believe that it was not too far removed from reality to assume (...) that the system could shift along the aggregate supply and demand curves groping for the point of effective demand without the curves bodily shifting due to a change in expectations" (Kregel, 1976: 224, my emphasis). The verb "to grope" conveys the precise meaning of the process depicted: this really is the Keynesian counterpart of Walrasian *tâtonnement*!

comparative statics method. But, as Vercelli (1991: 32) emphasizes, the conditions for a "*correct use of comparative statics*" are rather demanding. Besides dynamic stability and rapidity of convergence ⁴⁶, absence of path dependence and absence of indeterminacy are required. Should we be convinced that these conditions are self-evident truths?

Now, the "*forces determining the position of equilibrium*" are neither immutable nor "*violently unstable*" (G.T.: 249). The independent variables referred to in chapter 18 are likely to change, changing with them the point of effective demand. It seems that, for Keynes, these changes are usually not significant enough to rule out convergence towards short-period equilibrium. However, they tend to prevent the economy from reaching the long-period employment (G.T.: 48; see Asimakopulos, 1991). Furthermore, these changes imply that the long run tendency of a capitalist economy cannot be stated by economic theory: "*a final position of equilibrium (...) does not properly exist*" (XXIX: 222) ⁴⁷. Assuming, for the moment, that this was the most appropriate course, it may be interesting to ponder upon the way Keynes depicted the action of these more fundamental "*forces*".

⁴⁶ "Even if the equilibrium were stable, comparative statics would have little meaning if the convergence towards equilibrium, after a change in one or more parameters, were not fast enough to justify the assumption that the system would be sufficiently near equilibrium before there was another change in the parameters" (Vercelli, 1991: 32).

⁴⁷ On the difference between long run and long period, see Carvalho (1990).

4. More equilibria: Investment and the multiplier

Adopting the "reverse order" suggested in chapter 18, one must begin by investment decisions, which are the "*causa causans*" in the determination of aggregate output. In chapter 7, investment is defined as the "*increment of capital equipment, whether it consists of fixed capital, working capital or liquid capital*" (G.T.: 75). Yet its meaning seems to be henceforth restricted to changes in fixed capital ⁴⁸; in chapter 11, for instance, Keynes seems to be referring to a long-lived asset, whose expected profitability depends on long-term expectations.

In chapter 11, the determination of investment is presented in an oversimplified manner: the state of long-term expectations and the interest rate are both the necessary and sufficient conditions required. Besides fixed capital, money and bonds, no other asset is present. "Given" investment, one may concentrate on the multiplier process; given the consumption function, aggregate income is also determined. Everything happens as though there were an "investment period", at the end of which a "multiplier period" could begin. All in all, the model results very similar to its 45° cross "bastard" version.

A rather more sophisticated approach can be constructed on the basis of chapters 12 and 17, where a masterly cornerstone to portfolio theory can be found. But the achievements are damaged by a sort of "aggregation anxiety" ⁴⁹. Keynes seems to be eager to get rid of preliminary and microeconomic concerns and to concentrate on the determination of aggregate investment. To this respect, Keynes attempts to show that the decisions of wealth-owners about the purchase of assets cause changes in market prices ⁵⁰ until that, from the standpoint of the

⁴⁸ Although many times Keynes gives it a very loose meaning; in chapter 12, for example, it includes the purchase of Stock Exchange securities (Kahn, 1984: 150).

⁴⁹ Which is, by the way, pervasive in the *General Theory*. Even the principle of effective demand is better understood when defined in microeconomic terms, as can be seen in Possas & Baltar (1981) and Possas (1987: 50-72).

⁵⁰ The effect of the "*pressure on the facilities*" for producing a certain capital asset, which results from the increased investment in it "*during any period of time*", will "*cause its supply price to increase*"; this is "*the more important*" factor "*in producing*

"*marginal investor*", there is no asset with marginal efficiency higher than the interest rate. When it happens, there is a set of relative market asset prices in the face of which all wealth-owners will have taken their "investment" decisions and will be satisfied with the composition of their portfolios. In other words, the "investment period" will have come to an end ⁵¹.

On the other hand, there is the well known conceptual experiment represented by the multiplier story: initially, the community is on a point of the aggregate consumption function; macroeconomic equilibrium is then disturbed by a change in investment, which will eventually produce a multiplied change in aggregate income. There is no proper passage of time; seemingly it is assumed that to focus on what happens before the predetermined final equilibrium is achieved (let alone to discuss what is necessary for it to be achieved) is not really important.

In chapter 18, Keynes allows for a more complex interaction between aggregate investment and the multiplier process, during which there are changes in real income and in prices; these affect interest rates which, in turn, affect the "equilibrium position" (presumably through investment) ⁵². If the "literary" model of chapter 18 is to be made linked with the point of effective demand of

equilibrium in the short run". The fall in prospective yields becomes more important "the longer the period in view" (G.T.: 136; my emphasis). It thus appears that Keynes' portfolio theory requires the passage of time. Then, what rules the portfolio decision of a single agent in a point of time?

⁵¹ "Equilibrium requires (...) that the prices of different kinds of assets (...) must move until their marginal efficiencies (...) are equal" (Keynes, 1937a: 107). "Clearly in equilibrium these two alternatives [the owner of wealth can lend his money or buy some kind of capital asset] must offer an equal advantage to the marginal investor in each of them. This is brought about by shifts in the money prices of capital assets relative to the prices of money loans. The prices of capital assets move until (...) they offer an equal apparent advantage to the marginal investor who is wavering between one kind of investment and another" (Keynes, 1937b: 117).

⁵² According to Pasinetti, "what this theory requires, as far as the rate of interest is concerned, is not that the rate of interest is determined by liquidity preference, but that it is determined exogenously with respect to the income generation process" (Pasinetti, 1974: 47). But, evidently, that is not what Keynes does in chapter 18.

chapter 3, the later will inevitably bear a considerable resemblance to the point in which IS and LM curves cross ⁵³.

Leaving aside the discussion of its similarities with IS-LM model ⁵⁴, it is undeniable that this "schematism" (as Keynes calls it) has proved a useful guide to our "practical intuition" (G.T.: 249). Yet, that does not mean Post Keynesians must refrain from making its special assumptions and limits explicit, and from experiencing different paths, instead of sticking to "what Keynes really meant" ⁵⁵. Keynes' own reformist vein (or "skepticism toward institutions") should help us to perceive that his theory cannot be the "best of all possible theories"...

⁵³ It may be argued that Hicks considered prices as given; yet, it is not difficult to allow for prices determined according to neoclassical theories of perfect competition and monopoly (see Davidson and Smolensky, 1964). Neither is it impossible to incorporate shifts in LM curve due to the working of the finance motive.

⁵⁴ The possible conclusion that the IS-LM model is not as "bastard" as is normally supposed to be (already suggested by Keynes' correspondence with Hicks), has at least the virtue of questioning Samuelson' famous and frivolous remarks that Keynes did not clearly understand his own analysis (Samuelson, 1946). Anyway, I agree with Greenwald and Stiglitz's contention that "*It is a matter for regret that Keynes' summary of his argument in chapter 18 of the General Theory, and the formal modelling of Keynes' thinking by many latter writers, relied so much upon the neoclassical and Marshallian tools which then, as now, were the style of the day. A much richer picture emerges from the General Theory taken as a whole*" (Greenwald & Stiglitz, 1987: 127). That article seems to have motivated an answer by Ambrosi (1989-90) which, although correctly stressing important differences between Keynes and the Arrow-Debreu model, does not really deal with the pitfalls of Keynes' analysis discussed by Greenwald and Stiglitz.

⁵⁵ To put it differently, it seems to me that Post Keynesian literature shows a kind of imbalance, being too much concerned with the discussion of the "meaning" to the detriment of the discussion of the "significance" of Keynes's contribution. The first one has to do with "interpretation" whereas the second with "application". According to Gerrard, the "*significance of Keynesian economics depends on its ability to provide an understanding of how the economy actually works. The significance of Keynesian economics does not depend on being the economics of Keynes. What Keynes himself believed is a question for historians of economic thought, not for macroeconomists. This is not to say that interpretation is unimportant; quite the opposite. Rather the point is that the usefulness of an interpretation depends on its ability to generate a better understanding of economic behaviour*" (Gerrard, 1991: 287).

It seems to me that Keynes, perhaps unfortunately, stops short of a complete portfolio theory, and yet he goes beyond what would seem to be safe in his attempt to determine aggregate investment in a precise way. In my view, a portfolio theory should, first of all, deal with the definition, by one single agent, of the desired portfolio composition, i.e., that which maximizes expected profitability of the whole portfolio. There is a previous mental (rather than market) process which must take into account agent's expectations about the decisions which are being (and will be) taken by other agents. Portfolio calculations will reflect expected yields of assets (liquidity premium included), their market prices (already known or simply expected), and a complex Kaleckian/Keynesian uncertainty/risk factor ⁵⁶. At the margin, when the calculation process is complete, the investor will be indifferent as to the various assets. Each investor is supposed to reach his own (subjective and unstable) set of "relative demand prices", which is consistent with his desired portfolio composition. A second step would be the discussion of interaction between many agents. Their attempts to realize their planned portfolio operations create (continually) market processes which alter income flows, prices, information stock and expectations; plans may be frustrated (for instance, if a desired asset cannot be bought at the expected price), previous decisions are re-examined.

⁵⁶ That is to say, allowance must be made, firstly, to entrepreneur's doubt "*as to the probability of his actually earning the prospective yield for which he hopes*" (G.T.: 144); in chapter 17, the concept of risk seems to be referred to the confidence with which expectations are held (G.T.: 240). Secondly, on the other hand, Kalecki's "*increasing risk principle*" (1954: ch. 8) should be generalized (for it was originally meant to refer only to investment decisions on fixed capital) and thus incorporated: the demand price of an asset is not independent of the already possessed quantities of this asset (or of similar assets) in the portfolio. In the case of productive assets, an increasing number means, at least beyond some point, decreasing expected quasi-rents, owing to limited market demand for the goods such assets help to produce. Besides, given confidence in expectations, an increasing number of any asset implies increasing risk of capital loss in the case of disappointment. Finally, in some cases, large operations with an asset may cause undesired fluctuations in its supply, demand or market prices. (See Possas, 1987, Licha, 1991 and Macedo e Silva, 1992: chs. 8 and 9.)

Throughout this interacting process, individual decisions add up to aggregate investment for some period of time.

It should be obvious that, in the real world, the equality between all marginal efficiencies is never achieved, since real competition, working itself out on "Marxian" (or "Schumpeterian") grounds ⁵⁷, is a never-ending process of "creative destruction" through which asymmetries are continually emerging; the possible (but not probable) attainment of "equilibrium" by a single agent may amount to "disequilibria" of others. The prevalence of the adjustment aspect of competition postulated in orthodox theories does not fit the real world. Thus, one could ask whether economic theory should not proceed without this "scientific fiction" and whether such fiction is an adequate methodological reference to a non-ergodic economic world.

A similar questioning may be raised with regard to the multiplier. According to Keynes, it "*establishes a precise relationship between aggregate employment and income and the rate of investment*" (G.T.: 113). But this relationship may be too precise to be taken at its face value. A less precise (but much richer) picture emerges if comparative statics is abandoned in favour of an interpretation concerned with the microeconomic aspects that condition the dynamic process. Identical changes in autonomous expenditure may give rise to very different paths, as for the timing of the process and as for the distribution of induced changes between prices and quantities. A brief list of relevant factors would include: correctness of short term expectations in the productive chains actually affected; the state of current vis-à-vis desired inventory levels ⁵⁸; the

⁵⁷ Yet, there is a still simpler reason: in the real world, time is historical; in Keynes' portfolio theory, it is logical time, in which every process that may disturb the attainment of the results predicted by comparative statics is assumed away.

⁵⁸ If decisions concerning stocks are to be seriously considered, the market process of trial-and-error is likely to affect the point of effective demand; the disappointment of short-term expectations will originate unintended stock changes, the effect of which on production will be influenced by possible changes in the desired level of stocks. User cost is another factor that is likely to produce path-dependence, for changes in the expectations on which it is based will alter supply functions. Recent attempts to retrieve this concept from oblivion can be found in Kandir (1989) and Licha (1989).

impact of demand changes on flexprices, which depends on the prevailing state of business affairs, as well as on expectations; the ability of producers in fixprice markets to adjust prices after changes in costs; the length of production periods 59.

Independently of further criticism on the simplistic approach to consumption adopted in the *General Theory* (but see Keynes' remarks in his 1937 lecture notes), the microeconomic elements just mentioned represent a caveat on the traditional use of the multiplier in the determination of aggregate income. It is impossible to establish, in a general and theoretical way, the impact of expenditure changes on prices and quantities, as well as the period of time which is necessary for fulfilment of the effect (Possas, 1987: 88) 60. The multiplier story ignores the dynamics of the different markets and of short-term expectations. In chapter 10 of the *General Theory*, there are some cursory remarks about multiplier dynamics; in textbooks, this dynamics is reduced to the mechanistic development of a geometric progression 61.

The case for such attempt is strengthened in conditions of exchange-rate instability and in conditions of high inflation.

59 In Vercelli's terms, I am suggesting that the analysis of the "structural instability" of capitalist economies should not be restricted to the analysis of long-term expectations and liquidity preference (see Vercelli, 1991: chapters 3, 11 and 13).

60 If the macroeconomic period is made to depend on the multiplier effect, it should be admitted that macroeconomic periods may have different lengths...

61 Joan Robinson states that "the concept of equilibrium (...) is an indispensable tool of analysis". It may well be. However, in my view, owing to the "irresistible attraction about the concept", it is very difficult to "keep it in its place", which is (or should be) "strictly in the preliminary stages of an analytical argument" (Robinson, 1962: 78).

5. Equilibrium in the Neoclassical Synthesis and in Keynes: a final account

In order to define equilibrium states, it is necessary to ignore important aspects of interaction processes between agents. Consequently, convergence towards equilibrium is not, normally, demonstrated. Rather, it is postulated - it then becomes an act of faith. To determine the conditions of existence of (one or more than one) equilibrium - and not to explain how the system moves (assuming or, preferably, not assuming the existence of some centre of gravity) - continues to be the main objective of economic theory, as much in Keynes as in the IS-LM model ⁶².

In chapter 18 and in the IS-LM model, a sort of equilibrium is achieved with given wages. What about the effect of unemployment on wages and prices? Of course chapter 19 represents a most valuable attempt to surpass the static frame of analysis. But I think it came too late ⁶³. Economists were entitled to analyse the effect of falling nominal wages within the same equilibrist theoretical framework. Is the capitalist economy "*inconsistent*" (Patinkin, 1948: 252), that is to say, did Keynes prove that a level of wages and prices low enough to assure full employment does not exist? This was the question posed by Pigou, Modigliani, Patinkin, Tobin, among others. Keynes' comparative static analysis

⁶² In Kohn's words, "*The adoption of the equilibrium method was both the strength of the General Theory and its weakness. On the one hand, it gave Keynes's message the power and simplicity it needed to supplant the classical verities in the textbooks and to influence the making of policy. On the other, the internal contradictions of the General Theory - for the anti-classical message cannot be expressed in a logically consistent and nontrivial way using the equilibrium method - led to a nightmare of confusion among professional economists from which we are only now beginning to emerge*" (Kohn, 1986: 1192). In my opinion the statement is correct. However, I strongly disagree with Kohn's ultimate reasoning, which is completely orthodox: for him, the *General Theory* is a particular case of neoclassical monetary analysis, the resurgence of which is to be welcomed; its aim is to deal with the stability of equilibrium, the nature of which is properly analysed by general equilibrium theory.

⁶³ And, with the notable exception of Patinkin, it took decades to be rediscovered by mainstream economists.

suited their concerns perfectly well, and was interpreted as a useful "*lowbrow general equilibrium theory*" (Tobin, 1986: 349), to be substituted for the "*cumbersome*" (in Patinkin and Modigliani's wording) Walrasian model. The equilibrist questions called for (neoclassical) equilibrist answers, such as the Keynes-effect (Modigliani, 1944), the Pigou-effect (Patinkin, 1948), and the less often mentioned effect of falling wages on the choice of techniques (Tobin, 1941 and 1947). If underemployment equilibrium is a sort of Marshallian short-period equilibrium, why not to define a "real" long-period equilibrium? Neoclassical Synthesis' full-employment equilibrium, at least for Patinkin, is not a long-run result. Rather it is a theoretical long-period situation ⁶⁴. And, from an equilibrist neoclassical viewpoint, it can be claimed to be more general than Keynes' long-period employment ⁶⁵, since it allows for nominal wage changes.

The methodological continuity, so far as the equilibrium method is concerned, between Neoclassical Economics, Keynes, Hicks and the Neoclassical Synthesis, contributed to the victory, from the theoretical standpoint

⁶⁴ "But in the real world in which we live, price flexibility with a constant stock of money might generate full employment only after a long period; or might even lead to a deflationary spiral or continuous unemployment" (Patinkin, 1948: 278). "The existence of a consistent equilibrium position for the static system is a necessary but not a sufficient condition for the elimination of involuntary action within the economy (...) in certain cases it may be that, due to dynamic expectation factors, no matter how far the price level and interest rate falls, it is impossible to shift the expenditure function back to its position [consistent with full employment]. Under these assumptions we may continue to have involuntary action within the system for an indefinitely long period" (Patinkin, 1949: 382-3).

⁶⁵ Keynes' analysis in chapter 19, as well as his remarks on the stabilizing character of sticky nominal wages, are neglected, as elements which do not belong to the core of the model (and are pertinent to ad hoc short-period analysis only), or simply ignored. Hahn has been one of the outstanding exceptions in the mainstream field, either in denying that Keynes' analysis depends on rigid wages (Hahn, 1975) or in emphasizing the relevance of dynamics: "Money wages will not fall in a co-ordinated way and the process will involve changes in relative prices and relative wages and so in allocations. Expectations enter the story in an important but uncertain way. The nominal interest rate will also take time to adjust and may not do so monotonically. A prevailing expectation of falling prices may, for a time, discourage investment. In short, there is a complex and not well understood process to be examined" (Hahn, 1982: 318-9). See also Tobin (1977).

(Leijonhufvud, 1968: 7), of neoclassical "real analysis". The idea that dynamic concerns only become important after a well-behaved short-period theory is settled thus seems to be seriously misleading.

In short, Keynesians, as Keynes himself, let themselves be imprisoned in a neoclassical "equilibrium trap". This trap consisted in framing the debate as one concerned with macroeconomic equilibrium theorems. But this need not be the Keynesian battlefield - even if Keynes himself had no other option. Indeed, it must not. Involuntary unemployment is important because it may be lasting in calendar time, regardless of being some kind of "equilibrium". It may be cyclical⁶⁶ and yet permanent to some extent, for there is no reason to believe on a *a priori* basis that it tends to be averaged out. It surely represents "disequilibrium", from the standpoint of those unemployed, and yet this fact does not mean that market processes tend to produce equilibrium. Agents in disequilibrium may well produce, through their actions, more disequilibrium, or different kinds of disequilibrium⁶⁷. The apparently common sense orthodox assertion that "*private market manages to exhaust trades that are to the perceived mutual advantage of the exchanging parties*" (Barro, 1979: 56) is just an act-of-faith! Neoclassical

⁶⁶ "The underemployment equilibrium of the standard interpretation of Keynes's theory is not really an equilibrium. It is a transitory state following a debt deflation and a deep depression" (Minsky, 1986: 176). I suppose that, for Minsky, what is "transitory" is the particular state of the economy (actual rate of unemployment, etc.) and not necessarily the existence of involuntary unemployment.

⁶⁷ I therefore disagree with Vercelli's opinion that "As long as deviations from classical equilibrium can be interpreted as disequilibrium positions, their importance may be doubted because of their more transitory nature relative to the equilibrium position (...) Thus Keynes realizes that the phenomenon of persistent unemployment, if it is to be taken seriously, must be considered as an equilibrium phenomenon" (Vercelli, 1991: 225). If the theory abandons its usual presumptions about the existence of centres of gravity, disequilibrium states need no longer to be cease to be viewed as necessarily transitory. Or, to quote Lawson (1985: 922): "(...) the picture which emerges is not one of disequilibrium - deviations about some notional or 'long-run' norm equilibrium position. Rather it is an essentially non-equilibrium view, which presupposes periods of stability but also sharp breaks".

economists just happen to believe it, but nevertheless theirs is the burden of proof that existence theorems for equilibrium positions may be meaningful ⁶⁸.

The adoption of the equilibrium method ⁶⁹ may well have been responsible for the success of Keynes' critique of *laissez-faire*; after all, it took more than 30 years for *laissez-faire* enthusiasts to recoup a hegemony that, nowadays, seems to be at stake once more. And it is even doubtful whether Keynes would have been disappointed, since his ultimate aim was not academic applause, but the defence of "*enlargement of the functions of government*" as

"the only practicable means of avoiding the destruction of existing economic forms (...) and as the condition of the successful functioning of individual initiative" (G.T.: 380).

The "*final task*" of his theory was accomplished, since the variables to be "*controlled and managed by central authorities*" were surely identified ⁷⁰. However, this should not be enough for all those who (still) strive for a more radical reconstruction of economic theory. One of the objectives of this article was to show that, besides many misinterpretations of Keynes' work, the present state of affairs is the consequence of some features of his theory. It follows that

⁶⁸ Anti-Keynesian arguments, Tobin (1977: 461) writes, "*are all inspired by faith that the economy can never be very far from equilibrium. Markets work, excess supplies and demands are eliminated, people always make any and all deals which would move all parties to preferred positions*". I have tried to show that partial criticism of this conception may have the effect of an insufficient dose of antibiotic: infection will come back with double strength. To use a different metaphor, my suspicion is that any moderate equilibrist church is always prone to be taken by assault by more radical (general equilibrium) sects.

⁶⁹ Kregel (1976: 222) argues that there are significant differences between Keynes' equilibrium approach (more akin to Marshallian method) and Walrasian method, and he is certainly right in stressing this point. However, it may also be argued that the common neoclassical nature of both facilitated the translation of Keynes into Walrasian terms.

⁷⁰ This may, incidentally, help to explain Keynes' famous comments about IS-LM model (XIV: 79); many of his "*comparatively simple fundamental ideas*" (XIV: 111), especially if one is concerned with economic policy, are embodied in Hicks's "*little apparatus*".

exegetical disputes, however important, are not enough ⁷¹, and that Keynes' genius would be better honoured by an effort to surpass his own limitations - which, to a good extent, were tactical and dated - than by attempting at a thorough defence of his work ⁷².

Joan Robinson states that Keynesian revolution, "*on the plane of theory, (...) lay in the change from the conception of equilibrium to the conception of history*" (Robinson, 1973: 125). I think this is a proper description of what should be done, rather than of something already achieved ⁷³.

As indicated in this paper, it may be worth taking some roads "*less travelled by*". It seems to me that Keynes' theory is rich enough to develop more dynamic approaches, which should endeavour to incorporate the contributions of such dynamic theorists as Kalecki and Schumpeter. On the other hand, a bit of Schumpeterian misgivings about aggregation would do no harm. Solid Keynesian microeconomic analysis, freed from equilibrist faith, can lead to dynamic macroeconomic theories which, in spite of Keynes apprehensions, may not need to be "*frightfully complicated*" (XIV: 180). It may be necessary to give up precision to some degree - as, for example, in the case of the use of a

⁷¹ For if I am right in stressing the coexistence of revolutionary and conciliatory aspects in Keynes' work, the efficacy of Post Keynesian "*rhetorical exegesis*" (Littleboy, 1990: 14-17) will always be hindered by hard evidence found in Keynes by other interpreters (for an example of sound reasoning on this basis, see for instance Patinkin, 1990). Dispassionate "*archaeological exegesis*" is important, but it has to be differentiated from theoretical research. "*Heuristic exegesis*", which "*views the inherited literature as a quarry to be mined*" (Littleboy, 1990: 16) may help to enlighten what in Keynes' work is to be retained and what is to be discarded. To come back to Gerrard's point, it is not obvious that the "*legitimacy of any particular Keynesian research programme*" should be judged "*with regard to the authenticity of its implied interpretation of Keynes*" (Gerrard, 1991: 276).

⁷² Owing to the important contributions of Davidson and Minsky, among others, the Post Keynesian school does not deserve and should not accept the extremely corrosive flaw of "fundamentalism".

⁷³ Even if it is conceded that Robinson's strictures against the equilibrium method may not sound convincing to Walrasian ears (Weintraub, 1985), they must be considered a fundamental contribution - to Post Keynesian, institutionalist and evolutionist schools

macroeconomic accounting period of arbitrary length. Yet some attempts at precision may be unnecessary or, as Keynes knew it, really dangerous. Following Keynes' advice, Post Keynesianism

"ought not to feel inhibited by a difficulty in making the solution precise. It may be that a part of the error in the classical analysis is due to that attempt. As soon as one is dealing with the influence of expectations and of transitory experience, one is, in the nature of things, outside the realm of the formally exact" (XIV: 2) ⁷⁴.

⁷⁴ This text reflects my concerns with teaching economics. Neoclassical textbooks do not discuss the extremely demanding assumptions that are necessary to assure deterministic results. Furthermore, such results are often presented as if they were undisputed facts discovered by a hard science. Such textbooks instill in students the same sort of "equilibrism vice" that characterizes most of the scientific community. By contrast, I think that approaches based on the historical conception of time should be the starting point of the learning process; particularly introductory textbooks should handle equilibrium concepts with the utmost care, discarding equilibrism presumptions (let alone "syntactic" equilibrium concepts). I myself have been engaged in writing a textbook conceived as a non-equilibrism introduction to macroeconomic theory (Macedo e Silva, 1992).

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