1 Introduction: Money, Uncertainty and Time

This book starts from a simple observation, namely that Keynesian economics, broadly defined as the theoretical approach that seeks inspiration in Keynes's writings, has made important contributions to the economics discipline, and it remains a driving force in the development of new theories and methods of analysis. For instance, in his Nobel Prize lecture in December 2001, George Akerlof explained that the research programme for which he received the prestigious prize was nothing but the development of behavioural macroeconomics in the original spirit of Keynes's *General Theory* (1936) (Akerlof 2002: 411). He also referred to the diminished authority of Keynesian economics from the late-1960s and 1970s together with the resurgence of classical economics as a significant development in the history of the economics discipline. For all the progress on the microeconomic foundations of price and wage decisions, New Classical macroeconomics failed to account for real-world phenomena such as involuntary unemployment and rising income inequalities (see also Stiglitz 2002: 489). Akerlof concludes his review of modern theories that explicitly attempt to provide explanations for, and solutions to, these real-world phenomena, by stating that Keynes's work was a major driving force in the development of New Keynesian theories, and more generally the greatest contribution to behavioural economics before the present era. This profound vitality of Keynesian economics is indicative of the significance of Keynes's insights into the working of modern economies. It confirms the high reference power of economic ideas that have had to face, and consequently be adapted to, a variety of often very different historical circumstances.

The term Keynesian economics has usually been used to label the core theoretical ideas of Keynes's *magnum opus*, *The General Theory of Employment, Interest and Money* (1936), and its policy implications (Eatwell 1987: 46-47, Kregel 1987a). More precisely, Keynesian economics has usually been associated with the tendency to replace changes in the interest rate and other prices, with changes in the level of national income as the main factor of adjustment between investment and saving. In Keynesian analysis, income effects take priority over price changes in the process of formation of the overall level of output and employment. This idea was directly derived from the principle of effective demand, which downplayed the price mechanism, and promoted, *via* the multiplier analysis, the link between autonomous expenditure (e.g. investment) and income. This view leads to the conclusion that in a market economy there is no automatic tendency either in the short or long period[1] ensuring that the level of output corresponds to the full employment level. The economy could thus reach an equilibrium position with output far below capacity.

In terms of policy formation, this means that it should be the responsibility of the government to intervene in the economy by managing, *via* fiscal and monetary policies, a level of aggregate demand that would generate full employment. The distinctive features of Keynesian economics can thus be summarised into three basic propositions (Fontana and Gerrard 2006).

Proposition I (the possibility of involuntary unemployment): the economy does not automatically and effectively self-adjust towards the social macroeconomic optimum.

Proposition II (the principle of effective demand): aggregate demand plays an important role in determining the adjustment path of the economy.

Proposition III (the principle of policy effectiveness): fiscal and monetary policies are effective for determining, under certain circumstances, the level of output and employment in the economy.

Propositions I-III serve two purposes. Firstly, they are useful for defining Keynesian economics *vis-à-vis* neoclassical economics. From this perspective, Keynesian economists are dissenters who question the characteristic neoclassical proposition that market economies automatically self-adjust to the full employment level of output. In neoclassical economics involuntary employment is a logically untenable position (Dixon 2000). Could not unemployed workers obtain a job if only they were willing to reduce their reservation wage? The answer of Keynesian economists to this question is no. Involuntarily unemployed workers are willing to accept, but cannot obtain, jobs identical to those currently held by workers with identical ability. Involuntary unemployment is a meaningful concept, and it gives strength to the principles of effective demand and policy effectiveness.

Secondly, propositions I-III are an effective way to introduce the particular contributions made by different interpreters of Keynesian economics. For instance, the distinct position of the scholars discussed in this book, the Post Keynesian economists, is to accept the possibility of involuntary unemployment (Proposition I), and to argue that aggregate demand affects the adjustment path of the economy, which also impacts on any equilibrium position which may or may not be reached (Proposition II). Furthermore, Post Keynesian economists maintain that aggregate demand has long-run effects on economic activities; hence by managing fiscal and monetary policies, the government can generate a satisfactory level of output and employment (Proposition III). By contrast, New Keynesian economists qualify their interpretations of the Keynesian propositions in terms of the distinction between short-run and long-run models. In the former, New Keynesian economists support Propositions I-III, but in the latter they revert to the neoclassical principle that market economies automatically self-adjust to the full employment level of output. For this reason, New Keynesian economists are usually sceptical about the long-run real effects of changes in the components of aggregate demand, and the role of stabilisation policies, more generally. In brief, propositions I-III serve the dual objectives of broadly defining Keynesian economics *vis-à-vis* neoclassical economics, and of allowing for different interpretations of Keynesian economics. This second objective has an immediate application for the purpose of this introductory chapter, since it helps to explain the fact that the nature of Keynesian dissent has always been a source of debate.

Keynes himself presented the publication of the *General Theory* as a challenge to the economic establishment, a frontal attack on classical theory (Keynes 1935a). However, in the same book Keynes asserts that “if our central controls succeed in establishing an aggregate volume of output corresponding to full employment as nearly as is practicable, the classical theory comes into its own again from this point onwards" (Keynes 1936: 378). This seductive, if arguably contradictory, position towards classical and then neoclassical economics has also been an important feature of the historical development of Keynesian economics. Over the past decades, several economists have claimed to be inspired by Keynes's ideas, but many more have clearly also been so inspired. Several approaches have been put forward claiming to have made important contributions to the development of Keynesian economics. Yet, during this time deep divergences have emerged over the degree to which neoclassical economics must be rejected or extended in order to accommodate the Keynesian propositions I-III.

On one side, it has been argued that the different interpretations of Keynesian economics reflect the evolution of the economic discipline. As the discipline has evolved, the nature of the Keynesian dissent *vis-à-vis* neoclassical economics has changed. On the other side, it has been suggested that the sheer scale and complexity of Keynes's writings explain the emergence of several Keynesian approaches. Different Keynesian scholars have been inspired by different writings and, as in the case of the *General Theory*, even by different chapters of the same work. Whatever the cause, the vigour and changing forms of Keynesian economics are indicative of the high reference power of the three Keynesian propositions. This also means that it is beyond the scope of this book to present and evaluate in any depth the numerous and influential contributions that have usually been associated with Keynesian economics. The objective of the book is indeed more modest. The book looks at a specific research programme within Keynesian economics, namely the Post Keynesian approach. Even with this limitation, the scope of the book would still be vast, so the book mainly aims to provide a coherent framework for assessing recent contributions to the monetary stream of Post Keynesian economics. In the next section some possible reasons for the emergence of several approaches to Keynesian economics are briefly discussed, before concluding with an overview of the book content.

The changing nature of the Keynesian dissent

The nature and origin of the Keynesian dissent *vis-à-vis* neoclassical economics has always been a source of much debate. A common explanation for this debate is the lack of common purpose in Keynesian dissent, which simply illustrates the way in which a discipline like economics evolves over time (e.g. Laidler 1999). According to this evolutionary view, before attaining recognition into mainstream economics, it is obvious that the relationship between any new theory and existing theories needs to be explored. Then, the novelty and importance of the new theory must be conveyed to other practitioners, and finally to policy makers and the public at large. Therefore, in the process of being absorbed into mainstream economics the new theory loses some of its original features, and new attributes are added. From this perspective, it is thus not surprising that Keynesian ideas as represented by propositions I-III have taken on forms that Keynes may have not foreseen, or that he may not have encouraged (see, for a similar conclusion, Coddington 1976). Along these lines, it is also argued that this process of absorption of Keynesian ideas into economics is a dynamic, ever-changing process. In other words, if economics is continually evolving, it is natural that the nature and the forms of dissent within the discipline would also change over time.

However, this book subscribes to the view that there is much more to Keynesian dissent than is allowed by an evolutionary explanation. The "Cambridge-Cambridge

Capital Theory Controversies" over the concepts of aggregate capital and the economic meaning of capital are a case in point. Cohen and Harcourt (2003) have argued that the capital theory controversies highlighted more than the logical problems of using the concept of aggregate capital in price theory. What was really at stake was the problematic issue of different ideologies and visions in economics. How best could the accumulation process in a capitalist society be envisaged and modelled? On one side, there was the Keynesian tradition pointing toward the role of competing social groups in the economic process. This was the world of entrepreneurs and capitalists defining the so-called monetary context of behaviour (Fontana and Gerrard 2002b), in which accumulation, production and exchange activities are undertaken to achieve monetary, not commodity, returns (Keynes's M-C-M′ economy; see Keynes (1979: 81), and related discussion in Chapter 5 below). On the other side, there was the neoclassical tradition of the utility-maximising agent. In the orthodox spirit of this tradition, the capital theory controversies prompted refinements and further amendments to the original price theory.

For the closest colleagues and followers of Keynes the outcome of these controversies called into question the general use of the neoclassical approach to economics. In particular, Joan Robinson lamented that the original purpose of Keynes's work had been completely misunderstood. Keynes had presented the *General Theory* as the final result of a long struggle to escape from the old neoclassical modes of thought and expression (Keynes 1936: xxiii). As Keynes explained in the one-page-long Chapter 1 of the *General Theory*, the fatal flaw of the neoclassical approach lay in the nature of the axioms that were necessary to demonstrate the self-correcting tendency of the economic system. These axioms have been asserted, more often implicitly than explicitly, as universal truths. By contrast, the restricted applicability of these axioms meant that important economic phenomena such as prolonged mass unemployment could not be explained by neoclassical theory. For this reason, Keynes felt the need to develop a less restrictive axiomatic theory of unemployment, namely the *General Theory*.

> I have called this book the *General Theory of Employment, Interest and Money*, placing the emphasis on the prefix *general*. The object of such a title is to contrast the character of my arguments and conclusions with those of the *classical* theory of the subject. … I shall argue that the postulates of the classical theory are applicable to a special case only and not to the general case. … Moreover, the characteristics of the special case assumed by the classical theory happen not to be those of the economic society in which we actually live … (Keynes 1936: 3, italics in the original).

Robinson argued forcefully that what the process of absorption into the mainstream had done was to transform the *General Theory* and related writings into a special case of the general neoclassical theory of employment, interest and money. Keynesian economics had become synonymous with the economics of depressions and equilibrium unemployment. Keynesian economics was simply the application of the general neoclassical theory to the restrictive case of less-than-full-employment equilibrium (Robinson 1971, see also Davidson 1994: 292, Pasinetti 1999: 22).

Another explanation for the lack of commonality in Keynesian dissent is the scale and complexity of Keynes's writings.[2] *The Collected Writings of John Maynard Keynes* number thirty volumes. Moreover, the interpretation of this large number of writings entails a lot of difficulties, not least because of the peculiar tradition of studying economics at Cambridge (UK). Several scholars have often argued that, like many of his Cambridge colleagues, Keynes had a very practical view of economics (Harcourt 1998:

335, see also Kaldor 1982a: 3, Pasinetti 2005). Keynes was mostly concerned with the effective working of actual economic systems within a well-defined institutional structure. His analysis proceeded more on the basis of intuition, rather than of a rigid theoretical system. For the sake of exploring his intuition, Keynes would thus accept established theories, without questioning their fundamental principles, until such questioning would be forced on him by the search for consistency between the established model and his own intuitive reasoning. Therefore, his writings relate sometimes to first principles, sometimes to practical circumstances, and sometimes to both. This multi-dimensional aspect of Keynes's writings has therefore allowed scholars to focus on different parts of his writings or, as is the case of the *General Theory*, on different chapters of the same work. As a result of this heterogeneity of sources, the Keynesian challenge to the classical concept of the invisible hand has assumed a variety of forms and meanings, including *IS-LM* Keynesianism, Disequilibrium Keynesianism, New Keynesianism and Fundamentalist Keynesianism. And it does not stop here. Today, Fundamentalist Keynesianism is called Post Keynesianism, which in a broad definition includes Neo-Ricardian Keynesianism, Kaleckian Keynesianism, Monetary Circuit Keynesianism and, for want of a better name, Non-ergodic/Monetary Keynesianism[3] (Hodgson 1989, King 2003). An example may help to illustrate how the multi-dimensional aspect of Keynes's writings has affected the different nature of these 'Keynesianisms'.

Coddington has used the term "Fundamentalist Keynesianism" to describe the work of Post Keynesian scholars like Joan Robinson and George Shackle, who believed that the analysis of the effects of uncertainty on investment in Chapter 12 of the *General*

Theory was the essence of Keynes's theory (Coddington 1976: 1259-1263). In this case, Coddington is making a dual claim. First, for Post Keynesian economists, the writings of Keynes are related mostly, if not exclusively, to first principles. Secondly, uncertainty is a first principle informing Keynes's dissent against the invisible hand theorem, and hence it represents the guiding principle for the development of the Post Keynesian dissenting view. Other commentators have preferred to underplay the role of first principles, and they have focused on the practical circumstances that have guided some of the most popular writings of Keynes. In particular, it is well known that by the early 1930s Keynes felt that world-wide mass unemployment was a serious and persistent problem in urgent need of a new economic solution. For this purpose, he embarked on the writing of the *General Theory*. The possibility of mass unemployment, now as then, has thus become one of the main features of the Keynesian dissent. As uncontroversial as this proposition could be, it has become a source of great dispute between New Keynesian and Post Keynesian economists. For example, Dixon (2000) describes the New Keynesian dissent in terms of theoretical explanations for the existence in our modern economies of nominal rigidities and less-than-perfect information that give rise to the phenomenon of involuntary unemployment (among other phenomena). According to Dixon, the appeal to the Keynesian result of involuntary unemployment has set the agenda for the New Keynesian dissent. In this sense, whatever the nature of the first principles adopted, New Keynesian scholars believe that the real world keeps on revealing itself more on the side of Keynes, than on the side of neoclassical economics. It may indeed be argued that New Keynesian economics shares the same first principles of neoclassical economics, but it differs from the latter since it considers nominal rigidities and less-than-perfect information as stylized macroeconomic facts in urgent need of (microeconomic) explanations (Rotheim 1998). For this reason, most Post Keynesians have called into question the Keynesian dissent in New Keynesian economics. According to Davidson and Post Keynesian economists more generally, the Keynesian dissent is related to first principles, and therefore the New Keynesian attempt to forge Keynesian results from the axiomatic principles of neoclassical economics is wrong-headed. As Davidson has aptly put it, where is the Keynesian beef in New Keynesian economics (Davidson 1994: 290)? In short, differences over the degree to which neoclassical economics must be rejected or extended in order to accommodate Keynesian ideas can be at least in part explained by the multidimensional aspects of Keynes's writings. Since those writings are related in part to first principles, and in part to practical circumstances, different Keynesian economists have given different weight to these two features in their theories.

This multi-dimensional aspect of Keynes's writings has been a controversial issue not only between different Keynesian schools, but also within some of them. In particular, it has led to the emergence of a variety of theories and methods of analysis within Post Keynesian economics. Coddington has expounded the view that Fundamentalist Keynesians relate Keynes's writings mostly, if not exclusively, to first principles (Coddington 1976). This view is now well accepted by Post Keynesian scholars (e.g. Gerrard 2003). However, what those first principles are, and how they should be used for the development of the Post Keynesian dissent is not yet clear. In particular, are these first principles related to economic theory, methodology or policy issues, or else to all of these facets together? The aim of this book is to provide an answer to these questions by arguing that money, uncertainty and time are three important first principles of Post Keynesian dissent and that these principles are related to economic theory and methodology.

Outline of the book

The book is divided into three main sections. Part I sets the frame of reference for the remaining chapters of the book. It deals with the historical development of Post Keynesian economics and the lessons that can be learned from its successes and failures. In the previous section it has been argued that Keynesian economists are dissenters who question the characteristic classical/neoclassical proposition that market economies automatically self-adjust to the full employment level of output. In Chapter 2 the nature of the Post Keynesian dissent is analysed in its evolution through what have been labelled the 'Romantic Age' and the 'Age of Uncertainty'. The former describes the period of optimism and excitement of the 1960s and 1970s, when Post Keynesian economics was seen as a comprehensive theoretical system alternative to the dominant neoclassical paradigm. The end of this period was marked by an increasing awareness of the importance of the methodological features of the new paradigm. Post Keynesian economics was still viewed as possessing the potential to become an alternative to the dominant paradigm, but the transformation came to be seen more fundamental than initially envisaged. Post Keynesian economics was now an alternative theoretical and methodological approach to neoclassical economics. This awareness of the methodological features of Post Keynesian economics initiated a period of doubt and deep internal divisions, the age of uncertainty, which still exists today. For this reason, Chapter 3 is devoted to the intimate relationship between theory and methodology in economics. It deals with the old debate between Keynes and the 'Classics' and its relevance for modern economics. It is often argued that Keynes and classical economists were saying different things. But how, and why, did Keynes and the 'Classics' say these different things? Chapter 18 of the *General Theory* (Keynes 1936) is used as a case study to provide an answer to this question. From this perspective, Chapter 18 represents much more than the summary of Keynes's theory of employment and output. It re-states an innovative theory of employment and income, together with the original methodology that grounds it.

Part II is concerned with the theoretical elements of the book. It builds on the particular nature of the link between theory and methodology in Keynes and Post Keynesian economics discussed in Part I. It deals with the notions of rationality, probability relations, and knowledge and their applications to the modern Post Keynesian theory of unemployment and the monetary circuit theory. Drawing on Keynes's work, Chapter 4 develops a theory of individual knowledge based on a two-dimensional approach to probability theory, namely probability relations and weight of argument. Probability relations provide a rational assessment of the relative degree of belief attached to alternative propositions, whereas the weight of argument measures the evidential base of these degrees of belief. These two components of probability theory allow for a general theory of individual knowledge, which includes the cases of certainty and risk as well as the case of uncertainty. Chapter 5 uses this original general theory of individual knowledge to enrich the theory of unemployment and the monetary circuit theory in Post Keynesian economics. When the evidential base of the degrees of belief is inconclusive, a probability relation cannot be conceived. This means that there is nothing to guide individuals in their practical decision-making. This describes the notion of uncertainty on which it is grounded the demand for a liquid store of wealth. In these circumstances money becomes a bottomless sink of purchasing power, with the result that the economic system may settle in equilibrium at a level that falls a long way short of generating full employment. Similarly, when there is some evidential base of the degrees of belief, a probability relation can be conceived. However, given the incompleteness of the evidential base, this means that the probability relation is an unreliable guide to decision-making. This describes a different, but not less important, notion of uncertainty. In this case uncertainty is related to the existence of institutions, contracts and a final means of payment that helps to meet and alleviate the problems of exchanging goods and services, when agents face the genuine possibility of defaulting on their obligations. In other words, money, contracts and institutions defines the context of modern production and speculative processes.

Finally, Part III applies the set of ideas and notions discussed in Part II to the modern debate on the endogenous money theory. It is concerned with the vagueness of human knowledge, the organic nature of economic phenomena, and their significance for the use of dynamic methods in monetary theory. It deals with the horizontalist and the structuralist analyses of endogenous money and the possibility of encompassing these analyses into a more general theory. In Chapter 6 some of the writings on money and time of the early Hicks, as well as of the late and more critical Hicks, are discussed. In particular, it is explored the original distinction between a single period theory and a continuation theory. The former aims at simple and stable relationships that may be obscured, or at best difficult to disentangle, once all the complexities of the modern monetary economies are considered. A single period analysis is based on the simplifying assumption that within the period considered agents hold constant expectations. This assumption helps to interpret real causal structures as temporally stable, though not inherently predictable, and in this way it helps detecting mechanisms and tendencies regulating actual events. A continuation theory is the natural complement to a single period theory. It is concerned with the effects of the events of a single period upon expectations and plans, that themselves determine the events of successive single periods. In other words, a continuation theory is the study of linkages between single periods. This original methodological distinction is used in Chapter 8 to analyse the most prominent and often controversial features of the modern endogenous money theory, namely the debit-credit nature of modern money, the role of the banking system in the production and accumulation process, and the origin of recent financial innovations. An overview of the modern endogenous money theory is provided in Chapter 7. The chapter starts with an analysis of the horizontalist (also called accommodationist) approach, which historically represents the first wave of modern contributions to endogenous money theory. The horizontalist analysis is grounded on two tenets, namely that "loans create deposits", and "deposits generate reserves". These two tenets are explored through an analysis of the balance sheets of commercial banks and the central bank. Next, it follows a discussion of the structuralist analysis, which has clarified and refined some features of the horizontalist analysis. In the perspective defended in this book, the structuralist analysis is in fact a natural development of the early horizontalist theory of endogenous money. The structuralist analysis retains the above-stated two original tenets of endogenous money theory, but these tenets are now interpreted in the light of a more explicit consideration of the liquidity preference of the agents involved in the money supply process, namely households, firms, commercial banks and the central bank. The complementary nature of the horizontalist and the structuralist analyses of endogenous money are further explored, with the help of an original four-panel diagram, in Chapter 8. As mentioned above, the methodological distinction between a single period analysis and a continuation analysis introduced in Chapter 6 is now used to lend support to the argument that the horizontalist and the structuralist analyses can be encompassed into a more general theory of endogenous money. From this perspective, the current disagreements between horizontalists and structuralists arise from the particular assumptions made about the general state of expectations of economic agents. Horizontalists rely upon a single period analysis that is built on the assumption that the state of expectations of all agents involved in the money supply process is constant. This assumption allows the specification of stable functional relationships that continuously changing expectations would make very laborious to specify. On the other hand, structuralists depend on a continuation framework that explicitly takes account of the fact that the state of expectations of agents may change in the light of realised events. In this way, structuralists are able to tackle controversial issues related to shifting monetary policies, the liquidity preference of banks, and the loans-deposits nexus that are overlooked by horizontalists. Whether the horizontalist analysis or the structuralist analysis is more useful or relevant depends on the purpose of the analysis, and which assumption about the general state of expectations of economic agents is more realistic in the situation analysed. In other words, it is perfectly proper, and in fact recommended, to use say the horizontalist analysis to study the reserve market in reasonably stable economic and financial conditions, and the structuralist analysis when conditions are unstable and continuously changing.

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[1] This book does not distinguish between short-run and short-period (or similarly long-run and long-period), though consistency with English language and the Marshallian tradition of studying economics in Cambridge (UK) would require to use 'run' for an historical interval of time, and 'period' for an analytical interval of time (Marshall 1890: 363-380): " 'period' is an analytical concept where the economist is in control of what may vary and what is locked up, at least provisionally, in the *ceteris paribus* pound; 'run' by contrast, is an historical concept where whatever is either changing or constant in a given situation is an historical outcome" (Harcourt 2006: 62(6)). In accordance with modern practice, in this book short-run and long-run refer to the analytical intervals of time (however see, on the risks of this modern practice, Panico and Petri 1987).

[2] It cannot be excluded that a further cause for the lack of commonality in Keynesian dissent is the natural ambiguity that results from the development of Keynes's own ideas over time.

[3] By Non-ergodic/Monetary Keynesianism it is meant the work of those Post Keynesians like Victoria Chick, Paul Davidson and Jan Kregel who have considered Keynes's insights on money and uncertainty as major contributions to economic theory (see, for example, Davidson 1972, Chick 1983, and Kregel 1987b). It is this monetary stream of Post Keynesian economics that is the major focus of this book. On the "ergodic hypothesis" and "non-ergodic hypothesis", see Samuelson (1968: 11-12) and Davidson (1982-83), respectively.