

# THE FUTURE OF POST KEYNESIAN ECONOMICS

by

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## SUMMARY

This paper assesses the current state of Post Keynesian economics and attempt to outline a strategy for its future development. It is argued that Post Keynesian economists have concentrated in recent years on the important pre-analytical task of searching for a sound methodological foundation upon which to develop analytical contributions to the development of economic theory and practice. It is then suggested that the future of Post Keynesian economics lies in the substantive task of constructing more general, encompassing understandings of economic behaviour that extend the applicability of existing economic theory to non-allocative modes of behaviour

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The first crisis arose from the breakdown of a theory which could not account for the *level* of employment. The second crisis arises from a theory that cannot account for the *content* of employment (J. Robinson, Richard T. Ely Lecture 1972).

## I. INTRODUCTION

That the *General Theory of Employment, Interest and Money* (Keynes 1936) has had a revolutionary impact on economic thought is beyond question. Much of the development of macroeconomics in the last sixty years has been the direct outcome of the extension and critique of Keynes's ideas (Akerlof 2002). But whether the nature of the revolutionary impact of the *General Theory* is that which Keynes intended remains a matter of much dispute.

The development of Keynes's ideas has given rise to a variety of "Keynesianisms": *IS-LM* Keynesianism, Disequilibrium Keynesianism, New Keynesianism, Post Keynesianism, Fundamentalist Keynesianism, Neo-Ricardian Keynesianism and Kaleckian Keynesianism (Hodgson 1989). The reasons for the multiple interpretations and extensions of Keynes's *General Theory* have been analysed by Gerrard (1991) using hermeneutics. Gerrard argues that the achievement of Keynes's *General Theory* in generating a diversity of research programmes is evidence of its high reference power. The *General Theory* discloses a number of different possible understandings in the multi-dimensional process of interpretation as the many different horizons of Keynesian scholars are fused with Keynes's own horizons.

The focus of this study is on one specific Keynesian research programme, that of Post Keynesian economics. The emergence of Post Keynesian economics is considered within the context of the overall development of Keynesian economics (see the edited volume by Rotheim 1998, for a detailed comparison of New Keynesian and Post Keynesian economics). The objective of the study is to assess the current state of Post Keynesian economics and attempt to outline a strategy for its future development. It is argued that Post Keynesian economics is perceived by many economists as having become too scholastic and inward looking (e.g. Backhouse 1998). Post Keynesian economists have concentrated in recent years on the important pre-analytical task of searching for a sound methodological foundation upon which to

develop analytical contributions to the development of economic theory and practice. It is the basic proposition of the study that the future of Post Keynesian economics lies in the substantive task of constructing more general, encompassing understandings of economic behaviour that extend the applicability of existing economic theory to non-allocative modes of behaviour (Fontana and Gerrard 2002a). The encompassing principle should be seen as a core methodological principle of Post Keynesian economics, derived from Keynes's critique of classical economics in the *General Theory*.

The structure of the paper is as follows. In Section 2 the development of Keynesian economics in its mainstream forms is briefly reviewed. Section 3 provides a detailed examination of the development of the Post Keynesian research programme. The origins of Post Keynesian economics are discussed and two phases of development are distinguished: the Romantic Age and the Age of Uncertainty. In Section 4 two alternative scenarios are outlined for the future of Post Keynesian economics depending on the attitude adopted towards mainstream economics. The encompassing principle is proposed as the appropriate methodological stance to allow constructive engagement. Section 5 provides some concluding remarks.

## **II. THE KEYNESIAN CHALLENGE**

The description of a set of ideas as "Keynesian" signifies fundamental differences in the method, assumptions, theories and/or practical implications of the analysis of the economic process. Keynesian economists are dissenters who question the invisible hand theorem, the characteristic neoclassical proposition that the economy is self-adjusting towards the social optimum. But beyond a shared intellectual debt to Keynes's *General Theory*, there has been little common purpose in Keynesian dissent and deep differences have emerged over the degree to which neoclassical economics must be rejected or extended in order to accommodate Keynesian ideas.

Despite the deep differences between the different Keynesian schools of thought, it does seem possible to distinguish three interconnected characteristic Keynesian propositions derived from Keynes's *General Theory* with which all Keynesian economists would agree:

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

*Keynesian Proposition II (the principle of effective demand):* aggregate demand plays a key role in determining the adjustment path of the macro economy.

*Keynesian Proposition III (policy effectiveness):* the possibility for effective stabilisation policies exists under certain circumstances.

(Neo-)classical macroeconomics, in all of its many variants, rejects all three of these Keynesian propositions. The three Keynesian propositions were first developed within the *IS-LM* Keynesian research programme as formulated by Hicks (1937). The *IS-LM* model focused attention on the demand-side of the macro economy, particularly the multiplier process. The *IS-LM* model showed the crucial role of liquidity preference in creating the possibility of demand-side equilibrium at a below-full employment level of income. However, subsequently, Modigliani (1944) highlighted that ultimately, except in some limiting cases, the level of output and employment depends not on the equilibrium level of nominal income but on supply-side conditions, specifically the labour market. From this neoclassical perspective, involuntary unemployment is caused by money-wage rigidity that prevents the real wage adjusting to the market-clearing level. Modigliani provided the basis for the emergence of the neoclassical synthesis in which the accepted view was that Keynesian economics is the special theoretical (but practically important) case of the macroeconomics of money-wage rigidity. The Keynesian-neoclassical debate became formulated in terms of two main "empirical" issues:

(i) the determinants of the three key aggregate behavioural functions on the demand-side, namely, the consumption function, the investment function and the demand-for-money function; and

(ii) the degree of wage flexibility.

The possible effectiveness of stabilisation policies became largely an empirical issue depending on demand-side and supply-side conditions. Subsequently, there have been two broad developments in Keynesian economics: New Keynesian economics and Post Keynesian economics. Both of these developments were initiated by a methodological critique of *IS-LM* Keynesianism. New Keynesian economics

developed out of the mainstream methodological critique of *IS-LM* Keynesianism. The first stage in this critique was the disequilibrium interpretation of Keynes proposed by Patinkin (1956), Clower (1965) and Leijonhufvud (1968). The disequilibrium theorists rejected the wage rigidity interpretation of Keynes as the consequence of the inappropriate use of static equilibrium analysis. From this perspective, involuntary unemployment is a disequilibrium phenomenon following a negative demand shock under conditions of slow price and wage adjustment. If prices and wages do not adjust instantaneously after a demand shock, markets will not clear and quantity constraints will emerge due to agents being unable to implement all of their notional trading plans. In Leijonhufvud's view, Keynes had removed the auctioneer from the Walrasian general equilibrium system. Involuntary unemployment is the inevitable consequence of false trading (i.e. trading at non-market-clearing prices). The removal of the Walrasian auctioneer symbolises a move beyond the highly restrictive assumption of perfect information. In interpreting Keynes as a theorist of the macro consequences of market behaviour under conditions of non-perfect competition (specifically, imperfect information), Leijonhufvud provided an important step towards the development of New Keynesian imperfectionist models of involuntary unemployment.

The disequilibrium interpretation of Keynes led to the development of models of generalised disequilibrium such as Barro and Grossman (1971) and Malinvaud (1977). These models showed that, under conditions of slow price and wage adjustment, a negative demand shock could result in generalised excess supply in the labour and goods market (designated as Keynesian unemployment in Malinvaud's model). However these disequilibrium models were in turn subjected to a methodological critique for their failure to provide an adequate explanation as to why prices and wages would be slow to adjust. Indeed both Barro (1979) and Grossman (1979) came to reject Keynesian economics on these grounds and became leading exponents of the New Classical approach characterised by the twin assumptions of continuous market clearing and rational expectations.

The mainstream methodological critique of *IS-LM* and disequilibrium Keynesianism rejected the use of *ad hoc* rigidity assumptions with no attempt to explain these rigidities as the outcome of optimising behaviour by rational economic agents. The mainstream Keynesian response led to the development of New Keynesian economics. New Keynesian economics is characterised by the search for

choice-theoretic microfoundations for the three characteristic Keynesian propositions. New Keynesian economics has aimed to provide more secure theoretical foundations for Keynesian economics by the use of existing neoclassical methods of analysis. The result has been the formalisation of a wide variety of imperfectionist theories in which the failure of the macro economy to adjust to the social optimum is explained in terms of imperfect competition, imperfect information, transaction/menu costs, multiple equilibria and co-ordination failures, and near-rationality (see Gordon 1990; Mankiw 1990 for surveys of developments in New Keynesian economics). The invisible hand theorem states that rational economic behaviour under perfectly competitive conditions results in a perfect (i.e. Pareto optimal) allocative equilibrium. As a corollary, it follows that imperfections in the competitive structure (including the information structure) and/or departures from strictly rational economic behaviour can cause a divergence from the perfect competitive equilibrium. This is the "imperfectionist thesis" explaining the occurrence of Keynesian (i.e. sub-optimal) outcomes. The New Keynesian economics is the detailed theoretical analysis of this important corollary of the invisible hand theorem. The New Keynesian economics is the macroeconomics of market failure.

### **III. THE DEVELOPMENT OF POST KEYNESIAN ECONOMICS**

There are two broad views on the nature of Post Keynesian economics. The first view considers Post Keynesian economics as essentially a theoretical enterprise seeking to develop and extend Keynes's original theoretical insights. From this perspective Post Keynesian economics represents the ongoing attempt to provide a generalisation of the *General Theory*. It is the view, for example, expressed by Eichner and Kregel in their survey of Post Keynesian economics:

Those one-time associates of Keynes, joined by a small number of the younger generation at Cambridge and elsewhere, have consistently tried to highlight the incompatibility of Keynes's views with orthodox theory even as they worked to develop more fully a "generalisation of *The General Theory*". This generalisation may be said to represent, in Thomas Kuhn's sense, a new paradigm; and since it extends the analysis set forth in Keynes's *Treatise on Money* (1930) and *The General Theory*, it can be

termed post-Keynesian (Eichner and Kregel 1975, p. 1293; see also Palley 1996, p. 9).<sup>1</sup>

The alternative view is that Post Keynesian economics is primarily methodological, developing new critical ways of understanding both economic phenomena and economic theory. It is the view, for example, of Chick in her Scottish Economic Society Presidential Lecture on Post Keynesian economics:

Post Keynesian economics is best identified as a way of thinking, a method of approach, inspired at root by Keynes and Kalecki and their intellectual successors (Chick 1995, p. 20).

The methodology view is necessarily "de-constructive", emphasising the critique of orthodox economic methods and theories. In contrast, the theoretical view puts the emphasis on the constructive task of developing alternative theories of economic behaviour. Both views are evident in the origins of Post Keynesian economics. The initial emergence of Post Keynesian economics as a distinct school of thought, the "Romantic Age", saw the emphasis put on the need to develop a "grand theoretical system" to replace neoclassical economics. From this perspective the "Capital Theory Controversies" were instrumental in boosting the morale of the emerging dissenting school (King 2002, pp. 121-123). Subsequently, and not independently from the lack of agreement upon the outcomes of the Capital Controversies, there was a shift in emphasis towards methodological matters, the "Age of Uncertainty". Among encouraging signs of a return to the search for alternative theories and policy that remains the primary focus of attention currently in Post Keynesian economics (see, for example, the special issues on Critical Realism, 1999, 2002).

### ***III.1 The Origins of Post Keynesian Economics***

Post Keynesian economics originated in the work of Joan Robinson and other Cambridge economists who sought to develop Keynes's legacy. In the *General Theory* Keynes had assumed that the stock of capital and the technique of production were given. However, as early as 1937 Robinson was already trying to move beyond

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<sup>1</sup> For a discussion of the replacement of the term "post-Keynesian" with "Post Keynesian", see Lee (2000, pp. 145-147).

Keynes's short-run approach to unemployment (Robinson 1937). At around the same time Roy Harrod was attempting to construct a dynamic macroeconomic model. Extending Keynes's analysis to the problem of unemployment in the long run, he showed that divergences in a one-commodity economy between the equilibrium or “warranted” rate of growth of output and the actual rate of growth instead of being self-righting would be self-reinforcing. This is what came to be known as Harrod's knife-edge problem (Harrod 1939, p. 22).

Nicholas Kaldor also made several small but important contributions in the development of Post Keynesian economics (Thirlwall 1987). He made suggestions on relaxing Keynes's assumption of the money stock as an exogenous variable under the control of the central bank (Kaldor 1939, p. 14). Furthermore, he explored the role of the relative shares of wages and profit in maintaining macroeconomic stability (Kaldor 1940). Similar questions were also at the heart of the work of the Polish economist Michal Kalecki. He had already made important contributions in the theory of economic fluctuations before the publication of the *General Theory* (Kalecki 1939) and, according to Robinson, he was very influential in creating a Classical-Marxist interpretation of Keynes's work (Robinson 1942).

During and especially after the war period these initial efforts at the theory of growth and the long-run implications of the principle of effective demand continued. Linked to this there was an increasing concern with income distribution in an economy with two economic classes: workers who receive wages and capitalists who receive profits. Again, for his theory of employment Keynes did not need a theory of distribution in the long run. But his followers came to believe that the twin issues of economic growth and income distribution could not be separated. In part this belief was generated by a suspicion that post-war growth had not only failed to overcome absolute poverty, but may have actually increased it.

The theoretical developments in the Keynesian theories of growth and distribution culminated in Robinson's *Accumulation of Capital* (1956). Robinson had actually first proposed some of her ideas in an extended review of Harrod's lectures on dynamic economics (Harrod 1948). There, among other criticisms, she complained that the “natural” or maximum rate of growth of output is not a natural datum. This rate depends on the increase in the working population and on the increase in output-per-head due to technical progress. Thus, she argued, the natural rate of growth can and is affected by economic policy (Robinson 1949, p. 85). The core of *Accumulation*

*of Capital* is the idea that the development of an economy depends in part on technical progress and in part on social institutions and political power. At the end of the book she also located in the differential propensities to save out of profits and wages an important way for overcoming Harrod's knife-edge problem (Robinson 1956, pp. 405-406). Unfortunately neither *Accumulation of Capital* nor her subsequent *Essays in the Theory of Economic Growth* (1962) had much impact on the economic profession.

Arguably, Kaldor's writings on distribution and growth were much better received. Kaldor's "Alternative Theories of Distribution" (Kaldor 1956) became a seminal text in Post Keynesian economics. The first part of the paper is a profound critique of the neoclassical theory of distribution, arguing that the theory of marginal productivity factor pricing and distribution is based on highly restrictive and unrealistic assumptions. The second part of the paper is Kaldor's macroeconomic model of relative income shares. The core argument is that, as long as prices are flexible and the propensity to save out of profits is greater than the propensity to save out of wages, investment determines the relation between wages and profits. Furthermore, with the additional assumption that the share of investment in income is constant, the share of profits will also remain constant over time. In this way Kaldor could account for the historically relative stability of distributive shares, a key "stylised" fact of industrialised economies. However, all these propositions were true only at full employment and that remains the main limitation of Kaldor's distribution theory.

The independent investment function also played a key role in Kaldor's growth theory (Kaldor 1957). Again, starting with an initial critique of neoclassical growth theory Kaldor went on to show that steady growth equilibrium is inconsistent with a less-than-full employment condition. As a result of underemployment, changes in the relationship between wages and prices would follow such that profit and real wage shares are consistent with steady growth. One of the main deficiencies of this model and its further modification (e.g. Kaldor and Mirrlees 1962) is the quasi-exclusive focus on the manufacturing sector. For this reason, as explained by his biographer Thirlwall (1987, p. 174), from 1966 on Kaldor adopted a sectoral approach in all his economic modelling (see, for example, Kaldor 1966, 1970).

The development of alternative Keynesian theories of economic growth and income distribution slowly began to take a methodological turn. These theories, often

implicitly, rejected marginalist microfoundations of rational-agent models, and instead used aggregate behavioural functions (often justified as consistent with stylised empirical facts) to represent socio-economic realities. The rejection of marginalist theorising ultimately became the principal issue in the so-called "Capital Controversies" (Harcourt 1972). The Controversies attracted highly prominent economists such as Pasinetti, Robinson and Sraffa on one side versus Samuelson, Solow, and Hahn on the other. The Controversies started with Robinson's "The Production Function and the Theory of Capital" (Robinson 1953-54), reaching its height with the publication of Sraffa's *Production of Commodities by Means of Commodities* (Sraffa 1960) and ending with Bliss's *Capital Theory and the Distribution of Income* (1975). During those years many papers were published by the main protagonists and many others in the leading journals including the *Quarterly Journal of Economics*, the *Review of Economic Studies* and the *Economic Journal*. In summary the Capital Controversies showed the logical problems inherent in the concept of aggregate capital, undermining the neoclassical theories of growth and income distribution. One of the major contributions to the controversies was in fact Sraffa's demonstration that a set of commodity prices could be derived based on the technical conditions of production without any marginalist analysis and with no concept of aggregate capital (Sraffa 1960). However the Controversies highlighted more than just a few anomalies in the meaning and measurement of the concept of aggregate capital in the scarcity theory of price. As argued by Cohen and Harcourt in a recent retrospective on the topic, there were two other issues at stake (Cohen and Harcourt 2003). Firstly, there was the issue of the use of equilibrium analysis as a tool for analysing processes of capital accumulation and growth. Here the debate was about the legitimacy of using comparative statics (i.e. a comparison of the different equilibrium outcomes consequent on changes in some of the model parameters) for the analysis of dynamic economic processes occurring in historical time. As Robinson explained, comparative statics can answer "what-would-be-different-if" type of questions whereas a truly dynamic analysis is concerned with "what-would-follow-if" type of questions (Robinson 1980).<sup>2</sup> Secondly, there was the issue of competing ideologies and visions of economics. How best could the accumulation process in

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<sup>2</sup> Note that in the early 1950s Robinson had already set the agenda for what is now called path-dependency analysis (e.g. Robinson 1953).

capitalist society be envisaged and modelled? On one side there was the Classical/Keynesian tradition pointing towards the role of the competing social classes in the economic process (Graziani 1989). This is an economic world of entrepreneurs and capitalists operating within a monetary context of behaviour (Fontana and Gerrard 2002b) in which production and exchange activities are undertaken to achieve monetary, not commodity, returns. On the other side there was the neoclassical tradition of the utility-maximising agent. From the neoclassical perspective, the Controversies prompted refinements and further amendments to the original scarcity theory of price. By contrast, from the perspective of the Classical/Keynesian tradition the outcome of the Controversies called into question the entire neoclassical approach to economics and justified the need for nothing short of a revolutionary paradigm shift in economics.

Whatever the differing assessments of the Capital Controversies, what is certain is that the Controversies provided a renewed sense of identity for those Keynesians who considered the *General Theory* to be a move beyond marginalist theorising. Socio-economic conditions also played a role. The end of the long postwar boom and the apparent inability of "Keynesian" theory and policy to deal with stagflation undermined the neoclassical synthesis. Mainstream economic theory responded initially by developing New Classical macroeconomic models explicitly based on optimising microfoundations with rational expectations and continuous market clearing. These New Classical models rejected demand-side policies to control the growing levels of unemployment in the industrialised economies, and advocated the need for supply-side measures especially labour market reforms to increase wage flexibility. All of these factors combined to give an added urgency to the development of an alternative economic theory based on more realistic microfoundations. The result was the emergence of a distinct Post Keynesian school of thought and recognised as such by both mainstream and non-mainstream economists.

### ***III.2 The Romantic Age: The Search for a Grand Theoretical System***

The main unifying theme of Post Keynesian economics as it emerged was the need to replace neoclassical economics with a radical alternative based on the recovery of Keynes's original insights. In the Richard Ely Lecture at the December 1971 New Orleans meeting of the American Economics Association Joan Robinson talked of a

second crisis in economics. The Great Depression together with the failure of neoclassical economics to provide a solution to low income and heavy unemployment had led to a first crisis in economic theory. Out of this crisis emerged the so-called Keynesian revolution. Keynesian economics became the theoretical orthodoxy and Keynesian demand-management stabilisation became the policy orthodoxy. Prosperity seemed to follow everywhere but then in the early 1970s economies were hit by a series of severe economic problems including increasing third-world poverty, pollution and wasteful armaments expenditure. High rates of inflation and unemployment emerged simultaneously in contradiction of the orthodox (IS-LM) Keynesian view. For the second time economic theory seemed to have little to say on the most urgent economic problems of the time. For Robinson the problems arose from a simple omission. Orthodox Keynesian economics lacked a sound theory of distribution and growth (Robinson 1972, p. 8). Robinson's lecture was well received in radical quarters. Robinson was encouraged to write an economic textbook aimed at introducing Post Keynesian economics to young North American economists (Robinson and Eatwell 1973).

In the USA Robinson found strong support in Sidney Weintraub who by early 1960s had already made important contributions to the theories of aggregate supply, distribution and inflation (e.g. Weintraub 1958, 1959). In the 1970s Weintraub voiced his opposition to neoclassical economics and established himself as one of the leading advocates of tax-based incomes policy (e.g. Wallich and Weintraub, 1971). Some of these ideas were further developed by his student Paul Davidson (e.g. Davidson and Smolensky 1964) who went to become one of the most influential representatives of Post Keynesian economics, especially of its monetary strand (e.g. Davidson 1965, 1972). Monetary and financial issues were also at the heart of Hyman Minsky's contributions later crystallised in the financial fragility hypothesis (e.g. Minsky 1975, 1977). As for the younger American generation, Jan Kregel was crucial in attempting to integrate Keynes's monetary analysis with Cambridge contributions on growth and distribution. However he soon lamented the lack of a Post Keynesian theory of price formation in corporate capitalism (e.g. Kregel 1973, p. 207). This was to be the main area of Alfred Eichner's contributions (e.g. Eichner 1973) eventually leading to the theory of the megacorp (Eichner 1976).

Despite this diversity of contributions, Post Keynesian economics was believed to have an essential unity of theoretical purpose with the potential of becoming a

comprehensive alternative to the dominant neo-classical paradigm (Eichner and Kregel 1975, p. 1294; also Eichner 1979a). Post Keynesian economics was seen as a well-defined approach making a distinct theoretical and practical contribution to the understanding of real-world problems. The research objective was to create a grand Post Keynesian theoretical system that could match the comprehensiveness of neoclassical theory (Pasinetti 1974). In this sense the Post Keynesian economics was an attempt to take on the mainstream paradigm on its own terms. Eichner and Kregel (1975) distinguished four characteristic features of the new Post Keynesian paradigm:

- (a) a dynamic theory of growth based on historical rather than logical time;
- (b) an explanation of the distribution of income strictly related to the rate of economic expansion;
- (c) a credit theory of investment; and
- (d) a microeconomic perspective grounded on imperfect markets with significant monopolistic elements.

The four characteristic features of Post Keynesian economics were claimed to represent a theoretical advance over neoclassical economics. Post Keynesian economics was seen to offer a set of new theoretical tools that are more appropriate for the study of real-world problems. Indeed some Post Keynesians were so convinced of the value of these new tools as to suggest that the next step was to devise a series of empirical tests to show the superiority of Post Keynesian theories (e.g. Eichner 1979b, pp. 57-58). The growth and increasing confidence of Post Keynesian economics initiated and fostered the development of a social and institutional framework to promote the new body of ideas (Lee 2000) including the launch of new academic journals, in particular the *Cambridge Journal of Economics* (1977) and the *Journal of Post Keynesian Economics* (1978). In retrospect, a serious shortcoming of Post Keynesian economics during the Romantic Age was the almost exclusive concern with the theoretical structure of the neoclassical paradigm. Most Post Keynesians considered the rejection of neoclassical economics to be primarily a matter of theoretical differences. Post Keynesians advocated the replacement of the optimisation calculus with more realistic behavioural assumptions such as imperfect competition, mark-up pricing and capacity-expanding investment (i.e. the accelerator model). But the emphasis on the theoretical critique of neoclassical economics was not universally supported. One of the principal exponents of the need for a more

thorough critique at both the methodological and theoretical levels was Joan Robinson.

Robinson recognised the dangers of trying replace one closed theoretical system with another closed theoretical system. She argued for Post Keynesian economics being seen as “a different habit of mind”, a distinct methodology that promotes a respectful knowledge of economic events but also admits the ignorance of what is unknown (Robinson 1979, p. 119). The Post Keynesian theoretical critique of neoclassical economics thus soon led to a recognition that at the root of most of the theoretical disputes lay in a profound difference in method and methodology. The end of the Romantic Age in the 1980s was marked by an increasing awareness of the importance of the characteristic methodological features of Post Keynesian economics. The new Post Keynesian paradigm was still viewed as possessing the potential to become an alternative to the neoclassical paradigm but the transformation came to be seen as much more fundamental than initially envisaged. The increasing concern with the methodological originality of Post Keynesian economics served to exacerbate the disputes between and within the different strands of Post Keynesian economics. The treatment of money, time and uncertainty became a key issue in these disputes (Fontana 2004). The Romantic Age gave way to the Age of Uncertainty.

### ***III.3 The Age of Uncertainty: The Search for an Alternative Methodology***

The optimism and excitement of the Romantic Age and the search for a grand theoretical system to replace neoclassical economics has been followed by a period of doubt and deep internal tensions within Post Keynesian economics. The Age of Uncertainty continues today. Post Keynesian economists have become increasingly concerned with the failure to transform the discipline of economics through gaining general acceptance of the significance of Post Keynesian contributions to economic theory. The growing self-doubt in Post Keynesian economics started with a preoccupation for the true meaning of Keynes's theory. For example, the annotated bibliography of Post Keynesian economics lists 248 entries on "interpretations of Keynes" up to 1994 of which more than half between 1980 and 1990 (King 1995, Ch. E). The period of self-doubt led to the emergence of a greater diversity of alternative approaches. *The Elgar Companion to Post Keynesian Economics* contains several streams of Post Keynesian thinking including entries on Fundamentalist Keynesians,

Joan Robinson's economics, Kaldorian economics, Kaleckian economics and Sraffian economics (King 2003). This greater diversity of alternative Keynesian approaches has ended to undermine the Post Keynesian claim to provide an alternative, coherent paradigm. Ultimately the greater diversity has led even those sympathetic to Post Keynesian economics to question whether or not there is a distinctive Post Keynesian school of thought at all (Walters and Young 1997).

The Age of Uncertainty can be traced back to internal and external circumstances. As for the former, most prominently are the methodological disputes that arose with the emergence of the Neo-Ricardian approach in the late 1970s and early 1980s. The Neo-Ricardians, especially Garegnani (1978 and 1979), Eatwell (1979) and Milgate (1982), sought to create a grand theoretical system from a synthesis of Sraffa's model of prices and Keynes's principle of effective demand. The characteristic feature of the Neo-Ricardian theoretical system is the separation of price determination and quantity determination in contrast to the simultaneous determination of equilibrium prices and quantities in the neoclassical system. This Neo-Ricardian approach followed early classical economics in adopting a long-period method of analysis, a static equilibrium approach set in logical (not historical) time and focusing on the "centre of gravity" of the economic system associated with the dominant economic forces. In its most extreme form, the Neo-Ricardian approach rejected the importance of money, time and uncertainty in Keynes's analysis. Keynes's analysis of long-term expectations and liquidity preference were interpreted as mainstream imperfectionist arguments that arose out of his retention of neoclassical marginal productivity theory, particularly the marginal efficiency of capital (Milgate 1982).

The Neo-Ricardian dismissal of Keynes's theories of money and behaviour under uncertainty coupled with their use of static equilibrium methods was in direct conflict with the "fundamentalist/monetary" Post Keynesians such as Robinson, Shackle, Davidson and Chick. These prominent Post Keynesians all argued for the fundamental importance of Keynes's analysis of money, time and uncertainty and the need for a more dynamic historical-time method of analysis (Fontana and Gerrard 1999). From this perspective, Neo-Ricardian analysis represented the continuation of classical methods of analysis albeit underpinning a non-mainstream theoretical structure. Similar tensions also arose between the fundamentalist/monetary strand and the Kaleckian strand. Again, from the fundamentalist/monetary perspective, the

Kaleckian approach attaches too little significance to the effects of uncertainty and instead concentrates on developing deterministic equilibrium models based on non-neoclassical microfoundations.

There are also important external circumstances explaining the growing self-doubt in Post Keynesian economists together with the emergence of their strong interest in methodological enquiries. Firstly, there was the question of the significance of the result of the Capital Controversies. Most Post Keynesian economists considered the Controversies had provided a convincing case for a paradigm shift in economics. They were thus puzzled by the tenacity of mainstream economists in ignoring the relevance of the critique of aggregate production functions, and neoclassical economics more generally. Secondly, there was the issue of the gradual exclusion of Post Keynesian economists from publishing in leading journals. Editors and referees pointed to the lack of formalisation in Post Keynesian economics and this naturally led to the complicated methodological question of what is 'proper' economics. Finally, in 1971 the Royal Economic Society began to publish the *Collected Writings* of Keynes. Previously inaccessible material became easily and widely available together with reprints of some of Keynes's lesser known works such as the *Treatise on Probability* (1983) and his other early philosophical and methodological writings. These publications prompted an intense interest into Keynes's philosophy and led to the emergence of the "new Keynesian fundamentalism" (e.g. Lawson 1985, Fitzgibbons 1988, Carabelli 1988 and O'Donnell 1989). The new Keynesian fundamentalism highlighted Keynes's rejection of: (i) the frequency approach to probability; (ii) the reduction of uncertainty to a well-defined probability distribution; and (iii) the optimisation of expected outcomes as a guide to human conduct. However, together with the rediscovery of Keynes's analysis of money and uncertainty, the new Keynesian fundamentalism also led to the long-lasting "continuity-or-change" debate over the extent to which Keynes retained his early philosophical/methodological positions in writing the *General Theory* (see Gerrard 1992, for a survey of this debate).

The increasing theoretical diversity within Post Keynesian economics along with the fundamentalist emphasis on the treatment of money, time and uncertainty stimulated the still ongoing debate as to whether or not there is such a thing as a coherent Post Keynesian approach. For many, diversity is the defining characteristic of Post Keynesian economics. This was the conclusion of Hamouda and Harcourt

(1989) in their survey of Post Keynesian economics. Hamouda and Harcourt maintained that there was no uniform way of tackling all issues in economics. The various Post Keynesian approaches differed from one another not least because they were concerned with different issues and often a different level of abstraction (Hamouda and Harcourt 1989, p. 32). Post Keynesianism should thus be seen as a portmanteau term describing the work of a very heterogeneous group of economists united by a rejection of neoclassical economics and seeking to provide an alternative economic approach. In a similar vein, Sawyer (1991) argued that the vigour of Post Keynesian research derives from the pluralism of theories, methods and assumptions.

An alternative view on the diversity and coherence of Post Keynesian economics is taken by Walters and Young (1997). They view the emphasis on coherence as a continuing legacy of the Romantic Age and the search for a grand theoretical system to replace neoclassical economics. Walters and Young argue that identification as a distinct school of thought requires coherence but Post Keynesian economics exhibits little coherence either in terms of an agreed methodological approach or an agreed research agenda. Indeed they maintain that there is little coherence even at the level of research themes with tensions between sometimes contradictory analytical frameworks. Walters and Young conclude that Post Keynesian economics is more appropriately seen as a looser association of opponents to neoclassical economics.

In contrast to Walters and Young, those who consider Post Keynesian economics as a distinct approach believe that its essential defining characteristic is methodological (Dow 1995, p. 154). As Lawson points out, neoclassical economics is ultimately defined by its methodology and, hence, any non-neoclassical alternative must also be defined by an alternative non-neoclassical methodology (Lawson 1999a, p. 7). From this perspective, diversity is not only a characteristic appearance but also the fundamental methodological principle of Post Keynesian economics. The methodology of diversity is the core characteristic of Post Keynesian economics (Dow 1992, p. 111).

By implication, the fundamental debate within Post Keynesian economics is the appropriate specification of the methodology of diversity (or world-view). The emerging consensus is that critical realism can provide the core organising (methodological) principle for Post Keynesian economics (Lawson 1994). Critical realism emphasises the need for open-systems theorising to provide realistic causal

explanations that recognise the social and institutional context of behaviour. As such critical realism is not school-specific and, as is argued in the next section, can be compatible with both neoclassical and Post Keynesian theoretical structures.

#### **IV. THE FUTURE OF POST KEYNESIAN ECONOMICS**

Despite developing a large corpus of contributions to the history of economic thought, the methodology of economics and economic theory, Post Keynesian economics has remained largely marginalised within the academic discipline of economics. Lee (1995) argues that Post Keynesian economics is dying because of its failure to reproduce itself. He attributes this to both demand-side and supply-side influences. On the supply-side, few Post Keynesian economists are being trained because of the lack of Post Keynesian courses being taught in universities. Such courses, if offered at all, are typically optional courses. Post Keynesian economics is not considered to be part of the core subject even in those university economics departments with Post Keynesian economists. On the demand-side, there is little demand for Post Keynesian economists and what little demand there is tends to be concentrated in a few universities. Lee forecasts that, if present trends continue, there will be no Post Keynesian economists by the year 2020. The blame for the death of Post Keynesian economics lies thus with the Post Keynesian economists themselves whom he accuses of a 'lack of will'.

Lee's analysis of the current state of Post Keynesian economics is pessimistic. He views the impending demise of Post Keynesian economics as a serious loss to the economics discipline. Hence the analysis ultimately becomes a 'call to arms', urging Post Keynesian economists to fight to maintain Post Keynesian economics as an alternative school of thought. However, even if the prediction of the demise of Post Keynesian economics is subsequently borne out, it need not necessarily signify a backward step for the economics discipline. The demise of Post Keynesian economics could be interpreted as a sign of intellectual progress to the extent that it signifies the integration of Post Keynesian economics into the main corpus of economic theory. Distinct schools of thought can wither away as a result of success rather than failure as, for example, Baumol (1991) has argued in the case of the Stockholm school.

Post Keynesian economics has had little impact on the bulk of (mainstream) economics. There are few courses in Post Keynesian economics; few Post Keynesian economists are hired; Post Keynesian economics has little presence in the programmes of leading economics conferences; and there are few Post Keynesian papers published in the highest ranking journals. There are two possible explanations for the marginality of Post Keynesian economics. One explanation is that Post Keynesian economists reject mainstream economics outright and, as a consequence, see no need to engage with mainstream economists. Neoclassical economics is viewed as lacking academic legitimacy and, hence, there is no need to communicate with neoclassical economists. From this perspective, Post Keynesian economics is an alternative discipline with little institutional power.

An alternative explanation of the marginality of Post Keynesian economics is that there is a desire to engage with mainstream economics but "it takes two to tango". Post Keynesian economists may have little to communicate to mainstream economists or may be perceived as such. They may even be perceived as not wanting to communicate. Post Keynesians may want to communicate with their mainstream counterparts but fail to do so. There are several possible reasons for this communications failure. First, Post Keynesians may have (or may be perceived to have) an inadequate knowledge of developments in mainstream economics. Many of the characteristic themes of Post Keynesian economics have similar developments in mainstream economics but Post Keynesian economics is little informed by these developments (and vice versa). For example, the Kaleckian emphasis on imperfect competition parallels New Keynesian models of imperfect competition. The Post Keynesian analysis of fundamental uncertainty can be linked with the recent concern in the theory of decision-making under risk and uncertainty (Fontana and Gerrard 2003). The work of mainstream theorists such as Blanchard and Summers (1987), Manning (1990) and Ball (1999) on path-dependency analysis has been mirrored by Post Keynesians such as Setterfield (1993), Rowthorn (1999) and Lavoie (2002) who have been independently developing path-dependency analysis drawing on Robinson (1953). There are also strong resonances between Post Keynesian monetary economics and modern 'monetary policy rules' scholars like Svensson, Taylor and Woodford (Goodhart 2002, Monetary Policy 2002). Second, Post Keynesian economists are seen to be more concerned with critique, methodology and the history of economic thought rather than the development of economic theory per se. Finally,

the style of Post Keynesian economics is seen to be more literary with limited use of formal analytical techniques such as mathematics and econometrics.

This analysis of the current state of Post Keynesian economics suggests two alternative scenarios for its future. The first scenario is that of no significant engagement with mainstream economics. This is attractive to those who view Post Keynesian economics as an alternative discipline that seeks to supplant mainstream economics. Non-engagement is likely to ensure that Post Keynesian economics remains marginalised within the economics discipline. Post Keynesians will be seen mainly as a source of methodological critique with little or nothing to say on theoretical and empirical developments. It creates the real danger of Post Keynesian economics becoming an intellectual ghetto and fostering intellectual laziness behind a superficial façade of anti-formalism. This surely would be the death of Post Keynesian economics.

The alternative scenario is that Post Keynesians actively pursue constructive engagement with mainstream economics with an emphasis on theoretical and empirical developments within a methodology that supports engagement. A prerequisite for constructive engagement is that Post Keynesians have a more thorough understanding of mainstream economics in order to be able to provide informed (rather than "straw man") critiques of its limitations. Such a strategy should seek to exploit the parallel developments in mainstream and Post Keynesian economics such as imperfect competition, decision-making under uncertainty, path-dependency analysis and monetary policy rules. Significant examples of this strategy are, for instance, *Economic Psychology* (2004), Fontana and Palacio Vera (2003, 2004), León-Ledesma and Thirlwall (2002), Sawyer (2002), Setterfield (2002) and Slater and Spencer (2000).

At the conclusion of *A History of Post Keynesian Economics Since 1936*, King predicts the medium-term fate of Post Keynesian economics to be continued survival as an embattled minority (King 2002, p. 259). King's vision of the future fits with the first scenario. King argues that there are substantial theoretical, social, political and institutional barriers to dialogue between Post Keynesians and their mainstream opponents. Hence he sees Post Keynesian economics remaining a small and very diverse radical grouping of the followers of Keynes, Kalecki and Sraffa who will continue to develop a dissenting economics but with little or no prospect of achieving a Kuhnian revolution in economics.

In his review of King's *History*, Davidson (2003-04) agrees that embattled survival is the only viable option for Post Keynesian economics but Davidson's vision of the future is significantly different from that of King and, indeed, is much more consistent with the second scenario of constructive dialogue. Davidson defines Post Keynesian economics in a much tighter manner than King, excluding Sraffians and Kaleckians as too classical in their emphasis on the real economy and their rejection of the importance of uncertainty and money. Davidson is very critical of the "anything goes" pluralism that infects Post Keynesian economics. 'Babylonian incoherent babble' leads to inconsistency and lack of theoretical rigour. Davidson advocates the development of Post-Keynesian economics as a consistent axiomatic-based theory able 'to beat the classical mainstream on their own playing field' by showing the restrictive nature of classical axioms. Davidson wants critical theoretical engagement between Post Keynesians and the classical mainstream and argues that Post Keynesian economics can only prevail if it matches the theoretical rigour of its opponents.

In order to foster an attitude of constructive engagement with mainstream economics, Post Keynesian economics needs to ensure that its methodology of diversity is not used to justify "anything-goes" anti-formalism (see, for a similar view, Downward *et al.* 2002, Downward and Mearman 2002) and the exclusion of relevant neoclassical contributions to the understanding of the economic behaviour (Dow 2002). Elsewhere this methodological stance has been described as the encompassing principle (Fontana and Gerrard 2002a). It is a methodology of diversity that argues for the necessity of defining the limits to the domain of relevance of an existing theoretical framework and to encompass it within a more general theoretical framework incorporating alternative theoretical perspectives. It is the methodological stance exemplified *par excellence* by Keynes's *General Theory*. Keynes considered classical theory as a special case that provides a theory of the allocation of scarce resources. The principal limit to its domain of relevance is its inability to provide a non-allocative theory of the utilisation of available productive resources. Thus Keynes set out to develop a general theory that could provide a non-allocative explanation of unemployment as under-utilisation (i.e. involuntary unemployment) to complement existing classical allocative theories of frictional and voluntary unemployment. Keynes retained allocative demand-and-supply theory in his explanation of the behaviour of the financial sector as a portfolio adjustment process (i.e. the theory of liquidity preference). As Gerrard (1989) argues, Keynes's *General Theory* represents a

post-classical synthesis that encompasses neoclassical theory within a more general framework that allows for both allocative and non-allocative modes of activity. It is an open-systems methodology that is fully consistent with the critical realist project discussed above. From this perspective, the usefulness of neoclassical analysis in any specific situation is largely an empirical issue. Critical realism and the encompassing principle are both pleas for tolerance and a genuine methodology of diversity in which neither mainstream nor Post Keynesian economists make *a priori* closed-system claims about the unique and exclusive relevance of their respective theoretical contributions (Lawson 1999b).

## V. SOME CONCLUDING COMMENTS

The concept of "schools of thought" is a useful simplifying device in the history and methodology of economic thought that helps to provide a rational reconstruction of the development of economics as a discipline. It is particularly useful in a relatively young and immature discipline in which fundamental issues remain in dispute. The Keynesian challenge initiated by Keynes's *General Theory* and its many interpretations highlights the immaturity of economics. The fundamental issue of the causation of involuntary unemployment and the appropriate policy response still remains a matter of controversy within economics.

The initial response to the Keynesian challenge was its incorporation within mainstream economics. The neoclassical synthesis presumed that there is a common theoretical basis between neoclassical and Keynesian economics such that theoretical and policy differences are potentially resolvable by empirical testing. Post Keynesian economics provided a much more radical interpretation of the Keynesian challenge. Post Keynesians believe the Keynesian challenge to be more fundamental, requiring the development not only of alternative theoretical models but also a change in the methodological foundations of the subject.

This study has analysed the development of the Keynesian challenge in both its mainstream and Post Keynesian forms. It has been recognised that Post Keynesian economics has much to offer but it remains marginalised within the economics discipline. It has been argued that the way forward is for Post Keynesian economics

to engage in a more constructive dialogue with mainstream economics with the objective of encompassing relevant neoclassical models within a more general framework that incorporates Post Keynesian alternatives. It has been suggested that the macroeconomics of imperfect competition, the theory of decision-making under uncertainty and the recent research on monetary policy rules are three areas with immediate possibilities for constructive engagement between mainstream and Post Keynesian economics. If Post Keynesian economics is successful in bringing about a fundamental methodological shift in economics towards more open-systems theorising, then Post Keynesian economics may tend to fade away as a recognised school of thought separate from mainstream Keynesianism. But this is only natural if the intellectual objective of Post Keynesian economics is to act as a vehicle for the radical transformation of the economics discipline.

But to achieve this radical transformation requires understanding on the part of both mainstream and Post Keynesian economists. For Post Keynesian economists to state that mainstream economics is limited is not enough. It must be shown to be so. Nothing persuades better than theoretical models that provide testable hypotheses substantiated by empirical evidence. This is the urgent task for Post Keynesian economics at the start of a new millennium. Post Keynesian economics must move away from "straw man" critiques towards constructive engagement with mainstream economics based on academic respect and tolerance, and concrete theoretical and empirical developments.

## REFERENCES

- Akerlof, George A. (2002). Behavioral Macroeconomics and Macroeconomic Behavior. *American Economic Review*, 92(3): 411-433.
- Backhouse, Roger E. (1998). The Value of Post Keynesian Economics: a Neoclassical Response to Harcourt and Hamouda, in: Roger E. Backhouse (ed.), *Explorations in Economic Methodology*. London: Routledge: 149-156.
- Ball, Lawrence (1999). Aggregate Demand and Long-Run Unemployment. *Brookings Papers on Economic Activity*, 2: 189–236.
- Barro, Robert J. (1979). Second Thoughts on Keynesian Economics. *American Economic Review Papers and Proceedings*, 69: 54-59.
- Barro, Robert J. and Grossman, Herschel I. (1971). A General Disequilibrium Model of Income and Employment. *American Economic Review*, 61: 82-93.
- Baumol, William J. (1991). Comment, in: Lars Jonung (ed.), *The Stockholm School of Economics Revisited*. Cambridge: Cambridge University Press: 166.
- Blanchard, Oliver and Summers, Lawrence H. (1987). Hysteresis in Unemployment. *European Economic Review*, 31: 288–95.
- Bliss, Christopher J. (1975). *Capital Theory and the Distribution of Income*. Amsterdam: Elsevier North-Holland.
- Carabelli, Anna (1988). *On Keynes's Method*. London: Macmillan.
- Chick, Victoria (1995). Is There a Case for Post Keynesian Economics? *Scottish Journal of Political Economy*, 42: 20-36.
- Clower, Robert W. (1965). The Keynesian Counter-Revolution: a Theoretical Appraisal, in Frank H. Hahn, and Frank P.R. Breachling (eds.), *The Theory of Interest Rates*, London: Macmillan: 103-125.
- Cohen, Avi J. and Harcourt, Geoff C. (2003). Whatever Happened to the Cambridge Capital Theory Controversies? *Journal of Economic Perspectives*, 17: 199-214.
- Critical Realism (1999). *Journal of Post Keynesian Economics*, Special Issue, Fall, 22(1).
- Critical Realism (2002). *Cambridge Journal of Economics*, Special Issue, November, 26(6).
- Dalziel, Paul (2001). *Money, Credit and Price Stability*. London: Routledge
- Davidson, Paul (1965). Keynes' Finance Motive. *Oxford Economic Papers*, 17: 47-65.
- Davidson, Paul (1972). *Money and the Real World*. London: Macmillan.
- Davidson, Paul (2003). Setting the Record Straight on A History of Post Keynesian Economics. *Journal of Post Keynesian Economics*, 26: 245-272.
- Davidson, Paul and Smolensky, Eugene (1964). *Aggregate Supply and Demand Analysis*. New York: Harper and Row.
- Dow, Sheila C. (1992). Post-Keynesian Methodology: a Comment. *Review of Political Economy*, 4: 111-113.
- Dow, Sheila C. (1995). Interview, in: J. King (ed.), *Conversations with Post Keynesians*, London: Macmillan.
- Dow, Sheila C. (2002). *Economic Methodology: an Inquiry*. Oxford: Oxford University Press.
- Downward, P.M., Finch, J.H. and Ramsay, J. (2002). Critical Realism, Empirical Methods and Inference: a Critical Discussion. *Cambridge Journal of Economics*, 26: 481-500.

- Downward, Paul M. and Mearman, Andrew (2002). Critical Realism and Econometrics: Constructive Dialogue with Post Keynesian Economics. *Metroeconomica*, 53: 391-415.
- Dunn Stephen P. (2000). Wither Post Keynesianism. *Journal of Post Keynesian Economics*, 22: 343-364.
- Eatwell, John (1979). *Theories of Value, Output and Employment*. London: Thames Papers in Political Economy.
- Economic Psychology (2004). *Journal of Economic Psychology*. Mini-Symposium: Scope for Cross-fertilization between Economic Psychology and Post Keynesian/Institutional Economics, Forthcoming.
- Eichner, Alfred S. (1973). A Theory of the Determination of the Mark-Up Under Oligopoly. *Economic Journal*, 83: 1184-1200.
- Eichner, Alfred S. (1976). *The Megacorp and Oligopoly: Micro Foundations of Macro Dynamics*. Cambridge: Cambridge University Press.
- Eichner, Alfred S. (1979a). Introduction, in: Alfred S. Eichner (ed.), *A Guide to Post-Keynesian Economics*. London: Macmillan: 3-18.
- Eichner, Alfred S. (1979b). A Look Ahead, in: Alfred S. Eichner (ed.), *A Guide to Post-Keynesian Economics*. London: Macmillan: 165-184.
- Eichner, Alfred S. and Kregel, Jan (1975). An Essay on Post-Keynesian Theory: a New Paradigm in Economics. *Journal of Economic Literature*, 13: 1293-1314.
- Fitzgibbons, Athol (1988). *Keynes's Vision: A New Political Economy*. Oxford: Clarendon Press.
- Fontana, Giuseppe (2004). *Money, Uncertainty and Time: Essays in the Post Keynesian tradition*. London: Routledge.
- Fontana, Giuseppe and Gerrard, Bill (1999). Disequilibrium States and Adjustment Processes: Towards a Historical-Time Analysis of Behaviour Under Uncertainty. *Philosophical Psychology*, 12: 311-324.
- Fontana, Giuseppe and Gerrard, Bill (2002a). The Encompassing Principle as an Emerging Methodology for Post Keynesian Economics, in: Philip Arestis, Meghnad Desai and Sheila Dow (eds.), *Methodology, Microeconomics and Keynes*, Essays in Honour of Victoria Chick, vol. 2. Aldershot: Edward Elgar: 95-105.
- Fontana, Giuseppe and Gerrard, Bill (2002b). The Monetary Context of Economic Behaviour. *Review of Social Economy*, 60: 243-262.
- Fontana, Giuseppe and Gerrard, Bill (2003). A Post Keynesian Theory of Decision-Making Under Uncertainty. *Journal of Economic Psychology*, forthcoming.
- Fontana, Giuseppe and Palacio-Vera, Alfonso (2003). Is There an Active Role for Monetary Policy in the Endogenous Money Approach? *Journal of Economic Issues*, 37: 511-517.
- Fontana, Giuseppe and Palacio-Vera, Alfonso (2004). Monetary Policy Uncovered: Theory and Practice. *International Review of Applied Economics*, 18: 25-41.
- Garegnani, Pierangelo (1978). Notes on Consumption, Investment and Effective Demand: Part I. *Cambridge Journal of Economics*. 2: 335-353.
- Garegnani, Pierangelo (1979). Notes on Consumption, Investment and Effective Demand: Part II. *Cambridge Journal of Economics*. 3: 63-82.
- Gerrard, Bill (1989). *Theory of a Capitalist Economy: Towards a Post-Classical Synthesis*. Oxford: Basil Blackwell.
- Gerrard, Bill (1991). Keynes's General Theory: Interpreting the Interpretations. *Economic Journal*, 101: 276-287.

- Gerrard, Bill (1992). From A Treatise on Probability to the General Theory: Continuity or Change in Keynes's Thought?, in: Bill Gerrard and John Hillard (eds.), *The Philosophy and Economics of J.M. Keynes*. Aldershot: Edward Elgar: 80-95.
- Gerrard, Bill (1994). Beyond Rational Expectations: a Constructive Interpretation of Keynes's Analysis of Behaviour Under Uncertainty. *Economic Journal*, 104: 327-337.
- Goodhart, Charles A.E. (2002). The Endogeneity of Money, in: Philip Arestis, Meghnad Desai and Sheila Dow (eds.), *Money, Macroeconomics and Keynes*, Essays in Honour of Victoria Chick, vol. I. London: Routledge: 14-24.
- Gordon, Robert (1990). What Is New Keynesian Economics? *Journal of Economic Literature*, 28: 1115-1171.
- Graziani, Augusto (1989). The Theory of the Monetary Circuit, *Thames Papers in Political Economy*. Spring: 1-26.
- Grossman, Herschel I. (1979). Why Does Aggregate Unemployment Fluctuate? *American Economic Review Papers and Proceedings*, 69: 64-69.
- Hamouda, Omar and Harcourt Geoff (1989). Post-Keynesianism: From Criticism to Coherence?, in: John Pheby (ed.), *New Directions in Post-Keynesian Economics*. Aldershot: Edward Elgar: 1-34.
- Harcourt Geoff (1972). *Some Cambridge Controversies in the Theory of Capital*. Cambridge: Cambridge University Press.
- Harrod, Roy F. (1939). An Essay in Dynamic Theory. *Economic Journal*, 49: 14-33.
- Harrod, Roy F. (1948). *Towards a Dynamic Economics*. London: Macmillan.
- Hicks, John R. (1937). Mr Keynes and the "Classics": a Suggested Interpretation. *Econometrica*, 5: 147-159.
- Hodgson, Geoff (1989). Post-Keynesianism and Institutionalism: the Missing Link, in: John Pheby (ed.), *New Directions in Post-Keynesian Economics*. Aldershot: Edward Elgar: 94-123.
- Kaldor, Nicholas (1938). Stability and Full Employment. *Economic Journal*, 48: 642-657.
- Kaldor, Nicholas (1939). Speculation and Economic Stability. *Review of Economic Studies*, 7: 1-27.
- Kaldor, Nicholas (1940). A Model of the Trade Cycle. *Economic Journal*, 50: 78-92.
- Kaldor, Nicholas (1956). Alternative Theories of Distribution. *Review of Economic Studies*, 23: 83-100.
- Kaldor, Nicholas (1957). A Model of Economic Growth. *Economic Journal*, 67: 591-624.
- Kaldor, Nicholas and Mirrlees, James (1962). A New Model of Economic Growth. *Review of Economic Studies*, 29: 174-192.
- Kaldor, Nicholas (1966). *Causes of the Slow Rate of Economic Growth of the United Kingdom: An Inaugural Lecture*. Cambridge: Cambridge University Press.
- Kaldor, Nicholas (1970). The Case for Regional Policies. *Scottish Journal of Political Economy*, 17: 337-348.
- Kalecki, Michael (1939). *Essays in the Theory of Economic Fluctuations*. London: Allen & Unwin.
- Keynes, J. M. (1921). *The Treatise on Probability*. London: Macmillan, reprinted in J. M. Keynes, *The Collected Writings of J. M. Keynes*, vol. VIII, London: Macmillan. 1983.

- Keynes, J. M. (1930). *A Treatise on Money*. London: Macmillan, reprinted in J. M. Keynes, *The Collected Writings of J. M. Keynes*, vols. V-VI, London: Macmillan, 1973.
- Keynes, J. M. (1936). *The General Theory of Employment, Interest and Money*. London: Macmillan, reprinted in J. M. Keynes, *The Collected Writings of J. M. Keynes*, vol. VII, London: Macmillan. 1973.
- King, John (1995). *Post Keynesian Economics: An Annotated Bibliography*. Aldershot, UK: Edward Elgar.
- King, John (2002). *A History of Post Keynesian Economics Since 1936*. Cheltenham, UK: Edward Elgar.
- King, John (eds. 2003). *The Elgar Companion to Post Keynesian Economics*. Cheltenham, UK: Edward Elgar.
- Kregel, Jan (1973). *The Reconstruction of Political Economy: An Introduction to Post Keynesian Economics*. London: Macmillan.
- Lavoie, Marc (2002). A Post-Keynesian Alternative to the New Consensus on Monetary Policy. Paper presented at the ADEK Conference organized by the CEMF, November 14-16, Université de Bourgogne, Dijon, France.
- Lawson, Tony (1985). Uncertainty and Economic Analysis. *Economic Journal*, 95: 909-927.
- Lawson, Tony (1994). The Nature of Post Keynesianism and Its Links to Other Traditions: a Realist Perspective. *Journal of Post Keynesian Economics*, 16: 503-538.
- Lawson, Tony (1999a). Connections and Distinctions: Post Keynesianism and Critical Realism. *Journal of Post Keynesian Economics*, 22: 3-14.
- Lawson, Tony (1999b). Feminism, Realism, and Universalism. *Feminist Economics*, 2: 25-59.
- Lee, Fred (1995). The Death of Post Keynesian Economics? *Post Keynesian Study Group Newsletter*, January: 1-2.
- Lee, Fred (2000). The Organisational History of Post Keynesian Economics in America: 1971-1995. *Journal of Post Keynesian Economics*, 23: 141-162.
- Leijonhufvud, Axel (1968). *On Keynesian Economics and the Economics of Keynes*. Oxford: Oxford University Press.
- León-Ledesma, M.A. and Thirlwall A.P. (2002). The Endogeneity of the Natural Rate of Growth. *Cambridge Journal of Economics*, 26: 441-59.
- Malinvaud, Edmond (1977). *The Theory of Unemployment Reconsidered*. Oxford: Blackwell.
- Mankiw, N. Gregory (1990). A Quick Refresher Course in Macroeconomics. *Journal of Economic Literature*, 28: 1645-1660.
- Manning, Alan (1990). Imperfect Competition, Multiple Equilibria and Unemployment Policy. *Economic Journal*, 100: 151-162.
- Milgate, Murray (1982). *Capital and Employment: A Study of Keynes's Economics*. London: Academic Press.
- Minsky, Hyman P. (1975). *John Maynard Keynes*. New York: Columbia University Press.
- Minsky, Hyman P. (1977). The Financial Instability Hypothesis: An Interpretation of Keynes and An Alternative to "Standard Theory". *Challenge*, 20: 20-35.
- Modigliani, Franco (1944). Liquidity Preference and the Theory of Interest and Money. *Econometrica*, 12: 45-88.
- Monetary Policy (2002). *Journal of Post Keynesian Economics*, Special Issue, Summer, 24(4).

- O'Donnell, Rod M. (1989). *Keynes: Philosophy, Economics and Politics*. London: Macmillan.
- Palley, Tom (1996). *Post Keynesian Economics: Debt, Distribution and the Macroeconomy*. London: Macmillan.
- Pasinetti, Luigi L. (1974). *Growth and Income Distribution: Essays in Economic Theory*. Cambridge: Cambridge University Press.
- Patinkin, Don (1956). *Money, Interest and Prices*. New York: Harper and Row.
- Robinson, Joan (1937). *Essays in the Theory of Employment*. London: Macmillan.
- Robinson, Joan (1942). *An Essay on Marxian Economics*. London: Macmillan.
- Robinson, Joan (1949). Mr. Harrod's Dynamics. *Economic Journal*, 59: 68-85.
- Robinson, Joan (1953). Imperfect Competition Revisited. *Economic Journal*, 63: 579-593.
- Robinson, Joan (1953-54). The Production Function and the Theory of Capital. *Review of Economic Studies*, 21: 81-106.
- Robinson, Joan (1956). *The Accumulation of Capital*. London: Macmillan.
- Robinson, Joan (1962). *Essays in the Theory of Economic Growth*. London: Macmillan.
- Robinson, Joan (1972). The Second Crisis of Economic Theory. *American Economic Review*, Papers and Proceedings, 62: 1-10.
- Robinson, Joan (1979). Thinking About Thinking, in: Joan Robinson (ed.), *Collected Economic Papers Volume V*. Oxford: Basil Blackwell: 110-119.
- Robinson, Joan (1980; orig. 1974). History Versus Equilibrium, in: Joan Robinson (ed.), *Collected Economic Papers Volume V*. Oxford: Basil Blackwell: 48-58.
- Robinson, Joan and Eatwell, John (1973). *Introduction to Modern Economics*. Maidenhead: McGraw-Hill.
- Rotheim, Roy J. (ed., 1998). *New Keynesian Economics - Post Keynesian Alternatives*. London: Routledge.
- Rowthorn, Bob (1999). Unemployment, Wage Bargaining, and Capital-Labour Substitution. *Cambridge Journal of Economics*, 23: 149-69.
- Sawyer, Malcolm (1991). Post-Keynesian Economics: the State of the Art, in: W. Adriaansen and J. Van der Linden (eds.), *Post-Keynesian Thought in Perspective*. Amsterdam: Wolters-Noordhoff: 31-55.
- Sawyer, Malcolm C. (2002). The NAIRU, Aggregate Demand and Investment. *Metroeconomica*, 53: 66-94.
- Setterfield Mark (ed., 2002). *The Economics of Demand-led Growth: Challenging the Supply-side Vision of the Long Run*. Cheltenham, UK: Edward Elgar.
- Slater, Gary and Spencer, David A. (2000). The Uncertain Foundations of Transaction Costs Economics. *Journal of Economic Issues*, 35: 61-87.
- Sraffa, Piero (1960). *The Production of Commodities by Means of Commodities*. Cambridge: Cambridge University Press.
- Thirlwall, Anthony P. (1987). *Nicholas Kaldor*. Brighton: Harvester.
- Walters, Bernard and Young, David (1997). On the Coherence of Post-Keynesian Economics. *Scottish Journal of Political Economy*, 44: 329-349.
- Wallich, Henry C. and Weintraub, Sidney (1971). A Tax-based Incomes Policy. *Journal of Economic Issues*, 5: 1-19.
- Weintraub, Sidney (1958). *An Approach to the Theory of income Distribution*. Philadelphia: Chilton.
- Weintraub, Sidney (1959). *A General Theory of the Price Level, Output, Income Distribution and Economic Growth*. Philadelphia: Chilton.