A Critique of Pragmatic “Keynesianism”

James Juniper
The University of Newcastle

Abstract: This paper responds to Alan Fenna’s pragmatic critique of Keynesianism by focusing on the key conditions that he argues must come together for traditional policies of fiscal expansion to have sustainable effects. In opposition to Fenna, it argues for a clear linkage between neoliberal ideology and opposition to Keynesian economic policy. However, it also identifies a problem of observational equivalence for those holding to Fenna’s critical position and those questioning traditional Keynesian policies from a modern money perspective. In each case, limitations applying to conventional policies of demand management are identified. Where Fenna, by his own logic, would be forced to abandon policies designed to achieve full-employment, modern money theorists instead argue for alternative approaches that overcome these limitations.

Introduction
The theme of the Australasian Political Science Conference in Sydney at the end of September, 2009 was the global financial crisis. While the crisis was the central theme of an interesting address by the Conference’s keynote speaker, Professor Andrew Gamble, another speaker, Professor Alan Fenna from the John Curtin Institute of Public Policy, presented a paper entitled “The Rudd Government and the Return of Keynesianism”. The concerns raised in Fenna’s paper are of crucial importance because they represent a dominant strand of economic opinion insofar as they view the upheavals of recent decades from a seemingly common-sense perspective, which evokes a gentle scepticism about the effectiveness of government interventions to combat unemployment.

Section Two of this paper provides a critique of Fenna’s arguments, which are initially reviewed in Section One. Section Two of this paper provides a specific critique of his claim that neoliberalism was not responsible for the demise of Keynesianism, and an evaluation of his arguments about the nature of the factors that come together to reduce the effectiveness of policies designed to achieve full employment. Conclusions follow. To make the paper more readable a separate appendix has been provided detailing the more technical aspects of the critique. This appendix specifically focuses on the question of whether there is a natural rate of economic growth to which the economy will gravitate if left to its own devices.

An Overview of Fenna’s Arguments
Fenna’s paper takes issue with the view that, “since the mid-1970s the full employment objective has been sacrificed on the alter of ‘neoliberalism’”. In contrast, Fenna argues that the “return of Keynesianism has only been made possible by the unusual convergence of a number of necessary conditions”. As these conditions are unlikely to hold over different periods—specifically, when the objective of price stability is
threatened by the build up of inflationary pressures—Fenna concludes that Keynesian policies should not be pursued in their generality.

Fenna follows Alan Coddington (1976) in defining Keynesianism as the view that 1) markets are not self-equilibrating and in particular are inherently prone to periods of involuntary unemployment; 2) this unemployment is often caused by an insufficiency of effective demand; 3) through their influence on effective demand governments have both the capacity and responsibility to moderate the extremes of the business cycle so as to maintain full employment; 4) fiscal policy is the most powerful instrument for stimulating demand; and 5) thanks in part to the ‘multiplier’ and ‘pump priming’ effects, budget deficits generated by stimulatory policy are not to be feared. Fenna includes an additional defining principle that 6) there is a psychological component to economic behaviour that increases the returns to policies of economic stimulus, observing that Keynes’s favoured instrument of fiscal stimulus—large-scale public investment—yields a “double-dividend” in the form of a short term cyclical benefit and long-term structural benefit.

Fenna acknowledges that, in positing that “Full employment is a fundamental aim of the Commonwealth Government” the Labor government’s 1945 White Paper Full Employment in Australia, cautioned against the danger of unstable public finances and warned that governments would have to “keep public spending within bounds and build in mechanisms for controlling inflation”.

Fenna goes on to argue that five factors limit the capacity of governments to operate Keynesian policies, namely: that it is difficult to control inflation when full-employment has been, or is close to being achieved; that there are long and variable decision-making and implementation lags in the pursuit of counter-cyclical programmes of public sector investment that make fine-tuning difficult, especially when downturns are short and sharp; that far from being self-reducing through multiplier effects, when debt levels rise due to sustained budget deficits they are very difficult to reduce, even during periods of sustained economic growth; political pressures to maintain growth in periods of contraction are greater than those to lower inflation during periods of expansion lending an inflationary bias to macroeconomic policy; finally, in a “globalised” world one cannot be “Keynesian in one country”, as economic autonomy is undermined by spillovers, which directly and adversely influence the balance of trade.

From this perspective, Fenna claims that the post-World-War Two boom had very little to do with discretionary policy and everything to do with underlying economic vigour. Echoing the views of the monetarist, Milton Friedman, Fenna contends that once the inflation genie was released from the bottle in the early 70s, it proved difficult to restrain due to the build up of inflationary expectations. He observes that the Accord was ineffectual in controlling inflation over the 1980s and it took the recession of 1990 to really dampen the inflationary spiral. Fenna notes that despite the empirical failure of monetarist policies targeting growth in the money supply classical monetarism, in broad outlines at least, has been “absorbed into mainstream economic thinking” and has “nearly become identical with modern monetary theory and practice”. Similarly, the notion of balancing the budget over the cycle has also become part and parcel of the current economic consensus.
Nevertheless, Fenna also argues that a remarkable confluence of key pre-conditions have rendered Keynesian policy interventions feasible, for the moment. These include consensus support for deficit spending amongst economic agencies like the OECD and IMF, and business groups like the BCA and AIG; a firmer theoretical basis for Keynesian policies due to the work of the New Keynesians on the microeconomic foundations of macroeconomics; an improved budgetary position for governments across the OECD, especially for Australia; a notable back-log of worthwhile public-sector infrastructure projects in Australia; and a mild external constraint due to global policies of demand stimulus and sustained though moderated growth in exports.

The downside to these observations, of course, is that for Fenna, classical Keynesian methods will have to be wound back as these same advantageous pre-conditions are inverted, turning from favourable supports to negative constraints. Fenna concludes by questioning the “peculiar idea that being Keynesian means engaging continually in fiscal stimulus”. For him, “Keynesianism is about investing in fiscal stimulus in conditions where monetary policy has been exhausted; substantial economic resources, both capital and labour, are idle; inflationary dangers are minimal; and current account problems do not threaten”. Moreover, “[c]ommitment to balancing the budget over the cycle is in no way contrary to Keynesianism and indeed is integral to practice”. In contrast to this pragmatic interpretation of Keynesianism, modern money theorists assert the primacy of fiscal policy, arguing for deficit spending whenever the non-government sector wishes to net save, denying any relevance to current account imbalances when exchange rates are floating rather than fixed, and suggesting that policy can respond to inflationary pressures through tailored fiscal interventions, which should not detract from on-going efforts to achieve full employment.

A Critique of Fenna’s Policy Nostrums

In his paper Fenna questions the link between neoliberal ideology and opposition to Keynesian economic policy. In what follows, this position of Fenna’s will be subject to criticism by establishing a clear link between neoliberalism, in both of its major manifestations, and antagonism towards central planning and Keynesian policies of demand management. This section of the paper will then discuss the problematic issue of an observational equivalence holding for those holding to Fenna’s pragmatist center-right critique of Keynesianism and those questioning traditional Keynesian policies from a modern money perspective.

In his authoritative analysis of the modern form of liberalism, Foucault (2008: 78) identifies two dominant strands: on one hand there is the German form linked to the crisis of the Weimar Republic and the critique of Nazism, on the other hand there is the American form nurtured by the critique of Roosevelt’s New Deal and subsequent Democrat policy interventions. He notes (Foucault, 2008: 79), however, that each these two forms share a common doctrinal adversary in Keynes, and a shared object of repulsion: the state-controlled and centrally planned economy. Nevertheless, despite this common ground, the problems that each form had to face were somewhat different.
For the German Ordoliberals the issue was one of how to legitimise the state's foundations in advance, given the task of constituting a new state on the ruins of Hitler's barbaric social experiment. In particular, Foucault (2008: 103) traces the influences of Husserl's phenomenology and Max Weber's sociology over Walter Eucken who, in 1927, was appointed professor of political economy at Freiburg University. Eucken founded the journal Ordo in 1936, which became the voice-piece for the Freiburg school of ordoliberalism. While Nazism could not serve as an analytical model for general history for the Ordoliberals, Foucault (2008: 108-10) points to the fact that they conceived Nazi totalitarianism to be the realisation of a necessary system of relations between four elements: a protected economy, a state unified on Bismarckian principles, an economy characterised by wartime planning, and one featuring Keynesian-style interventions. Each of these elements was perversely conceived to operate as a centre of gravity for its counterparts and, in combination, they were seen to be allied to an unlimited growth of state power (achieved through the displacement of the rule of law by the Volk and, correlated with this, a principle of conduction displacing the traditional vertical structures of power, with effective authority vested in the Party rather than the state) (Foucault, 2008: 110-112). According to Foucault (2008: 116) the key principle that the Ordoliberals distilled from their analysis of Nazism was therefore one of constituting a state under the supervision of the market rather than a market supervised by the state. Where ordoliberalism departs from its classical forbears is in raising the issue of how the market economy could thus function as the principle, form, and model for a state: one that is profoundly and continually mistrusted because of its potential defects. In achieving this goal Keynesian policies clearly had to be sacrificed.

Much like Ordoliberalism, the American model of modern liberalism coincided with the constitution of a new state after the War of Independence. Despite this, over the previous two centuries, liberalism was situated at the heart of policy debates over protectionism, currency issue, federal fiscal relations and the problem of slavery (Foucault, 2008: 217).

In this context, interventionist policies of a Keynesian variety were viewed very much as the alien and external imposts of a military and imperial state. Finally, the US strain of neo-liberalism was more influenced by a utopian fervour, not least due to the singular efforts of European émigrés such as Ludwig von Hayek.

In contrast to the ethical ambiguities associated with 'fine-grained' Ordoliberal conceptions of social policy and enterprise, which placed as much emphasis on the "warm" moral and cultural values as on the "cold" mechanisms of competition, Foucault (2008: 243) observes that American neo-liberalism is both more complete and more exhaustive. For one thing, the market functions as the principle for "deciphering" social relationships in such a way that seemingly non-economic modes of behaviour reflected in the birth rate, the phenomenon of marriage, and the provision of sexual services, are rendered more explicable. This is achieved by making the household a unit of production and a site of complex contractual negotiations over the individual supply of inputs and the sharing of collective outputs (Foucault, 2008: 243-6). For another, the economic grid is also deployed to assess the validity and value of government activity. The resulting procedures of scrutiny serve to anchor and justify what Foucault (2008: 246) calls a "permanent political criticism of political and government action", which notably attained material form in 1943 with the establishment of The American Enterprises Institute. Far from being a principle of the government's self-limitation as it was under
classical liberalism, for neo-liberalism the law of the market becomes a “permanent economic tribunal turned against government” (Foucault, 2008: 247). Under the gaze of such a tribunal Keynesian policies of demand management were always exposed to both critique and outright rejection.

From the analytical perspective traced out in Foucault’s analysis it seems all too clear that, at an essential level from its very inception, neoliberalism was firmly pitted against Keynesianism. Nevertheless, Fenna’s claims about the constraints over the implementation of Keynesian policies must also be addressed. On the surface they appear to be reasonable and clearly reflect mainstream views about how the macro-economy works, but that doesn’t mean that they are correct. The biggest problem for anyone attempting to assess the merits of Fenna’s arguments is that proponents of the modern money view, and pragmatic opponents of traditional Keynesian nostrums, appear to share considerable common ground, although usually for entirely different reasons. In effect, it comes down to differing theories of how a monetary economy operates.

While Fenna cites Monetarist arguments it is clear that his sympathies lie more firmly in the New Keynesian camp. What New Keynesians share with “Mark I” (i.e. Milton Freidman, 1968) and “Mark II” (i.e. later “Rational Expectations” theorists such as Thomas Sargent, 1986) Monetarists is a belief in some kind of natural rate of economic growth, which, in the absence of market failure, adjustment costs, or inevitable errors in decision-making under risk, would always be realized by private agents. This view is not shared by modern money theorists. What they ultimately ignore are much more destructive “fallacy of composition effects”, which lead to an insufficiency of effective demand and result from an unwillingness on the part of government to generate enough net financial assets to meet the non-government sector’s desire to net save. For neoclassical economists the natural rate of growth in output would always be achieved if the price mechanism in goods, labour and capital markets was unfettered by market failure. It underpins the Monetarist conviction that any growth in the money supply beyond such a natural rate of growth in output would lead to accelerating inflation.

For both the Monetarists and the successors: the rational expectations and “real business cycle” theorists, government attempts to moderate the business cycle always end up making things worse, either due to the problem of “long and variable lags” or due to the fact that they “muddy” the pool of information agents rely on when making long-run predictions. In each case, these views are ultimately grounded in the notion of a natural and real rate of economic growth, which is immune to the interventions of government, no matter how well-meaning they might be. By introducing game-theory into the mix, economists such as Kydland and Prescott add to this theoretical assault on Keynesianism by arguing that policy interventions would only be affective if non-government agents believe that the government will act consistently over the relevant policy horizon, rather than by engaging in “gaming” strategies designed to exploit the private sector’s naive faith in government rectitude.

In response to the “Rational Expectations Revolution”, which gave renewed credence to earlier Monetarist nostrums through the deployment of more sophisticated models of inflationary expectations. New Keynesians accepted the very same notions of optimal growth, however, they also constructed a raft of alternative models to explain why this growth rate would not necessarily be attained under free market conditions. A variety of
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models were developed, each based on a different interpretation of market failure within a chosen markets, including imperfect competition in goods and factor markets, efficiency wage models of the labour market, big “S” and little “s” models of inventory investment, and models of credit rationing in the banking system, all serving to explain how economies could depart from neoclassical conditions of optimal growth and trade (see Blanchard and Fischer, 1990).

While the notion of some kind of a maximal rate of economic growth is legitimate in a multi-sectoral economy, modern money theorists question whether markets that are allowed to “get relative prices right” would always arrive at this optimal rate of growth. This is because they follow Keynes and other members of the 1930s Cambridge Circus in rejecting marginal productivity theories of income distribution. The rejection of marginal theory separates the determination of a normal rate of return from the determination of a normal rate of growth and leaves government with a responsibility for the setting benchmarks for both the minimum rate of return and the price level (i.e. by setting the return on deposits with the central bank and by choosing the minimum wage, respectively) (see Andrews, 1996).

Despite their rejection of a natural rate of growth in output, which operates as a centre of gravity for macroeconomic equilibrium, modern money theorists nevertheless accept that traditional Keynesian fiscal policies do possess an inflationary bias. This is because traditional fiscal policy is too blunt an instrument. The economy runs up against capacity constraints well before regionally dispersed concentrations of unemployment are absorbed.

Modern money theorists also believe, along with Fenna, that that there are significant timing problems associated with a reliance on large-scale public investment. These problems are easily avoided through the regional targeting of public sector employment funded by the Federal Government but largely (though not exclusively) delivered by local government and NGOs.

Finally, modern money advocates also reject Keynesian policies that hark back nostalgically to the Gold Standard in a misguided belief that fixed exchange rates are necessary and/or desirable to control structural imbalances on the current account. Instead, they warn that it is a loss of monetary autonomy, associated with policies tying the exchange rate to the US dollar or a bundle of currencies, that undermine efforts to achieve full employment within the domestic economy, especially when both private sector and government debt is locked into foreign-currency denominated assets.

When it comes to the balance between monetary policy and fiscal policy modern money theorists accept Keynes’s arguments for the “euthanasia of the rentier class”. Interest rates should always be kept low to permit easy repayment of government debt and force the private sector to invest its financial resources in productive forms of wealth. The main factor undermining government efforts to achieve full employment through deficit spending is an “independent” central bank with a charter to raise interest rates whenever unemployment falls some pre-determined inflation-related target. Modern money theorists also believe that inflation is best managed by setting an appropriate level for the minimum wage and, where necessary, through policies of fiscal restraint. When inflationary pressures are particularly strong these two instruments can be combined: as
increased taxation and reduced government spending ease pressures in the goods market. Highly paid jobs in the private sector are being replaced by minimum wage jobs in the public sector, easing pressures in the labour market. Even this extreme policy mix would achieve better outcomes than the current policy regime in industrial economies, which relies on the deliberate creation of high levels of underemployment and unemployment to control inflation with appalling, but all too well understood social costs.

In conclusion, modern money theorists believe that a regionally-directed job guarantee can channel public sector employment opportunities to where they are most needed. Job guarantee programmes clearly meet the conditions of an automatic price stabiliser through their provision of minimum wage jobs. If and when required, public sector employment programmes can be complemented by carefully crafted programmes of infrastructure investment and training. In this environment, sustained deficit spending is desirable whenever there is a positive desire on the part of the non-government sector to net save.

References


Appendix: Technical Aspects of the Argument:

The purpose of this appendix is to question the theoretical basis for mainstream macroeconomic notions that, in the absence of distortions in the labour market caused by trade unions, there is an automatic tendency for the economy to return to a full-employment equilibrium. For mainstream theorists, variations in relative factor prices will determine an optimal level of investment and accumulation so that full-employment is restored. These effects are supposedly supplemented by wealth effects (or real balance effects) occasioned by a decline in the general price level. The notion of a self-correcting rate of growth in output also grounds notions that excessive growth in the money supply (or its counterpart: interest rates that are set too low) will simply feed into rising prices because real growth rates are determined exogenously by the equally real forces of productivity and thrift. The arguments set out below also justify a role for government in setting nominal rates of return (through a targeting of short term rates of interest) and the nominal price level (by selecting an appropriate level for the minimum wage).

The development of linear multi-sectoral production systems (the basis of what is called input-output modelling today) can be traced from the Physiocrats, with their Tableux Economique to the work of Russian economists such as Dimitriev, which was subsequently drawn upon by Wasilly Leontieff (1953). There is a clear link between these input-output models and the textbook Keynesian-cross diagram representing multiplier relationships that operate in determining the point of effective demand.
This system representing the production of commodities by means of commodities was subsequently formalized by John von Neumann (1945) in his work on balanced growth paths and turnpike theorems and by Piero Sraffa (1960) in the context of a devastating critique of marginal economics. Von Neumann's turnpike (balanced growth) theorem essentially revolved around the notion that it sometimes pays to deviate from a main road to get onto a freeway so that the total trip time can be reduced. The economic analogue to a deviation from the balanced growth path is a temporary assignment of productive capacity towards machines that make machines and away from machines that make consumption goods so that, ultimately (on the freeway) the production of latter can be increased more rapidly boosting the flow of consumption goods (a present day example could be the training of teachers for the baby boomers in the 1950s, and then for the children and then grandchildren of the baby-boomers).

The pricing equations that could be derived from these linear systems were an important theme of the so-called post-world-war II socialist calculation debates, although protagonists on the Keynesian side of the debate focused more on conditions for the derivation of meaningful shadow prices of goods and services whereas their neo-Austrian opponents were more concerned with the issue of property-rights and incentives for entrepreneurial discovery.

The insights generated during the capital debates were already known to members of the Cambridge Circus, such as Keynes, Joan Robinson, and Piero Sraffa, in the 1930s. They also draw upon some of the theoretical inquiries initiated by Piero Sraffa in his research of the late 1920s into the phenomenon of increasing returns. Joan Robinson (1953) brought these concerns into public light in her paper which pointed out that the aggregate stock of capital, when the latter was conceived as a 'capitalized' series of wage labour costs, could not be used to determine value independent of distribution (i.e. in terms of the conventional value-marginal product of capital).

Robinson's arguments were soon questioned by Champernown and Samuelson. Champernown (1953) explained how a chain link index could be calculated that supported the notion of gradual adjustment in the capital intensity of techniques of production in response to a unidirectional change in the ratio of the wage over returns to capital. Similarly, Paul Samuelson (1962) constructed a "surrogate production function" or envelope of unit factor-price frontiers that would operate much like its mathematical dual the isoquants familiar to undergraduate students of microeconomics. However, both these attempts to explain substitution between capital and labour intensive techniques of production were shown to break down in the realistic case where the capital intensity of production (as measured by the organic composition of capital) was allowed to vary between one sector of industry and another.

In these cases it was shown that so-called "reswitching" phenomena were typical (even in simple models featuring only two sectors of production with one sector producing consumer goods and the other producing capital goods). Under reswitching, a relatively more capital-intensive technique of production could be more profitable at both high and low rates of interest, while a less capital intensive technique could well be more profitable at medium rates of interest. This result clearly violated the neoclassical presumption that a gradual fall in the rate of interest relative to wage levels would see firms adopting increasingly capital-intensive techniques of production.
In his response to the issues raised by the capital debates, Frank Hahn (1982) contends that the neo-Ricardian model is merely a special case of the Neo-Walrasian model: one in which the vector of endowments is equated to that required to achieve a uniform rate of profit when expressed in terms of classical prices of production. In their rejoinder to Hahn, Duménil and Lévy (1985) demonstrate that he fails to draw appropriate conclusions from his analysis because he does not make a clear distinction between the vector of nominal prices and the vector of discounted prices. Once this has been accomplished, Duménil and Lévy (1985) show that far from being a special case—one that can only be invoked under the unlikely assumption that the endowments vector just happens to equal the required vector magnitude—instead, prices of production are the most general case, insofar as they operate as centres of gravity for the general equilibrium process. They establish that, over an infinite horizon, equilibrium prices asymptotically converge towards prices of production. As such, they contend that the principle factor differentiating neoclassical economics from its classical counterparts is thus its most questionable feature—the tatonnement process. In the absence of a Walrasian “auctioneer” calling out price vectors until equilibrium is achieved there is no guarantee that the economy will move automatically to a position of full employment equilibrium. The link between income distribution and the marginal productivity of capital is severed, thus eliminating any automatic mechanism for achieving optimal rates of investment and accumulation.

In the concluding sections of their paper Duménil and Lévy (1985) suggest that dynamic analysis within a Walrasian intertemporal framework can ultimately take two forms: it can either address the tatonnement process directly, or alternatively trace the outcome of the already accomplished tatonnement as the economy advances from one period to the next. However they emphasize the fact that, unlike their classical centre-of-gravity counterparts, in either case neoclassical theories impose the implausible condition that at each point in time the diachronic rate of profit is equal to the rate of interest. No such equilibrium condition is required by the classical analysis, which only operates in a tendential fashion. Nevertheless, there are strong grounds for exposing Duménil and Lévy’s classical alternative to a more radical critique.

While issues of reswitching and capital deepening tended to dominate in the debate over capital theory, a more radical alternative interpretation also gained ground. In what he calls a Wittgensteinian interpretation of the Ricardian problem of finding a standard commodity (that has a value that is invariant to changes in distribution of income). David Andrews (1996) provides a dialectical Hegelian Marxist rather than a long-period neo-Ricardian view of price determination. Piero Sraffa shows how to construct a standard commodity whose money price is invariant despite changes in ratio of wages to the rate of profit on capital. Initially, Sraffa assumed that the composition of output would be held constant (his famous “snapshot” assumption). In modern garb, Sraffa’s solution is a function of the dominant eigenvalue in the net product (or $(I - A)$) matrix. Unfortunately, the existence of increasing (or decreasing) returns to production would mean that this eigenvalue structure would shift with changes in the composition of output, thus undermining the notion of a standard commodity that would be invariant to changes in both the composition of output and the ratio of wages to profits. Disequilibrium adjustments of the tatonnement kind would only add to the difficulty of constructing a standard commodity.
Andrew’s (1996) anti-foundationalist interpretation undermines possibility of determining benchmark price index that could be used to separate real from nominal returns and prices, thus, justifying a role for government in setting these crucial nominal anchors via minimum wage and overnight interest rate. Andrews contends that impossibility of an invariant standard of value operates both as a critique of the neoclassical theory of income distribution, and also as an attack on the essentialist and long-period notion of prices-of-production as centres of gravity. Continual adjustments in the composition of demand; the distribution of income between economic classes; the rate of technological change; and the degree to which economies of scale are exploited undermine any conception of a stable standard of value - natural or artificial.

The implications of this finding are profound. For one thing, there can be no determination of the real value of any type of capital or financial asset price, or rate of return. Phenomena of this kind can neither be defined or calculated, let alone ranked in an order that would be invariant with respect to changes either in income distribution or the composition of output. This inability to rank carries over to techniques of production adding further obstacles to those wishing to hold onto some conception of a surrogate production function or chain index of capital.

The problem for neoclassical economists is that a strategic retreat away from aggregative parables to the rigorous and formal world of general equilibrium theory opens up another can of worms. It is widely acknowledged that the Walrasian alternative must confront the possibility of indeterminacy: a multiplicity of equilibria obtain within the ‘core’ of general equilibrium. This is because the offer curves of agents wishing to borrow or lend possess multiple turning points due to the existence of at least three degrees of freedom (Dougherty, 1980). As interest rates vary, on one hand there are income and substitution effects operating along the intertemporal indifference curves for current and future consumption, and on the other hand there is a substitution effect operating along the consumption possibilities frontier which accounts for intertemporal production activity (i.e. investment turns present consumption into future consumption).

The above overview of debates occasioned by the controversies in capital theory would seem to consolidate a Keynesian approach to the notion of fundamental uncertainty, undermining the very grounds of the rational expectations hypothesis. Ironically, one recently developed strand of orthodox economic theory—the New Growth Theory—has surreptitiously revived some of the essential insights of the 1960s and 70s capital debates: in particular, by abandoning the notion that there are diminishing marginal return to capital.

Kurz and Salvadori (1998, 1997) argue that the resulting AK-Models developed by New Growth Theorists can be reconciled with their Post-Keynesian counterparts if certain minor adjustments are made. Differences are minimized if non-produced resources are set aside and if labour is subsumed within (produced) capital (i.e. ‘non-produced’ land is ignored and workers are conceived to be produced like ‘cattle’). In regard to infinite horizon General Equilibrium modelling, Kurz and Salvadori observe that the optimal capital-consumption path converges asymptotically to the von-Neumann balanced path. Accordingly, it is an acceptable practice to switch from an intertemporal analysis to a description of the long period, steady-state. An equally justifiable approach is simply to
assume that a long-period position exists and then to study its properties (i.e. this is the approach taken by Piero Sraffa, 1960).

Where workers are presumed to gain a share of the surplus, an extra equation becomes necessary to close the model. This can be accomplished in either of two formally equivalent ways: through the optimisation of the intertemporal consumption trajectory, or through the use of a Cambridge equation along the lines of Luigi Pasinetti. In other words, neoclassical theorists introduce the demand for and supply of ‘capital’ (e.g. an equation relating savings out of per-capital production to investment measured in labour units, or by maximizing the integral of discounted consumption to determine an optimal rate of accumulation). Post Keynesians arrive at a similar growth rate using, say, the Pasinetti-form of the Cambridge equation. Technology characteristics would then completely determine the rate of profit, thus determining the rate of accumulation. This equivalence of closure justifies the approach adopted by post Keynesian economists such as Wynne Godley and Marc Lavoie (2007), who chose to work within the stock-flow consistent macroeconomic modelling paradigm.

1 Associate of the Centre of Full Employment and Equity, The University of Newcastle
2 Proponents of the modern money include L. Randall Wray (2006) and Mitchell and Muysken (2008).
3 See, for example, the macroeconomic growth model set out in Sargent (1986) or Backhouse (1981) for a simpler treatment that incorporates the Solow-Swan model into a IS-LM macroeconomic framework. Owing to the importance of this supposition to Monetarist and more pragmatic arguments against fiscal policy it is treated at length in the accompanying appendix to this paper.
4 See Vercelli (1991) for a rigorous post-Keynesian critique of the rational expectations framework developed by Robert Lucas.
5 On this see Duménil and Lévy’s (1985) critique of Hahn (1982) (as discussed in the technical appendix) and Nikaido’s (1970: 149-154; 236-43) overview of the von Neumann balanced growth model as a particular instance of multi-sectoral modelling in the tradition of Piero Sraffa and Wassily Leontieff.
6 See Nagatani (1981) for a succinct yet reasonably comprehensive assessment of the implications of the capital debates for macroeconomic theory. In particular, he shows that Samuelson’s (1962) attempted resolution based on a “surrogate-production function” lacked the generality required to defend the “fables” of aggregate production theory. See the discussion of Kurz and Salvadori (1998) and Salvadori’s (2003) work in the appendix, which argues that the New Growth Theory unintentionally reproduces many of the insights emanating from the capital debates.