A Brief Introduction to Post Keynesian Macroeconomics

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1. Introduction

I begin by setting out the core of Post Keynesian macroeconomics, using six propositions asserted by Tony Thirlwall and drawing some important conclusions from them. I then distinguish three schools within Post Keynesian theory: the fundamentalist Keynesian approach taken by Paul Davidson, the Kaleckian variant represented by Eckhard Hein, and Hyman Minsky's financial instability hypothesis. I take note of both their differences and their very significant points of agreement. I continue by identifying what Post Keynesian macroeconomics is not, and outlining some very substantial criticisms of both "Old Keynesian" and "New Keynesian" theory. There follows an historical interlude, in which I sketch the development of Post Keynesian theory in Cambridge (UK) and the United States in the 1950s and 1960s and summarise the contributions of two eminent Austrian theorists, Josef Steindl and Kurt Rothschild.

I continue by discussing the distinctive Post Keynesian position on questions of macroeconomic policy, focussing on monetary and fiscal policy, the regulation of prices and incomes, and the reform of the international monetary system. I then apply these principles to explaining the Global Financial Crisis that began in 2007 and suggesting some Post Keynesian policy proposals that might make similar crises less likely in the future. I conclude by discussing the relationship between Post Keynesianism and three other schools of heterodox economic theory: Marxism, institutionalism and behavioural economics.

Space constraints prevent me from discussing the relationship between Post Keynesianism and six other heterodox schools: feminism, ecological economics, evolutionary economics, Sraffian theory, social economics, and Austrian theory (of the Hayek-von Mises variety). They also rule out any systematic discussion of methodological issues; the theories of growth and of economic development; Post Keynesian microeconomic theory; a possible Post Keynesian contribution to environmental economics; the implications of complexity and path-dependence for the equilibrium income-expenditure models that are used by all three Post Keynesian schools; and the future of Post Keynesianism in university economics departments around the world.

2. The Core

Twenty years ago, Tony Thirlwall (1993) summarised Post Keynesian macroeconomics in terms of six core propositions. First, employment and unemployment are determined in the product market, not the labour market. Second, involuntary unemployment exists, and is caused by deficient effective demand; it is not the result of labour market imperfections, and it would not be eliminated if such imperfections were removed. Third, the relationship between aggregate investment and aggregate saving is fundamental to macroeconomic theory, and causation runs from investment to saving, and not vice versa. As James Meade (1975, p. 82) once put it, the "Keynesian Revolution" involved a mental shift, from the picture of a dog called "saving" that wags its tail called "investment", to one of a dog called "investment" that wags its tail called "saving". Fourth, a monetary economy is quite different from a barter economy: money is not neutral, finance is important and debt matters. Fifth, the Quantity Theory of Money is seriously misleading, for three reasons. Money is endogenous, so that in the Equation of Exchange (MV = PT) causation runs from right to left, not from left to right; changes in liquidity preference mean that V is not constant; and cost-push forces (especially pressures on wages and primary product prices) often generate inflation well before full employment is attained. Sixth, capitalist economies are driven by the "animal spirits" of investors, which determine investment. (This final proposition is somewhat problematic, as will be seen in section 8.3 below.)

The implications of Thirlwall's six propositions are very clear, and extremely important. Say's Law is false, so that output and employment are often (perhaps normally) demand-constrained, not supply-constrained. Hence the maintenance of full employment often (perhaps normally) requires state intervention. Fiscal policy is not ineffective, and the principle of "Ricardian equivalence" is false (as Ricardo himself recognised). Finally, prices and incomes policies are needed to control inflation. In all of this, the bottom line is the principle of effective demand.

3. Three Post Keynesian Schools

While all Post Keynesians would agree with Thirlwall's core, the detailed exposition and elaboration of these fundamental principles differs significantly between (at least) three distinct schools.

3.1 Paul Davidson's "fundamentalist Keynesianism"

The position of Paul Davidson (b. 1930) has not changed in almost half a century: "It's all in the General Theory."[1] According to Davidson, Keynes identified the three crucial axioms of "classical" theory: ergodicity (the future can be reliably inferred from the past); gross substitution (price flexibility ensures that all markets clear); and the neutrality of money (the classical dichotomy: money affects prices, not output and employment, which depend only on the "real" factors of tastes and technology).

Davidson emphasises that Keynes believed all three axioms to be wrong. The existence of fundamental uncertainty means that we live in a non-ergodic world, in which the future cannot be reliably inferred from the past. The axiom of gross substitution is false, so that price flexibility does not guarantee full employment. And money is not neutral; it affects output and employment. From this Keynes derived the principle of effective demand, summarised in Davidson's (2011, Fig. 2.5, p. 30) Aggregate Supply-Aggregate Demand diagram, which was described (but not drawn) in the General Theory, and is quite different from the mainstream textbook version. It reflects Davidson's microeconomics, which (as with Keynes) is Marshallian. Like Keynes, Davidson argues that the principle of effective demand demonstrates the need for active monetary, fiscal and incomes policies. He advocates the reform of the international monetary system along the lines advocated by Keynes in 1944 (the International Clearing Union: see section 6.4 below).

3.2 Michał Kalecki's two-class model

The great Polish economist Michał Kalecki (1899-1970) discovered the principle of effective demand more or less simultaneously with Keynes, but gave it a Marxist twist. For Kalecki (1954) the distinction between workers and capitalists is essential, and capitalist expenditure (above all on investment) is the key to the business cycle: "Workers spend what they get; capitalists get what they spend." Kalecki's algebra is derived from the simplest income-expenditure model, and reveals that in a closed economy with no government, total profits are indeed equal to capitalists' expenditure (in a more complicated and realistic model, we must add the government deficit and the trade surplus).

Write Y for total income; C for consumption (the suffixes w and p refer respectively to consumption spending by workers and capitalists); I for investment; W for total wages; and P for total profits. In the simplest case, with no government or overseas sector,

Expenditure $= C + I = C_w + C_p + I$, and

Income $= W + P$.

Assuming that there is no saving by workers, so that $C_w = W$, equality of income and expenditure entails that

$P = C_p + I$.

Thus, in aggregate, profits are determined by capitalists' expenditure.

Now add the government, which incurs expenditure (G) and collects tax revenue (T). It follows that

Expenditure $Y = C + I + G = C_w + C_p + I + G$, while

Income $Y \quad = W + P + T$.

Again assume no saving by workers. Once again $C_w = W$, so that

$P = (C_p + I) + (G – T)$,

and total profits are now equal to expenditure by capitalists plus the budget deficit.

Finally introduce an open economy, which means adding exports (X) to total expenditure and imports (M) to total income. It is easy to show that

$P = (C_p + I) + (G – T) + (X – M)$,

so that aggregate profits depend on expenditure by capitalists plus the budget deficit plus the trade surplus. Adding saving (or dis-saving) by workers makes the algebra a little more complicated, but does not affect the thrust of the argument.

For Kalecki the profit share depends on the degree of monopoly in oligopolistic product markets (and also, in his later work, on the outcome of class conflict in the labour market). Fluctuations in investment expenditure are the key to the business cycle, but there is also a tendency for a chronic deficiency in effective demand, as suggested by early underconsumptionists like Rosa Luxemburg, since the profit share is normally too high, and the wage share too low, to sustain full employment of labour or capital. But this is a capitalist society, and the ruling class will normally resist government deficit spending, even though it would increase total profits. In part this reflects a mistaken belief in the need for "sound finance", in part a well-founded fear of full employment as a threat to discipline in the factories.[2] Armaments expenditure is less objectionable to the capitalists than civilian spending, however, so that "Military Keynesianism" may prove politically acceptable where high wages and the welfare state are not.

3.3 Hyman Minsky and the financial instability hypothesis

The "Wall Street vision" of capitalism articulated by Hyman Minsky (1919-1996) was rather different from Kalecki's, but not fundamentally inconsistent with it. The central relationship that interested Minsky was that not that between the capitalist employer and the worker, but rather that between the investment banker and his capitalist client. Since capitalism is inescapably cyclical (and not prone to stagnation, Minsky believed), fluctuations in investment are crucial, and the availability of finance is central to investment. Lending standards fluctuate over the cycle. As is well known, Minsky distinguished three phases: “hedge finance” in the early stages of an upswing, when lenders only accommodate those borrowers whose projects are expected to be sufficiently profitable to allow them to make both the necessary interest payments and repay the principal; “speculative finance”, where lenders are less cautious, and no longer require that the repayment of the principal is guaranteed; and “Ponzi finance”, where lending standards become so lax that some borrowers need to take out further loans in order to meet their interest obligations (the 2008 case of the US swindler Bernie Madoff was uncannily similar to that of the eponymous Charles Ponzi almost a century earlier). The eventual, inevitable financial crisis results from a collapse in lenders’ confidence and leads to credit rationing, the forced liquidation of assets at “fire sale” prices in order to repay loans, a sharp fall in investment, and a consequent decline in output and employment.[3]

Late in his life Minsky identified a new phase of “money manager capitalism”, in which consumer borrowing, and hence also consumer debt, had become more important.[4] As a student of Joseph Schumpeter, Minsky always emphasised the crucial role of financial innovation in all stages of capitalist development. This meant that there was a constant need for close financial regulation, and also a constant threat that it would be ineffective. Why, then, had a financial crisis on the scale of the Great Depression not happened again in Minsky’s lifetime? Big government was the answer, he believed. There was both a flow dimension and a stock dimension to this. In the post-1945 US the government was much larger than it had been in 1929, which made built-in fiscal stabilisers much more powerful in a downturn; this was the flow aspect. In addition, the sum of all the budget deficits since 1929 had provided the private sector with a huge quantity of risk-free government securities, greatly improving its financial robustness; this was the stock aspect. But eternal vigilance remained the price of continuing financial stability.

3.4 Conclusions

Evidently these three Post Keynesian schools occupy a very considerable area of common ground. In particular, they all agree that it is impossible to base macroeconomic theory on RARE microfoundations (where the acronym denotes representative agents with rational expectations). Rational expectations are ruled out for Davidson by non-ergodicity and fundamental Keynesian uncertainty, and for Minsky by the cyclical myopia of his investment bankers; Kalecki, too, stresses the importance of irreducible “borrowers’ risk” and “lenders’ risk”. Neither is there any role for representative agents, since this would eliminate the bulls and bears who are central to Keynes and Davidson, the workers and capitalists who are emphasised by Kalecki, and the debtors and creditors who are distinguished by Minsky. At least two classes of agents are always involved, in any Post Keynesian macroeconomic model, and they cannot behave "rationally" in the strict neoclassical sense, since they lack the necessary information (which is not to say, Keynes stressed, that they do not normally act in a reasonable manner).

It should also be noted that Kalecki and Minsky need each other. In Kalecki's models there is no substantial role for money or finance. It is not that he believed that capitalism could be analysed as if it were a barter economy, but simply that he chose to concentrate on other questions. Kalecki was not a great reader, and it is entirely possible that he knew nothing about Minsky. But the latter's emphasis on cyclical variability in credit rationing and on asset price fluctuations might well have been useful to Kalecki in resolving the continuing problems that he had in specifying an acceptable macroeconomic investment function, which were noted by Josef Steindl (1990, pp. 139-148).

As for Minsky: he needed a theory of financial resources to complement his theory of financial commitments. Capitalists obtain income in the form of the profits that are generated by their activities, and they only encounter financial difficulties if their incomes are inadequate to meet their obligations to their creditors. Kalecki's theory of profits provides a clear and coherent theory of capitalists' aggregate financial resources, as Minsky himself came to recognise rather late in his career. And this points to a problem for him: since total profits are determined by the sum of investment and capitalist consumption expenditure, it is entirely possible that capitalists can spend their way out of trouble, in aggregate (though not, of course, individually). Again, the investment function is the critical part of any Post Keynesian model.

4. What Post Keynesian Macroeconomics Is Not

The name of John Maynard Keynes has all too often been taken in vain by theorists with whom he would have had little or nothing in common. This is true to some extent of Old Keynesians like J.R. Hicks and Don Patinkin (as Hicks himself came to acknowledge late in life), and even more so in the case of the 21st-century New Keynesians.

4.1 Old Keynesian Macroeconomics

Post Keynesians reject all three components of Old Keynesian theory. Indeed, Post Keynesian economics in the US very largely arose from a critique of the "Old Neoclassical Synthesis", as we shall see in section 5 (ii).

The first component of Old Keynesian macroeconomics is the IS-LM model. Now this was a multiple discovery, which seems to have met with Keynes's approval.[5] But there are very serious problems with it. First, it deals with the wrong variables, and the well-known IS-LM diagram thus has the wrong axes, which should be inflation and employment, not output and the rate of interest. Second, there are good reasons for believing the IS curve to be both interest-inelastic and highly unstable, since investment depends on profit expectations (and hence on "animal spirits"), much more than on the rate of interest. Third, the stock of money is endogenous: it is determined by the demand for credit. This means that the LM curve is horizontal, not vertical. For all these reasons, IS-LM is a source of confusion rather than enlightenment.

The same is true of the second component of Old Keynesian macroeconomics, the Solow (or more accurately Swan-Solow) growth model, which is rejected by Post Keynesians on several grounds. First, they object to its treatment of the long run as a sort of magic kingdom where Say's Law holds, labour and capital are both always fully employed, and the principle of effective demand is therefore inapplicable. (Many would agree with Kalecki that there is no such thing as the long run, but only a series of short runs.) Second, they point to the incoherence of the neoclassical theory of capital on which the Solow growth model relies, and in particular to what Heinz Kurz has described as the "monotonic fallacy" regarding capital-labour substitution. As demonstrated by Piero Sraffa (1898-1983), there is no good reason to believe that a change in the ratio of the real wage to the rate of profit will always induce a change in the capital-labour ratio in the opposite direction, as the Solow model requires. Finally, there is every reason to believe that technical change is endogenous, and responds to changes in demand. This puts Say's Law into reverse, so that demand creates its own supply (a proposition sometimes summarised in the concept of "hysteresis").

The third and final component of Old Keynesian economics is the Phillips Curve, which Post Keynesians reject in favour of an institutional approach to explaining inflation, in which politics, labour market institutions and the class power of capital, relative to labour, are more important than the unemployment rate. Thus they were no more surprised than the monetarists were by the instability that the Phillips Curve displayed in the 1970s. But they explained it in a very different fashion: heightened social conflict over the distribution of income was more important in increasing inflation than were increased inflationary expectations.

4.2 New Keynesian Macroeconomics

The New Neoclassical Synthesis relies on DSGE (Dynamic Stochastic General Equilibrium) models, which have a number of objectionable features. First, they assume that macroeconomics can be reduced to propositions about microeconomics: this requirement for "microfoundations" is usually treated as self-evident, and is seldom explicitly defended. Second, there is a reliance on the RARE individuals (representative agents with rational expectations) that we have already encountered, and rejected. Third, there are assumed to be "complete financial markets", in which there is no fundamental uncertainty and no fear of default, so that debt is irrelevant and financial instability on Minskyan lines is impossible. The only supposedly "Keynesian" feature of such models is the introduction of market imperfections, and it is this which distinguishes "New Keynesian" from "New Classical" macroeconomics. The two most important imperfections are provided by efficiency wage theory, which explains why employers do not cut wages to eliminate unemployment, and asymmetric information between borrowers and lenders, which prevents capital markets from clearing.

Post Keynesian objections to RARE individuals have already been noted. Most Post Keynesians also object to the microfoundations dogma, on the grounds that it denies the fallacies of composition that they regard as central to macroeconomics and which make it impossible to reduce macroeconomics to microeconomics.[6] The "paradox of thrift" was emphasised by Keynes: any individual agent can increase her saving, should she choose to do so, but if all agents attempt to do so, without any increase in aggregate investment, the result will be a decline in output and income, leaving aggregate saving unchanged. There is also a Kaleckian "paradox of costs": wage increases are invariably bad news for any individual capitalist enterprise, since they push up costs and reduce profits, but under certain circumstances they may be good news for capitalists as a whole, raising output and aggregate profits (see section 7.2 below). Finally, a "paradox of liquidity" is implicit in both Keynes and Minsky: any individual enterprise that wishes to become more liquid can normally do so, at a price, but if all enterprises attempt to increase their liquidity the effect will be to push up interest rates, and in some circumstances to cause a major financial crisis.

Post Keynesians also reject the final principle of New Keynesian theory, which Davidson terms "imperfectionism" and which is inconsistent with the principle of effective demand. Downward wage and price flexibility would not, they maintain, be sufficient to establish and maintain full employment. In fact deflation is seen as by Post Keynesians as part of the problem, and not as part of the solution to involuntary unemployment. As Keynes (1936, pp. 257-271) argued at some length in chapter 19 of the “General Theory”, falling prices and money wages will make things worse in a downturn, by depressing expectations, raising real interest rates and increasing the real burden of debt. The experience of Japan since 1990 provides a cautionary case study in the dangers of even very gradual deflation.

5. Some History

Post Keynesian theory originated in the 1950s and 1960s, more or less independently in Britain and the United States. By the early 1970s the term was being widely used to describe the ideas discussed in section 3, and by the end of the decade a more or less clearly defined Post Keynesian school had emerged.

5.1 Cambridge (UK)

The most important of the early British Post Keynesians were Joan Robinson (1903-1983) and Nicholas Kaldor (1908-1986). Rather than attacking the Old Neoclassical Synthesis, their principal concern was to fill in the gaps left by Keynes, in particular to develop theories of growth and distribution that were consistent with the principle of effective demand. This did eventually lead them into conflict with the Solow growth model, especially after the Italian theorist Piero Sraffa, who had lived in Cambridge since the late 1920s, finally published his devastating attack on the coherence of neoclassical capital theory.

The main landmarks of Cambridge Post Keynesianism were Robinson’s magisterial “Accumulation of Capital” (1956) and Kaldor’s influential article, “Alternative Theories of Distribution” (1956), and Sraffa’s slim volume, “Production of Commodities by Means of Commodities” (1960). They established a Cambridge tradition, in which the Harrod growth model was supplemented by a macroeconomic theory of distribution where the income shares of wages and profits were determined by capitalists’ investment decisions and the very different propensities to save of capitalists and workers. There was no role for neoclassical production functions or for the marginal productivity theory of distribution. Kaldor later developed a range of growth models that made technical progress endogenous, and pioneered the Post Keynesian analysis of monetary endogeneity and the consequent critique of the Quantity Theory. Robinson, for her part, came to attack the Old Neoclassical Synthesis as a form of “Bastard Keynesianism”, aimed at “putting Keynes to sleep”. In this she may well have been influenced by the US Post Keynesian Sidney Weintraub.

Two more Italians played an important role in the development of Post Keynesian thinking in Britain. Luigi Pasinetti (b. 1930) corrected a major defect in Kaldor's macroeconomic theory of distribution, generalising it to allow for the accumulation of wealth by workers, and Pierangelo Garegnani (1930-2011) devoted his life to promoting the (controversial) prospect of a Keynes-Sraffa synthesis.

5.2 USA

The emergence of Sidney Weintraub (1914-1983) as the first prominent Post Keynesian in the United States was due entirely to his objections to the Old Neoclassical Synthesis, which he believed to neglect wage-push inflation and to entail an ineffective and damaging deflationary response to a problem caused not by excessive aggregate demand but rather by the failure of wage-fixing institutions. Weintraub believed that he had discovered a magic constant: the wage share in total output. Trade union efforts to increase this share by demanding increases in money wages were therefore inevitably self-defeating, and they were also dangerously inflationary. He advocated a tax-based incomes policy to reward moderation in wage bargaining and penalise employers (and indirectly also unions) for excessive wage increases.[7]

Paul Davidson was Weintraub's student, and his "Money and the Real World" (1972) was not only an important text for the Fundamentalist Keynesians but also a major event in the emergence of Post Keynesianism as a distinct school. Other landmarks were Robinson's keynote address to the 1971 meeting of the American Economic Association; the widely-read 1975 survey article by Alfred Eichner and Jan Kregel published in the "Journal of Economic Literature"; and Hyman Minsky's book on John Maynard Keynes, which appeared in the same year.[8] Minsky was something of a loner, and did not get on with Davidson or publish his work in the "Journal of Post Keynesian Economics", which Davidson and Weintraub co-edited from its inception in 1977, with financial and moral support from John Kenneth Galbraith. Soon there were Post Keynesians, and before long also Post Keynesian societies, in many parts of the world, including Brazil, France, Japan and the UK. However, there has never been a Post Keynesian association in the United States, unlike the societies of institutionalist, radical, feminist, social and evolutionary economists.

5.3 Austria

Something should be said about the two major figures in Post Keynesianism in Austria. In 1937 the young Josef Steindl (1912-1993) anticipated J.R. Hicks's discovery of the "supermultiplier", which is the Keynesian investment multiplier augmented by the accelerator effect of increased consumption, which induces a further increase in investment.[9] After wartime exile in England, where he came under the influence of

Michał Kalecki, Steindl produced his best-known book, "Maturity and Stagnation in American Capitalism" (1952), in which he argued that a growing degree of monopoly had restricted the growth of working class consumption and thereby undermined the dynamism of capitalism in the US. In later work Steindl explored what might be termed the post-Kaleckian issues of working-class saving, dis-saving and debt.

Over a very long and highly productive career, his friend and near contemporary, Kurt Rothschild (1914-2010), argued the case for pluralism in heterodox economics and implemented it in his own combination of elements of Post Keynesianism, Marxism and institutionalism. His important contributions were celebrated in a 2011 conference sponsored by the Austrian National Bank.[10] Rothschild's edited volume on "Power in Economics" (1971) remains a perceptive (and unfortunately rare) attempt to grapple with some important and neglected questions in social science.

6. Why it All Matters: Post Keynesian Economic Policy

Keynes was never greatly interested in economic theory for its own sake, and instead regarded economics as a policy science, or perhaps as an art. Post Keynesians share these practical concerns, and have distinctive views on a very wide range of economic policy questions that differentiate them very clearly from the mainstream. I shall touch briefly on four of them.

6.1 Monetary policy

As we have seen, the earliest Post Keynesians were strongly critical of monetarism, both as a theory and as a set of policy proposals. Money was endogenous, they argued, and the direction of causation was the reverse of that claimed by Friedman and the Chicago school. Inflation originated in the "real" economy, especially the markets for labour and raw materials. Attempts to combat it by implementing a rigid rule for the growth of the money supply would not succeed, but (through the associated fiscal austerity, high interest rates and overvalued exchange rates) would inflict serious damage on output and employment.[11] There was also an important point of political principle: monetary policy should be subject to democratic control in the interests of the great majority, and not placed in the hands of supposedly "independent" central banks that in practice remained very much dependent on the tiny, very rich minority of players in the financial markets.

Much of the Post Keynesian critique of monetarism was soon confirmed, for example by the experience of Thatcher's Britain, and some of it has been absorbed (without acknowledgement) into the New Neoclassical Synthesis (a horizontal LM curve; interest rates as a more practical instrument of monetary policy than control of the money stock). But Post Keynesians remain severely critical of mainstream monetary policy, not least for its dogmatic assertion that output price inflation is the only legitimate target. As we shall see in section 7, this has led to a dangerous neglect of other important targets, most notably asset price inflation and the stability of the financial system as a whole (the vital question of "macroprudential regulation").

Post Keynesians also dispute the mainstream reliance on one policy instrument, which renders the monetary authorities powerless to influence these other target variables. Some favour a return to the use of direct controls, for example to restrict mortgage lending when there are grounds to fear a housing price bubble. Others argue for indirect controls, in the form of asset-based reserve requirements that would in effect impose a higher tax on particular forms of lending to prevent the emergence of bubbles or to deflate them gradually.

That said, Post Keynesians are also inclined to question what monetary policy actually can achieve. The failure of quantitative easing to stimulate a strong recovery in the US and the UK in the wake of the Global Financial Crisis has not surprised them. Like Keynes, who advocated "a somewhat comprehensive socialisation of investment" to compensate for the weak effects of expansionary monetary policy, Post Keynesians tend to focus on what monetary policy can not accomplish, and to advocate a set of more powerful alternatives. First and foremost, there is fiscal policy.

6.2 Fiscal Policy

One significant difference between Old and New Keynesian economics is their treatment of fiscal policy. For Old Keynesians – and here they shared common ground with Post Keynesians – deficit-financed government expenditure was an important weapon against demand-deficient unemployment, while budget surpluses should be used to restrain demand-push inflation. New Classicals and New Keynesians argue instead that fiscal policy is ineffective, invoking the principle of "Ricardian equivalence". Rational economic agents, it is claimed, will realise that increased government borrowing today entails higher taxation in the future and will reduce their consumption spending accordingly, eliminating any stimulatory effects of the increased government spending. Conversely, in the case of a budget surplus, government austerity measures will not reduce effective demand.

This principle was indeed proclaimed two centuries ago by David Ricardo, and with some justification: in 1815 British government debt amounted to 300% of GDP, annual interest payments represented approximately 10% of national income, and there were real grounds for the wealthy to fear working-class resistance to any further increases in the taxation of necessities and to expect that any further government borrowing would increase their own future tax bills. Even under these circumstances, Ricardo doubted the principle that is now associated with his name; even highly educated people, he believed, simply could not understand it.[12] In this he was almost certainly correct.

There is some tension between Ricardian equivalence and the principle of "sound finance", as expressed in Angela Merkel's famous statement of "Schwäbian housewife logic" ("we must not live beyond our means"): if fiscal policy is ineffective, then it cannot have any adverse effects. Post Keynesians, however, deny both the ineffectiveness of fiscal policy and the principle of sound finance. Instead they assert the principle of "functional finance" that was first stated by Abba Lerner (1943) seventy years ago: the only thing that matters is the achievement of full employment and the avoidance of demand inflation. The government should run a deficit if private sector expenditure is expected to be inadequate, and it should run a surplus if private sector spending is expected to be excessive; a balanced budget is called for only in the (very improbable) case in which private sector spending is expected to be "just right". Applying Merkel's logic in depressed conditions, when consumers lack confidence and business expectations are subdued, will be self-defeating: it will reduce effective demand, cut tax revenues and increase the budget deficit. This was one of the most important lessons of the Great Depression of the 1930s, which now needs to be learned all over again.

6.3 Prices and Incomes Policy

Contractionary fiscal policy is an appropriate weapon against demand inflation, but as Weintraub argued it is likely to be both ineffective and damaging when applied to cost inflation. In this case direct intervention in product and factor markets is required. In the highly unionised labour markets of the post-1945 "golden age", the most important principle was to ensure that money wages did not rise too rapidly. As early as 1951 Nicholas Kaldor had established the underlying principle, in a paper that was for some reason not published for another decade. Assuming that the existing division of total output between capital and labour is acceptable, money wages in all industries should increase at the same annual rate as average labour productivity. Industries with below-average productivity growth should be allowed to raise their prices, and industries where productivity was growing faster should be required to reduce prices, so that the overall price level remains roughly constant. In the early 1960s two Australian Keynesians, Eric Russell and Wilfred Salter, modified the Kaldor rule to allow for variations in the terms of trade, which would change the effective rate of productivity growth.

A prices and incomes policy of this type could be implemented in three ways: by legally binding compulsory arbitration, as in Australia before 1990; by agreement between the "social partners", as in the formerly social democratic or "corporatist" countries of northern Europe; or through the use of tax incentives and disincentives, as proposed by Sidney Weintraub for the United States (but never implemented, there or elsewhere). Incomes policies of all types broke down during the stagflationary crisis of the 1970s, in part under the pressure of rapidly rising primary product prices (see section 6.4 below). Since then trade unions have been very substantially weakened, and the threat of renewed wage-push inflation now seems rather remote. Today a rather different case can be made for an incomes policy, this time to avoid the dangers of deflation and a continually declining share of wages: instead of restraining real wages, an incomes policy now needs to make sure that they rise in line with labour productivity. The closely related distinction between "wage-led" and "profit-led" recovery regimes will be discussed in section 7.2 below.

6.4 International Economic Policy

In the "golden age" of advanced capitalism from 1945 to 1973 unemployment and inflation were very low, output grew rapidly and downturns in economic activity were brief and insubstantial. To some extent this was the result of the international economic order that had been decided upon at the Bretton Woods conference in 1944, where Keynes succeeded in implementing part of his ambitious agenda for post-war reconstruction. A fixed exchange rate regime restored stability and eliminated the self-defeating competitive currency devaluations of the 1930s, while controls over capital movements prevented any repetition of the destabilising "hot money" flows of that decade. Trade grew rapidly in the 1950s and 1960s, but international finance was deliberately repressed. The Bretton Woods era ended in 1973 with the devaluation of the US dollar, the consequent return to floating exchange rates, and the liberalisation of global capital flows. Many Post Keynesians attribute the less favourable macroeconomic performance of the last 40 years in some part to the breakdown of the Bretton Woods system.

There is some disagreement on how the international monetary system might be reformed. The most ambitious proposal comes from Paul Davidson (2002; see also section 7.2 below), who urges the adoption of Keynes's plan for an International Clearing Union. This would not only reestablish fixed exchange rates but would also eliminate private sector international capital movements altogether, and would thereby involve a massive reduction in the volume of global finance. This is too radical for many Post Keynesians, and advocates of "modern monetary theory" like

Randall Wray and Warren Mosler oppose any return to fixed exchange rates on the grounds that this would entail an unacceptable loss of national sovereignty.

There would be more general support for the reform of the International Monetary Fund to make it the world central bank that Keynes had envisaged, well resourced and with a commitment to promoting full employment on a global scale. Most Post Keynesians also advocate the introduction of a turnover tax on international financial transactions (the so-called Tobin tax) to raise revenue and perhaps also put "sand in the wheels" of speculative international finance. In recent years the instability of food and raw material prices has also revived interest in the proposal made by Kaldor and Jan Tinbergen back in the 1960s for the establishment of a set of international funds to intervene in primary product markets in order to stabilise commodity prices. This would remove one major source of cost inflation, and it would also allow the general introduction of the principles of "fair trade", to the benefit of poor people in primary producing countries.[13]

7. The Global Financial Crisis

Although few Post Keynesians can claim to have foreseen the Global Financial Crisis, in the sense that they predicted the precise timing or the specific details of the events of 2007-8, they were not at all surprised by it, since it was entirely consistent with their long-standing critique of neoliberal, global financial capitalism.[14]

7.1 Causes

The Global Financial Crisis was the result of a toxic mix of globalisation, financialisation, deregulation, increasing inequality and rising debt, all encouraged (if not initiated) by the neoliberal ideas of mainstream macroeconomists. Globalisation greatly increased the power of internationally footloose capital relative both to labour and to national governments. By the early 1980s it was possible for "the markets" to punish social democratic governments in a way that would have been inconceivable thirty years earlier; the experience of the Mitterand government in France is a celebrated case in point. (Remember that "the markets" are not a force of nature; they are social institutions that are operated by rich people, and the poor people who work for them.)

Financialisation involved the emergence of new "products" (new assets and liabilities), new suppliers and new customers. It had a quantitative dimension, with a sharp rise in the proportion of GDP, employment and (especially) corporate profits accounted for by the FIRE sector (finance, insurance and real estate). There was also a qualitative dimension, with a very significant increase in the economic and political power of finance. This is sometimes described as representing an historical shift from one stage of capitalism to another: from the manufacturing-based "Fordism" of the Golden Age to "finance-led growth", or Minsky's "money manager capitalism", after 1973. It was made possible by the thorough-going deregulation of finance that began with the collapse of Bretton Woods and was encouraged by neoliberal ideology.

We may distinguish four principles of neoliberal economics. First there was the case for floating exchange rates made by the monetarists. Second was the new financial economics, and in particular the "efficient market hypothesis", according to which markets always make the best possible use of all available information, so that detailed regulation was unnecessary (since "the price was right"). Third, New Classical macroeconomics revived Say's Law and the doctrine of the neutrality of money, repudiating the principle of effective demand. Finally, there was the deeply-held belief that market failure was almost always less serious than state failure, which undermined the case for any form of regulation, micro or macro.

The consequences of financialisation were profound. Most important was the return of "shareholder value" as the only viable goal of the capitalist corporation. During the golden age, alternatives to (short-run) profit maximisation were accepted, like the "stakeholder capitalism" practised to some extent in Austria, Germany and Japan, where management, workers and local and national communities were considered to have a legitimate interest in the way the firm was run, along with the shareholders, and were encouraged to take a long-term view of these interests. At least in Northern Europe this was linked to the power of organised labour and to corporatist wage policies, and both here and in Japan income differentials were restrained. With the rise of shareholder value, the new rule for corporate behaviour was "distribute and downsize" rather than "re-invest and grow". New incentive systems were introduced, with bonuses for senior management tied to the company's share price, and this corresponded to a new alliance between management and shareholders, at the expense of the old alliance between management and other stakeholders.

All this led to rapidly increasing inequality. Profits rose relative to wages, so that the share of wages in national income steadily declined; top managerial salaries grew much more rapidly than the pay of their subordinates; and there was also substantially increased inequality in wealth, stimulated by the rise in equity prices. Increasing inequality also encouraged the growth of debt. In part this was the inevitable result of financialisation, since the rising sum of assets was necessarily accompanied by an increase in liabilities. To some extent it was a direct result of the increased inequality, with those left behind increasingly tempted – and increasingly able – to borrow in order to maintain their standard of living, purchase a house and protect their social status.[15] In turn this was linked to a profound cultural shift, with the growing acceptance of a "debt culture" among rich and poor alike. Note the important and potentially sinister asymmetry that is involved with the growth of debt: debtors can be forced to cut their spending, but creditors cannot be forced to increase their expenditure when macroeconomic conditions deteriorate.

In this context the Post Keynesian theorist Till van Treeck (2012) distinguishes two possible macroeconomic regimes. In the "debt-led" regime, consumption spending grows strongly, through positive wealth effects on the consumption of the rich and increasing debt that allows the consumption of the poor to continue to rise, even though their incomes do not. In the "debt-burdened" regime, financial instability comes to threaten both consumption and investment spending.

In essence the Global Financial Crisis of 2007-8 can be explained by the first regime giving way to the second. It was "made in the USA" (just like 1929-33), and transmitted internationally via trade, capital flows and (especially) expectations (again as in 1929-33, but this time much more quickly, due to the revolution in information technology). The underlying cause of the Global Financial Crisis was financial fragility, and the proximate cause was the bursting of the US housing bubble, which led to a fall in consumption spending (through negative wealth effects), the collapse of housing investment, and the eventual fall in financial derivative values that led to the failure of Lehman Brothers.

There is some dispute over whether the Global Financial Crisis really was a "Minsky moment", as it has often been described. Davidson (2008) denies this, on the grounds that the so-called NINJA mortgagees ("no income, no jobs, no assets") were not Ponzi borrowers in Minsky's sense. The GFC, he argues, should instead be viewed in a more general sense as a crisis of de-leveraging. The Minskyans respond by pointing to the role of financial innovation, the new stage of money manager capitalism, the deregulation and the evasion of remaining controls over financial markets, and the increasing loss of memory of lenders in the period immediately before 2007, all of which they claim to be entirely consistent with Minsky's ideas.

A sort of Kalecki-Minsky synthesis has been developed by Richard Koo (2008) of Nomura Securities, who draws on the Japanese experience since 1990 to illustrate the dangers of a severe "balance sheet recession", in which an over-indebted private sector cuts consumption and investment expenditure in order to reduce its debt. The Kaleckian algebra from section 2.2 reveals that this reduction in private sector debt necessarily implies an increase in public sector debt, for Planet Earth if not for individual nations. Thus fiscal austerity will be self-defeating. If

Expenditure = $C_w + C_p + I + G$,

Income = $W + P + T$,

and there is no saving or dis-saving out of wages, so that $C_w = W$, then

$C_p + I + G = P + T$, and

$G - T = P - (C_p + I)$,

so that the government's budget deficit must be equal to the private sector's surplus. Thus, when the private sector is intent on "de-leveraging" (that is, reducing its unacceptably high debt), an increase in government debt is part of the solution, not part of the problem. Any individual nation-state can run a trade surplus and thereby reduce both public and private sector debt, but this only increases the growth of public debt in its trading partners; it is not a solution for the world as a whole.

Koo concentrates on the case of Japan, but very similar conclusions can be drawn from the continuing crisis of the Eurozone, and in particular the protracted depression in the PIIGS (Portugal, Ireland, Italy, Greece and Spain; probably Slovenia should now be added to the list). The only good news in all of this is that a new Global Financial Crisis may be delayed, since successful de-leveraging does mean that the financial robustness of the private sector has increased (this is related to the "stock aspect" of Minsky's argument, outlined in section 3.3 above).[16]

7.2 Cures and Prevention

Thus austerity is exactly the wrong course of action for the Eurozone. Fiscal policy is not ineffective, and in the case of the PIIGS it is proving to be extremely damaging. The Post Keynesian principle of functional finance requires that these countries continue to run large deficits, preferably using them for massive public investment in energy conservation and other environmental improvements. Monetary policy, however, is relatively ineffective as a cure for a debt crisis (or balance sheet crisis), when neither cheap money nor quantitative easing are capable of inducing large increases in private sector consumption or investment expenditure.[17] Monetary policy should certainly be reformed along the lines proposed in section 6.1, but the benefits will be seen only in the longer term: control over asset price inflation and the targeting of financial stability should be seen as measures of prevention that will make a renewed crisis less likely.

Measures to reduce inequality would serve as both cure and prevention. If the wage share were to rise at the expense of the profit share, and the top 1% were to lose out to the bottom 99%, there would be a boost to consumption expenditure and a reduction in unsustainable consumer debt. The precise macroeconomic consequences of an increase in the wage share depend on the values of the relevant parameters.[18] While consumption will increase, investment expenditure can be expected to fall, along with net exports (since increased wages will make imports cheaper and exports more expensive). For many individual countries, especially those like Australia, Canada and China that are highly trade-dependent, this makes a "profit-led" recovery more plausible than a "wage-led" recovery. But there is again a danger of a fallacy of composition here, since net exports cannot increase in every nation. For Planet Earth the prospects of a wage-led recovery seem to be very good, so that reduced inequality will bring significant macroeconomic benefits.

Increased equality might be achieved through more progressive taxation and the restoration of the welfare benefits that were cut in the name of austerity. There is also a strong case for the re-regulation of the labour market, improving the rights of workers in temporary and casual jobs (the new "precariat") and increasing wages at the bottom of the labour market. Germany in particular urgently needs a legally enforceable minimum wage, as does Austria. In countries like Australia and the United States where there already is a legal minimum wage there is a strong case for indexing it to average earnings, so that the low-paid are not constantly falling behind. To repeat: all this would have clear macroeconomic benefits, in addition to the undoubted improvements that it would bring in equity and social justice.

To succeed, however, it would have to be accompanied by two further measures. First, there would need to be international cooperation to prevent the "new Mercantilism" that has allowed Germany and China to achieve large trade surpluses by screwing down wages. This is the 21st-century version of the competitive devaluations of the 1930s, which benefited some nations only at the expense of others, and did harm to the capitalist world as a whole. Second, a very substantial degree of definancialisation will be required to reduce the size, the instability and the political power of the global FIRE sector. This in turn entails the introduction of the measures of international economic policy reform that were discussed in section 6.4, to decrease both the magnitude and the destabilising consequences of global financial flows. In terms of domestic policy, it will require a clear reversal of the privatisation of housing and pensions that contributed to the financialisation process in the neoliberal era.

8. Post Keynesians and (some) Other Heterodox Schools

There are evident similarities between Post Keynesians and other heterodox (or quasi-heterodox) schools. Space permits me to consider only three of them.

8.1 Marxism

Here Michał Kalecki is the indispensable bridge between two schools of thought with a great deal in common. Post Keynesians and Marxists both acknowledge that they are dealing with capitalist economies, in which the employment relationship is fundamental and the driving force is the pursuit of profit. Hence money plays a central role, Say's Law is repudiated ("childish babble", Marx called it), and there must inevitably be what Keynes termed a "monetary theory of production" to analyse an unstable and contradictory economic system. In the 1933 draft of the General Theory, Keynes used Marx's M-C-C'-M' model of the capitalist circulation process and followed rather closely the treatment of the "realisation problem" set out by Marx in volume II of Capital.

That is the good news. There are also some big problems.[19] They include the labour theory of value and the related issues of distinguishing productive from unproductive labour, determining what the "product" of labour actually is in a digital age, and deciding whether there are still strong forces tending to equalise the rate of profit in a world of Schumpeterian temporary monopolies that are imperfectly protected by intellectual (rather than material) property rights. There are also problems with the falling rate of profit dogma, which is in turn related to several dichotomies – base/superstructure, production/circulation, real/monetary, and underlying scientific reality/superficial appearances – none of which Post Keynesians would be at all comfortable with. They also hope that capitalism can be made to work better, and thus reject any tendency towards "fatalistic Marxism", according to which "the logic of capital" and the depth of the system's contradictions necessarily prevent any possibility of reform.

8.2 Institutionalism

There are some strong natural affinities between Post Keynesian and institutionalist thinking, including a shared hostility to mainstream economics, in particular its formalism and especially its general equilibrium (and above all its DSGE) variants. An emphasis on the role of habit, convention and the social influences on individual behaviour is common to both schools. There is also considerable agreement on policy issues, since Post Keynesians and institutionalists tend to share a commitment to "big government" and a common heritage in the New Deal and the post-1945 social democratic compromise. Keynes himself was an enthusiastic supporter of the institutionalism of his day, and there have been many later personal links; Steven Pressman and Charles Whalen have been prominent in recent decades.

As we have seen, John Kenneth Galbraith also had a large foot in both camps. Many Post Keynesians have published in the "Journal of Economic Issues", and some institutionalists have also found a home for their work in the "Journal of Post Keynesian Economics". It could be argued that there is a natural division of labour, with the Post Keynesians specialising on macroeconomics and formal theory, leaving micro issues and the socio-political background to the institutionalists. But this also points to some potential difficulties in the relationship. Unlike many institutionalists, few Post Keynesians are opposed in principle to formal modelling, so long as it is of the right type, or to the use of econometric methods, providing that they are used with the appropriate care and restraint. There are some important unresolved methodological tensions here.

8.3 Behavioural Economics

Again, there are some obvious and important similarities between Post Keynesianism and behavioural economics, most obviously with the "Old Behaviouralism" of Herbert Simon (1916-2001) and his associates.[20] Both schools reject the neoclassical conception of rationality, instead emphasising the limits to human cognitive ability, the importance of fundamental uncertainty and the role of conventions and rules of thumb. There are also some points of agreement with "New Behaviouralism", most clearly on questions of the framing of decisions, the context of decision-making and what are sometimes described (unwisely, in my opinion) as the "macrofoundations" of individual behaviour).

These similarities have led Paul Davidson to describe Keynes as the first behavioural economist and Simon to claim him as the father of bounded rationality. But there is also a strong suspicion that the New Behavioural Economics is really "neoclassical model building carried on by other means", as Simon once put it, and that it should therefore be avoided by Post Keynesians. It does seem that behavioural macroeconomics, which was foreshadowed by George Akerlof in his 2001 Nobel acceptance speech, is a promise that bounced. Akerlof and Shiller's book on "Animal Spirits" (2009) not only misinterprets Keynes on the prevalence of reasonable behaviour under conditions of fundamental uncertainty but also has almost nothing to say about investment or the investment-saving relationship. The recently-published "Lectures on Behavioral Macroeconomics" (2012) by Paul de Grauwe also place too much emphasis on market imperfections and not enough on the principle of effective demand.

None the less, a case can be made for Post Keynesians making use of some aspects of behavioural economics, providing that it is done in a selective and self-critical way. This might allow a more realistic formulation of the investment function, which has always been a source of difficulty in Post Keynesian macroeconomics, and the behavioural finance literature may also be helpful to the Minskyans in their work on financial innovation and the challenges to financial regulation. There are also signs of a rediscovery of the work of George Katona (1901-1981), whose work on consumer behaviour may well prove helpful in enabling a more accurate specification of the consumption function. I think there is a strong case for Post

Keynesians to take a "broad church" rather than a "narrow church" approach to the discipline.

Endnotes

[1] Compare Davidson (1972) and (2011).
[2] Kalecki (1943).
[3] Minsky (1986).
[4] Minsky (1987 [2008]).
[5] King (2003) 31.
[6] King (2012).
[7] Wallich and Weintraub (1971); Weintraub (1978).
[8] Robinson (1972); Eichner and Kregel (1975); Minsky (1975).
[9] Steindl (1937).
[10] Altzinger (2013).
[11] Kaldor (1982).
[12] King (2013) 139.
[13] Ussher (2009).
[14] King (2010, 2011); Hein (2012).
[15] Kapeller and Schütz (2013).
[16] As the liberal Austrian journalist Josef Urschitz put it, the period 2007-9 saw the largest conversion of private debt into public debt in human history (Urschitz 2010).
[17] Culham and King (2013).
[18] Onaran and Galanis (2012).
[19] Falkinger (2013).
[20] Jefferson and King (2011).

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Abstract

I begin by setting out the core of Post Keynesian macroeconomics, and then distinguish three schools within Post Keynesian theory: the fundamentalist Keynesian approach taken by Paul Davidson, the Kaleckian variant represented by Eckhard Hein, and Hyman Minsky's financial instability hypothesis. I continue by identifying what Post Keynesian macroeconomics is *not*, and outlining some very substantial criticisms of both "Old Keynesian" and "New Keynesian" theory. After an historical sketch of the development of Post Keynesian theory in Cambridge (UK) and the United States in the 1950s and 1960s, I summarise the contributions of two eminent Austrian theorists, Josef Steindl and Kurt Rothschild. I then discuss the distinctive Post Keynesian position on questions of macroeconomic policy, offer an explanation of the Global Financial Crisis that began in 2007 and suggest some policy measures that might make similar crises less likely in the future. I conclude by discussing the relationship between Post Keynesianism and three other schools of heterodox economic theory: Marxism, institutionalism and behavioural economics.