

The relevance of Keynes

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This paper argues that the thinking of John Maynard Keynes remains highly relevant to an understanding of the financial collapse of 2007–8 and for policy measures to enable the world to escape from the ‘great recession’. The essay explains the role of uncertainty in Keynes’s theory, and the Keynesian case for fiscal and monetary ‘stimulus’. It provides a Keynesian perspective on the reform of the world’s monetary system, and concludes with reflections on the role of the state and the state of economics.

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1. The return of the master

When I finished my biography of Keynes in 2001 (Skidelsky, 1983, 1992, 2000), his star seemed to have set. Despite a medley of New Keynesians, post-Keynesians, synthesisers, eclectics, trimmers, and occasional outbreaks of common sense by policy-makers, the dominant tendency in theory and policy was being set by the doctrines of the Chicago School. Their ‘new classical economics’ was simply a mathematically souped-up version of the old classical economics, which Keynes had overthrown in the 1930s. Markets were deemed to be optimally self-regulating; the macroeconomic task of government was restricted to maintaining ‘sound money’; government’s task in the micro-economy was to free up markets in order to lower the ‘natural rate of unemployment’. The fall of communism in 1990 made possible for the first time since 1914 the restoration of a single world economy based on balanced budgets, free trade and unrestricted capital movements—the pre-1914 recipe for economic success. ‘Globalisation’ was the name given to this worldwide extension of the market system.

Recent events have brought Keynes back to life. The so-called ‘Great Moderation’, which seemed to vindicate the new regime of deregulated markets, lasted less than 10 years: from today’s perspective it resembles nothing so much as the ‘roaring twenties’, which preceded the Great Depression of 1929–32. With the financial collapse of 2007–8 the ‘new classical’ belief in self-regulating markets has proved to be as illusory as the old classic belief.

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Since I wrote my biography, my ideas of what was significant in Keynes have shifted, partly because the world has changed. What I want to do to is indicate the topics with which I believe a contemporary Keynesian should be most concerned. I have selected five: the role of uncertainty, the debate over the stimulus, the reform of the international monetary system, a new Keynesian political economy and the state of economics. I will deal with them in turn.

2. The role of uncertainty

I would now assign a much greater weight to uncertainty in Keynes's revolution than I did when I wrote my biography. It was not that I was unaware of it, but I did not place it at the heart of my account of Keynes's theory. In this I followed the usual treatment. The purpose of the *General Theory* (Keynes, 1973A) was to explain how an economy could get stuck in a low employment trap. This explanation was provided by the theory of effective demand. Demand is effective at the point where the aggregate supply and demand schedules intersect; the theory of effective demand states that any inequality between the two is removed—equilibrated—by a change in output (or income) and not price. That is how economies could get stuck in—or, alternatively, oscillate around—a state of 'under-employment equilibrium'. The theory of the income or employment multiplier showed much extra demand needed to be pumped into a depressed economy to bring it back to full employment. The income/expenditure model that is conventionally taken to be the core of Keynesian theory was thus the bit of Keynes most suitable for the policy-maker.

In the *General Theory* (referred to hereafter as GT), expectations are taken as given. Current employment and output are determined by a mixture of short-term expectations, which are the sales expected from producing output with a given stock of capital and long-term expectations, which are the expected returns from investing in new capital goods. Since the latter are the returns expected over the life of the new equipment, and since investment is a key component of demand in any non-static economy, current employment and output are heavily dependent on long-term expectations. Every level of employment corresponds to a certain state of long-term expectations.

The GT was dominated by expectations; but why expectations are, at any time, what they are, was never explained. Instead Keynes emphasised the extreme difficulty, in an unmanaged market economy, of maintaining a state of expectations consistent with full employment.

This is because uncertainty dominates the investment process. It also plays a significant, but lesser, role in determining the rate of interest. Keynes's picture of the economy differs from the classical—as well as the new classical—picture in its stress on the volatility of investment and the weakness of the rate of interest as an equilibrating mechanism. Without uncertainty, the collapse of investment that causes the economy to collapse would not happen, interest rates would automatically rebalance any discrepancy between *ex ante* saving and investment, and the classical theory of the optimally self-regulating market would be the relevant one in all circumstances.

Many commentators have presumed that Keynes had little or nothing to say about financial instability. This is wrong: the instability of investment as a cause of crisis is a continuous theme in his writing with its cause—inescapable uncertainty about the future—clearly identified.¹ Equally clearly Keynes identifies probabilistic knowledge of the future as the key 'tacit assumption' behind the classical theory of the self-regulating market

¹ See for example the *Treatise on Money* (Keynes, 1971B, pp. 322–4).

(Keynes, 1973C, p. 112). If we knew what tomorrow would bring there would never—assuming rational behaviour—be a financial or economic crisis.

Keynes' view that uncertainty about the future is the root cause of financial crisis may be contrasted with today's conventional view that the recent banking collapse was caused by the 'mispricing of risk'. Behind this lies the notion that risks can be correctly priced, but that markets were impeded from discovering these correct prices by information or incentive failures. The key to the prevention of further crises is therefore better 'risk management' by the banks and by the regulators: more transparency, better risk models and above all better incentives to evaluate correctly the risks being run. There is no questioning of the view that investments can, in principle, be correctly priced and that expectations will, on average, be fulfilled. The argument seems to be between those who say risks are always correctly priced on average—the efficient market theorists—and those who concede that exogenous shocks, imperfect information and/or the wrong incentives can cause market prices to deviate temporarily from the correct prices given by 'fundamentals'.

By contrast, Keynes made a key distinction between risk and uncertainty. Risk is when probabilities can be known (measured); uncertainty exists when they cannot be known (or measured), i.e. when the future is unknowable. His original insight was that the classical theory of the self-regulating market rested on the epistemological claim that market participants have perfect information about future events. Grant this and the full employment assumption follows, deny it and it collapses. Keynes' economy, on the other hand, is one in which our knowledge of the future is 'usually very slight and often negligible' and expectations are frequently subject to disappointment (Keynes, 1973A, pp. 194, 293–4). This renders investment 'a peculiarly unsuitable subject for the methods of the classical economic theory' (Keynes, 1973C, p. 113). Macro models that assume that we have calculable probabilities are irrelevant to the actual working of economies.

What was it that rendered large parts of the future impervious to probabilistic calculation? Keynes gave the example of an apple, which he endows with 'human' characteristics. Newtonian physics tells us that it will always fall to the ground at a speed dictated by the force exerted on it divided by its mass. But no such prediction can be made about the 'human' apple:

It is as though the fall of the apple to the ground depended on the apple's motives, on whether it is worth while falling to the ground, and whether the ground wanted the apple to fall, and on mistaken calculations on the part of the apple on how far it was from the centre of the earth. (Keynes, 1973C, p. 300)

Some part of the uncertainty attaching to the speed of the apple's fall can be put down to mistakes on the apple's part ('mistaken' calculations), which are, in principle, correctible. However, the main 'human' characteristic with which Keynes equips his apple is 'motives' and 'intentions'. It is these which break the link between economics and physics, and which make economics a 'moral' and not a 'natural' science. Keynes's point is that economics 'deals with introspection and values. ...with motives, expectations, psychological uncertainties' (Keynes, 1973C). The future cannot be predicted because it is 'open'. It is 'open', in large part, because it depends on our intentions and beliefs, and on the organic nature of human life. In talking about irreducible uncertainty Keynes does not just have in mind ignorance of the relevant probabilities, but genuine ontological indeterminacy: some probabilities are not just unknown, but non-existent.² This view implies a large restriction

² On the role of ontology in economics see the work of Tony Lawson (e.g. Lawson, 1997, 2009).

on the domain of econometrics. Basically Keynes believed that it was relevant only to those fields dealing with risk rather than uncertainty. This, therefore, excluded investment markets.

From the earliest times human beings have relied on the magic of numbers to convert the unknown into the known: Jevons, for example, attached a peculiar importance to the number seven. One of the earliest techniques, and still the most prevalent, is induction. Keynes had already exposed the flaw in induction in his *Treatise on Probability*: it depends on an inductive principle—the assumption of a universe of finite probabilities—which cannot be established by induction itself (Keynes, 1973B, pp. 281–2). A modern version of the inductive method, which underlies most forecasting models, is Bayes theorem. All probabilities are capable of being construed as subjective bets, or prior probabilities, which the accumulation of information causes to converge towards posterior, or objective, probabilities. Keynes denied the existence of such objective probabilities. While repeated betting on horses allows you to update your ‘priors’ to match the ‘true’ merits of the horses, no amount of data on past economic events brings you closer to their true probabilities in the future because the human horses never run the same race twice.

Induction appears in Keynes’s treatment as a *convention*, the convention being that ‘the present is a much more serviceable guide to the future than a candid examination of past experience would show it to have been hitherto’ (Keynes, 1973C, p. 114). A second convention that Keynes emphasises is the testimony of the crowd. ‘Knowing that our own individual judgment is worthless we fall back on the judgment of the majority or the average’ (Keynes, 1973C, p. 114). We follow the crowd, which itself relies on the opinion of experts, who are themselves trying to guess ‘what average opinion expects average opinion to be’ (Keynes, 1973A, p. 150).

Keynes did not decry these conventions despite their lack of any real ontological basis. He acknowledged the usefulness of inductive methods but denied that they could always be made to yield measurable probabilities. In most cases the recourse to convention is the best that reasonable people can do in the circumstances. Specifically, we do not need to invoke the postulate of ‘irrationality’ to explain conventional behaviour. The postulate of rational man maximising his utilities in isolation from his fellows can never make sense in a world in which we can be tripped up by unpredictable events. Similarly, uncertainty explains the importance we have always placed on institutions, which build trust and anchor expectations. There is no need to fall back on neurological explanations for social institutions.

However, any view of the future based on conventions is liable to ‘sudden and violent changes’ when the news changes, even transiently, since there is no basis of real knowledge to hold it steady. Suddenly everyone starts revising their bets:

The practice of calmness and immobility, of certainty and security, suddenly breaks down. New fears and hopes will, without warning take charge of human conduct. The forces of disillusion may suddenly impose a new conventional basis of valuation. All these pretty, polite techniques, made for a well panelled board room and a nicely regulated market, are liable to collapse. (Keynes, 1973C, pp. 114–15)

This is as good a theoretical explanation as I know of for the meltdown in the autumn of 2008. It also illustrates, with unerring precision, the contradictory character of financial innovation. By making investment more ‘liquid’, the stock market reduces the proportion of their resources that people will want to hold in cash. Other things being equal, it serves to increase the volume of real investment (accumulation of capital). But by the same token

it enlarges the scope for speculation and thus makes economic life more volatile. This has been exactly the effect of ‘securitisation’ in the last few years.

However, the story is only half told. Investment depends on what Keynes calls the marginal efficiency of capital (MEC)—roughly, the expected rate of return over cost—as compared to the rate of interest. If MEC is greater than the rate of interest, investment takes place; if less, it falls. In the classical picture, the rate of interest, being the price that equilibrates saving and investment, adjusts automatically to any change in the MEC. Keynes accepted that the volume of investment depends on the rate of interest, but denied that the rate of interest was determined in the market for saving and investment. Rather it is the price for parting with money. This is his liquidity preference theory of the rate of interest. Money plays a key part in Keynes’s narrative of investment breakdown. Holding money is an alternative to buying investments. Keynes was the first modern economist who clearly identified the role of money as a ‘store of value’. What he called ‘liquidity preference’ rises when the ‘convention’ supporting investment collapses. A rise in liquidity preference can retard the fall in the rate of interest necessary to bring about a recovery of investment in the face of a fall in expected profitability. Indeed, a fall in the expected profitability of investment and a flight into money are two sides of the same coin. This is essentially what happened in 2007–8. Liquidity suddenly dried up as banks enlarged their cash balances and stopped lending. Indebtedness played a larger part in the freeze-up than it did during the time of the Great Depression, but the essential motive for the flight into money—loss of confidence in the future—was the same. Any rise in the demand for money to hold tends to raise the cost of borrowing at the precise moment when the fall in the MEC requires that it should be lower. Keynes’s liquidity preference theory of the rate of interest is his main explanation for why a market economy lacks a self-correcting mechanism.

Keynes rejected the classical idea that it was only ‘stickiness’ of wages that prevented continuous full employment. He contended that even with fully flexible money wages, there could be what he called involuntary unemployment. This is because workers bargained for money wages, not real wages. A general cut in workers’ wages would cause national money income to fall proportionately, leaving workers’ real wages unchanged. However, Keynes did recognise that sticky wages were the normal case and provided a theoretical explanation for them in terms of uncertainty. He claimed that stickiness is a logical consequence of the lack of labour mobility, which focuses the bargaining process on the maintenance of group differentials. Groups of workers bargain for relative shares with other workers, so no group will be the *first* to accept a wage cut that might leave them worse off than others; forward contracts also suit employers and unions because they are a way of hedging against the uncertainty of future selling prices of labour and goods.

3. The debate about the stimulus

When the financial system crashed in 2008, dragging down the real economy with it, governments stepped in everywhere with ‘stimulus packages’ made up of a mixture of bailing out insolvent banks, printing money, providing tax rebates or subsidies for private spending and big increases in loan-financed public spending. This was all according to Keynesian prescription. Even Robert Lucas, high priest of Chicago economics, admitted that ‘we are all Keynesians in the foxhole’. But signs of economic recovery induced by the stimulus rapidly brought about a resumption of normal intellectual service. Most economists and many policy-makers are now calling for a swift withdrawal of the stimulus on the ground that it will bankrupt governments or lead to inflation or both. What this rapid turnabout shows is that

the model of the economy that Keynes had tried to blast out of the minds of economists in the early 1930s is still firmly lodged there. It wavers in moments of panic, but quickly reasserts itself. In fact, the current debate about the stimulus is a replay of the debate between Keynes and his critics at the time of the Great Depression.

In 1929, with British unemployment standing at 10% of the insured workforce, Keynes and Hubert Henderson wrote a pamphlet entitled *Can Lloyd George Do It?* (Keynes, 1981). In this they proposed a big programme of public works, to be financed by loan, the idea being to induce a ‘cumulative wave of prosperity’. The British Treasury attempted to refute the proposal using an argument developed by its only economist Ralph Hawtrey. Hawtrey had claimed that, with a fixed money supply, any loan raised by the government for public works would ‘crowd out’ an equivalent amount of private spending. Employment could be increased only by credit expansion—or what was then called inflation. The prime minister, Stanley Baldwin, was fed the lines ‘we must *either* take existing money *or* create new money’.

Keynes riposted: ‘Mr. Baldwin has invented the formidable argument that you must not do anything because it means you will not be able to do anything else’. Yet the Treasury argument of 1929 was restated in 2009, in almost identical terms, by Professor John Cochrane of Chicago University:

If money is not going to be printed, it has to come from somewhere. If the government borrows a dollar from you, that is a dollar that you do not spend, or that you do not lend to a company to spend on new investment. Every dollar of increased government spending must correspond to one less dollar of private spending. Jobs created by stimulus spending are offset by jobs from the decline of private spending. We can build roads instead of factories, but fiscal stimulus can’t help us to build more of both. (Cochrane, 2009)

This is equivalent to saying that a market economy will be always be at full employment, i.e. that the multiplier is zero. The policy implication of this argument is that the fiscal stimulus was a mistake and should be withdrawn as soon as possible in order to create room for private spending. And this has been the almost unanimous theme of conservative politicians and commentators. The increasing pressure for fiscal retrenchment ignores the fact that enlarged government deficits are an automatic consequence, not a cause, of a fall in aggregate demand and will shrink automatically (though not fully) as aggregate demand recovers. Government spending to put the unemployed to work is not taking away employment from those already in work: it is adding to the amount of employment. In 1932, Keynes wrote: ‘The voices which—in such a conjuncture—tell us that the path of escape is to be found in strict economy and in refraining, wherever possible, from utilizing the world’s potential production, are the voices of fools and madmen’ (Keynes, 1982, p. 61).

Contemporary Hawtreyans believe that an exogenous increase in the money supply is a necessary and sufficient condition for a recovery. There is no need for extra government spending on public works, etc. When the central bank buys government and corporate securities it adds to the cash reserves of banks and companies. These purchases enable banks to expand their deposits (loans) and companies to expand their investments. The price of bonds will rise, pushing down long-term rates towards zero. Thus ‘open market operations’, carried out to any extent necessary, will be sufficient to produce recovery from even a severe slump. Keynes certainly believed something like this when he was writing the *Treatise on Money* in 1929–30.

By 1936, he had come to believe that ‘if... we are tempted to assert that money is the drink which stimulates the system to activity, we must remind ourselves that there may be several slips between cup and lip’ (Keynes, 1973A, p. 173). He now saw an increase in the

quantity of money as a consequence, not a cause, of a recovery of aggregate demand: the causal relationship ran from spending to money supply, not from money supply to spending. Nevertheless, he conceded, in 1937, that an investment decision may involve ‘a temporary demand for money...before the corresponding saving has taken place’. Thus, though extra investment (private or public) could not be limited by a ‘shortage of saving’ it could exceed the supply of financial facilities ‘if the banking system is unwilling to increase the supply of money and the supply from existing holders [of inactive balances] is inelastic’. In this situation the central bank could always create the ‘finance’ for additional public investment by printing more money. As the investment takes place ‘the appropriate level of incomes will be generated out of which there will necessarily remain over an amount of saving exactly sufficient to take care of the new investment’ (Keynes, 1973C, pp. 207–10).

Chapter 13 of the GT tried to answer the question why someone should hold money rather than buy bonds. Keynes found the necessary condition to lie in ‘the existence of *uncertainty* as to the future rate of interest’. If the rates of interest ruling in future could be foreseen with certainty, ‘it must always be more advantageous to purchase a debt than to hold cash as a store of wealth’. However, if the future rates of interest were uncertain, the outcome could be quite different. He noted that ‘...if a need for liquid cash may conceivably arise before the expiry of n years, there is a risk of loss being incurred in purchasing a long-term debt and subsequently turning it into cash, as compared with holding cash’ (Keynes, 1973A, pp. 167–9). When there were enough investors who expected the next move in interest rates to be upwards, they would hold at least part of their wealth in the form of money rather than bonds. They would do this even though they would be foregoing income in the immediate future. In the extreme—when bond yields had fallen so low that the only sensible expectation was a future rise in the bond yield (i.e. the only sensible expectation was a capital loss)—investors would keep idle any extra money balances that might be injected into their portfolios. The economy would be in a liquidity trap: people would accumulate money balances without limit. Open market operations could not rescue it, only fiscal policy could (Keynes, 1973A, pp. 201f). Keynes believed that something like a liquidity trap had arisen in the USA in the early 1930s; and the notion came back to prominence during the long Japanese stagnation of the 1990s.

Keynes’s liquidity trap discussion has been heavily criticised for being analytically incomplete. He postulated only two alternatives—holding cash or buying bonds. But savers may express their desire for liquidity by increasing their demand for other liquid assets such as equities. If investors have a choice between money, bonds, and equities, and you allow the change in money to alter inflation expectations, Keynes’s trap disintegrates. However, this does not, it seems to me, rescue the case for monetary policy as a sufficient cure for a slump. Quantitative easing has undoubtedly had a positive effect on stock market prices. But most of it has not yet filtered into the real economy. It has bid up prices of existing assets, but not stimulated new investment, because lenders are still asking more from borrowers than borrowers can expect to earn. The general proposition is that the emergence of asset bubbles, just as much as a flight into money, can signal a dearth of investment opportunities. Keynes’s ‘speculative motive’ for holding money should not be limited to the desire for cash alone.

4. Global imbalances

Keynes’s 1941 plan for an international clearing union was designed to overcome the global imbalances of his day, namely the blocking of the balance of payments adjustment

mechanism by the tendency of the USA to accumulate gold reserves, which imposed deflation on the rest of the world. My biography described the 1941 plan, but had nothing to say about its possible relevance to the contemporary world, because it was written before East Asia and the Middle East had started on their process of reserve accumulation.

Keynes's perspective on global imbalances was formed not just by the disturbances of the interwar years but by his reading of monetary history. He thought that throughout history the desire to hoard savings had been stronger than the desire to invest them, because at all times vague panic fears lie below the surface, denting our optimism and creating a permanent bias towards preserving existing value rather than creating new value. This was his explanation of why the world had stayed poor for so long. He believed that investment came in bursts of optimism, which he called 'animal spirits'. We can trace these investment upsurges in history—from the railway boom of the nineteenth century to the dot com boom that ended in 2000. But normally people preferred to hoard rather than invest their money, that is to say there was a permanently high level of liquidity preference, which exerted a permanent upward pressure on interest rates. Hence, Keynes's support for the medieval usury laws, which he saw as an attempt to prevent people making money by hoarding money.

Keynes's theory of economic history was influenced by Jevons's famous description of India as the 'sink of the precious metals'. 'The history of India at all times', he wrote in the *General Theory*, 'has provided an example of a country impoverished by a preference for liquidity amounting to so strong a passion that even an enormous and chronic influx of the precious metals has been insufficient to bring down the rate of interest to a level which was compatible with the growth of real wealth' (Keynes, 1973A, p. 337). Keynes believed that from ancient times onwards, the Orient's propensity to hoard influxes of the precious metals had set the Occident a permanent deflationary problem. Shortage of gold in the west had been relieved from time to time by discoveries of gold and silver in the New World, and by Western seizure of Oriental temple and palace hoards.

Keynes would thus have seen the global imbalances of today as the reappearance of an ancient pattern, though with a modern twist.

Keynes was prescribing for the ills of the gold standard. In such a system, a country running a current account deficit cannot devalue its currency in terms of gold: it has to deflate its domestic prices. By contrast, the country gaining gold has the option to inflate its domestic prices, 'hoard' (sterilise) its accumulating gold or make foreign loans. This is what led Keynes to write in 1941:

the process of adjustment is *compulsory* for the debtor and *voluntary* for the creditor. If the creditor does not choose to make, or allow, his share of the adjustment, he suffers no inconvenience. For whilst a country's reserve cannot fall below zero, there is no ceiling which sets an upper limit. The same is true if international loans are to be the means of adjustment. The debtor *must* borrow; the creditor is under no...compulsion [to lend]'. (Keynes, 1980, p. 28)

The deficit country deflates its domestic prices (or costs of production) by raising interest rates; whence, in Keynes's view, unemployment. For, as he wrote in 1925, the policy of credit restriction to lower prices can only attain its end 'by the deliberate intensification of unemployment' (Keynes, 1972, p. 220). The chief 'hoarder' in the interwar years was the USA, whose super-competitive position, fortified by an undervalued exchange rate, enabled it to drain gold from the rest of the system, including Britain.

Keynes's Clearing Union plan of 1941 was designed to retain the advantages (as he saw them) of a fixed exchange rate system while avoiding the asymmetric costs of adjustment.

The essential feature of the Keynes plan was that creditor countries would not be allowed to 'hoard' their surpluses, or charge punitive rates of interest for lending them out; rather these surpluses would be automatically available as cheap overdraft facilities to debtors through the mechanism of an international clearing bank whose depositors were the central banks of the union. The Keynes plan was vetoed by the USA, which was not prepared to allow its 'hard earned' surpluses to be automatically at the disposal of 'profligate' debtor countries. Instead the Bretton Woods Agreement of 1944 set up an International Monetary Fund to provide short-term financial assistance, on conditions, for countries in temporary balance of payments difficulties. But the onus still lay on the debtor country to deflate its wages and prices to restore balance of payments equilibrium.

That the Bretton Woods fixed exchange rate system, which lasted from 1949 to 1971, did not reproduce the deflationary character of the inter-war system was entirely due to the 'dishoarding' policies of the USA. America flooded the 'free' world with dollars, to such an extent that by the 1960s it was starting to run a balance of trade deficit itself. The boot was now, so to speak, on the other foot, but the logic of the deficit country having to deflate was circumvented by the role of the dollar as the world's main reserve asset. In his book, *Indian Currency and Finance* (1913) (Keynes, 1971A), Keynes had endorsed the gold exchange standard as being in the forefront of monetary evolution. Broadly speaking, it envisaged one or two countries only staying on the gold standard, with the rest of the world holding their reserves in these currencies, which because of their convertibility would be 'as good as gold'. As sterling faded, the dollar became the world's 'key' currency. Countries held their reserves in dollars. As its trade deficit widened, the USA printed an increasing quantity of dollars to cover its unrequited imports. The surplus countries accumulated American dollar liabilities, which they invested in US Treasury bonds. The USA did not have to restrict domestic credit by raising interest rates since the dollars it printed came back to it. In the absence of what would have been a major deflationary force, the world economy boomed for 20 years.

The flaw in the system, as pointed out by Professor Triffin of Yale University, was that the increase in the liabilities of the key-currency country was bound to raise doubts about its ability to redeem these liabilities in gold (Triffin, 1961). This brought about the predicted collapse of the gold-exchange standard in 1971. The dollar became inconvertible, and a new international reserve currency, Special Drawing Rights, was set up by the International Monetary Fund (IMF). But without the essential element of conversion of dollar balances into SDRs, the dollar continued to be the world's main reserve asset in a mixed world of floating, fixed and managed exchange rates.

In theory, floating exchange rates remove the need for any reserves at all, since current account imbalances would not arise. But the need for reserves unexpectedly revived, mainly to guard against speculative movements of hot money, which could drive exchange rates away from their equilibrium values. Starting in the 1990s, East Asian governments unilaterally erected a 'Bretton Woods II', linking their currencies to the dollar and holding their reserves in dollars. This reproduced the expansionary benefits of Bretton Woods I, but at the cost of an increasingly unbalanced reserve position, as the dollar became progressively overvalued against the super-competitive renminbi.

A Keynesian analysis would put global imbalances at the heart of the current economic meltdown. Keynesian unemployment is triggered off by an imbalance between planned saving and investment that is liquidated by a fall in output. The imbalance can be initiated either by an increased desire to save or a reduced desire to invest, or by a mixture of both. An increased desire to save (by the Chinese) subjected the US economy to deflationary

pressure. This was offset by an inflow of dollars invested in US Treasuries, which enabled Alan Greenspan to keep the Fed funds rate abnormally low. But the ensuing credit expansion resulted not in a surge in investment but the build up of a debt-fuelled private asset and consumption boom. The situation was unsustainable because no new resources were being created with which to pay back either domestic or foreign borrowing. Between June 2004 and July 2006, the Federal Reserve, seeking to dampen inflation and return short-term interest rates to a more normal level, raised the federal funds rate from 1% to 5.25% and held it there until August 2007. This brought about a collapse in the housing boom and, through its repercussions on the balance sheet of the banks that had provided or securitised housing mortgages, of the banking system.

This is not unlike what happened at the end of the 1920s. Judged by commodity prices, there was no danger of US inflation in 1927. Hence, by raising its funds rate from 3.5% to 5% in July 1928, the Fed was imposing an act of deflation on the US economy. As Keynes wrote in October 1928:

I cannot help feeling that the risk just now is all on the side of a business depression and deflation. . . If too prolonged an attempt is made to check the speculative position by dear money, it may well be that the dear money, by checking new investments, will bring about a general business depression. (Keynes, 1973B, pp. 71–2).

This is essentially what I believe happened in 2007–8.

5. Keynes's political economy

At present the reform agenda for averting future crises concentrates entirely on reforming or restructuring the banking system to prevent imprudent lending. These reforms are very necessary, and I applaud President Obama's recent call for a separation of retail and investment banks. But there is a common assumption that once the crisis is over, macroeconomic policy can continue as before—that is, with a single target, the inflation rate. However, many risks, which cannot be properly managed, will continue to exist because they are unmeasurable. So part of the risk reduction role has to be assumed by the government. This implies an enlargement of the present macro-economic functions of government.

Keynes's recipe for a less uncertain economy consisted of three main elements: measures to stimulate investment, measures to stimulate consumption, and a reform of the international monetary system to prevent the transmission of unemployment from one country to another.

The first duty of the state is to ensure enough investment in the economy to maintain continuous full employment. Although cutting taxes might give a temporary boost to investment it will have only a weak and uncertain effect on profit expectations. For the same reason Keynes doubted the success of a purely monetary policy in maintaining a full employment level of investment (Keynes, 1973A, p. 164). The grounds for this scepticism, worth some attention, are laid out in chapter 15 of the GT, 'The Psychological and Business Incentives to Liquidity'. Here Keynes explains that the attempt by the monetary authority to reduce long-term interest rates to below the rate the market considers (from historical experience) to be the 'safe' or 'normal' rate is likely to induce people to sell bonds for cash. This, he thinks 'is perhaps the chief obstacle to a fall in the rate of interest to a very low level' (Keynes, 1973A, p. 202). The problem of maintaining full employment arises from 'the association of a conventional and fairly stable long-term rate of interest with a fickle and

highly unstable marginal efficiency of capital' (Keynes, 1973A, p. 204). His solution to the problem is to use monetary policy to establish a permanently low long-term rate of interest. For 'any level of interest which is accepted with sufficient conviction as likely to be durable will be durable...' (Keynes, 1973A, p. 203). For this reason, he did not want to use interest rates to manage the business cycle: the exact opposite of present practice. Nevertheless, he believed that it 'seems likely that the fluctuations in...the marginal efficiency of capital...will be too great to be offset by any practicable changes in the rate of interest' (Keynes, 1973A, p. 164). Hence, apart from keeping interest rates permanently low, investment needed to be 'socialised'. Keynes wrote: 'I expect to see the State...taking an ever greater responsibility for directly organising investment' and 'I conceive, therefore, that a somewhat comprehensive socialisation of investment will prove the only means of securing an approximation to full employment' (Keynes, 1973A, pp. 164, 378).

By 'socialisation of investment' Keynes did not mean nationalisation. Socialisation of investment need not exclude 'all manner of compromise and devices by which public authority will co-operate with private initiative' (Keynes, 1973A, p. 378). This single throw-away line in the *General Theory* reflects Keynes's thinking on 'public-private partnerships', which came out of his involvement in Liberal politics in the 1920s (Skidelsky, 1992, chs 7 and 8). In essence, he sought to expand the public-utility component of investment to give greater stability to the investment function. Today, he would have seen the big institutional investors like pension funds as a major support for stability. A guaranteed stream of investment would reduce fluctuations to modest dimensions, which could be readily controlled, if so wished, by speeding up or slowing down elements in the investment programme. Such investment would not necessarily be profit-maximising. But provided it yielded positive returns, there would be a gain. If markets had perfect information, public investment would be inefficient. But with uncertainty, there is a gain as against having no state investment at all, because of the losses due to uncertainty.

Keynes's political economy would also use the taxation system to redistribute income, since an 'increase in the habitual tendency to consume will in general [i.e. except in conditions of full employment] serve to increase the inducement to invest' (Keynes, 1973A, p. 373). The rationale for this is that the poor spend a higher proportion of their incomes than do the rich. Marriner Eccles, chairman of the US Federal Reserve Board from 1934–1948, spelt out the logic of this position better than Keynes managed himself:

A mass production economy has to be accompanied by mass consumption. Mass consumption in turn implies a distribution of wealth to provide men with buying power. Instead of achieving that kind of distribution, a giant suction pump had by 1929 drawn into a few hands an increasing proportion of currently produced wealth. This served them as a capital accumulation. But by taking purchasing power out of the hands of mass consumers, the savers denied to themselves the kind of effective demand for their products that would justify a reinvestment of their capital accumulations in new plants. In consequence, as in a poker game when the chips were concentrated in fewer and fewer hands, the other fellows could stay in the game only by borrowing. When their credit ran out, the game stopped. (quoted in Whimster, 2000, p. 98)

The same 'suction pump' was in operation in Britain and the USA in the run up to the 2007 crisis, access to credit compensating for the growing inequality of wealth and incomes.

Finally, Keynes's political economy would see a major reform of the international monetary system. The chief need is to reduce the amount of global reserves. Between 2003 and 2009 measurable global reserves have increased from \$2.6 trillion to \$6.8 trillion—an average annual rate of increase of about 17% at a time when global GDP grew at an annual

rate of 4.4%. In 2003, global gold reserves amounted to 7% of total reserves; in 2009 the figure was 12%.

This flight into liquidity amounts to a large increase in deflationary pressure. Reserves are a way of insuring against uncertainty. What is required is to lower the cost of insurance by reducing uncertainty. A package of measures to achieve this would need to include internationalisation of reserves, 'Tobin' taxes on hot money flows, and agreement on exchange rates.

The decision of the G20 in April 2009 to increase the IMF's Special Drawing Right (SDR) facility by \$250 billion opens the door to China's proposal to create a 'super-sovereign' reserve fund gradually to replace national reserves. But little work has so far been done on this. The conversion of existing dollar holdings into SDRs will be necessary. This will require a much larger issue of SDRs than hitherto contemplated. There is a precedent here in the proposal for IMF funding of Britain's wartime sterling balances, which Britain rejected in 1944, only to accept in 1978 in a move which finally wound up the sterling area. Agreement would be needed on the rate of future creation of IMF resources, and the terms on which they would be lent out. In conjunction with a 'Tobin' tax on short-term financial transactions, these measures would greatly reduce the need to hold such large reserves. But there also needs to be agreement on exchange rates. Since the collapse of the Bretton Woods system of fixed exchange rates, there have been swings in currency values much larger than justified by changes in competitive conditions. So it is important to reach agreement on rules for exchange rates to avoid the build up of future global imbalances: in short, we need a return to elements of the rejected Keynes Plan of 1941. Keynes would have said, and I agree with him, that unless the international monetary system is fixed, free trade will languish, and globalisation will go into reverse. There are signs that this is now happening—in the Congressional demand in the USA to impose trade sanctions on 'currency manipulators' and in proposals for regional 'lender of last resort' facilities to fill the gap left by inadequate IMF resources.

6. Towards a new economics

Keynes claimed his theory was more 'general' than classical economics because it encompassed a variety of economic situations exhibiting different states of knowledge. The question is: how central is the Keynes case? If the capitalist growth engine is subject to irreducible uncertainty then its mediocre performance and frequent breakdowns are explained. If, on the other hand, uncertainty can be plausibly modelled as an information problem, to be overcome by learning and by more efficient data processing, then Keynes's case is marginalised, and the classical theory is reinstated as the central case. The comeback of classical economics consisted in marginalising the Keynes case, and reinserting its own theory of the self-regulating market based on 'perfect information' as the 'general case'. The breakdown of the self-regulating market in 2007–8 suggests to me that Keynes's theory is the 'general' one. But what would an economics which takes uncertainty seriously look like?

The fundamental issue involves the role of maths in economics. The older generation of economists used maths for a strictly limited purpose: to make more precise their intuitions about the real world, not to create an axiomatic system whose virtue lay in its unrealism. There has to be a return to an economics that allows room for explanations of economic behaviour that cannot be expressed mathematically. Keynes himself was hostile to exaggerated precision: whether or not he was the author of the phrase 'it is better to be

vaguely right than precisely wrong³ this summed up his own approach. It remains to work out the teaching of economics, the production of economic textbooks, and the reform of professional standards of economic journals to reflect this insight.

7. Conclusion

One clear conclusion emerges from this discussion: the need for a greater role for government in the management of the economy. A greater role for government in turn requires the intellectual rehabilitation of the state as a potentially rational economic actor, rather than a mere vote-seeker. It is decades since anyone was able to write, as Keynes did in 1936, of the state being 'in a position to calculate the marginal efficiency of capital-goods on long views and on the basis of the general social advantage' (Keynes, 1973, p. 164). We need to think about a structure of the state which allows its investment function to be separated from the political incentives facing politicians.

We do not need a new Keynes; we do need the old Keynes, suitably updated. He will not be our sole guide to the economic future, but he remains an indispensable guide.

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³ Attributed to Wildon Carr.