

# TRANSFIGURATION AND DEATH: KEYNES'S MONETARY THEORY

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## 1. Introduction

In mainstream economics, Keynes is dead. We suspect foul play. As always, if the charge is to stick, we must establish the culprits, the means, and the motives – these words are plural because there was a plethora of assassins: this was a death by a thousand cuts. Standard macroeconomics is now classical economics, even though it may appear to be constructed from 'Keynesian' components. Through a series of transformations of the components of *The General Theory* the original content was completely lost; identified, wrongly, with 'Keynesian' economics, Keynes appears, transfigured, as a neo-classical, or even classical, economist. 'Keynesian economics' became fiscal policy and the economics of depression. It was this transfigured 'Keynes' that was, deservedly, killed off when 'Keynesian' economics could not explain the 'stagflation' of the 1970s. *The General Theory*, by contrast, can explain stagflation (*GT* Ch. 21), and the real Keynes was concerned with monetary policy in good times and bad, regarding public works as the appropriate remedy only in the depths of a depression.

In all subjects, present understanding is constructed by interpreting the past. But Economics may be an extreme case: Economics has recovered its classical tradition and so completely obliterated the 'Keynesian Revolution' that Keynes's name rarely appears in modern textbooks unless taken in vain, signalling either 'bastard Keynesianism' or 'New Keynesian' economics.

There is too much to say about what has happened to Keynes's *General Theory*. Worse, much of it has already been said and this literature is well known to heterodox economists. We shall try to deal with the first problem by selecting those articles which seem to us to be significant milestones and by confining ourselves mainly to the theory of money and interest (though at one point the full system will have to be discussed). But such constraints still allow us to deal with much, given the central role of the liquidity preference theory of interest in *The General Theory*:

There is, I am convinced, a fatal flaw in that part of the orthodox reasoning which deals with the theory of what determines the level of effective demand and the volume of aggregate employment; the flaw being largely due to the failure of the classical doctrine to develop a satisfactory theory of the rate of interest. (*CW* XIII, p. 498)

And we hope to offer something new by exploring the underlying agenda behind the key interpreters' transformations of Keynes's theory: their emotional responses, mode of thought, ideology or politics.

We begin by outlining the theory of money and interest in Chapters 13-15 of *The General Theory*. Resistance to the book's content came immediately drafts began to circulate.

Keynes, after all, was trying to effect ‘a revolution in the way the world thinks about economic problems’ (*CW* XIII, p. 492), and it is natural for the mind to mount a defence of its established contents and processes. The third section will trace the main contemporary attempts to defend the old order, loanable funds theory, against the new monetary theory, liquidity preference.

The fourth section traces the effects of the alterations to liquidity preference and to its place in the wider theory. The first step was to empty liquidity preference of its disturbing content of speculation and fill it with content more compatible with orthodox theory. This was aided by focussing on the mathematical expression rather than the theoretical content, starting with *IS-LM*. Then, with the ‘completion’ of *IS-LM* by the addition of the labour market, ‘Keynesian’ equations were made to produce full-blown classical economics, the position we have today. The effect of these transformations was to turn a theory which ingeniously wraps up dynamics in statics into a theory which is purely static. The chronology of this section overlaps with section three at the beginning.

The fifth section retraces the steps of sections three and four, exploring the underlying causes of the alterations made. This section is by necessity speculative. The sixth section shows that as a result of the transformation of Keynes’s monetary theory, economics has lost not only a key component of the best theory of twentieth-century (and maybe even twenty-first century) capitalism, but also, as a consequence, the key policy conclusion of *The General Theory*: that it should be the purpose of the central bank to run a policy of the cheapest money possible under a country's circumstances. The recovery of this policy conclusion is the focus of the second author's recent book (Tily 2007).

## **2. Money and interest in *The General Theory***

The central proposition of *The General Theory* is that unemployment occurs because the rate of interest is too high, not because wages are too high. This puts money and interest centre stage.

The classical theory, that the rate of interest is determined by saving and investment, is subject to two flaws, Keynes argues in Ch. 13 (all references in this section are to *The General Theory*). First, ‘[it] should be obvious that the rate of interest cannot be a return to saving or waiting as such. For if a man hoards his savings in cash, he earns no interest.’ (pp. 166-7). The possibility of saving in the form of cash is not entertained in classical theory: saving is identified with lending. Once the possibility of saving by holding cash is entertained, it is not clear that that saving rises with the rate of interest.

‘[T]he mere definition of the rate of interest tells us in so many words that the rate of interest is the reward for parting with liquidity for a specified period’ (p. 167). There was no puzzle about the holding of money for transactions: because those balances were in constant circulation they were not counted as saving. The problem was to explain why anyone would choose a ‘barren’ asset as a store of value. (See *CW* XIV, p. 115.)

Keynes’s answer was that liquidity preference (LP) exists because the future of the rate of interest is uncertain: if it were certain, any future rate could be calculated from two current rates, but since there is uncertainty, both about capital values and the future need for cash (so that exact maturity matching is not possible, even if all maturities were available), anyone parting with liquidity must be compensated for the risk of disappointment. This point applies to the transactions and precautionary motives, which he expects to be largely governed by income and comparatively interest-insensitive. In addition, anyone who believes that future rates will be

above the rates assumed by the market will stand to profit by staying liquid while those of the opposite view would commit some cash and might even borrow short to buy longer debt; this is the speculative motive (pp. 169-70). Keynes remarks on the similarity to the discussion of bulls and bears in the *Treatise on Money*, but while there he lumped together the equity and bond ('debt') markets, in *The General Theory* he analyses equity ('investments') by means of the marginal efficiency of capital. LP in conjunction with the quantity of money (and the quantity of bonds) determines the rate of interest.

In Chapter 15 he elaborates the famous three motives and gives (p. 199) the equation

$$M = M_1 + M_2 = L_1(Y) + L_2(r),$$

specifying that  $L_2$  'mainly depends on the relation between the current rate of interest and the state of expectation'. In Ch. 15 this becomes the difference between the actual rate and a 'safe' rate, safe in the sense that this rate is unlikely to rise (pp. 201-2). Thus the current rate stands for expectations of future changes in the rate, given what is considered 'safe'. This is a key difference with most later interpretations, which understand the rate of interest as the opportunity cost of holding money. There are other differences. (i) It is widely believed that 'money' in LP means non-interest-bearing assets, whereas footnote 1 on p. 167 makes it clear that the border between money and 'debt' is both vague and moveable according to need. What really matters for LP is fluctuations in capital value with the rate of interest; therefore interest-bearing bank accounts and short-term debt may, for the purpose of speculation, be treated as money (though even short-term debt would not serve the transactions motive) ) (Chick 1991, Tily 2007, Ch. 7). (ii) 'The' rate of interest in *The General Theory* has been interpreted as the long rate, but Keynes actually means (most of the time) the whole complex of rates (n. 2, p. 167). It is true, however, that the rate which causes the greatest variations in capital values is the long rate, and it is also significant that long-dated debt (most particularly consols, which have no maturity date) was prevalent at the time.

Discussing possible extreme positions of the liquidity-preference function, Keynes doubted the practical importance of the feature seized on by many interpreters: the liquidity trap: 'I know of no example of it hitherto'. However, he does forecast a difficulty in lowering the rate by policy action once it has already reached a low level, and he refers to liquidity trap episodes in the United States (pp. 207-8). Keynes argued that it is through the rate of interest that changes in the money supply have their effect on the economy, regardless of the way that the new money is introduced (pp. 200-1). He emphasises that monetary policy (open market operations) acts both through the exchange of money for bonds (and vice versa), the liquidity function being unchanged, and by changing expectations and thus the position of the liquidity function (p. 197). This last point is crucial and was where the most lasting damage was done by the Keynesians. It has not been resurrected even by post-Keynesians, including the first of the present authors. The central conclusion of *The General Theory* is that unemployment is caused by insufficient investment, which in turn is the fault of interest being too high; and it can be held in that position by nothing more substantial than the expectations, especially the fears, of speculators. Thus the theory of LP is of the greatest practical significance.

### **3. In defence of the old order**

The famous *IS-LM* article (Hicks 1937) was merely a component of a broader assault, led, or at least led in public, by Dennis Robertson. The other key players were Hicks (by then) at Oxford, Haberler at the League of Nations, Ohlin in Sweden and Hansen in the USA. From the start they all took the line that *The General Theory* was not a revolution in thought. They argued instead that Keynes's work demanded a formalisation of developments to the classical theory that were already well known, if not clearly set out in the literature. In classical theory the rate of interest is determined by saving and investment. Loanable funds theory (LFT) is a variant of this, one which preserves the importance of saving and investment but moves away from the classical conception of real resources and a real rate of interest to a monetary rate determined at least in part by monetary factors.<sup>1</sup>

The specific argument was that LFT not only adequately tackled the issues raised in the context of liquidity preference, but also that LFT, properly understood, was equivalent to Keynes's theory. The attack began in Hicks's (1936) review.

The ordinary method of economic theory would be to regard each price as determined by the demand and supply equation for the corresponding commodity or factor; the rate of interest as determined by the demand and supply for loans. If we work in this way, the equation for demand and supply of money is otiose... . But we could equally well work in another way. We could allot to each commodity or factor the demand and supply equation for that commodity, as before; but we could allot to the rate of interest the equilibrium for the demand and supply of money. ... This latter method is the method of Mr. Keynes. It is a perfectly legitimate method, but it does not prove other methods to be wrong. The choice between them is purely a matter of convenience. ... (Hicks, 1936, pp. 92-3).

Keynes did not let this pass. His observation 'I am not clear in this passage what "other" methods you have in mind' (31 August 1936, *CW XIV*, pp. 71-2) led to a brief exchange of views.

Robertson's stance was publicly expressed in the November 1936 *Quarterly Journal of Economics*. Here he portrayed liquidity preference as simply an 'alternative version' of loanable funds theory (p.183).<sup>2</sup> Hicks and Keynes next returned to the issue following the *IS-LM* piece. Implicit in *IS-LM* was the LFT perspective that an increase in investment, because it increased income, led to an increase in the demand for money and therefore in the rate of interest. Keynes spotted this and complained in his famous (31 March 1937) letter 'accepting' *IS-LM*: 'From my point of view it is important to insist that my remark is to the effect that an increase in the inducement to invest *need* not raise the rate of interest' (*CW XIV*, p. 80).

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<sup>1</sup> Even as he wrote *The General Theory*, Keynes did not hold this work in high regard. '...[I]t is the attempt to build a bridge [between the theory of value and the theory of money] on the part of the neo-classical school which has led to the worst muddles of all' (*GT* p. 183).

<sup>2</sup> Private correspondence illustrates how his position coincided with the developing 'Keynesian' position: 'Both over the *Treatise* and this book I have gone through real intellectual torment trying to make up my mind whether, as you often seem to claim, there is some new piece on the board or rather a re-arrangement, which seems to you superior, of existing pieces. It has been an intellectual relief to me to find Hicks (e.g. review pp. 246-8) and Harrod (*Econometrica* paper) both taking the latter view, though agreeing far more with you than me about the merits of the re-arrangement' (Robertson to Keynes, 29 December 1936, *CW XIV*, p. 95).

Looking to the forthcoming ‘alternative theories’ debate, Keynes also directly asked Hicks in the same letter about his perspective on rate of interest theories: ‘where you say “It is a perfectly legitimate method, but it does not prove other methods to be wrong”, what exactly are the other methods which you have in mind?’ (*CW XIV*, p. 81)

Hicks’s response again asserted the LFT position, this time seeing ‘six possible alternative ‘theories’; but if they are correctly stated, they all mean the same thing, and are all equally right’ (*CW XIV*, p. 82). He explained his motivation as follows:

Of course what lies behind this rather silly business is a desire to separate the essential content of your theory from its formal arrangement. I am a convinced liquidity preference man, but I do covet some freedom of choice about the way (or ways) the doctrine shall be expressed. (*CW XIV*, p. 83)

Keynes replied in a terse letter on 11 April 1937; the note is reproduced in its entirety and is not notable for any friendliness with his alleged greatest interpreter:

Dear Hicks, I do not really understand how you mean interest to be determined by saving and investment under II, near the bottom of your second page. However I am trying to bring the whole thing to a head by a short article I shall write for the next *Journal* containing Ohlin’s exposition of the Swedish theory of interest regarded as determined by the demand and supply for loans which is being printed in the same issue. I am there accusing you of agreeing with the Swedes in this matter. If this is a calumny, and your theory is really quite different, forgive me. Yours sincerely, J.M.K. (*CW XIV*, p. 83)

Hicks did not deny Keynes’s charge, and Keynes included him amongst the ‘heretics’ in his letter to Ohlin (Ohlin was stating the case for LFT in the ‘alternative theories’ debate):

I am very glad that you have been able to put down in a way I can understand the theory of the rate of interest as established by the demand and supply for credit. This is an idea which is widely held outside Sweden e.g. to some extent by Dennis Robertson and Hicks. For my part, I am not convinced by it and consider it a fundamental heresy. ... It is obviously frightfully important, and we must get our minds completely clear about this. So far from it being an alternative version of my theory, my first impression is that this and mine are wholly irreconcilable. (Keynes, letter to Ohlin on 3 February 1937, *CW XIV*, pp. 185-6)

Ohlin’s statement of LFT, Keynes’s response, and pieces by Robertson and Hawtrey were published in the June 1937 *Economic Journal*. Keynes was as clear in public as he had been in private:

There is, I think a concealed difference of opinion, which is of very great importance, between myself and a group of economists who express themselves as agreeing with me in abandoning the theory that the rate of interest is (in Professor Ohlin’s words) ‘determined by the condition that it equalises the supply of and demand for saving, or,

in other words, equalises saving and investment'. The object of this first section is to bring this difference to a head. ...

...The alternative theory held, I gather, by Professor Ohlin and his group of Swedish economists, by Mr Robertson and Mr Hicks, and probably many others, makes it to depend, put briefly, on the demand and supply of credit or, alternatively (meaning the same thing), of loans, at different rates of interest. Some of the writers (as will be seen from the quotations given below) believe that my theory is on the whole the same as theirs and mainly amounts to expressing it in a somewhat different way. Nevertheless the theories are, I believe, radically opposed to one another. (*CW* XIV, pp. 201-2)

By this time Hicks had retreated from the debate. Robertson, on the other hand, continued to pursue his quarry in the next two issues of the *EJ* and beyond. Hicks then returned to the fray in *Value and Capital* (1939), where he gave a formal 'proof' that liquidity preference and loanable funds theories are equivalent (so we needn't have a battle about them). He did this in a Paretian/Walrasian framework (his preferred habitat) in which there are 'markets' for goods, money and securities. It was then a simple matter to argue, from the proposition that one equation in a general equilibrium framework is redundant, that it is a matter of indifference whether we drop the market for money (LP, in his interpretation) or the market for securities or loans (LF). This argument was surprisingly influential,<sup>3</sup> considering that it falsified LP by treating security purchases as loans,<sup>4</sup> didn't distinguish between a stock theory (LP) and a flow theory (LF) and took money, loans and goods as gross substitutes. Where does that leave the role of credit (in LFT) in financing investment or the transactions demand for money in LP, where loans and money are complements to expenditure? It is surprising that no one thought to ask why we shouldn't drop the market for goods.

#### 4. From Keynes to Keynesianism to Classical macroeconomics

Not content with constructing LP as just another form of LFT, Hicks, joined by others, proceeded to empty LP of its original content. Formalism was their loyal servant: once LP was identified with the equation  $L = L(Y, r)$ ,<sup>5</sup> the reasoning behind the equation could be transformed. This section reviews the critical steps in this transformation.

*'A suggestion for simplifying'* (Hicks 1935): This remarkable paper, published before *The General Theory*; was inspired by the *Treatise*. It was a first step in the construction of the

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<sup>3</sup> For example, Alan Coddington, whose work was in turn influential, was taken in by it (1983, p. 74ff.)

<sup>4</sup> Trade in seasoned securities, which is the bulk of financial market activity, is a transfer of assets, not lending.

<sup>5</sup> This formulation appears first in Hicks (1937). To a mathematician, it is more elegant than Keynes's version, but it might be worth speculating on Keynes's choice: was it supposed to remind us both that the money satisfying different motives is different in content (Chick 1991) – an 'inconsistency' permitted by *GT*, p. 167, n. 1 - and that the components adjust at different speeds, speculation being the rapidly shifting element while transactions and precautionary demand move more slowly? The second of these also reminds us of the sequential nature of Keynes's theory (Chick 1983).

portfolio approach which transformed LP into something more amenable to orthodox theory. Hicks's 'suggestion' was to submit money balances to a marginalist, choice-theoretic analysis. The first stumbling-block was the treatment of income-related demands for money, for 'the simple consideration that the decision to hold money is always made at a point of time shows that the connection between income and the demand for money must always be indirect' (p. 49). He did not solve this problem until 1969, when he advocated treating the transactions demand for money as non-volitional, on the grounds that at any particular time no one monitored or controlled their monetary transactions balances.<sup>6</sup> The rest of money balances could, he argued, be analysed in terms of the opportunity cost of forgone yield on securities or real capital, allowing for risk in terms of the likely price variation of alternative assets and uncertainty about the dates for which future cash was needed. In speaking of these uncertainties as adding a 'penumbra of doubt' to the calculations, it is clear that Hicks is thinking in terms of classical probability theory.

*Hicks's review (1936) of The General Theory:* Hicks recognises the significance of Keynes's 'method of expectations': 'If we assume given not only the tastes and resources ordinarily assumed given in static theory, but also people's anticipations...equilibrium analysis can be used, not only in the remote stationary conditions...but even in the real world, even in the real world in "disequilibrium"' (p. 86). But LP, despite its being a fine example of that method, disturbed his habits of thought, as we have seen above. By regarding the choice in LP as between 'holding money and lending it out', he transforms Keynes's stock theory into something closer to loanable funds, a procedure repeated later (but introduced above) in *Value and Capital* (p. 92). He says little about the 'motives' behind the function, only that writing LP as a function might make it appear more stable than it really is. If he was really worried about this, why did he not explain that the current rate of interest was a proxy for expectations given a settled convention regarding the 'safe' rate, and that that convention was fragile? – because, we argue, to do so would undermine the role of 'the fundamentals', productivity and thrift, which Keynes had discarded.

*IS-LM (Hicks 1937):* This is one of four articles which picked up the three 'ultimate independent variables' from Keynes's summary Chapter 18 (see Young 1987), the propensity to consume, liquidity preference and the marginal efficiency of capital, and embodied these in equations to capture the essence of *The General Theory*. Of the four, this is the one that became famous. Hicks offers these equations for 'Mr Keynes's *special theory*' (p. 107, his italics):  $M = L(r)$  and  $I(r) = S(Y)$ , in modern reduced form and modern notation. This is contrasted both with his 'classical theory',  $M = kY$  and  $I(r) = S(Y, r)$ ; and with 'the [i.e. Hicks's] General Theory' (his upper case)  $M = L(Y, r)$  and  $I(r) = S(Y)$ . What is 'general' and 'special' here depends only

<sup>6</sup> This idea later appears as buffer stocks and Moore's 'convenience lending' by depositors to the banks.

<sup>7</sup> Shackle wrote (1982, p. 438, quoted in King 2002, p. 186), 'Sir John still does not seem to me to acknowledge the essential point: the elemental core of Keynes's conception of economic society is uncertain expectation, and uncertain expectation is wholly incompatible and in conflict with the notion of equilibrium.' On this matter, we side with Hicks: the fulfilment of an expectation can be treated as an equilibrium, no matter how uncertain the expectation was at the time it was formulated.

on how many variables are included, which of course has nothing to do with Keynes's claim to generality: that his theory was valid for any state of employment (*GT*, p. 3), so Keynes is falsified on another front.

Hicks regards the dependence of liquidity preference on  $r$  as nothing new, citing Lavington's discussion of the opportunity cost of holding money (Lavington 1921, Ch. 6) as 'setting the stage' for Keynes (p. 106).<sup>8</sup> His own explanation of the speculative demand turns on the uncertainty of future payments, where having to cash in securities before maturity could lead to capital losses. This point is included in Keynes's speculative demand (see above), but it does not capture the deliberate gambling element based on uncertainty about the future rate of interest.

Note that opportunity cost is contemporaneous with the 'price' which measures it. It is in this article too that we find the statement, now widely, but wrongly, believed, that 'the rate for loans of infinite duration' is the rate which Keynes 'always has in mind as *the* rate of interest' (p. 111; cf. *GT* p. 167, n. 2, quoted above).

*Modigliani (1944)*: Modigliani had a good war from the perspective of the 'Keynesian' Counterrevolution. This, its key article, was his PhD thesis; it was published when Modigliani was only 26. In it there is very little discussion of the theoretical basis of LP; equilibrium in the money market is reached when dealers (why dealers? - in *The General Theory*, as in real life, everyone holds money) are willing to hold the existing stock of money at the going rate of interest (p. 198). The reasons for their willingness are not explored; the rest of the discussion is entirely in terms of the variables in the equation: income, interest or both, as in Hicks 1937. As such, the article contributes to the process of emptying out the content of LP. But the real significance of the article is that Modigliani 'completes' the *IS-LM* scheme by adding the labour market. This step reversed the causal order which Keynes had established (expected aggregate demand and aggregate supply determine employment), to the classical causality: supply and demand for labour jointly determine the volume of (full) employment and the real wage, and, through the production function, the level of output (identified, incorrectly, with real income).<sup>9</sup>

Modigliani constructs three simultaneous-equation versions of this extended model, in

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<sup>8</sup> This connection has been repeated quite recently by Gerrard (1994, p. 71). It is not clear whether he is simply giving Hicks's view or his own assent. Laidler (1999, pp. 87-9) recognises clearly that Lavington's contribution is to the precautionary motive, not the speculative motive. He also comments (p. 87, n. 14) that it was Robertson who called Hicks's attention to Lavington, though he cites no proof. Robertson also commended Lavington to Keynes (letter to Keynes 29 December 1936, *CW* XIV, p. 97), though this had no effect. Laidler (p. 83, n. 7) remarks, intriguingly, 'even though Lavington had been Keynes's pupil, there is no mention of Keynes...anywhere...in Lavington's writings, as far as I am aware. Keynes, in his turn, seems to have ignored Lavington just as completely. It would be interesting to know why.' Perhaps the clue lies in Robertson's comment that Lavington was 'surely the most "classical" writer of our generation!' (*CW* XIV, p. 97).

<sup>9</sup> The idea that output equals real income, and the convention of representing both by  $y$ , is more insidious and damaging than is perhaps immediately apparent. Output is determined at the beginning of Keynes's sequence, on the basis of aggregate supply and producers' expectations of demand. Income, realised in money terms, is determined when that output is sold, at the end of the period. For the two to be equal therefore, prices expected at the beginning must be realised at the end, or alternatively there must be no unexpected change in inventories. In other words, producers' expectations of sales (expectations of aggregate demand) must be correct. The equivalence of output and real income turns *The General Theory* into equilibrium theory, as does the simultaneous equation model initiated by Hicks and the three other reviewers (see Young, 1987).



the manner of Hicks 1937. The ‘Keynesian case’ is marked by a labour supply curve with a horizontal portion at the ‘going’ money wage. He concludes from these models that ‘[t]he liquidity-preference theory is not necessary to explain unemployment equilibrium; it is sufficient only in a limiting case: the “Keynesian case.” In the general case it is neither necessary nor sufficient; it can explain this phenomenon only with the additional assumption of rigid wages’ (1944, p. 223). Similarly the dependence of the rate of interest on the quantity of money also is explained only by rigid wages (*ibid.*). Any importance for LP is thus eradicated and the rigid wages interpretation is established.

This work is extraordinary. It does far more than make excessive wages and/or obdurate unions once again the cause of unemployment. Consider a model derived along his lines and now standard in many textbooks:<sup>10</sup>

- 1)  $s(y, r) = i(y, r)$
- 2)  $M^* = L(Y, r)$
- 3)  $Y = Py$
- 4)  $n_d = f(w)$
- 5)  $n_s = g(w)$
- 6)  $y = h(K^*, n)$

where lower-case letters indicate ‘real’ variables and upper case are monetary, and \* means the factor is exogenous. This little model looks a bit ‘Keynesian’: the first two equations are *IS-LM*, though the first equation has ‘improved’ on Hicks by being in real terms. It looks as if it embodies liquidity preference. But on closer inspection the level of real income is determined by equations (4)-(6) and full employment is guaranteed; therefore the only job of saving and investment (now specified, as in classical economics, as real resources) is to determine the rate of ‘interest’ (actually a real return)! In turn, the only function remaining for the quantity of money is to determine the price level (equations (2)-(3)). The classical dichotomy and the Quantity Theory are restored. If there is any interest in the money wage, a further definitional equation,  $W = Pw$ , is sufficient to solve for it. The classical system is restored in its entirety.

*Hansen’s Guide (1953)*: Hansen does not refer to Modigliani 1944. Though he does not elaborate on the process of speculation or its theoretical significance, he understands that the role of the rate of interest in the LP function is as an indicator of the direction of its future change (1953, Ch 6). But in Ch 7 he accuses LP theory of the same indeterminacy as that on which Keynes faulted LFT (*GT* Ch 14). Whereas the classical theory needs the determination of  $y$  to determine the position of the saving schedule before it can determine  $r$ , LP theory needs the level of income to determine  $L_I$ . As is shown throughout the work, Hansen is thinking entirely in the framework of *IS-LM*, a static, simultaneous-equation approach, although he recognises that *The General Theory* is more than static analysis (e.g. p. 51). In a simultaneous-equation approach one is left with one reduced-form equation, which of course cannot solve for two variables. An appreciation of the dynamic structure of Keynes’s theory might have suggested the following: the causal priority lies with the determination of interest in a fast-moving market, the market for securities. The rate of interest along with the marginal efficiency of capital

<sup>10</sup> Equations (1) – (3) constitute ‘aggregate demand’, AD, and (4) – (6) ‘aggregate supply’, AS. These bear no relation to Keynes’s functions of the same names.

(m.e.c.) then determines investment which in turn determines income. In the sequential context the claim that LP and the supply of money determine the interest rate makes sense (see Chick 1983, Ch 13). This serves as a demonstration of the power of mathematical modelling to limit possibilities, even falsify theories, while satisfying a desire for deterministic results.

*Samuelson's Economics (1948)*: The first edition of Samuelson's famous textbook was published not long after the War. Chapter 12 explains that saving and investment are equilibrated by income via the multiplier – the famous Keynesian cross. The chapter on money and interest (Ch 13) explains the three motives, but again the gambling aspect of speculation is missing. Rather the connection with the rate of interest is through a 'long-term investment' demand for cash when there is an expectation that the return will be less than the capital loss, especially when interest rates are low (as they were at the time). (By contrast, Keynes's speculator hardly holds assets long enough to earn a return; s/he is typically concerned only with capital value; earning a return is the province of short-term assets held on precaution and of long-term investment, within which there is no logical place for money unless rates are almost certain to rise.) This conception turns up again in Tobin's (1958) explanation in terms of a 'critical rate', in which pure capital gains and losses are modified to include the asset's return.

Samuelson supports the cheap money policy established in the Depression and maintained through the War, on the grounds that it made for 'a healthier structure of corporate debt and fixed charges' (p. 306), but senses that it might be about to end (as it did in the USA with the Treasury-Federal Reserve Accord in 1951).

*Baumol (1952) and Tobin (1956)*: In these articles, the authors in their different ways proposed that transactions demand is also interest-sensitive. Both argue that interest can be earned on money balances between the receipt of income and expenditure outlays. This alternative explanation of the relation of money to interest would allow the formulation  $L(Y, r)$  to be carried forward without ever departing from the transactions demand for money; the problems of time, expectations and subjectivity raised by speculative demand could thus be dispensed with.

*Tobin (1958)*: Tobin here transformed speculative demand into portfolio theory, subjective expectations into classical probability, and uncertainty into risk. He is highly critical of Keynes's speculative demand, in that (to him) it predicts that an individual will either hold all money or all bonds (he neglects to add 'on speculative account'; rather he implies that this is true for money/bond holdings as a whole<sup>11</sup>). But, he continues, we know that individuals diversify their portfolios between risk-free assets ('money') and risky assets ('bonds'). The risk is variation in capital value; it is balanced by return. The risk is measured by applying probability theory, presumably to the historical record of the security's price - a procedure of which Keynes was explicitly sceptical (p. 169), even for non-speculative holdings. Although foreshadowed by Hicks (1935), it was this article that put paid to speculation once and for all.

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<sup>11</sup> Perhaps Keynes's way of formalising LP in two parts would have saved him from this blunder, if he had recalled it.

*Friedman (1956)*: Friedman claims that his theory of the demand for money is an elaboration or generalisation of LP, though actually it is based on portfolio theory. He starts with a very general framework of opportunity cost: money is a substitute for the widest possible range of assets – bonds ( $b$ ), equity ( $e$ ), goods, human and non-human capital. These are represented in the demand function by their rates of return:

$$M = f(P, r_b - 1/r_b \cdot dr_b/dt, r_e + 1/P \cdot dP/dt - 1/r_e \cdot dr_e/dt, 1/P \cdot dP/dt; w, Y/r, u)$$

The rate of inflation and the price level are both included, as are the rates of change of security returns along with the level of the interest rate and the real rate of return on equity. Real wealth is  $w$ . Income divided by a general rate of interest measures human capital.  $u$  is the error term. The equation is manipulated until we have a velocity equation  $Y = v(\cdot)M$  with  $r_b$ ,  $r_e$ ,  $1/P \cdot dP/dt$  and wealth as arguments (eq. 13, p. 58). Now watch carefully:

In order to convert equation (13) into a “complete” model of income determination, ...it is necessary to suppose either that the demand for money is highly inelastic with respect to the variables in  $v$  or that all these variables are to be taken as rigid and fixed. (p. 62)

Any relation with interest rates is swept away. He restores the primacy of the simplest transactions demand from what he claimed to be Keynesian beginnings. The article was not particularly influential when it was published: the Keynesians were in control. Its day had to wait for the rise of monetarism. The ‘Keynesian’ origins were believed, even by those who should have known better (e.g. Hines 1971, p. 34, citing Patinkin 1969).

*Modern mainstream textbooks*: In today’s conventional textbooks, Keynes’s monetary theory is unrecognisable. The proposition that the rate of interest is a monetary phenomenon has been replaced with ‘real’ interest rates determined by time preference (saving and investment). Money has become ‘real balances’. Needless to say there is no speculation. As *AS-AD* analysis makes clear, the sole purpose of ‘money’ is to determine the price level. The triumph of classical economics is complete.

## 5. Wellsprings: modes of thought, ideology, politics, fear and loathing

When a piece of work is as distorted by the author’s contemporaries and successors as is Keynes’s masterwork, one has to enquire the reasons. We suggest three possibilities, which are not mutually exclusive and may not be exhaustive:

- (i) the natural instinct to defend the *status quo* (a) in theory, (b) in economic method and mode of thought
- (ii) an emotional response
- (iii) ideology and politics.

We have already seen the strong attachment of Keynes’s contemporaries to LFT, a

variant of classical theory. We have also already seen that the difference between LFT and LP was either not understood or deliberately obscured. Defending the old order is a common response in most disciplines (Kuhn, 1962) but not only theory was at stake. LP offended deep-seated economic methods and modes of thought. Its new element, speculative demand, introduced (as did the theory of investment) true uncertainty about the future. Nevertheless, we must act. Stability in such a world relies not on economic fundamentals but the maintenance of convention. When convention breaks down, LP (and the m.e.c.) can be quite unstable.

A logical positivist expects explanations in terms of objective economic fundamentals rather than psychological ‘propensities’. It is particularly unnerving when these propensities are portrayed as not very steady or consistent, or even, as with ‘animal spirits’, explicable. Consider Hicks’s second thoughts about expectations:

Expectations ...appear [in *The General Theory*] as *data*...not as elements that are moulded in the course of the process that is being analyzed. Perhaps it is the famous (but I now think rather wicked) chapter on ‘Long-term expectations’ which is at the root of the trouble. For one can grant that there exists an irrational element in expectations without conceding that they are so irrational as to be random – and therefore incapable of being moulded, at least to some extent, by policy. (1969, p. 113, quoted in Coddington, 1982, p. 86)

He repeats the charge that Keynes was ‘rather wicked’ to make speculative demand ‘so irrational’ in 1977 (p. 126). It is extraordinarily emotive language.

And there is no doubt that Hicks was keen to retain the sheet-anchors that hold conventional economics together; in another context he writes:

There is an equilibrium when all individuals are choosing the quantities, to produce and consume, which they prefer. To a conception of equilibrium that is of this type *we must hold fast*. (Hicks, 1965, p. 23; italics added.)

The fear of being cast adrift from order, rationality and (his understanding of) determinacy is palpable. That these feelings were aroused by *The General Theory* is made explicit by the fact that Hicks referred to it as ‘this Dunciad’ (1937, p. 101).<sup>12</sup> *The General Theory*, especially the speculative demand, was to him the economics of anarchy, chaos, and darkness. Equally, the role of fear and a regressive response to it in shaping Robertson’s economics and his response to the economics of others is thoroughly explored in Fletcher (2000).

Speculating in the gilts market – or in commodities or shares – is not everyone’s cuppa. Clearly Keynes relished it; not even close encounters with ruin<sup>13</sup> put him off, and he gambled with his College’s and his friends’ money as well as his own. One cannot imagine Hicks at

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<sup>12</sup> These days we are less familiar with Pope’s *Dunciad*. The poem’s last lines gives the flavour:

‘Lo! Thy dread Empire, Chaos! is restored;  
Light dies before thy uncreating word:  
Thy hand, great Anarch! lets the curtain fall;  
And universal Darkness buries All.’

<sup>13</sup> For the famous story of the wheat futures see *CW* XII, pp. 10-12.

Crockford's, or Tobin in Las Vegas. Though I feel sure that both of them held financial assets, their character suggests they were sound, solid, long-term investors, and their theories reflect that. For long-term investors a probability distribution built up from historical experience may not, in normal circumstances, be a bad guide to financial investment. To a speculator however, the important datum, one which by the nature of the world s/he cannot know with any certainty, is the difference between today's price and that a few days hence. The desired information is equivalent to a point on the probability distribution, not the distribution itself (see Chick 1983, 202-8 and 213-18). With a classical probability derived from known past data, everyone's expectation would be the mean and there would be no one to speculate with.

Tobin also, perhaps more famously, reduced uncertainty to risk (1958). In so doing, casino capitalism is banished. The rate of interest is restored to its former respectability as a price which can be relied upon to allocate capital efficiently and – this is an important ideological point – the allocation is managed at one remove by shareholders, a point which has always been important to Tobin (see Chick 1973, Ch 6, especially pp. 100-2) and other neoclassical economists.

There was a further factor which played an explicit role not apparent in Hicks: clearly Tobin subscribes to the representative agent and 'rational choice theory'. This is revealed in his step-wise LP function. To him, there is only one way to be rational, and if that is so, LP has that shape for one person and hence for all.

These contributions and those of Baumol and Tobin on transactions demand have the effect of bringing LP into line with the treasured method of statics. The retreat from speculation is also a retreat from time: the future is banished. Hicks himself later acknowledged that *IS-LM* reduces *the General Theory* to a theory which is not in time: '[The *IS-LM*] diagram is now much less popular with me than I think it still is with many other people. It reduces the *General Theory* to equilibrium economics; it is not really *in time*.' Make way for the cat which Hicks is about to let out of the bag: 'That, of course, is why it has done so well' (1976, pp. 289-90).

Clearly Hicks's 1937 formulation converts the sequential nature of Keynes's theory, where the rate of interest is determined before investment which in turn determines income, into a simultaneous-equation, equilibrium model. In such a model it is only in the liquidity trap that LP takes us 'completely out of touch with the classical world' (p. 110), where Keynes's assertion that a rise in the m.e.c. has no effect on  $r$  is correct. For this reason, Hicks concludes that 'the General Theory of Employment is the Economics of Depression'. Once  $L(r)$  is supplanted by  $L(Y, r)$ , 'Mr Keynes takes a big step back to Marshallian orthodoxy, and this theory becomes hard to distinguish from the revised and qualified [by Lavington, presumably] Marshallian theories' (p. 108), where a rise in investment raises  $r$ , just as in LFT.

Keynes's mistrust of expressing theory in equations is, in the light of what happened, amply justified. While the ambiguity of his apparently static but actually recursive method could be sustained in a discursive presentation, a formal presentation immediately destroys the timeful character of the theory.

## 6. What we have lost

We have rehearsed a well-known story: the steps by which Keynes's theory was transformed into an orthodox classical model. But the loss of theory is only part of our concern. While

busily engaged in eradicating LP, the Keynesians also managed to polarise debate on technical theoretical issues rather than the practical substance of *The General Theory*. By some tragic fluke, Keynes's contributions to these debates did not once touch on the policy implications of LFT set against LP. The conclusion of LP that the monetary authorities could manipulate LP (*GT*, p. 197) and take control of the whole spectrum of interest rates (*GT*, pp. 205-6) has eluded even those scholars who have treated the debate seriously ever since.

The disappearance of this conclusion from the literature was connected to the removal of speculative content from LP, but goes further. Even before Keynes's death, Keynesian discussion was emptying his policy of monetary content. The elevation of 'Keynesian' fiscal policy and downgrading of monetary policy is so familiar that we need not concern ourselves with it here. Equally familiar is the astonishing proposition that 'money doesn't matter' in *The General Theory*.<sup>14</sup> What we have to remind ourselves of is Keynes's genuine policy perspective.

Keynes's own policy perspective should be obvious from the titles of his books, up to and including *The General Theory of Employment, Interest and Money*. Keynes sought a theory of capitalism that could guide policy in a world after gold – and after classical economics. While a work of high theory, its ultimate aim was practical: the fuller justification for the monetary reform that he had long advocated. Again it is tragic that he did not spell this out. He wrote for his audience then and not for us; his practical observations were almost throwaway remarks to an audience that knew the context.

In *The General Theory*, the rate of interest was finally exposed as a highly psychological phenomenon that stood in the way of the prosperity and stability of a free market economy. But it was manipulable by monetary policy. The theory justified the steps already taken in the early 1930s: cheap money policy, the exchange equalisation account, capital control and the conversion of the war debt issued in 1917, as necessary steps to a more permanent prosperity. During W.W.II Keynes was given the opportunity to formalise a debt-management policy in line with his theory. The authorities pursued this policy and Britain fought the war with long-term interest rates effectively set at three per cent.

Within a year from the end of the war, Keynes was dead. The policies he had formulated were lost as fast as the theory that had informed and supported them.

The policy dimension raises a more substantial puzzle, one that suggests another wellspring of the Keynesian Counterrevolution: class conflict. In the light of Keynes's theory, society faces a *choice* of interest rates. But as we know, high interest rates favour rentiers or finance capital, and low interest rates favour industry and labour. Keynesianism, as classical economics before it, dealt with the choice by ignoring its existence, leaving 'the market' to set rates. A conservatism in the wake of theoretical challenge may be even more disturbed by a challenge to the social and political *status quo*. Keynes did not hold back from the revolutionary implications of his theory in his 'social consequences' chapter. But while he went far, it is quite clear – in the wake of democratic socialist revolutions all over the world – that many would want to go further. Siding with the rentier was to protect the *status quo*. The apparently apolitical nature of much of the debate should not blind us to the possibilities of a political agenda:

No one can follow the history of political and economic theory during the last century without recognizing that the selection and rejection of ideas, hypothesis, and

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<sup>14</sup> This did not have to wait for monetarism. Prominent 'Keynesians' also asserted it.

formulae, the moulding of them into schools or tendencies of thought, and the propagation of them in the intellectual world, have been plainly directed by the pressure of class interests. In political economy, as we might well suspect, from its close bearing upon business and politics, we find the most incontestable example. (Hobson, 1902, pp. 218-19)

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