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Fabricating the Keynesian Revolution: An Overview

David Laidler

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"Fabricating the Keynesian Revolution: An Overview"

David Laidler

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"Fabricating the Keynesian Revolution: An Overview"

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Chapter 1

AN OVERVIEW

THE NATURE OF *THE KEYNESIAN REVOLUTION*

Economics was subjected to a major re-arrangement of ideas in the late 1930s. So dramatic was the change that it was quickly classified as a revolution, more specifically, following Lawrence Klein (1949), as *The Keynesian Revolution.* It is, of course, far too late to do anything about this label, so thoroughly is it established in our vocabulary: hence its appearance in the title of a book whose main aims are to explore the relationship of the change in question to the earlier ideas out of which it was fashioned. And yet my choice of the word "fabricating" to characterise its creation is carefully considered. I do wish my title to suggest that an element of myth-making is involved whenever the phrase "Keynesian Revolution" is deployed, that the rearrangement of ideas to which it refers was neither revolutionary in the usual sense of the word, nor by any means uniquely Keynesian in origin.

In the intellectual world, the word revolution conjures up an image of the overthrow of some dominant orthodoxy by a new idea or set of ideas that forces a systematic rethinking of a whole discipline. The Keynesian Revolution is, to be

sure, often portrayed as having accomplished such a feat in economics. John Maynard Keynes himself seems to have thought that this was what he was up to in writing *The General Theory of Employment Interest and Money* (Keynes 1936). In 1935, he wrote to George Bernard Shaw as follows: " . . . I believe myself to be writing a book on economic theory which will largely revolutionise - not, I suppose, at once but in the course of the next ten years - the way the world thinks about economic problems" (Keynes 1936, as reprinted 1967, back cover). Many people subsequently took him at his word too. How else is one to explain that his publisher, Macmillan, thought that the posthumous appearance of the paragraph in which those words occur on the back cover of the once standard "Papermac" (sic) edition of that book would provoke respect rather than mirth?

It is the contention of this book that there was no overthrow of an old economic orthodoxy after 1936. What happened was altogether more mundane, though perhaps a good deal more useful: economics acquired a new formal model, around which there would, in due course, develop an orthodox body of analysis called macroeconomics. This model was remarkably simple and therefore easily grasped and eminently teachable, but it did not sound new themes. Rather it synthesised and permitted orderly debate about questions which, far from being revolutionary in the sense of superseding what had gone before, had themselves permeated the complex discussions of money, the cycle and employment that took

place in the years after the World-War-1. The formal model in question, IS-LM, was extracted from Keynes's *General Theory* by a number of that book's younger readers. A careful, not to say selective, reading will confirm that an informal version of the model was there to be found, and a reading of what went before it (or at least of what was available to the mainly English speaking economists who expounded the model) will confirm that it was not to be found elsewhere. Keynes's status as the crucial contributor to what followed is not, therefore, in question. All the same, the ideas which IS-LM organised, as opposed to that model's way of organising them, were well established in the earlier literature, and the model itself omitted many important elements of the new message which Keynes himself was trying to convey in 1936.

The years between the wars had seen intense debate among competing schools of thought. No single orthodoxy, moribund or otherwise, dominated them. Keynes's attempted intellectual revolution of 1936 was an effort to set up ideas of his own as the basis of a new orthodoxy where none currently existed, not an attempt to overthrow an already established order; and, as we shall see, he was by no means the only one engaged in such a project. Many of his contemporaries - Austrian cycle theorists, or American Institutionalists, to give a far from exhaustive list of examples - were attempting to do exactly the same thing. No one succeeded in this effort, not even Keynes, and if the state of economics before

1936 bears more relationship to that of European Christianity in the early 16th century than to that of the French monarchy before 1789, then the development of economics after that date also bears more resemblance to a successful counter-reformation than to a triumphant revolution. The new orthodoxy that IS-LM epitomised brought order to macroeconomics for thirty years or so, and, as I shall argue below, it did so while, indeed by, judiciously selecting among the competing doctrines of the inter-war years, accommodating some, and excluding others.

FORMAL MODELS IN ECONOMICS

Economists like formal models, sets of well specified assumptions from which, by a mechanical process of logical inference, an array of predictions may be derived. They do so with good reason, because models, once constructed, become a substitute for creative thought and make its results widely accessible. They are usable by anyone who has mastered their mechanics, and teachable to anyone who has not. They are not, of course, foolproof when it comes to application. It takes a certain skill to distinguish the situations in which the inevitably approximate relationship between their assumptions and reality is relatively harmless from those in which it is misleading; and, where the properties of the system itself depend upon the magnitude of particular parameters, to choose the right ones to plug into given circumstances. All the same, when we use a

formal model we raise the ratio of established knowledge to intuition and imagination that is brought to bear upon a problem, and increase the chances that our analysis of it will be helpful.[1]

It may be, as older economists like to believe, that intuition and imagination become sharper with experience, but it is certainly the case that younger economists are just as capable as anyone else, indeed perhaps more so, of mastering the logical structure of formal models. Such constructs provide a shortcut whereby the less experienced are enabled to catch-up with the state of knowledge in an area, and a model that is new is particularly useful and attractive in this respect. To the extent that it formalises what was already understood by experienced practitioners of the discipline, it makes that knowledge more readily and widely attainable; and to the extent that it incorporates novel insights, these are equally accessible to all who master the model's properties regardless of the state of their initial understanding. Often the first reaction of experienced economists to a new model is that it contains little, or even nothing, that is new, while the less experienced simultaneously treat it as pathbreaking. Sometimes each group is right from its own standpoint.

A new model will seldom embody all that was previously, albeit informally, understood about a problem. If an area is interesting, it is also likely

to be controversial, and a new model will usually systematise one viewpoint, or at least a subset of viewpoints, to the exclusion of others. Herein lies both a strength and a weakness of a discipline driven by a strong preference for formal reasoning. If a particular approach is fundamentally incoherent, it will not be possible to frame it in terms of a model and it will inevitably and appropriately lose ground when an alternative is so formalised. But the actual construction of a coherent economic model, as opposed to its dissemination, requires a good deal of creativity and technical capability. It is quite possible, at a particular time, that a perfectly reasonable idea fails to find proponents capable of giving a formal account of it, and that an alternative is more fortunate. In that case, a promising approach can easily get lost to view, and an ultimately less useful set of insights can come to dominate an area, at least for a while.[2]

Formal Models in The 1950s

In the late 1950s, a would-be economist was thoroughly drilled in the properties of a well defined set of models. In microeconomics, Marshall's partial equilibrium supply and demand apparatus, models of the perfectly competitive and monopolistic firm, and some version of a two person, two input, two output, general equilibrium structure formed the theoretical core of the typical honours undergraduate curriculum: and in macroeconomics that role was played by the IS-LM formulation of what had come to be called "Keynesian Economics". To be

sure, advanced students of macroeconomics would also be exposed to business cycle theory, usually of the multiplier-accelerator sort, and perhaps some macro-econometrics in the Klein-Goldberger (see Klein and Goldberger 1955) tradition, but as often as not, these would be presented as extensions of the IS-LM framework, the former dealing with factors causing the IS curve to shift systematically over time, and the latter as a quantification of a rather elaborate version of the same basic framework.[3] When, as late as 1973, that acute anthropological observer Axel Leijonhufvud visited the Econ tribe, he noted that, among its macro sect, the cross labelled IS-LM appeared to be a totem of ritual significance equal to that of the cross labelled S and D among the socially superior Micro.

IS-LM

IS-LM lay at the very heart of orthodox "Keynesian" macroeconomics for three decades or more, and it was an important component of the first serious challenge to that orthodoxy too, *Monetarism* as it came to be called. It was not immediately apparent in the mid-1950s, when that challenge was first mounted, that Milton Friedman's capacity to get different results from his professional colleagues about, say, the relative influence of monetary and fiscal policy on output, depended not so much on his using some different model of the economy, but on his attributing different orders of magnitude to certain key parameters of

a commonly used system. Nor was it obvious that his monetary theory of inflation stemmed from concentrating on the economy's properties in regions where output was capacity constrained, rather than free to expand in response to changes in the aggregate demand for goods and services. However, in the early 1970s, Friedman did make these matters clear, and the IS-LM model played a prominent role in his exposition.[4] Thus it was only with the rise of "New-classical" economics in the 1970s and 80s that IS-LM began to lose its dominant position in the macroeconomics curriculum.

The IS-LM model itself is easily expounded. In its simplest form, taking the price level, P, as given, it determines the level of real output and employment in a closed economy as a function of autonomous private expenditure A, government expenditure G, and an exogenously given quantity of money M. Specifically, with C expenditure by households, I expenditure by firms, G expenditure by government, Y real income, and r the rate of interest, it postulates

$$Y = C + I + G \qquad 1 - (1)$$

$$C = c(Y) \qquad 1 - (2)$$

$$1 > c' > 0$$

$$I = A + i(r) \qquad 1 - (3)$$

$$i' < 0$$

$$M/P = m(Y,r) \qquad 1 - (4)$$

$m'(Y) > 0$

$m'(r) < 0$

Equations 1 - (1, 2 and 3) may be solved and graphed as a downward sloping curve IS in figure 1, and equation 1 - (4) as an upward sloping curve LM, and the equilibrium levels of Y and r are determined at their intersection. Obviously, the less sensitive is expenditure to the rate of interest (the smaller in absolute value is i′) and the more sensitive is the demand for money to the rate of interest (the larger in absolute value is m′(r)) the more sensitive is the level of income to variations in A and G and the less sensitive to variations in M and P, and vice versa. Hence the model, even in this primitive form, enables one to construct a variety of stories about the factors, including price level stickiness, determining income and employment and the relative effectiveness of fiscal and monetary policy in offsetting their undesired effects; in more elaborate versions, combined say with a so-called aggregate supply curve, relating output to the price level, or a Phillips curve, relating output to the rate of change of the price level, it can be extended to the analysis of inflation too; open economy extensions are also available; and so on.

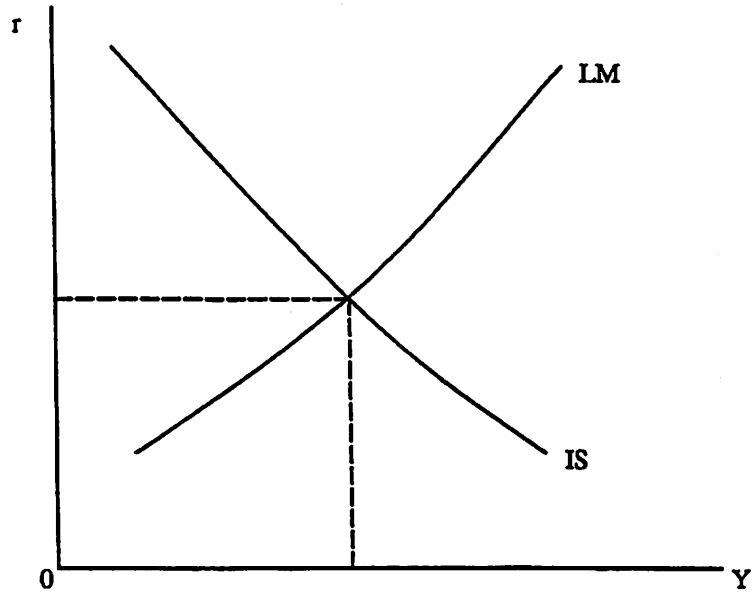

Figure 1

The IS-LM Diagram

The Orthodoxy's version of "Classical" Economics

Though a few economists of the post-war years objected vehemently to the identification of the IS-LM model with John Maynard Keynes's (1936) *General Theory of Employment Interest and Money*, including some who had been closely associated with Keynes himself in the 1930s - for example Joan Robinson famously took to referring to this model as "Bastard Keynesianism" - this orthodox view of things nevertheless came equipped with a version of history to support its legitimacy. According to that history, before 1936, there had existed a body of macroeconomic theory to which the label *classical* was attached and which had proved incapable of dealing with inter-war macroeconomic experience in general, and the Great Depression in the United States in particular. This classical economics was said to have had at its heart a belief that the economic system could find equilibrium only at full-employment, and hence had nothing to say about chronic unemployment. It based this belief on the postulate that money wages and prices were flexible, and that the rate of interest would always harmonise saving and investment plans. Though it lacked a theory of employment and output, classical economics had attempted to explain the price level, using a device called *the quantity theory of money*, whose exponents had, however, failed to notice that it was not a theory at all, but a tautology, and hence vacuous.

According to this narrative, Keynes, reacting to the evidence presented by the real world around him, where, he had noticed, money wages and prices were sticky, particularly in a downward direction, produced an alternative and radically different macroeconomics, in which such stickiness led to unemployment equilibrium as the general case. That macroeconomics also showed that, even if wage and price flexibility did exist, to rely on it to generate full employment was logically equivalent to relying on monetary policy for this purpose. Since Keynes had also demonstrated that monetary policy was an unreliable tool, because its effectiveness depended upon its capacity to influence the rate of interest, his analysis had revealed fiscal policy, particularly as it involved variations in the level in government demand for goods and services, to be a more appropriate remedy for depression. In this story, the IS-LM model was a geometric exposition of such revolutionary insights, and to acquire mastery of it simultaneously made them part of one's own intellectual equipment, and relieved one of any need to investigate just what economists might actually have been saying before 1936. Modern macroeconomics had come into existence in that year, and anything that might have been written beforehand was of purely antiquarian interest.

Exploded Myths

If all of this seems like something of a caricature, it was nevertheless a caricature whose features at one time appeared in many textbooks. But even in the

1950s, there were things that a student might learn that did not quite fit into the story. The *General Theory* had been published in 1936: if it really had been written in reaction to the American Depression, and had been original in making the case for fiscal policy as a way out, how had it come about that most of President Roosevelt's allegedly Keynesian "New Deal" policies had been put in place a few years before its publication? If "Classical" economists had believed that market mechanisms automatically rendered wages flexible, why was it that some people seemed to have been advocating a *policy* of money wage reductions in Britain in the 1920s? And why had John Hicks, in contrasting the economics of "Mr. Keynes and the Classics" in a (1937) article which was much read by undergraduates in the 1950s, attributed to the latter a version of the IS-LM model in which the price level was given?

Or again, if the classical economists had believed that the rate of interest always equilibrated saving and investment at full employment, where did the Swedish economist Knut Wicksell, who apparently thought that the failure of what he called the *market (or money) rate of interest* to do just that was an important source of inflation, fit in? And didn't Wicksell, who wrote well before World-War-1 (e.g., 1898) have an early 19th century predecessor called Henry Thornton (see 1802) who was an important exponent of the "Bullionist" position and therefore a classical economist? What too was one to make of the *Chicago Oral Tradition* to which Milton Friedman drew attention in (1956), and in which the

quantity theory of money was said to have been a theory of the demand for money, and not an accounting identity at all? And so on . . .[5] We have come a long way in sorting out these, and other puzzles too, in the last 40 years. Even though some of the old myths about Keynes and the Classics recounted above still put in an appearance from time to time in the textbooks, they have, by and large, been exploded in the eyes of anyone who takes the history of economic thought even slightly seriously. From the early 1960s onwards, such scholars as Harry Johnson (1961), Robert Clower (1965), Axel Leijonhufvud (1968) and Don Patinkin (1976) set in motion a reappraisal of Keynes's work, and its place in the development of economics.

It is, by now, well understood that advocacy of fiscal policy as a device for combatting unemployment, particularly cyclical unemployment, was a commonplace of the inter-war (and indeed earlier) economics literature. Not least, as Barber (1985) has documented, was this true in the United States, so much so that it would have been extremely surprising if the implementation of the New Deal had to await the publication of what was a book about economic theory rather than policy, and written in another country too. It is also well known that the postulate of money wage stickiness, particularly but not solely in a downward direction, was a central feature of efforts to explain why the business cycle was characterised by fluctuations in output and employment, rather than mainly in

prices, from the 1870s onwards, and that this postulate had made occasional appearances in the co-called classical literature long before that.[6]

As to Wicksell, his originality in linking questions about the causes of inflation to a failure of the rate of interest to co-ordinate choices about saving and investment is now widely recognised, as it is that this insight was of far reaching influence in the subsequent development of macroeconomics; and closely related, there is a considerable literature debating the proper classification of Henry Thornton's economic thought.[7] The Chicago tradition too has been much discussed, and though Friedman's (1956) suggestion that this University was the home of a unique version of the quantity theory of money which treated this doctrine as a theory of the demand for money has not withstood scrutiny, its reputation as a place where at least some people resisted "Keynesian" ideas has been confirmed. Even so, some commentators have suggested that Friedman's own theoretical notions have owed less to his Chicago predecessors than he was initially willing to concede.[8]

Some Remaining Questions

If advocacy of fiscal policy, a belief in money wage stickiness, and an appreciation of inter-temporal allocative problems involving the capacity of the rate of interest to co-ordinate saving and investment, which once seemed to be defining features of the Keynesian Revolution, were all prominent features of the

pre 1936 literature, another question naturally arises: namely, was Keynes's own economics after all unique, or was it anticipated elsewhere in the literature of the 1920s and 1930s? This question too has been much discussed since the early 1960s, and not surprisingly, the answer seems to depend upon just what it is that one thinks Keynes's key contribution to economics, or, as it is sometimes put, the *central message* of the *General Theory*, was.[9]

That the phrases "Keynesian Economics" and "IS-LM analysis" were widely treated as synonyms in the 1950s has already been noted, and appropriately so in the eyes of some commentators, but only some. For example, Leijonhufvud (1968) argued that what he called "The Economics of Keynes" was something rather different, dealing with the disequilibrium behaviour of a monetary economy and with its capacity to co-ordinate economic activity, rather than with the equilibrium properties of a comparative static model. Self-styled *post-Keynesians*, whom Alan Coddington (1976) characterised as "*fundamentalists*", moreover have claimed to be custodians of, and to be building upon, what they regard as the real message of the *General Theory*, which the IS-LM model simply ignores. In this view, the analysis of decision making in conditions where the uncertainty of outcomes cannot be rendered analytically tractable by application of the calculus of probabilities, the light which this throws on the nature of a monetary economy, and its implications for the appropriate role for government in economic life, are of the essence.[10] Thus, what Keynes "really meant" when he wrote the *General*

Theory has been, and remains controversial, as does its relationship to what went before. These, however, are not the only, not even quite the central, questions to be addressed in the following pages, as I shall now explain.

AN OUTLINE OF THIS BOOK

The IS-LM model made its first explicit appearances in the literature in 1936 and 1937, and it summarised most, though not all, of the macroeconomics of the inter-war years that eventually found its way into the post-war textbooks. Though its components were certainly to be found in the *General Theory*, many of these had been developed elsewhere long before 1936; and many intriguing ideas that were also much discussed in the 1920s and 1930s, including some that originated in the *General Theory* itself, found no place in it. IS-LM was, in short, what new models always seem to be, a highly selective synthesis of several pre-existing strands of economic thought. Even so, the fact that IS-LM was less, and more, than a summary of the *General Theory* does not mean that Economics took a wrong turn in focusing on it. Rather it means only that the *General Theory* was one among several sources of what came to be post-war orthodox macroeconomics. Like all orthodoxies, this one took what fitted into it from earlier literature while ignoring much else, regardless of the particular source involved.

This book, then, is about that earlier literature, including the *General Theory*, about what IS-LM took from it, and about what it left out. It does not purport to be a comprehensive history of inter-war macroeconomics. It has almost nothing to say about the development of macrodynamic econometrics during this period (see Mary Morgan (1990), Chs. 3 and 4), about open-economy macroeconomics (see M. June Flanders (1989), Chs. 4-10), or about the analysis of inflation which developed as a response to the post-World-War-1 hyperinflations, particularly in the German language literature (see Howard Ellis (1934) Parts I-III). It is also highly selective in its treatment of the work of monetary heretics. Underconsumptionism is discussed, but social credit, stamped money, and a myriad of other schemes are not. Moreover, because it is concerned with analytic ideas and is conceived of as a series of related studies, rather than as a continuous narrative, its organisation is at least as thematic as it is chronological, as we shall now see.

The Wicksellians

The first theme in inter-war macroeconomic thought taken up below was directly inspired by Knut Wicksell's contributions, made long before World-War-1, a theme that Axel Leijonhufvud (1981) called "The Wicksell Connection", and which involved refocussing the attention of monetary economics away from the interaction of money and prices, and towards the influence of the rate of interest

on savings and investment. Wicksell's analysis of *monetary equilibrium*, and the capacity of a modern banking system to undermine it by setting the interest rate at the "wrong" value are briefly discussed, as a prelude to a more detailed account of the two divergent paths along which these ideas developed, those taken by the Austrians and the Stockholm School, to which chapters 2 and 3, respectively, are devoted.[11]

The Austrians, Ludwig von Mises and Friedrich von Hayek in particular, brought Wicksell's notions of monetary equilibrium and disequilibrium into close contact with a deductivist approach to economic analysis that encompassed theories of the inter-temporal allocative mechanism in general, and capital theory in particular, that had been developed by an earlier generation of Austrian economists. In so doing, they created by about 1930 a coherent (by the standards of the time) model of their own, very different from IS-LM, which dealt with the influence of monetary factors on the size and composition of the economy's capital stock, particularly by way of the *forced saving* that they believed took place when, in conditions of full-employment, the banking system granted new credit to firms. This model's policy implications, for conditions prevailing in the 1920s and 1930s, verged on the nihilistic. To the extent that there ever existed a body of economic thought that urged reliance on the self-equilibrating properties of a market economy as the best means of dealing with unemployment, and to which the properties of IS-LM could be contrasted by its exponents to the benefit

of their own framework, it was this body of Austrian theory. Far from being some hang-over from the Classical economics of the 19th century, however, Austrian cycle theory was itself one of the newest and demonstrably most original bodies of doctrine developed in the inter-war years, although one which was driven into obscurity by the subsequent success of IS-LM.[12]

The Stockholm School, as certain members of a younger generation of Swedish economists were eventually to be called by one of their number, Bertil Ohlin (1937), began its work at about the same time, and from exactly the same starting point as the Austrians. These economists, however, explicitly rejected Austrian capital theory and moved in a different direction. Noting that saving and investment decisions, which the rate of interest had to co-ordinate if the economy was to function smoothly, were inherently forward looking, they made the influence of expectations on current spending decisions the centrepiece of their analysis. But these Swedish economists were never able to formulate a coherent theory of the evolution of expectations over time, and so, rather than produce a well defined model, they created instead a method of dynamic analysis from which a seemingly endless array of what they called "model sequences" could be created; and these in turn formed the analytic basis for a pragmatic approach to macro-policy in which both monetary and fiscal measures could, depending upon circumstances, be usefully deployed for stabilisation purposes.

The Marshallian Tradition in Britain

Chapters 4, 5, 6 and 7 deal with the principal features of the British literature of the 1920s and early 1930s, to which Keynes, beginning in (1923) was an important contributor, and out of which his *General Theory* was ultimately to develop. The starting point here is the legacy of Alfred Marshall, for although Wicksell had himself drawn on Marshall, his work, if not quite unknown, seems to have had little direct influence on British economics before 1930.[13] As is explained at the beginning of Chapter 4, Marshall bequeathed to his successors a stock supply and demand version of the quantity theory of money as a theory of the price level, a vision of the business cycle as a cumulative demand driven phenomenon, in which businessmen's expenditure plans were accommodated through a banking system at interest rates which failed, for a while at least, to keep pace with their profit expectations, and the idea that money wage stickiness was responsible for the cycle being a thing of real rather than purely nominal fluctuations.[14]

In the 1920s, the English economists who followed Marshall's lead most closely were Frederick Lavington and Arthur Pigou, and their work, along with that of Dennis Robertson, is discussed in the remainder of Chapter 4. Like Marshall they regarded the cycle as driven mainly by investment demand, and they were extremely skeptical of the capacity of businessmen to make well

calculated, let alone rational, investment decisions. Hence they emphasised the role of collective waves of what they called "error", successively optimistic and pessimistic. Though they thought that price stabilisation would modify the severity of cyclical swings, they departed from Marshall in doubting that it would eliminate them. Lavington, moreover, extended Marshall's version of the quantity theory and discussed the demand for money as a liquid store of value, held, by analogy with banks' holdings of cash reserves, as a contingency against uncertainty. In his view, shifts in the demand for money, as business confidence waxed and waned over the cycle, would provide accommodation to its fluctuations in addition to that afforded by an endogenous response of the money supply emanating from the banking system.

Robertson also attached considerable significance to the role of *error* in creating cyclical fluctuations, but he believed that investment booms were sometimes the result of desirable technical innovations. For him the central tasks of monetary policy were, first to distinguish between the *appropriate* fluctuations in output that they brought about and the *inappropriate* fluctuations that would usually be overlaid upon them, and second to encourage the former and eliminate the latter. In elaborating this argument, Robertson developed an analysis of forced saving that in many respects ran parallel to that of Mises and Hayek, but, here working in close collaboration with Keynes, he integrated this analysis with a Marshallian treatment of the stock demand for money. This, in conjunction with

his skepticism about the efficiency of market mechanisms when left to themselves, led him to share with Pigou and Lavington a cautiously optimistic, rather than nihilistic, view of the powers of stabilisation policy, both monetary and fiscal.

The work of Keynes and Ralph Hawtrey in the 1920s is taken up in chapter 5. In the *Tract on Monetary Reform* (1923), Keynes touched only rather briefly on cyclical questions, but a typically Marshallian belief that price level variations were the *sine qua non* of the cycle is quite apparent in what he wrote there. A much more complete monetary theory of the cycle is found in Hawtrey's writings. He located the proximate cause of output fluctuations in variations in what he called *effective demand*, the economy's rate of flow of nominal expenditure, arguing that money wage and price stickiness prevented them having consequences for the price level alone; and he attributed variations in effective demand to monetary sources.[15] In Hawtrey's analysis an *inherently unstable* process of money creation and destruction was perpetually creating discrepancies between the supply and demand for money, which in turn affected expenditure flows as agents attempted to restore equilibrium to their cash balances. Hawtrey was optimistic about the capacity of monetary policy to mitigate, though probably not eliminate, cyclical fluctuations in practice, but his insistence that no policy which failed to bring about variations in either the quantity of money or its velocity of circulation could affect output, made him acutely skeptical about the powers of fiscal policy.[16]

Keynes's status as an exponent of a largely monetary theory of the cycle, closer to Hawtrey than to Robertson and Pigou, was confirmed by his two volume *Treatise on Money* (1930). This book is the central topic of Chapter 6. It is notable for, among other things, its belated introduction of Wicksell's ideas into the British literature, and one of its avowed aims was to integrate Wicksell's analysis with the Cambridge version of the quantity theory. Keynes's version of Wicksell emphasised the effects of interest rate variations on the demand for output - particularly of long rates on investment. It was very much in the spirit of contemporary Swedish work, and went strongly against the grain of Austrian cycle theory.[17] Concern with long, rather than short, rates of interest as the key link in a monetary explanation of the cycle, and an accompanying pervasive emphasis on the problems of co-ordinating saving and investment decisions are only two of the notable innovations of the *Treatise.* Among others is the deployment of what amounts to Lavington's analysis of the demand for money as a liquid store of value in order to model endogenous fluctuations in velocity. Even so, the *Treatise* was ultimately unsuccessful, albeit in an extremely interesting way. It contained extensive discussions of wage stickiness, and its consequences for output and employment over the course of the cycle, but it failed to integrate these real fluctuations into the formal analytic structure which it expounded. The *Treatise's* theory of the cycle was thus, as many critics, both friendly and unfriendly would quickly point out, a theory of fluctuations in the price level, and not in income and employment.[18]

None of this is to say that English economics of the interwar years neglected the problem of unemployment *per se*; far from it, but when this issue was the main concern, the analysis deployed was not cycle theory, but rather a comparative static Marshallian supply and demand apparatus, modified in one way or another to accommodate what seemed to be relevant institutional features of the labour market. Chapter 7 begins with a brief discussion of some key pre-World-War-1 contributions to this essentially Marshallian literature on unemployment, Beveridge (1909) and Pigou (1913) in particular. It goes on to show how their emphasis on market frictions, seen as impeding both wage flexibility and inter-sectoral labour mobility too, permeated much of the British discussion of these matters in the 1920s. Contributors to this discussion also understood that what we would now call general equilibrium problems had to be addressed when discussing economy-wide unemployment. Pigou himself, whose (1933) book on *The Theory of Unemployment*, was much, and somewhat unfairly, criticised by Keynes in the *General Theory*, paid considerable attention to them, without, however, completely solving them.

Widespread unemployment and deficient output were not brand new features of the British, or any other, economy of the 1920s. They had occurred often enough and lasted long enough in earlier periods and in other places to inspire a dissenting tradition in economic analysis which treated them as the norm, rather than as deviations from an equilibrium which, frictions aside, would only

occur at full employment. Malthus, Lauderdale, and Sismondi are among the names associated with this "underconsumptionist" tradition in the early 19th century, and in the period dealt with by this book, its leading British exponent was John A. Hobson. This approach to the theory of unemployment is also discussed in Chapter 7, along with the work of Richard Kahn and Jens Warming who between them developed an analysis of the so-called multiplier effects of public works expenditures at the level of the economy as a whole.

American Analysis of Money and the Cycle

The literature to which Keynes's *General Theory* was most immediately related was predominantly British, but IS-LM analysis ended up at the heart of a macroeconomic orthodoxy which was to become at least as much, and perhaps even more, American than European. How "Keynes came to America", or at least to Harvard, very quickly indeed in the late 1930s is a well known story, but Chapters 8 and 9 deal with highlights of the development of American macroeconomics in the 1920s and early 1930s, before that arrival.[19] In the 1920s, the United States was by and large prosperous, and had only recently acquired a central bank. It is shown in Chapter 8 that questions about the use of monetary policy for stabilisation purposes, which such neo-classical economists as Marshall and Irving Fisher had analysed before the War, continued to be much discussed

there, not least because Fisher himself remained professionally active right through our period.

In the 1920s Fisher was the main proponent of legally mandating the Federal Reserve System to pursue a price stabilisation rule.[20] Opposition to reducing monetary policy to such a rule, and indeed to using it for stabilisation policy more generally, came from exponents of a version of the 19th century Banking School "needs of trade" doctrine, who were particularly influential at the Federal Reserve Board until the early 1930s. This doctrine had been kept alive in the United States, long after it had faded into relative obscurity in Britain, by James Laurence Laughlin and his followers, some of whom had been his students at the University of Chicago; and in its American version, it developed a distinct, if somewhat superficial, resemblance to Austrian cycle theory.[21] A more "middle of the road" position, influential at the Federal Reserve Bank of New York, saw a positive role for stabilising monetary policy, but argued that central bankers required more room for manoeuvre than any rule would give them, in order to implement it. Allyn Young who taught monetary economics at Harvard until 1927 was an important and influential academic exponent of one version of this point of view, strongly influenced by Hawtrey's ideas.[22]

Already in the 1920s, the United States was home to an empirical tradition in business cycle analysis whose closest parallel in Europe probably lay in the

German historical tradition. In the 1920s and '30s this was associated in particular with Wesley Clair Mitchell of the National Bureau of Economic Research. Like many of his contemporaries, for example Alvin Hansen, and Young, Mitchell was cautiously optimistic about rendering cycles less violent in future by way of a policy mix that included the collection and dissemination of systematic data on the economy's current and likely future performance, not to mention the judicious use of counter cyclical public works expenditure programmes, among other measures. And, as Barber (1985) has shown, under the auspices of Herbert Hoover, Secretary of Commerce for much of the 1920s, this agenda had considerable political support.[23] Underconsumptionism too was a highly visible feature of American economic thought in the 1920s, promoted in particular by William T. Foster and Waddill Catchings, and notably supported among the academic community by Paul Douglas of the University of Chicago. The policy views of these underconsumptionists were, needless to say, vigorously activist.

The downturn which began in mid-1929, and rapidly grew into what Friedman and Schwartz (1963) would later call the *Great Contraction* changed the focus of American macroeconomics. Developments in its wake are discussed in Chapter 9. As we shall see, adherents of the "needs of trade" doctrine saw no need to change their minds about how the monetary system worked in the light of new evidence, and took a nihilistic position on policy questions which matched that of

their Austrian contemporaries quite closely; and this is not to mention the fact that Austrian ideas themselves gained a foothold in America at this time. For example Gottfried von Haberler, who visited Harvard in 1931-32, was at that time an able exponent of the doctrines of von Mises and von Hayek. Among those who had been cautious advocates of monetary stabilisation policy in the later 1920s, there was also considerable pessimism in the wake of the contraction, and just as in the British economics of the period, and in some cases under its influence, doubts about the expansionary powers of monetary policy were widely expressed. In the early 1930s, too, Joseph Schumpeter, appointed at Harvard in 1932, brought his own brand of cycle theory to America. Very much like Robertson, he stressed the role of technical change in driving the cycle, but he nevertheless took a pessimistic view, more in the spirit of Hayek, of what activist policy could achieve in the face of the depression.[24] For a while he exerted considerable influence, not least on Alvin Hansen, then at the University of Minnesota. These two were intellectually coherent in their pessimism. but there were others who were far less so, notably some of Schumpeter's fellow contributors to *The Economics of the Recovery Program* (Brown et al. 1934), who were also based at Harvard.

Pessimism about the efficiency of monetary policy also marked the work of Paul Douglas who re-emerged in the early 1930s (after a brief hiatus) as a vigorous supporter of underconsumptionist doctrine. He integrated its policy

implications into a rather comprehensive democratic socialist programme for reforming American social and economic life. Economic planning was to be a prominent feature of this programme, as to a lesser extent it was in that envisaged by Mitchell in the 1930s. Though Irving Fisher retained confidence in monetary policy as the contraction gathered momentum, he developed what he called the "Debt Deflation Theory of Great Depressions" to explain the severity of the slump.

Almost, but not quite, alone among his contemporaries, for Carl Snyder of the Federal Reserve Bank of New York held similar views, Allyn Young's sometime protegé Lauchlin Currie, at that time an instructor at Harvard, and Hawtrey's assistant during his visit to that department in 1928-29, offered a monetary explanation of the contraction. He argued that mistaken policies, based on the needs of trade doctrine, had initiated a downturn of the money supply in 1928-29, and then failed to prevent it getting out of hand in 1929-1932. These are ideas which we nowadays associate with the Chicago Tradition, as are Currie's 1934 proposals to put the monetary liabilities of commercial banks on a 100 per cent. reserve base. As we shall see, elements of these ideas were indeed taken up at Chicago, or developed there independently, at about the same time, notably by Jacob Viner and Henry Simons, with the latter making them part of a radical liberal (in the old fashioned sense) policy agenda. In addition to "100 per cent money" as Irving Fisher would come to call it, the monetary aspects of that

agenda encompassed a legislated price level stabilisation rule similar to that which Fisher had first proposed in the 1920s.[25]

Keynes, the Classics and IS-LM

Evidently the intellectual milieu into which Keynes introduced his *General Theory* in 1936 was diverse, to say the least. Chapter 10 deals with the book itself, and Chapter 11 with the reaction to it on the part of those who were already well established contributors before its appearance - for example, Frank H. Knight, Pigou, Robertson, Viner, Hawtrey, Hansen and Ohlin. Chapter 12 goes on to discuss the emergence of the IS-LM model in the writings of younger commentators - Roy Harrod, John Hicks, Oskar Lange, Abba Lerner, James Meade, Brian Reddaway and Joan Robinson - as a way of expounding the issues raised by the book.

This is no place to offer more than the briefest sketch of Chapter 10's treatment of the *General Theory* itself. Suffice it to say, first of all, that the static nature of most of the book's analysis is stressed, as is its relationship to the literature on the problem of unemployment discussed in Chapter 7. The embryonic, albeit informal, IS-LM style analysis that it develops in dealing with the parallels between the effects of money wage cuts and of monetary expansion is recognised; but so is the amount of space devoted to the role of expectations

in economic life, and to an analysis of secular unemployment reminiscent in some respects, as Keynes himself recognised, of earlier underconsumptionist doctrines. The relationships between what Keynes had to say about certain issues in 1936, and what others had said about the same matters earlier are also discussed: for example between his evident lack of faith in the inter-temporal allocative efficiency of market mechanisms and the prevailing skepticism among his Cambridge predecessors and colleagues about these same matters, between his theory of liquidity preference and Lavington's earlier treatment of the same issue, and between his notion of effective demand and Hawtrey's version of this concept.

In the light of these relationships, which Keynes did not acknowledge, it is hardly surprising that some of his "classical" reviewers, Pigou and Knight in particular, were scornful of his claims to novelty. Chapter 11 begins with a discussion of their reactions, where it is shown that these two nevertheless missed one valid and crucially important point that Keynes was making: namely that there was a close analytic similarity between expansionary monetary policy on the one hand and a policy of money wage cuts on the other, and that the explanation of unemployment was to be found, not in the labour market but in the determinants of aggregate demand in the economy. Hawtrey and Viner recognised this element in the *General Theory* and welcomed it, while criticising other aspects of the book. They expressed doubts about Keynes's identification of liquidity preference with the demand for money *per se* in the context of a complex financial system,

and about his claim that this phenomenon was capable of permanently disrupting the capacity of interest rates to co-ordinate saving and investment and hence of generating chronic unemployment. Along with Robertson and Ohlin, they also argued that the static nature of Keynes analysis rendered it not only intellectually retrogressive, but a good deal less useful than much that had gone before it as well. Though the phrase is Alvin Hansen's, these critics all shared the opinion that the *General Theory* was "not the foundations of a new economics".[26] But anyone who believes that Keynes did not intend to found a "new economics" and did not take seriously the radical elements in the book's arguments must contend with what said in his 1937 reply to these critics in the *Quarterly Journal of Economics*, which is discussed at the end of Chapter 11.

Chapter 12 brings the fourth part of this book to a close. It discusses the way in which a number of Keynes's younger readers extracted versions of the IS-LM model from the *General Theory*. It shows that some of them, for example Brian Reddaway and James Meade presented systems of simultaneous equations essentially similar to that set out above, though richer in detail in Meade's case, as reflecting the central message of the book, and how others, notably Roy Harrod, Oskar Lange and John Hicks were inclined to treat IS-LM as a more general system, not specifically Keynesian, and capable of encapsulating, as special cases, the main views of both Keynes and his predecessors, with the role of the interest rate in the demand for money function being a key factor

differentiating these cases from one another. Hicks's extension of IS-LM to encompass an endogenously determined money stock is also discussed, as is his treatment of the relationship between a simple dynamisation of the system and Wicksell's treatment of monetary equilibrium, thus bringing this book's narrative in a full circle.

Conclusions

The final chapter discusses the relationship of IS-LM not just to the *General Theory*, but to the literature discussed in earlier chapters too. The static nature of the system is re-emphasised, but it is suggested that, despite this, the IS curve can be thought of as summarising certain essential features of the analysis of inter-temporal co-ordination issues which followed from Wicksell's contribution. It is further suggested that the LM curve performs a similar task on behalf of earlier work more closely related to the quantity theory of money, particularly in its Marshallian stock-supply-and-demand formulation. Thus, the model is presented as a subtle, though highly selective synthesis of important and often apparently conflicting elements of the earlier literature. It is nevertheless noted that some elements of the earlier literature are missing from that synthesis, not least one that Keynes (1936) had particularly stressed; namely, the importance of uncertainty and associated problems concerning the role of expectations in conditioning forward looking behaviour.

Chapter 13 also briefly discusses the subsequent development of dynamic analysis, based on multiplier-accelerator interaction. It is argued that this class of models had little to do directly with Keynes's influence, but that with appropriate assumptions about passively endogenous velocity, and/or money, they could be presented as dynamisations of an IS-LM system in which the LM curve was essentially horizontal, a configuration in which the quantity theory element disappears entirely from the system. The later revival of the quantity theory tradition, in the guise of "monetarism", and the subsequent re-emergence of a deductivist approach to macroeconomic issues, known as "new-classical" economics, related in some respects to Austrian ideas of the 1920s and 1930s, are noted, but not analysed in any detail.

THE LESSONS OF THE STUDIES

To the extent that the following studies yield lessons, they are: that the macro-economics of the inter-war years was the product of many intellects, and that rather than being swept away by a Keynesian Revolution, key features of that body of thought were in fact synthesised into a simple and easily grasped IS-LM model, around which debates could be, and were, organised for the next thirty years or so. To argue that an important branch of economics should have evolved in an untidy and piecemeal fashion out of the interactions of many contributors, albeit with some, not least Keynes himself, playing a bigger part in the process

than others, does not make for as much drama as the alternative of its being destroyed and then reborn as the result of the super-human efforts of a single creator. Perhaps, however, we should not be surprised that this way of telling the story of the 1920s and 1930s seems the more accurate one. I hope at least that the following pages help make the case for doing so.

FOOTNOTES

1. The reader will note that it is Marshall's conception of theory as an "engine of analysis" that underlies this discussion. Theories, conceived of as a set of testable propositions, are best thought of as being specific special cases of these broader constructs, incorporating particular restrictions upon their parameter values, and perhaps specific hypotheses about the sources of disturbances impinging upon the system. Thus, though IS-LM in and of itself has no empirical content, it is well known that very different propositions about the behaviour of an economy may be derived from it, depending, for example about the assumptions that are made about the interest sensitivity of the demand for money, and the way in which the supply of money is determined in the economy to which the framework is applied.

2. Though good, and not so good, ideas seem to come and go with greater frequency in macroeconomics than in microeconomics, I do not think that the latter area is immune to the phenomenon. The comings and goings of oligopoly theory, and the closely associated appearing, disappearing and reappearing taste for game theory in the area of industrial organisation, are surely cases in point.

3. Presentation of an approach is one thing, and its actual ancestry is another, however. Both the development of business cycle theory and of macro-econometrics from the late 1930s onwards are beyond the scope of this book, though the former topic is discussed briefly in its final chapter, while Patinkin (1976, is reprinted 1982) is still the standard treatment of the latter; though Mary Morgan (1990, Ch. 4) contains important material too. Suffice it here to say that in each case, Keynes's (1936) *General Theory*, and the IS-LM model which grew out of it, though influential, were by no means decisively so.

4. See Friedman (1974, pp. 29-40). Though Friedman's own explicit deployment of IS-LM analysis here came as something of a surprise, the apparatus was already in fairly widespread use to illuminate certain aspects of what came to be called the "Monetarist Controversy". See, for example, Laidler (1969, Part I).

5. The two foregoing paragraphs derive from my own memories of apparent conflicts in the various arguments to which I was exposed as an undergraduate in the late 1950s.

6. For a brief account of these matters, along with references to relevant literature, see Laidler (1987).

7. Notably in Henry Thornton (1802), but also in William Stanley Jevons (1863). On this, see Laidler (1991, pp. 95-106, and 116, fn.9).

8. On the origins of Friedman's Chicago tradition, see, *inter alia*, Friedman (1956, 1974), Patinkin (1969, 1974), Humphrey (1971), Laidler (1993, 1997) and Tavlas (1997) .

9. For example, Don Patinkin (1976, Part 1, 1987) discusses this issue extensively, as does Allan Meltzer (1988), though they come to very different conclusions about what Keynes's central message actually was. I take this matter up in more detail in chapter 10, below. Suffice it here to say that in my view Keynes thought he had more than one message to convey in (1936), and that the trouble with this particular debate hinges upon its participants paying more attention than is warranted to the word "central".

10. Paul Davidson (1972), Hyman Minsky (1975), Victoria Chick (1983) are important contributors to the "post-Keynesian" interpretation of the *General Theory* and its place in the history of economic thought. Post-Keynesian macroeconomics is, of course, far more than an approach to doctrinal history, but it is beyond the scope of this book to discuss its

nature. Chick (1992) and Colin Rogers (1989) are representative of this strand of modern economic thought.

11. I have discussed Wicksell's own contribution in some detail in Laidler (1991, Ch. 5)

12. Hayek's disappearance from the literature was discussed by Hicks (1967 Ch. 12). It seems to have been this paper which first drew attention to post-war readers the important role played by Austrian theory in general and Hayek's contribution to it in particular, in the development of inter-war macroeconomics.

13. The only account by Wicksell of his cumulative process analysis to appear in English during his lifetime is a succinct paper that was first presented to the British Association for the Advancement of Science, and published in the *Economic Journal* (1907a), and this paper seems to have made no impression at the time of publication. Wicksell did correspond with Marshall, but the letters reproduced in Gårdlund (1958, 1996) deal with capital theory, rather than monetary economics.

14. The argument first appears in the account of the cycle given by Marshall and Marshall (1879), and became a regular feature of Cambridge writings

on cyclical unemployment thereafter. On this matter, see Laidler (1991, Ch. 4)

15. It should be noted that the essential features of Hawtrey's analysis were first published in his (1913) monograph *Good and Bad Trade*, which appeared before World-War-1. See Laidler (1991, pp. 100-112). In the light of Hawtrey's extensive influence in the United States, particularly in the late 1920s, it is interesting to note that, according to Hawtrey, the empirical experience that prompted the analysis presented in that book was the American crisis of 1907.

16. Hawtrey was, that is to say, the originator of what later came to be called the "Treasury View", whose locus classicus is Hawtrey (1925). Note that, in the (1937) article in which he first developed the geometry of IS-LM, Hicks formulated this position in terms of a vertical LM curve version of this framework, as did Friedman as late as (1974, pp. 137-143).

17. That is why he drew criticism from Hayek, who by this time was based at the London School of Economics and was heavily engaged, in collaboration with Lionel Robbins, in introducing Austrian ideas to an English audience. The introduction of Austrian ideas about the cycle into British discourse was but one aspect of an altogether broader assault that

Robbins was launching against the dominance of Marshallian economics in Britain. On the microeconomic front, the assault was more successful, for it was from the London School of Economics that continental general equilibrium theory began to permeate British thinking, notably, but by no means exclusively in Hicks' *Value and Capital* (1939).

18. For a friendly critic who made this point, see Robertson (1931), and for a less friendly commentary, See Hayek (1931-32). These matters are discussed further in ch. 6, below.

19. Colander and Landreth (eds. 1996) contains an interesting collection of the, neither always mutually consistent nor accurate, recollections of those who participated in bringing Keynes's ideas to America.

20. On the pre-World-War-1 discussions of the role of monetary policy in stabilising economic activity, from which Fisher's post-war views developed, see Laidler (1991-, Ch. 6).

21. Laidler (1991, pp 163-64) briefly discusses Laughlin's views, but Neil Skaggs (1995) provides an altogether fuller account of them. It is ironical that Laughlin, the arch opponent of the quantity theory of money should have been based at the University of Chicago, where Henry Parker Willis,

a leading exponent of what Lloyd Mints (1945) would come to call the "real bills" doctrine in the 1920s and 30s, was among his students. See Chs. 8 - 9 below for further discussion.

22. Though Young was important as a policy advisor, having, for example, been Keynes's opposite number in the American delegation to the Versailles conference, his main influence on American economics was exerted as a teacher. Thus his obiturist Oskar Morgenstern (1929) suggested that in his teaching of monetary economics at Harvard prior to his departure in 1927, he created an "oral tradition" similar to that attributed to Marshall's influence at Cambridge.

23. Barber (1985) also notes that much of the impetus for the activist streak in American policy discussions in the 1920s came from the successful performance of government in organising war-time economic activity in 1917-18.

24. It is worth remarking that Schumpeter's views on the cycle had in good measure already been anticipated in the United States by Mrs. Minnie Throop England (e.g., 1912, 1913) in papers in the *Quarterly Journal of Economics* and *Journal of Political Economy*, and that such contributors as Irving Fisher and Alvin Hansen were familiar with this work before

Schumpeter arrived on the American scene. On her contribution, see Robert Dimand (1995).

25. As will be apparent, then, the Chicago department was far from united in its views. Indeed, there was considerable acrimony, particularly between Paul Douglas and Frank H. Knight. See Stigler (1988, Ch. 12). Though the immediate occasion of their quarrel seems to have been the question of renewing Henry Simons' appointment, Knight also seems to have harboured a deep distaste for Douglas' public advocacy of activist policies. As Reder (1982) recounts, relations between Knight and Viner were also cool, although correct.

26. Note that this phrase, which occurs in the original version of Hansen's (1936) review of the *General Theory*, was deleted from later reprints of it.