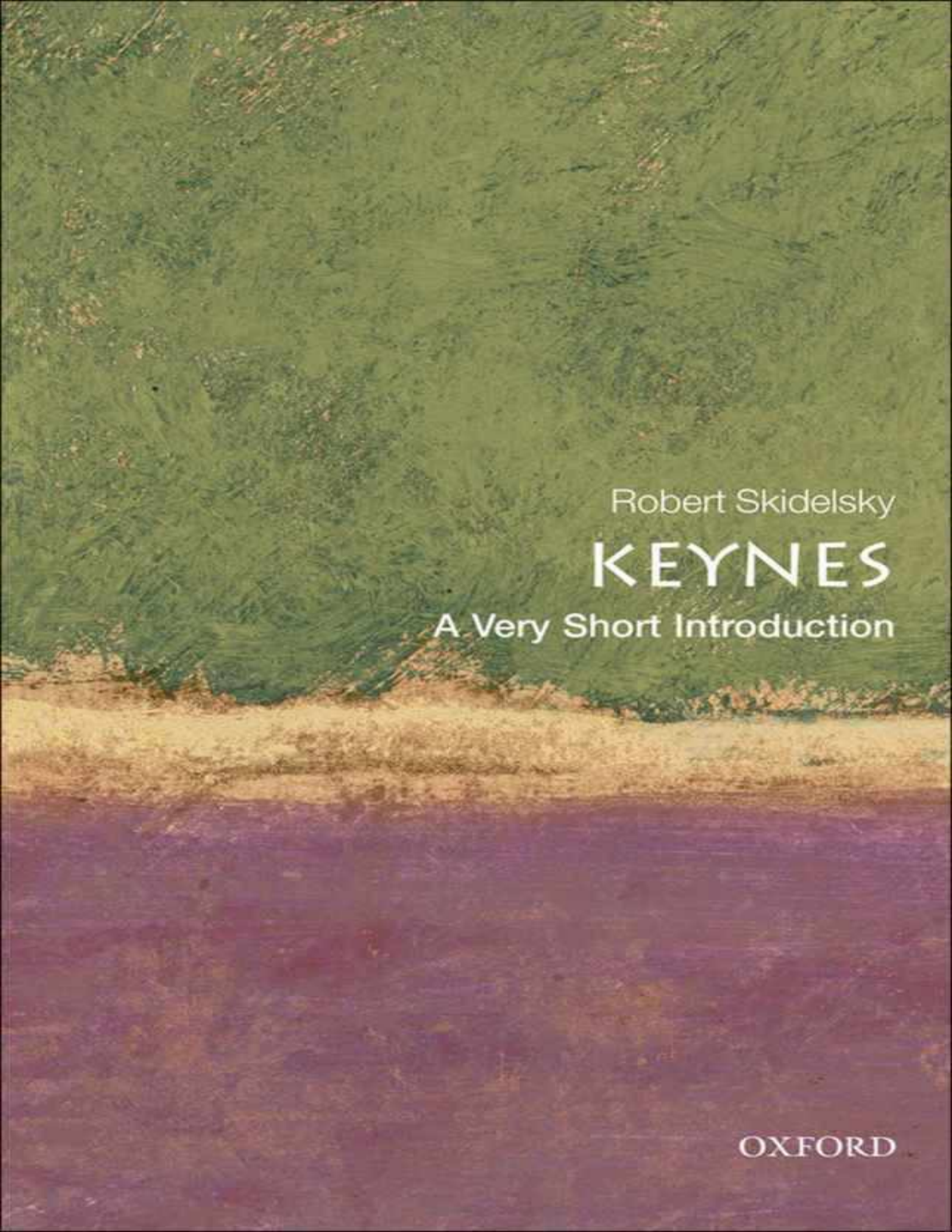
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KEYNES
A Very Short Introduction
OXFORD

Chapter 4
The General Theory

A strong common core of ideas links the *Treatise on Money* with *The General Theory of Employment, Interest, and Money*. The separation of saving and investment plans; the lack of any 'internal efficacious economic process' (in Samuelson's words) to equilibrate them; the stability of consumption and the volatility of investment; the store of value function of money – all these are present in the earlier book. *The General Theory* added a unifying mechanism in the shape of the 'principle of effective demand'. Keynes offered his profession, for the first time, a theory of demand and supply for output as a whole; he showed that if demand falls short of supply, output may have to run down to bring them back into balance; hence the possibility that 'the economic system may find itself in stable equilibrium… at a level below full employment'. For economists who wanted to make the world better this was *the* crucial breakthrough. It explained the slump and showed how an escape from it might be consciously organized.

As Keynes put it, the new book switched attention from the analysis of the *causes* of a change in the level of output to the analysis of the *effects* of a change in the level of output – something which had been left 'incomplete and extremely confused' in the earlier book. This is the nearest Keynes got to saying that both books are needed to understand the *Gestalt* of modern economies. In practice, the *Treatise* was forgotten and *The General Theory* became the bible of the economics profession and the politicians they advised.

Whether, but for the collapse of the world economy, Keynes, or anyone else, would have been thus interested in switching the spotlight from causes to effects is doubtful. What people wanted analysed in the 1930s was not

institutional obstacles to the adjustment from one position of satisfactory equilibrium to another, but factors capable of keeping economic activity at a low level. Equally, policy was now required not to dampen oscillations round a full-employment equilibrium – the traditional aim of the monetary reformers – but to raise the equilibrium level of employment. Keynes provided both theory and policy for the new conditions. Psychology and expectations move to the centre of his analytical picture; and he provided new concepts, terms, and tools directly useful to the policy-maker.

Keynes's thinking was directly affected by the world depression in two ways. First, the depression undermined his faith in monetary policy – a radical break from his personal past. Despite the cheap money which followed sterling's depreciation in 1931, recovery was very weak. Keynes concluded that 'direct state intervention to promote and subsidise new investment' might offer the only 'means of escape from prolonged and perhaps interminable depression'.

Secondly, it shifted his attention, more than ever before, from Britain to the United States. The problematic of the *Treatise on Money* was that of a sclerotic economy with an overvalued exchange rate. American wages and prices were much more flexible than those in Britain, its foreign sector much smaller, yet its output collapse was much more dramatic. American events spurred Keynes to think more generally about the predicament of wealthy economies. Moreover, the fact that the slump was worldwide made the search for remedies involving devaluation, protection, or other 'external' elements irrelevant. *The General Theory* would try to explain how the closing of the investment frontier, combined with a high propensity to save, could make 'involuntary' unemployment endemic in rich Western societies at large. The 'closed economy' model of *The General Theory* and 'fiscal' Keynesianism can both be seen as products of the world slump.

One early technical debate provoked by the *Treatise* was directly influenced by the state of the world. The Fundamental Equations are price-level equations. Changes in output and employment are merely incidents – even if potentially protracted and painful ones – in the adjustment of the cost of producing output to the price at which it can be profitably sold. This analytic picture, taken over from Keynes's earlier *Tract on Monetary*

Reform, seemed to fit the slump of 1920–1, when the fall in output and employment appeared to be an induced effect of falling prices. But it was at odds with the slump of 1930–1, whose earliest, most dramatic, and enduring effects in industrial countries were felt on output and employment, not prices.

Even before the *Treatise* was published, Ralph Hawtrey tried to convince Keynes that the causation ran directly from changes in spending to changes in output. 'If anything occurs to affect the demand for goods,' Hawtrey wrote to Keynes in 1930, 'the first result is an increase or decrease in sales *at existing prices*… There is always some interval of time before prices are adjusted, and the interval may be considerable.' On 28 November 1930, Keynes conceded that price and output changes might both play a part in adjusting an economy to a demand shock, and that 'it will probably be difficult in the future to prevent monetary theory and the theory of short-period supply from running together'. In Keynes's mind, the direct effects of a change in spending on quantities start to overshadow its effects on costs and prices.

The disequilibrium analysis of the *Treatise* posed a different technical problem. How did Keynes suppose the 'excess of saving over investment' to be eliminated if, for some reason or other, the rate of interest was not free to fall? In the banana parable, he suggested that the growing impoverishment of the community would eventually restore equilibrium by reducing the amount it saved. But this shadowy sketch of an income-adjustment mechanism was hampered by the *Treatise* definitions which made the 'excess of saving over investment' identical to business losses. This meant that saving would always 'run ahead' of investment as the economy ran down. Dennis Robertson's criticism of September 1931 was decisive:

> How many of those… who have taken up the cry that a slump is due to an excess of Saving over Investment realise that the savings which are so deplorably abundant during a slump consist largely of entrepreneurs' incomes which are not being spent, for the simple reason that they have not been earned?

If businessmen's losses were counted as deductions from the national income, the 'excess savings' disappeared.

In a note of 22 March 1932, Keynes 'bowed the knee' to Robertson (as well as to Hawtrey and Hayek) by proposing a definition of 'total income' to include 'abnormal' profits and losses, so that 'savings and investment are, necessarily and at all times, equal'. Further 'S[aving out of total income] always and necessarily accommodates itself to I[nvestment] … [It] is no longer the dog… but the tail'. Thus by 2 May 1932, Keynes can say that 'the volume of employment depends on the amount of investment, and… anything which increases or decreases the latter will increase or decrease the former'.

From the wreck of the *Treatise'*s special definitions the fundamental units of Keynes's *General Theory* – consumption, investment, income, output – are starting to emerge. These would lend themselves to statistical measurement, hence to national income accounting, hence to precise policy targets.

'Gentlemen, the change in title of these lectures' – from 'The Pure Theory of Money' to 'The Monetary Theory of Production' – 'is significant'. With these words on 10 October 1932, recalled Lorie Tarshis, 'Keynes began the first of his eight lectures and in effect announced the beginning of the Keynesian Revolution'. The subject of Keynes's enquiry was: what determines the volume of output in a monetary economy? The question is *The General Theory's*, but much of the answer is still wrapped up in the language and concepts of the *Treatise on Money*. Nevertheless, many of the familiar building-blocks of *The General Theory* are in view. They are even clearer in the repeat set of lectures he delivered in the autumn of 1933.

The volume of output is determined by aggregate 'disbursement', or expenditure. If spending on current output falls short of current income – if, in the language of the *Treatise*, the sales proceeds from current output fall short of the costs of producing it – income has to fall to the level of expenditure, via a reduction in output and employment. In explaining why the costs of production can be reduced only by cutting employment rather than by cutting money-wages, Keynes offers a first sketch of chapter 2 of *The General Theory*. The argument is sharpened in 1933 by the proposition

that the real wage depends on the state of effective demand, not on the money-wage bargain ('there may be no escape for labour from high real wages in a slump') and by the corresponding concept of 'involuntary unemployment'. In the absence of the possibility of real wage adjustment, the classical theory's reliance on Say's Law – 'supply creates its own demand' - for the continuous maintenance of full employment is also asserted.

Expenditure is determined, in a *laissez-faire* economy, by the 'factors of market psychology': the state of time preference (later the consumption function) relating saving to income; expected 'quasi-rents' or the expected profitability of investment (later the marginal efficiency of capital); and the state of liquidity preference, which, together with the quantity of money, determines the rate of interest. These 'parameters' of a monetary economy, together with the aggregate supply schedule and 'earnings response' (of costs to prices) tell us 'what state of output would ensue… and how the parameters would have to be influenced to get the desired output'. This is put more sharply in 1933: 'the fundamental forces determining the volume of employment are the state of confidence, the propensity to consume, liquidity preference and the quantity of money. We may call this the General Law of Employment.' The role of expectations and uncertainty are now much more prominently highlighted.

That the amount of aggregate disbursement determined by the 'factors of psychology' may be insufficient to maintain a full employment volume of output is clear to Keynes but the reason is not precisely stated in 1932. Keynes has already decided that the rate of interest is determined by the demand for money, rather than by the demand for loans. So decided, the interest rate 'fixes the present value of the prospective quasi-rents'. But there is no clear statement of his later doctrine that the validity of Say's Law depends on the efficacy of the classical interest-rate adjustment mechanism. Rather, he sticks to the *Treatise* doctrine that the monetary authority has complete control over the short and long rates, its duty being to 'maintain a rate of interest which leads to an optimum level of investment'. The proposition that the 'speculative' motive for holding money may set a floor to the fall in the interest rate is not clearly stated till 1933.

Keynes asks: what, in the absence of stabilization policy, is to stop income and output running down 'until production was at a total standstill?' The short answer is that, following a shock to investment, expenditure (consumption) falls less than income. It is this which makes possible 'stable equilibrium'. This, too, is said more sharply in 1933: 'Saving must equal Investment, income will adjust itself to meet this condition.' From any low level, income cannot be increased unless the 'propensity to save' is reduced or the amount of investment is increased. The advantage of Keynes's less precise formulation of 1932 is that it retains the cyclical analysis of the *Treatise*. The slump in income will tend to bring about a fall in interest rates as the ratio of money stock to income rises, allowing increased investment. But unless the interest rate is deliberately lowered further by banking policy, the 'increase in investment… may not be as rapid as the increase in savings as output begins to rise again', leaving the recovery to peter out before full employment is reached. This gives a more complete idea of Keynes's notion of subnormal 'equilibrium' than he managed in *The General Theory*, whose static analysis was designed to fix the economy at a point in time in order to give policy a precise target to aim at.

One reason for the relative imprecision of the 1932 lectures is that Keynes made no use of Kahn's multiplier theory. Like Kahn himself, he failed to see its logical connection with monetary equilibrium analysis.

Richard Kahn's article, 'The Relation of Home Investment to Unemployment', published in the *Economic Journal* in June 1931, was designed to combat the British Treasury's objections to loan-financed public works programmes as a remedy for unemployment. These were based on the meagreness of the employment afforded by a given expenditure of money, the budgetary burden entailed, and the 'crowding out' of private investment. In their pamphlet of 1929, *Can Lloyd George Do It?* Keynes and Henderson had asserted that a public works programme would provide, in addition to a calculable amount of primary employment, 'secondary' employment resulting from the newly employed spending their wages, but that these secondary effects were incalculable. The question Kahn asked was: what was to stop an extra £1 of income in one person's hands from raising the community's income to infinity? The intuitive answer is that some fraction of the extra income will be 'saved' each time it

is spent until the stimulus exhausts itself. Provided this fraction is known, the total of increased income or secondary employment can be summed to a finite number, which can be expressed as a ratio or multiple either of the initial investment or of primary employment. Moreover, the additional investment would, by raising aggregate incomes, create an equivalent amount of saving, thus exemplifying Keynes's assertion that 'investment always drags saving along with it at an equal pace', and countering the Treasury argument that loan-financed public investment would take savings from existing uses. This in essence is the multiplier theory.

It was not how Kahn set it out. He achieved his 'leakages' from the enlarged expenditure stream by deducting unemployment benefit (what the unemployed were already spending) and extra spending on imports (which did not directly increase domestic employment); and he failed to realize that his formula had established the necessary equality between saving and investment. (In an 'open' economy, the necessary equality is not between saving and investment but between saving and imports and investment and exports.) The *personal* saving leakage first entered the multiplier literature with an article by the Danish statistician Jens Warming in the *Economic Journal* of June 1932. Warming 'combined an exclusively income-related personal saving function with Kahn's own multiplier algebra to render neatly the income adjustment mechanism by which saving is equilibrated with an initiating change in investment'. Keynes almost certainly saw Warming's article when it was first submitted to the *Economic Journal*. So the theoretical influence may have run more directly from Warming to Keynes than from Kahn to Keynes at this point. Kahn, influenced in turn by Warming, presented a multiplier derived from the marginal propensities to save and import in a paper in Cincinatti, USA, in December 1932. Keynes's *The Means to Prosperity*, published three months later, presented this revised version of Kahn's theory in support of his argument for a loan-financed public works programme.

The multiplier is the most notorious piece of Keynesian magic. It abstracted from the confidence ('crowding out') issue and from the budget-funding problem. The precision of the employment, as opposed to the income, multiplier was always something of a confidence trick, depending on an arbitrary assumption as to how the increased spending would be split

between higher production and higher prices. This did not matter much in the early 1930s when prices were falling, but it was to have baleful effects after the war. Many Keynesians would assert baldly that ‘quantities adjust, not prices’. Keynes’s own famous mistrust of the notion of a ‘calculable future’ fell victim in this case to his passionate urge to give governments tools of action.

Much ink has been spilt over the question of when exactly Keynes came to understand his new theory of effective demand. That it was some time between 1932 and 1933 is indisputable. Beyond that it depends on the test of understanding being used. Perhaps Keynes himself should have the last word, though this is too much to be hoped for. Original thinking, he remarked in his lecture of 6 November 1933, starts as a ‘grey; fuzzy, woolly monster’ in one’s head. ‘The precise use of language comes at a late stage in the development of one’s thoughts. You can think accurately and effectively long before you can, so to speak, photograph your thought.’ Keynes knew more than he could say in the autumn of 1932, but he was more confident about what he knew a year later, and therefore could say it better.

The General Theory of Employment, Interest, and Money, published on 4 February 1936, is a work of enduring fascination. It is simple and subtle, obscure and profound. It offered a systematic way of thinking not just about behaviour of contemporary economies, but about the pitfalls in the quest for greater wealth at all times. It combined a vision of how economies behave with a rigorous demonstration of the possibility of underemployment equilibrium. Although young economists of speculative bent were drawn to it as a storehouse of suggestive ideas, it was its practical usefulness which chiefly attracted them in a world poised between a decaying democracy and rampaging totalitarianism.

It is by no means as badly organized as it is often held to be. The reader who starts with chapter 3 and then reads chapters 8–13, and chapter 18 can get an accurate idea of the core of Keynes’s theory. The main problems arise when Keynes tries to relate his own theory to what he calls ‘classical theory’, by way of comment, attempted reconciliation, or, more usually, destructive criticism. The difficulties are particularly acute in chapter 2,

‘Postulates of Classical Economics’, chapters 14 and 15, which deal with the classical theory of the rate of interest and the more complete statement of his own theory of interest, and in Book V on ‘Money-Wages and Prices’. Chapter 16, ‘Sundry Observations on the Nature of Capital’, and chapter 17, ‘The Essential Properties of Interest and Money’, as well as Book VI (chapters 22–4), are best read as general thoughts, speculative and visionary, arising from the core theory. Book II, ‘Definitions and Ideas’ (chapters 4–7), can be, and usually is, skipped.

In *The General Theory*, Keynes used a Marshallian ‘short-period’ analysis. The capital stock is fixed, so that the only way the economy can adjust to a demand shock is by a more or less intensive use of existing plant. This seemed a reasonable analytic device in the circumstances of the Great Depression. But it excluded changes in the ‘structure of production’ which the Austrian and Swedish economists regarded as central to the adjustment process, whether or not it was accompanied by unemployment.

Another characteristic of Keynes’s analytical method should be noted. He abjures Walrasian-type general equilibrium reasoning in favour of a logical chain of causation. Typical from *The General Theory* is the following sequence: given the propensity to consume, the amount of employment is determined by the amount of investment; given the expected profitability of investment, the amount of investment is determined by the rate of interest; given the quantity of money, the rate of interest is determined by liquidity preference. This causal chain, as we shall see, is used to demonstrate that if the income (sales proceeds) which entrepreneurs expect from employing n people is expected to fall below the costs of employing that number, then output and employment will fall till the costs of employment equal expected sales proceeds.

Keynes rearranges the ‘classical’ view that ‘involuntary’ unemployment is impossible into the same kind of chain logic in order to emphasize its dependence on the classical theory of the rate of interest. Given the real wage, the level of employment depends on Say’s Law that ‘supply creates its own demand’; given the expected profitability of investment, Say’s Law depends on the rate of interest being wholly determined in the market for loans. If this is untrue, the classical theory falls to the ground.

Three points need to be made about Keynes's definitions (Book II) before we get into the main argument. First, saving and investment are equal by definition, according to the equations: Income = Consumption + Investment; Saving = Income – Consumption; therefore Saving = Investment. This raises the question: what has to adjust in the economy to validate the last equation? Secondly, Keynes proposed to deflate changes in nominal income by wage rates – money payments per hour worked – in order to measure the employment impact of a change in demand. Given the average wage rate, employment will change by the same amount as nominal income. This seemed a reasonable short-period simplification, but it begged the question how adjustment is shared between employment and wages in actual situations. Finally, by making short-period employment depend mainly on expectations of long-period profit, Keynes introduced the 'method of expectations' into the determination of short-period equilibrium.

The General Theory makes explicit an idea that is only implicit in Keynes's previous two books: that money is not just a medium of exchange but a store of wealth. The necessary condition for this function of money is uncertainty: holding it reduces exposure to risk and thus alleviates anxiety. It is rather unfortunate that it was not till p. 168 that Keynes introduced the 'demand for money' into his 'causal nexus', since all his conclusions, indeed the *raison d'être* of *The General Theory*, flow from his perception that, when uncertainty becomes too great, liquidity provides a retreat from activity. The entrepreneur always faces a choice between using money in this way or in some other way *or not using it at all*. People's freedom not to spend in a monetary economy is thus the logical crux of Keynes's denial that 'supply creates its own demand'. Instead, 'expenditure creates its own income'. These thoughts underlie his 'vision'.

Books III and IV, dealing with consumption demand, investment demand, and the rate of interest, are the analytical kernel of Keynes's book, because these variables are what determine the volume of output and the level of employment. In the short run, the 'propensity to consume' (and therefore to save) is a 'fairly stable' proportion of current income. The shape of the function (what fraction of increasing or decreasing income is saved) enables one to sum (via the multiplier) to a finite number the amount of income adjustment needed to equilibrate saving and investment plans. The

consumption function enables Keynes to explain why, following a demand shock, income and output do not run down forever (as in banana-land) but issue in a position of 'underemployment equilibrium', and tells governments how much extra they need to spend to eliminate the 'output gap'. Together with the investment multiplier, it is the most useful policy tool bequeathed by *The General Theory*.

It is important to notice that, while *realized* saving and investment are equal by definition, *planned* saving and investment need not be. When they are not, some plans at least will be either exceeded or disappointed. An excess of planned saving over planned investment sets up contractionary forces; an excess of planned investment over planned saving sets up expansionary ones.

In all this, Keynes stands the classical psychology on its head. The classical economists praised 'parsimony' or 'thrift' as increasing the supply of capital. Keynes's 'paradox of thrift' was that an increase in intended saving was liable to lead to a reduction in actual saving, via a fall in income, unless the expected profitability of investment was going up independently. But an increased propensity to save was liable to have exactly the opposite effect on investment by reducing entrepreneurs' expectation of future consumption on which the profitability of investment depends. Moreover, in so far as the marginal propensity to save was likely to rise with income, the problem of securing an adequate amount of investment tended to worsen over time. To maintain full employment a rich society will need to invest an increasing proportion of its income even as the expected profitability of investment declines, as the gap between income and consumption widens.

Given the 'propensity to consume', the amount of employment depends on the rate of investment, or additions to capital stock. There is an 'inducement to invest' when the expected return on the investment is higher than the cost of undertaking it: when what Keynes calls the 'marginal efficiency of capital' is positive. In chapter 12, 'The State of Long-Term Expectations', the instability of investment demand emerges as the crucial cause of economic fluctuations. The reason is the volatility attaching to expectations of the future yield of investment.

Keynes's starting-point is the 'extreme precariousness of the basis of knowledge on which our estimates of prospective yield have to be made'. The stock exchange reduces the riskiness of investments by making them 'liquid' for individuals, but this makes investment as a whole much more volatile, since investors can buy and sell at a moment's notice. Share prices depend not on real investment prospects, which are largely unknowable, but on prevailing sentiment, which can fluctuate violently with the day's news. It is the flimsiness of knowledge supporting conventional share valuations which makes the investment function peculiarly dependent on 'animal spirits', defined as 'a spontaneous urge to action rather than inaction'.

Many Keynesians have seen chapter 12 as containing the 'vision' of *The General Theory*, and indeed of the Keynesian revolution, both in its attack on the ethics of capitalism – 'when the capital development of a country becomes a by-product of the activities of a casino, the job is likely to be ill-done' – and in its rejection of calculability in human affairs. The discussion leads naturally to the conclusion that the state should take 'an ever greater responsibility for directly organizing investment… on long views'. It also establishes the rationality of liquidity preference – a preference for holding cash rather than investing it – which plays a central part in Keynes's theory of the rate of interest.

Given the state of expectations, the amount of investment is determined by the rate of interest. Keynes's belief is that the rate of interest is determined in the market for money. He takes interest to be the price for giving up liquidity – instant command over sums of money. It is, he was to say in 1937, 'the measure of the degree of our disquietude'. The greater people's preference for holding their savings in money, the higher the rate of interest people will demand for parting with money. The chain of logic of *The General Theory* is thus completed by showing that the rate of interest can remain above the 'rate of return to capital' necessary to secure full employment.

The 'necessary condition', indeed the 'sole intelligible explanation' of the existence of liquidity preference is 'the existence of *uncertainty* as to the future of the rate of interest'. Keynes reasons that, if this were not so, investors who wanted to get out of equities would buy government debt.

This would drive up the price of bonds and lower their yield, making it more profitable for businessmen to borrow for investment. But if speculators think the interest rate is 'too low' – has fallen below its 'conventional' or expected level – they will sell bonds for cash, thus aborting, or reversing, the fall in the rate. Keynes does not enquire into what causes the expected rate of interest to be what it is – a point which Dennis Robertson was to pick up.

The monetary authority can step in by buying bonds itself (open-market operations). But this can generate offsetting bond sales by the private sector if monetary policy is regarded as 'unsound'. One can then get a 'liquidity trap', a situation when monetary policy cannot push the interest rate beneath a floor set by the fear of inflation or default. The lower the rate of interest the smaller the 'earnings from illiquidity' available to insure against risk of loss on capital account. This, says Keynes, is the main obstacle to the fall of the interest rate to a very low figure. A long-term interest rate of 2% 'leaves more to fear than to hope, and offers, at the same time, a running yield which is only sufficient to offset a very small measure of fear'. Liquidity preference may then become 'virtually absolute' in that almost everyone prefers holding cash to holding a debt. However, the flight into cash might occur at a higher rate of interest, as in the United States in 1932. In this event, the monetary authority will have lost effective control over the long rate. However, a monetary policy in which the public has confidence may succeed where one judged 'experimental in character or easily liable to change' will fail.

Keynes's discussion of the interest-rate problem goes to the heart of his theory. His assertion that liquidity preference may keep the interest rate too high for a full-employment level of investment clinches, in his view, his theoretical assault on the doctrine that 'supply creates its own demand'. The rejection of the idea that interest is a reward for saving undermines the classical idea that thriftiness is a virtue in a depression, since it does not lower the interest rate and thus encourage investment. The possible inefficacy of monetary policy to assure the same result reinforces the case for fiscal policy in combating depression.

This concludes the positive part of Keynes's 'general theory'. The basic ideas are 'extremely simple', as he said in his preface. The real difficulties arise in understanding not so much his own theory but its relationship to what he called 'classical' theory. To what extent was it inconsistent with received doctrine? And if inconsistent, to what extent was it a 'truer', or as Keynes put it, a more 'general' theory? To neither of these questions is a conclusive answer possible. Keynes set up his own theory against his own version of 'classical' theory, which many of his opponents denied holding. Also it is not very clear what he meant by 'general'. In the book's first chapter, he contrasted it with the 'special case assumed by the classical theory'; elsewhere he contrasted it with 'partial', as when he attacks the classical theory for ignoring the interdependencies between the labour and goods markets.

Keynes opened his account by attacking the 'classical' view that employment is determined in the labour market. Basing himself on Pigou's *Theory of Unemployment* (1933), he argued in chapter 2 that the classical theorists believed that, with perfect money-wage flexibility, there was no obstacle to full employment, whatever the state of nominal demand.

In the 'classical' account, as Keynes depicted it, the amount of employment depends on two 'real' wage 'postulates': that, in equilibrium, the wage equals the marginal product of labour, and that it is equal to the marginal disutility of labour. The first gives a downward-sloping demand curve for labour, which reflects the decreasing marginal efficiency of work; the second gives an upward-sloping supply curve, reflecting the increasing marginal disutility or 'pain' of work. With perfectly flexible wages, the amount of employment is determined at the point where the real disutility suffered (and wage paid) for the last hour worked just equals the value of what it is worth in revenue to the employer, i.e. there is no obstacle to continuous full employment. In such a world, there can be no involuntary unemployment, only voluntarily chosen leisure together with some 'frictional' unemployment. The leisure was voluntary because workers could always escape from it by revising their psychic computations of pain and pleasure, and accepting whatever was available to them for additional work. (It was never obvious how notions of diminishing efficiency and pleasure attached to 'hours' of work could be translated into quantities of

employment in a weekly waged system. The usual solution was to assume that increasing employment absorbed workers of decreasing quality and increasing leisure-preference.)

Keynes accepted the first, but rejected the second classical postulate. He thought that circumstances could arise in which more workers were willing to work at whatever *money*-wage was 'going' than the amount of jobs being offered. Labour as a whole would be off its supply curve: hence 'involuntary unemployment'. The reason was that wage bargains were made in money. If, following a negative shock to demand, wages and prices immediately fell together, the real wage would remain the same. Nothing would have happened to improve business prospects, so unemployment would still develop. Pigou argued that, with perfect wage flexibility, wages would fall more than employers' incomes (profits) – costs more than prices – reducing the real wage and allowing more employment. Keynes turned this argument neatly round by putting 'expected' in front of 'incomes'. The effect of a fall in money-wages on employment would depend on what it did for profit expectations. As he had put it neatly in 1933: 'Income is the expectation that induces [entrepreneurs] to do what [they] are doing.'

Here the argument in chapter 2 was broken off to be resumed in Book V, after Keynes had explained his own theory. In chapter 19, 'Changes in Money-Wages', Keynes considers the effect of money-wage reductions on the determinants of aggregate demand: investment, saving, and liquidity preference. His main conclusion is that an all-round reduction in money-wages *can* indirectly improve employment in a closed system, on two conditions: (*a*) if falling wages improve business confidence, and (*b*) by leading to a reduction in the price level and hence in the demand for transaction balances relative to the stock of money, allowing a fall in the interest rate. But a surer policy for achieving (*b*) would be to increase the nominal stock of money: 'only… a foolish person… would prefer a flexible wage policy to a flexible money policy'. As he had put it in chapter 2: involuntary unemployment exists when a rise in prices relative to wage rates would increase the quantity of employment.

In his review of *The General Theory*, David Champernowne attached a condition to Keynes's employment-raising policy: it would work only if

employed workers refrained from demanding a higher money-wage in response to a rise in prices. He predicted that their acceptance of a real wage reduction would be undermined by inflation, as unfortunately turned out in the end to be the case. This has led to the frequent charge that Keynes's methods of increasing employment depend on 'money illusion' - lowering the value of money and hoping that workers would not notice that their real wage had gone down. The charge is unfair. Keynes was merely echoing the prevalent belief that a recovery from depression required the *recovery* of prices to their pre-depression or 'normal' level. He assumed, that is, a continuation of a stationary cost of living, with wage-earners not adjusting their contracts to hold on to temporary windfalls. He was not suggesting pumping more money into an economy already subject to inflationary pressure.

In chapter 21, 'The Theory of Prices', Keynes acknowledges that rising employment will be accompanied by moderately rising prices, apart from any change in average wage rates, because labour is not homogeneous, because there are likely to be supply 'bottle-necks', and because the cost of capital might rise faster than the cost of labour. Indeed, such a rise in the price level relative to wage rates was accepted by Keynes as a necessary condition of increased employment, as we have seen. But, in addition, recovery is likely to put upward pressure on money-wages. Thus, there are likely to be positions of 'semi-inflation' short of full employment. At full employment, the quantity theory of money comes into its own, any further increase in money demand going wholly into raising prices. Chapter 21 makes it clear that the conventional summary of *The General Theory'*s message, 'quantities adjust, not prices', is seriously incomplete. Indeed, chapter 21 leaves indeterminate how the increase (or for that matter decrease) in money demand is divided between prices, wages, and output, though Keynes thinks it reasonable to assume that 'a moderate [increase] in effective demand, coming on a situation where there is widespread unemployment, may spend itself very little in raising prices and mainly in increasing employment'. In 1939, he was half-persuaded by J. G. Dunlop and L. Tarshis that increasing returns and imperfect competition would lower average unit costs as employment increased, obviating the need for prices to rise and real wages to fall; and many post-war Keynesians thought

that this factor would be sufficient to rob full-employment policies of any inflationary danger. That was the real illusion.

The upshot of Keynes's discussion of the wages problem was to knock on the head the 'classical' contention, that, with money-wage rates perfectly flexible, there is no obstacle to full employment at any level of money income. Rather, Keynes showed that only one level of money income (or aggregate demand) will bring about a real wage consistent with full employment, i.e. that over a wide range of actual circumstances the real wage was determined not in the labour market but by the whole range of factors influencing the level of demand for goods in the economy.

How important is Keynes's rate-of-interest theory in his denial of Say's Law? The consumption function/multiplier mechanism seems sufficient to explain the process of income adjustment. Consumption is strictly a function of income; the multiplier tells you how much income will have to change to equilibrate saving and investment plans. If the further assumption is made that investment is not sensitive to small interest changes, then the interest rate is not actually needed to explain anything: as Keynes said, it was left 'hanging in the air'. But, as a concession to Roy Harrod, Keynes had agreed to include a diagram, which showed saving as a function of interest as well as income. Thus the rate of interest was needed to establish a 'determinate equilibrium'. Consumption-function Keynesians have always regretted this concession to Harrod, because it seems to make the theoretical relevance of *The General Theory* depend on the existence of liquidity preference. If one could then show that Keynes had exaggerated the pervasiveness of liquidity preference, or that it did not provide a complete theory of interest, the way was open to make some damaging attacks on Keynes's theoretical structure.

Keynes's erstwhile collaborator, Dennis Robertson, concentrated on the second of these points. He pointed out that to say that the rate of interest is a function of the 'speculative' demand for money does not provide a complete theory of interest, because a fall in the transactions demand for money relative to the money stock will reduce the rate of interest and promote investment (something Keynes had admitted). Robertson claimed that this re-established the classical loanable-funds theory of the rate of

interest related to the underlying forces of 'productivity and thrift'. It explained the observed fact that interest rates fell in a slump and rose in a boom. A testy series of articles and rejoinders in the *Economic Journal* followed, which ended with Keynes proposing to print a note which contained the words, 'I hear with surprise [from Robertson] that our forebears believed that… an increase in the desire to save would lead to a recession in employment and income and would only result in a fall in the rate of interest in so far as this was the case.' He wrote to Robertson on 25 July 1938: 'Our forebears believed that… the rate of interest depends on the supply of saving. My theory is that it depends on the supply of inactive money. There is no possible reconcilation between these views.'

Keynes's other eminent Cambridge colleague and principal stalking-horse of *The General Theory*, Arthur Pigou, attacked Keynes from a different standpoint. Pigou claimed, in the *Economic Journal* of December 1943, that a deficiency in aggregate demand would lead to lower prices, thus increasing the real value of cash balances and hence net wealth in so far as such balances were unmatched by debts. This 'Pigou effect' increases consumption, raising aggregate demand back eventually to its long-run full-employment level.

Robertson and Pigou were fighting a rearguard action to show not that the classical scheme of thought denied the possibility of 'involuntary unemployment', but that such unemployment could not be part of an equilibrium state. The decline in the economy set in motion forces of recovery, irrespective of the policy of the monetary authority. However, though the existence of these forces was later admitted, and Keynes's assault on the classical theory judged to be logically flawed, orthodox theory was not thereby rehabilitated. Keynes's critics were forced to concede that recovery forces came into play uncertainly and feebly after a long period of subnormal activity; and they were thus of little interest to economists or governments who believed that Keynes had given them the tools to prevent large-scale fluctuations in demand from occurring in the first place, or reversing them quickly when they did occur.

Much of the rest of *The General Theory* is intended to be suggestive rather than conclusive. It contains a theory of economic history, in which the

weakness of the 'inducement of invest', owing to uncertainty, is presented as a permanent problem, and in which the 19th century is seen as a 'special case' in which the psychological propensities are in such a relation as to establish 'a reasonably satisfactory average level of employment'. There are the 'Notes on Mercantilism' in chapter 23 in which Keynes tries to establish a historical lineage for his concern with effective demand, in contrast to mainstream economic thinking based on Ricardo, which supposes that economics is the study of how given resources are allocated among different uses. There are what Pigou called his 'Day of Judgment' reflections on the fate of mature capitalist economies if the state is not brought in to supplement failing private investment demand. One version of the 'secular stagnation' thesis, in chapter 17, 'The Essential Properties of Interest and Money', has particularly fascinated some economists. In this superb crystallization of his deflationary vision, Keynes suggests that the desire to accumulate money can knock out all other forms of production, so that wealthy societies, like King Midas, drown in a sea of gold. After the war, governments succeeded in making money 'go bad', with consequences that Keynes – in another frame of mind – predicted in 1933: 'an entrepreneurial system which would be as prone to excessive demand and over-employment, as our actual system is to deficient demand and under-employment'.

Keynes's last chapter, 'Concluding Notes on Social Philosophy', may be seen as an updating of his Middle Way ideas of the 1920s, suggested by his new theory. Excessive thriftiness could be tackled by redistributing spending power to those with a high propensity to consume (the workers) and by reducing the rewards of thriftiness by fixing a low interest rate. This would remove the scope for savers to live off the scarcity value of capital: 'the euthanasia of the *rentier'* would be the consequence. Because banking policy was unlikely to be able to maintain an 'optimum rate of interest', Keynes advocated 'a somewhat comprehensive socialisation of investment', an ambiguous phrase which has to be interpreted in the light of his endorsement ten years previously of the growth of the public utility sector of the economy (see above pp. 44–5). With demand deficiency removed, Fascism and Communism would lose their appeal, and the full benefits and promise of the 'Manchester system' realized: efficiency and freedom and variety of life at home, mutual harmony and peace abroad. In a much-

quoted peroration, Keynes anticipated his intellectual triumph by writing that ‘the power of vested interests is vastly exaggerated compared with the gradual encroachment of ideas’.

Keynes did not have to wait long. The intellectual conversion of all the younger British and American economists started soon after *The General Theory* was published, Keynesian fiscal policy began to be used in 1940 in the United States and in 1941 in Britain.

What was accepted was by no means all Keynes had bequeathed. It was the English economist John Hicks, a newcomer to the Keynesian revolution, who in 1937 produced the ‘portable’ Keynesian model, which has been studied by economics students ever since. In essence, Hicks transforms Keynes’s chain logic into a set of simultaneous equations which he depicts diagrammatically by means of his famous IS/LM curves. This ‘generalized’ system has room for Keynes’s ‘special theory’ – in which saving is determined by income, investment is relatively interest-inelastic, and liquidity preference rules interest rates – but also for at least some versions of the ‘Treasury View’ which Keynes wrote *The General Theory* to refute. It all depends on the slopes of the curves. Keynes’s theory and the classical theory emerge as ‘special cases’ of the true ‘general theory’, with Keynes’s special case assumed to be the most useful for policy. Hicks’s was an astonishing performance.

Keynes, who, above all, sought to influence policy, did not resist this reconciling way of selling his ideas if it made them more accessible and acceptable to the younger economists. But he took advantage of the controversy which followed *The General Theory’*s publication to restate his theory in 1937 in a way which brought out better than his book had its epistemic assumptions. For the ‘fundamentalist’ Keynesians this article of 1937 in the *Quarterly Journal of Economics* is the canonical statement of the Master’s position.

Keynes’s restatement of the ‘essence’ of *The General Theory* is concerned particularly with the effects of uncertainty on investment and the rate of interest: it draws out from the book, that is, the argument of chapter 12, ‘The State of Long-Term Expectations’, which emphasizes the volatility of investment demand, and those of chapters 13 and 17, which explain why

liquidity, or money, carries a premium. It is, above all, the desire for liquidity which makes a decentralized enterpreneurial economy unstable and ensures that its oscillations normally occur round a subnormal level of activity. Why, Keynes asks, should anyone outside a lunatic asylum wish to use money as a store of wealth? The only intelligible answer is the existence of radical uncertainty - a possibility assumed away by the classical assumption of a 'definite and calculable future'. In the article of 1937, there is no consumption function, no investment multiplier, only vague and uncertain knowledge, fluctuating states of confidence, and courage, fears, and hopes, coped with, as best they can be, by strategies and conventions, themselves liable to be swept away by changes in the 'news'. Uncertainty, Keynes suggests, is the human condition. That is why *The General Theory* retains, in Shackle's words, the 'quality of imperishable relevance to the… insoluble problems of time-bound humanity'.

In this final distillation of his thought, money, or what Keynes calls liquidity, emerges, above all, as a strategy for calming the nerves. Technically, he had come a long way since his early days as monetary reformer, but his vision had not changed much. His whole work, like that of his entire generation of economists, revolved round the unruliness of money, its awesome power to disturb the real economy. They all wanted to make the monetary economy behave like a 'real exchange' economy – one in which there was no unemployment. The deepest question posed by Keynes's work is as follows. Is it money which causes the economy to misbehave? Or is it uncertainty which causes money to misbehave? Between these two views the theory of monetary policy is still poised.