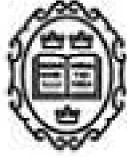

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Malthus and Keynes

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MALTHUS AND KEYNES*

By R. P. RUTHERFORD

THE question of Malthus's stature as an early Keynesian has held a continuing fascination for historians of economic thought. While Keynes himself claimed Malthus as a forbear, most commentators have shared Schumpeter's judgement (1954) that Keynes was mistaken. This paper argues that Malthus did anticipate Keynes in important respects and that the literature has misjudged the relationship because of undue concentration on Keynes's General Theory.[1] After noting some problems in modern interpretations of the relationship, a justification is offered for turning instead to Keynes's Treatise on Money to establish the link. This is then explored with reference both to the theory of failure of effective demand and the policy solutions proposed.

Introduction

At least since Cannan (1917, p. 7) Malthus has been widely portrayed as a hopelessly muddled thinker. This view has been turned on its head in recent years and his reputation as a theoretician is deservedly higher than at any time this century. There has emerged a consensus over his basic theoretical framework of a cyclical model of economic growth based on the interaction of capital and labour cobwebs.[2] The Malthusian economy is pictured as having an inherent tendency to stall or become 'hitchbound' as Schumpeter puts it (1954, p. 566). However, views on Malthus's analysis of the post Napoleonic depression have differed widely and it is this work, including the proposed policy solutions, which is most pertinent to that of Keynes.

Perhaps the simplest position taken on Malthus's depression analysis is to regard it, with Sowell as the slump phase of a self correcting cycle in the growth process. The analysis of general glut is seen as 'a sketchy corollary on temporary unemployment' appended to 'an elaborate theory of economic development' (1963, p. 193). This interpretation conflicts with the many references which suggest a more serious breakdown in the economy. It also runs into difficulties because it strictly identifies Malthusian 'oversaving' with overinvestment, that is with capital accumulation overshooting in the cobweb. Many commentators have noted that, in analysing the depression resulting from the transition from war to peace, Malthus is not looking at a situation heralded by the collapse of an investment boom. There are two

* I would like to thank my colleagues, Alf Hagger and Ben Heijdra, for comments on an earlier version, and two anonymous referees for helping me to clarify the argument at some critical points. Any remaining errors are of course my own responsibility.

[1] All references to the works of Keynes are to the Collected Writings published by the Royal Economic Society and are given by volume number in Roman numerals and page number.

[2] Malthus's framework is derived chiefly from his *Principles of Political Economy*. Unless otherwise indicated all references are to the second edition of 1836.

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problems here. Firstly, it has been too easily accepted that an overinvestment theory of depression would of necessity be non-Keynesian and this issue is taken up later in the paper. Secondly, if overinvestment is the basic cause of the slump phase of a cycle, how are we to integrate the discussion of the post Napoleonic depression with the discussion of the growth process? Hollander believes that our problems of interpretation arise because we persist in looking for a unified theory, while Malthus in fact had more than one theory of depression and therefore his account of post war events with regard to causes 'is not inconsistent with Keynesian analysis' (1969, p. 306). The attribution to Malthus of an analysis at variance with the basic model of capital accumulation results in serious problems of internal logical consistency with respect to the rationale lying behind Malthus's policy prescriptions. Hollander argues that the seemingly Keynesian solutions to unemployment are based on 'a markedly non-Keynesian set of arguments' because 'Malthus's logic frequently involves results derived from the basic model of capital accumulation' (1969, p. 307). Further these solutions themselves are 'not really consistent with his own basic model of accumulation' (1969, p. 334n). Hollander thus presents Malthus as a sophisticated theorist evolving new structures to grapple with the march of events but unable to successfully integrate these with his underlying model.

There lies a great challenge in presenting a coherent Malthusian model able to embrace both his views of the growth process and his post war depression analysis. This is exactly what Eltis attempts. After first developing, as he says uncontroversially (1980, p. 19), a Sowell like analysis of the interactions of the labour and capital cobwebs in a business cycle, he notes the failure of this analysis to explain the many references which suggest that something more serious can go wrong with the economy than merely a self correcting slump. The Eltis solution is a growth model in which it is possible for key variables to take on values such that effective demand fails to grow at the same rate as supply. The most daring and controversial element in this model is the introduction of functional dependence of the rate of technical progress on the rate of profit, a relationship which plays a crucial role in the failure of effective demand.[3] While Eltis is not specifically concerned with the relationship to Keynes, he in effect presents Malthus as the first 'Cambridge' growth theorist. That is to say, with separate investment and savings functions and classes with differing propensities to save, the dynamic equilibrium condition that planned saving equals planned investment will only be met if the distribution of income adjusts appropriately. It has long been acknowledged that such growth models contain Keynesian elements. Eltis clearly regards Malthus's model as being in some

[3] Eltis justifies this relationship with a series of quotations designed to show that Malthus believed motivation to be of central importance and that productivity growth is demand induced. The textual basis is a little thin but Malthus may well have echoed Smith on this point. The bold incorporation of endogenous technical progress is no doubt based on the methodological justification given for the assumption made. (1980, p. 19)

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respects Keynesian though it is with Kalecki that he draws his fleeting comparison (1980, p. 39). In a recent paper, Costabile and Rowthorn (1985) also present Malthus as a 'Cambridge' growth theorist though their model differs in some important assumptions.

In evaluating Malthus as an early Keynesian reference will be made to a variety of Keynes's writings.[4] Since the original version of the Essay on Malthus dates from 1922, it is clear that Keynes thought highly of Malthus at a very early stage in the development of his own theories. Moreover, only a few years separate the General Theory from the Treatise on Money and an editorial note makes clear that the critical passages of the Essay, where Keynes makes his strongest claims for Malthus, were added at the beginning of 1933 thus falling squarely between the two works (Vol X. p. 71). In any case, we no longer see the General Theory as a revolutionary break with Keynes's previous work. The resurgence of interest in Keynes's economics following the work of Clower (1965) and Leijonhufvud (1968) has led us to an appreciation of the essential continuity in his thought. The evidence of the Treatise on Money is particularly valuable because the analysis of fluctuations in effective demand is there conducted using a model which assumes price flexibility. This takes us much closer to Malthus. It will be argued that the sequence of events analysed by Malthus in the post-Napoleonic depression bears close correspondence to the depression process outlined in the Treatise and that there is an essential similarity of conception over the crucial role of the rate of profit and the way in which changes in income distribution can result in a failure of effective demand.

Keynes made several specific claims for Malthus. He praised him for his conception of effective demand as determining prices and profits, (Vol X, p. 88) and for dealing with a specifically monetary economy (Vol X. p. 97). He credited him with a 'complete comprehension of the effects of excessive saving on output *via* its effects on profit' (Vol X. p. 99), and commended his policy prescriptions (Vol X. p. 101). The following is aimed at substantiating these claims which are currently dismissed or at best deemed overstated.

The depression process in Keynes's treatise

Since Keynes claimed that Malthus had seen the link between effective demand, prices and profits and how excessive saving could affect output through its effects on profit, we need to establish that these elements play a part in both Keynes's Treatise view of the depression process and Malthus's. Given that most economists are familiar not with the Treatise but with the later modelling of the problem in the General Theory, it seems appropriate to begin with a brief outline of the analytical apparatus of the Treatise, then show how a depression can arise and finally compare this to Malthus's analysis of depression.

[4] Most commentators have made their points against the implicit benchmark of the textbook Keynesian model with which they can safely assume the reader is acquainted and have directed their energies almost totally to careful textual analysis of Malthus.

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It may come as a surprise to those whose Keynesianism begins with the General Theory to learn that Keynes explicitly worked with a concept of effective demand in the Treatise. He was quite clear that this amounted to saying aggregate output could vary. The analysis of effective demand takes place in a price-flex economy but the adjustment velocities of prices are not all the same. Effective demand is discussed without the multiplier and the modern reader faces the difficulty of a strong temptation to read it in. While Say's Law is not explicitly dealt with it is quite clearly dismissed, and moreover, in the sense of the modern proposition that we owe to Clower (1965), that the sum of excess demands for all goods including money is zero.[5] There is a clear distinction in the model between motives to save and invest, that is there are separate savings and investment functions. While not specified mathematically these functions are extensively discussed and the operation of the Fundamental Equations depends on them. The discussion of output and employment effects takes place as a process analysis with a definite sequence. The analysis is entirely of the short run and concerns disequilibrium as equilibrium is defined as occurring at full employment. While we may presume Keynes believed such an equilibrium to exist he clearly did not regard it as stable as the whole thrust of the book is to advocate an active monetary policy based on the rate of interest. It should be noted that he assumes that the market rate of interest is sticky and so are money wages. However, it is unclear whether the Keynes of the Treatise believed that these variables could move to restore equilibrium or that the economy was locked into 'disequilibrium'. This is not of great importance to us here since precisely the same thing can be said of the view of depression Malthus espouses. In this brief outline of how depression can arise in the 'Treatise' view I will assume that money wages and the interest rate are fixed.

Full employment equilibrium output exists in the situation where costs of production ex ante, including normal rewards to entrepreneurs, equal actual costs of production. However, expectations might not be validated in this way, in which case there will be a windfall gain or loss to entrepreneurs. There can also be windfall gains or losses to the suppliers of labour with fixed money wages if the price level of consumption goods changes but these gains and losses have no driving force in the model. Effectively we can assume that all wages are spent. The real action of the model lies in how the relative movement in the price level of consumer goods vis a vis the price level of investment goods imposes a windfall gain or loss on entrepreneurs and how this affects their decision to invest in the next period.

In Chapter 12 of the Treatise [Vol V, p. 154–165] Keynes was concerned

[5] This modern conceptual variant of Say's Law is employed as most pertinent to the mechanism by which excess demand failure occurs in both Malthus and Keynes. It in effect subsumes both "Say's Identity" and "Say's Equality" in Baumol's terminology (1977). Thweatt (1979) also reviews the early development of Say's Law, and discusses its connexion with both the nineteenth century orthodoxy rejecting general glut, and the twentieth century Treasury View attacked by Keynes.

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to establish that a decision to save in terms of non-consumption was not a decision to invest in capital goods and that an exogenous shock, such as an increase in the savings ratio, could lead to depression precisely because it was not matched by an increase in investment. The mechanism he envisages is that an exogenous shock, be it a change in planned savings by consumers or planned investment by entrepreneurs, results in changes in the relative prices of consumption goods and these result in income distribution effects. A key analytic point is that aggregate output is sold at prices below the ex ante costs of production. Because in the model of the Treatise it is the decisions of entrepreneurs which drive the level of overall activity, the concentration is on the windfall gains and losses to entrepreneurs. It is important to note that either oversaving or 'overinvestment' can provide the exogenous shock leading to a depression. In order to use Keynes's own illustration of the 'banana plantation' and to facilitate comparison with the Malthus analysis of the post-Napoleonic depression, the oversaving shock will be discussed.

The sequence in the banana example [Vol V, p. 158–160] works this way. Consumers decide to save a higher proportion of their incomes. However, the entrepreneurs of the society do not increase their investment in new plantations. The same quantity of bananas comes to market and on the assumption that they are non-storable the price level of bananas falls. Consumers are better off since they have increased their savings but enjoyed the same consumption level as before at a lower price level with money wages unchanged. The bananas, aggregate output, have been sold below their ex ante costs of production and entrepreneurs have suffered a windfall loss which has been transferred to the workers via higher real wages. The losses are made good by the entrepreneurs borrowing the savings of the consumers. Keynes concludes that entrepreneurs will attempt to protect themselves by reducing wages and employment but that this will not help as long as planned savings exceed planned investment: 'there will be no position of equilibrium until either (a) all production ceases and the entire population starves to death; or (b) the thrift campaign is called off or peters out as a result of the growing poverty; or (c) investment is stimulated by some means or another so that its cost no longer lags behind the rate of saving.' [Vol V, p. 160]

It is not our concern here whether this represents good economics but only whether the analysis is similar to that used by Malthus.

The depression process in Malthus

The purpose of this section is to establish that the process by which depression can arise in Malthus's model is consistent with that outlined in Keynes's Treatise on Money. Furthermore, it will be argued that Malthus had only one theory of depression in the sense of the key elements of the process by which it occurred. However, he allowed either an exogenous

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shock of the overinvestment type when entrepreneurs were excessively optimistic about the profit rate or an exogenous shock of the underconsumption and underinvestment type when entrepreneurs were excessively pessimistic about the profit rate. Both processes are mirrored in Keynes and can be contrasted with crude underconsumptionist and overinvestment theories which lack an analysis of the process.

Many early commentators on Malthus as a Keynesian used as their litmus paper test the question of whether Malthus assigned a role to hoarding. The reason for this was their concern to establish whether Malthus like Keynes was allowing a role for the running up of idle money balances as a leakage from the circular flow of income. Since their view of Keynesian economics was confined to the General Theory we can construe this as positing an outward shift in the speculative demand for money function within an ISLM framework leading to an upward movement of the LM curve and a reduction in real output and employment.[6] This was perhaps understandable given the novelty value of the speculative demand for money in the General Theory. However, unfortunately for those who wished to show Malthus in this sort of Keynesian light, there were some formidable quotations which seemingly denied any significance to hoarding.

Sowell (1972, p. 97) draws attention to the following passages from the 'Principles' to argue that Malthus usually meant that saving was the same thing as investment:

> 'No political economist of the present day can by saving mean mere hoarding.' (1836, p. 38)
> 'If he did not choose to use it in the purchase of luxuries or the maintenance of personal services, it might as well be thrown into the sea. To save it, that is to use it in employing more labourers upon the land, . . .' (1836, p. 325)

There are serious objections to this view. The rational running up of idle balances might not have been thought of as hoarding by Malthus. Eltis (1980, p. 53) points out that the reference to hoarding is incidental to a discussion of the correct borderline between the productive and unproductive sectors of the economy. He goes on to argue that Malthus would have defined an act of saving as adding to the stock of wealth and an act of investment as adding to that component of stock used as capital to earn profits and provide investment and so clearly the two need not be the same. The essential point he attempts to establish is that planned savings are distinct from planned investment. Hollander (1969) also argues that savings and investment are distinct. Neither deals explicitly with the question of how a leakage occurs in the process leading to depression, whether the depression occurs in the wake of excessive capital accumulation or as a result of excessive saving which is not matched by investment.

[6] Since the Keynesian model against which Malthus is compared is never spelt out, it is possible that some actually saw this as accompanied by a shift in the investment function as opposed to a simple movement along it induced by the resultant higher interest rate.

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The denials of hoarding should, as Eltis suggests, be viewed in context. We must remember that Malthus's Principles purported to be a 're-coinage' of Smith's Wealth of Nations. It is generally accepted by modern economists that Smith's distinction between unproductive and productive labour was the basis of a model for maximizing economic growth.[7] The denial of hoarding in the first quotation comes directly from the section where Malthus is concerned with the usefulness of Smith's distinction. It should come as no surprise to us that in the context of a growing economy all savings are invested for the precise reason that capital is earning its supply price. Malthus puts his views quite plainly:

> 'Parsimony, or the conversion of revenue into capital, may take place without any diminution of consumption, if the revenue increases first.' (1836, p. 326n)

Later after arguing the dangers of oversaving he writes:

> "How then is this saving to take place without producing the diminution of value apprehended? It may take place, and practically almost always does take place, in consequence of a previous increase in the value of the national revenue, in which case a saving may be effected, not only without any diminution of demand and consumption, but under an actual increase of demand, consumption and value during every part of the process.' (1836, p. 365)

Thus in the context of discussing growth rather than stagnation it is entirely appropriate for Malthus to echo Smith on the relationship of capital accumulation to the growth process and, because expectations of the return to capital are being realised as output grows, to identify savings with investment. However, once we move away from the question of what best promotes the trend rate of growth of the economy to the question of short-run depression, when capitalists' expectations of the rate of profit are not realized, it seems equally clear that Malthus admits a role for the running up of idle balances.

There is a remarkable passage in the first edition of Malthus's Essay on Population which sheds considerable light on the hoarding issue. Malthus is arguing against Godwin's model of a perfect society on the grounds that it is divorced from economic reality:

> 'Dr Adam Smith has very justly observed that nations as well as individuals grow rich by parsimony and poor by profusion, and that, therefore, every frugal man was a friend and every spendthrift an enemy to his country. The reason he gives is that what is saved from revenue is always added to stock, and is therefore taken from the maintenance of labour that is generally unproductive and employed in the maintenance of labour that realizes itself in valuable commodities. No observation can be more evidently just. The subject of Mr Godwin's essay is a little similar in its first appearance, but in essence is as distinct as possible. He considers the mischief of profusion as an acknowledged truth, and therefore makes his comparison between the avaricious man, and the man who spends his

[7] See for instance Hicks (1965, p. 36–38).

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income. But the avaricious man of Mr Godwin is totally a distinct character, at least with regard to his effect upon the prosperity of the state, from the frugal man of Dr Adam Smith. The frugal man in order to make more money saves from his income and adds to his capital, and this capital he either employs himself in the maintenance of productive labour, or he lends it to some other person who will probably employ it in this way. He benefits the state because he adds to its general capital, and because wealth employed as capital not only sets in motion more labour than when spent as income, but the labour is besides of a more valuable kind. But the avaricious man of Mr Godwin locks up his wealth in a chest and sets in motion no labour of any kind, either productive of unproductive.' (1798, p. 175–6)

This passage is interesting because this is the early Malthus using the Smithian argument, on the virtues of parsimony and its importance for growth, to dismiss Godwin's arguments as utopian outpourings. But very significantly he is open to the notion of hoarding as a phenomenon and once admitted he goes on to say that it can have serious economic repercussions:

'But Mr Godwin says that the miser really locks up nothing, that the point has not been rightly understood, and that the true development and definition of the nature of wealth have not been applied to illustrate it. Having defined therefore wealth, very justly, to be the commodities raised and fostered by human labour, he observes that the miser locks up neither corn, nor oxen, nor clothes, nor houses. Undoubtedly he does not really lock up these articles, but he locks up the power of producing them, which is virtually the same. These things are certainly used and consumed by his contemporaries, as truly, and to as great an extent, as if he were a beggar; but not to as great an extent as if he had employed his wealth in turning up more land, in breeding more oxen, in employing more tailors, and in building more houses. But supposing, for a moment, that the conduct of the miser did not tend to check any really useful produce, how are all those who are thrown out of employment to obtain patents which they may shew in order to be awarded a proper share of the food and raiment produced by the society? This is the unconquerable difficulty.' (1798, p. 180–1)

This point that 'hoarding' or saving without investing can lead to workers being dismissed and that this had repercussions in the product market because their current money incomes were constrained is of great importance as to why Keynes ascribed to Malthus an understanding of the operations of a money economy. It is evident that Malthus did not always assume that all savings were invested and that 'oversaving', depending on its context, may refer either to excessive planned investment or excessive non-consumption.

Hollander credits Malthus with a Keynesian analysis of the causes of the post-Napoleonic depression. However, he nowhere specifies what is meant by a Keynesian analysis of depression and argues that the basic model of excessive capital accumulation in the growth process leading to depression is distinctly non-Keynesian. With reference to the specific 'Treatise' Keynesian model discussed earlier, it will now be argued that both are essentially

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Keynesian. In terms of textual exegesis of Malthus what follows is entirely uncontroversial and Hollander himself provides ample referencing to the excessive capital accumulation case (1969, pp. 308–312) and to the under-consumption case (1969, pp. 313–320). Here are only the bare bones of each sequence to facilitate comparison with Keynes.

The so-called basic model of capital accumulation starts with an exogenous shock of overinvestment. Capitalists, their 'animal spirits' raised perhaps, respond to a high profit rate by overinvestment. In order to do this they must reduce their own consumption. In Malthus this is much the same thing as spending less on unproductive labour. In effect they sack the 'minstrels' and hire them again to plant corn. The consumption of workers thus remains constant but the output of wage-goods rises. This produces a fall in the price level of wage goods. Money wages do not fall initially and hence the real wage rate rises and there is a transfer of real income from entrepreneurs to workers. A situation of general glut sets in as output as a whole is sold at prices which do not cover ex ante costs of production. The rate of profit is reduced below that expected ex ante. Capitalists respond to the income transfer by cutting investment or, what is the same thing in Malthus, by sacking workers or not advancing wage goods. The sacked workers are not re-hired as minstrels because of the income transfer. The rise in unemployment further depresses the price level of output because the unemployed while they have the 'will' to consume lack the 'power'. The economy thus goes into depression.

The post-Napoleonic depression commences with a different shock that of an excessive output of corn after a series of good harvests.[8] This leads to a fall in the price level of the food component of wage goods. With money wages constant, real wages rise. There is a transfer of income from farmers to workers. Malthus then has a downward multiplier process. The rise in agricultural unemployment reduces the effective demand for manufactured wage goods. It is quite clear that, while money wages are flexible, they lag behind the fall in the price level. He even considers the effect to spread to the export market with a fall in mercantile earnings.[9] It is also apparent that the sequence from an income transfer and fall in the rate of profit to reduced employment and reduced effective demand is no different to that outlined for the overinvestment case. Two points stand out for particular attention, the central role of the income transfer and the fact that it is not flexibility of money wages which is important but that money wages lag in the process:

'For the four or five years since the war, on account of the change in the

[8] Malthus (1836, p. 413–416) is quite clear that excessive capital accumulation is not involved and that capital is deficient but not in the sense of it not matching the growth in the labour force but in the sense of a deficient effective demand for it.

[9] Since Malthus is analysing real events and we are looking at his implicit model, I have not addressed his arguments as to how the depression is exacerbated by a contraction of the money supply, the increase in the labour force through natural growth and demobilisation, and reduced taxation bills leading to higher savings not investment.

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distribution of the national produce, and the want of effectual consumption and demand occasioned by it, a check has been given to the rate of production... ...Though labour is cheap, there is neither the power nor the will to employ it all; because not only has the capital of the country diminished, compared with the number of labourers, but, owing to the diminished revenues of the country, the commodities which those labourers would produce are not in such request as to ensure tolerable profits to the reduced capital.' (1836, p. 417)

The two depression processes are presented in order to show their similarity of process and that they differ only in the sense of the shock administered to the model. In outlining them I have neglected the analysis of the labour market 'cobweb' on the grounds that Malthus discusses this in both contexts and this merely exacerbates the effective demand problem which is in all essentials exactly the same as that outlined previously from Keynes's Treatise. Malthus himself would have regarded the overinvestment shock as a supply side shock and the collapse of prices in the wake of good harvest as a failure of effective demand. Furthermore, his definition of a situation of general glut is symmetric with respect to cause:

"A glut is said to be general, when, either from superabundance of supply or diminution of demand, a considerable mass of commodities falls below the elementary costs of production.' (1827, p. 247)

The common features of the two Malthusian depression stories and that of Keynes's Treatise can now be brought together. All descriptions start with a shock which leads to a fall in the price level of consumption goods. It is assumed that the product market always clears. All prices including money wages are flexible but there is a definite sequence of response so that money wages fall only after product prices fall. The central problem, in each case leading to a failure of effective demand, is due to the distributional consequences of the relative price movements. The rise in the real wage rate and fall in the profit rate leads to a reduction in employment. Current consumption is constrained by current money incomes, so that the initial fall in consumption prices is amplified and a downward spiral in output, expenditure and income sets in.

Interestingly, both Malthus and the Keynes of the Treatise are ambiguous on the question of automatic mechanisms by which full employment equilibrium could be restored. Malthus alternatively writes of 'a marked depression of wealth and population permanently'[10] (Ricardo II, p. 325) and that 'the question of a glut is exclusively whether it may be general, as well as particular, and not whether it may be permanent as well as temporary' (1827, p. 62). Keynes set up his formal equations with a fixed full employment level of output assuming there were forces to pull the economy

[10] The quotation given is from the 1st. edition of Malthus's *Principles*. Further evidence of Malthus's ambiguity here is that in the second edition the word 'permanently' is replaced by 'afterwards'. (1836, p. 326) Costabile and Rowthorn explicitly model Malthus as not having an automatic mechanism. (1985, p. 435)

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back to this. However, the non-formal analysis frequently belies this. Both in any case argued for active policy intervention in the face of depression.

The Malthusian remedies

Keynes commended Malthus's policy proposals that 'public works and expenditure by landlords and persons of property was the appropriate remedy' (Vol X, p. 101). While both sound Keynesian, Hollander, as noted earlier, claims that the rationale Malthus presents is non-Keynesian because of Malthus's use of results from the excessive capital accumulation model.

It should be obvious from the foregoing analysis that, since we are dealing with the same model subjected to different shocks and that this model is Keynesian in the sense of the Keynes of the Treatise, this argument falls to the ground. Indeed, Hollander's own thorough and perceptive analysis, in particular of the public works policy proposal, fits in neatly with the link between effective demand and the profit rate discussed in our analysis of the Treatise model:

> 'Public works were not supported by Malthus because they represent a net injection of purchasing power into the economy which—together with multiplier effects—would lead to a higher level of activity. The argument is based upon the Malthusian position that any *transfer of funds from productive to unproductive expenditure will raise the level of effectual demand and accordingly the profit rate.*' (1969, p. 334).

The same, of course, can be said of any increase in unproductive consumption including hiring more minstrels.[11] The famous 'widow's cruse' argument of the Treatise (Vol V, p. 125) depends on exactly this mechanism.

In any case we must dispose of the view that Keynes's advocacy of a public works programme was something that sprang up with the General Theory. As Moggridge points out (1976, p. 82) Keynes held in the Treatise that monetary policy should be used to operate on the long term interest rate in order to restore aggregate demand. However, Keynes recognised a special case for a small open economy on a fixed exchange rate where this would not be possible and public works were then a reserve weapon. This is even illustrated in application to the depression of the 1890's in the applied volume of the Treatise (Vol VI, pp. 150–2). Moggridge also points to the advocacy of public works in the pamphlet, 'Can Lloyd George Do It? and gives this quotation from a talk given in the U.S. in June 1931:

> 'In Great Britain I have for a long time past agitated very strongly for a public works programme, and my argument has been that we are such a centre of an international system that we cannot operate on the rate of interest, because if we

[11] It should be noted that Malthus' arguments for public works are strictly qualified with respect to the source and use of funds. Corry (1958, 1962) has argued that Malthus was not an advocate of public works, but see Hollander's discussion of this position (1969, pp. 329–34).

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tried to force the rate of interest down, there is too much lending and we lose our gold . . .' (1976, p. 84–5)

This view had been expressed before the amendments of the Essay on Malthus previously noted. It would therefore appear that those policy proposals which sound Keynesian are Keynesian in the true sense that the analysis behind them is akin to that Keynes used in the Treatise. One can even make a case for the policy proposals which were essentially long run and which therefore sound non-Keynesian. If planned saving is to equal planned investment in the dynamic setting of the growth process, this requires an appropriate distribution of income so that the rate of profit is maintained. As Eltis points out (1980, p. 42) the whole structure of the argument of sections VI to IX of 'The Progress of Wealth' in the Principles (1836, p. 361–413) is concerned with mechanisms by which demand side factors can maintain the rate of profit necessary for continued growth and this includes such things as the 'division of landed property' and the importance of unproductive consumption.

The general implications for the relationship of Malthus and Keynes

One of the criticisms this paper levels at past comparisons of Malthus and Keynes is that Keynes has been left implicit. By implication it has been the Keynes of the General Theory alone that has been the benchmark and, given some of the comments made, almost certainly in ISLM garb. In order to be specific in our comparison and with proper regard to the timing of Keynes's comments on Malthus, explicit attention has been given to the model of depression in the Treatise. However, this comparison can now be used to facilitate a wider perspective on the relationship and be linked to a more recent debate on the nature of Keynesian economics.

Many of the problems in seeing the link between Keynesian and Malthusian economics stem from the implicit use of a comparative statics model derived from the General Theory. Most observers would now agree with Leijonhufvud's contention (1968, p. 50–4), that the essentially dynamic analysis of the General Theory was obscured by the use of comparative statics.[12] This can be linked to the failure of commentators to understand the role of money in both Malthus and Keynes and the nature of the attack on Say's Law. Hence, they also fail to see the basis for Keynes's praise of Malthus. For instance Sowell, in the context of arguing that Malthus and others did not attach special significance to money, claims that classical economists 'put much more emphasis than do modern economists on causation in a sequential sense rather than in the sense of simultaneous determination of the values of related variables' (1972, p. 98).

He dismisses the fact that both Malthus (1836, pp. 315–6) and Keynes

[12] Moggridge makes the point that Keynes adopted comparative statics analysis because, while less suited to describing disequilibrium situations, it was extremely useful for getting his message across to non-specialists. (1976, p. 92)

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(Vol. VII, pp. 18–22) claimed to be attacking Say's Law by warning that 'Say's Law has both lost and acquired meanings in the long process of theoretical refinement', and that 'it has led to grotesque distortions of history where the general glut controversy that reached its peak in the 1820's is treated as a debate over Say's Law in its modern sense . . .' (1972, p. 5).

An implication of the comparison made earlier is precisely that both Malthus and Keynes were making the same fundamental critique of the operation of a market economy and both correctly singled out the law of markets as the analytic lynchpin of the orthodoxy they opposed. We should remember that prior to Clower (1965) most economists would have accepted that Keynes attacked Say's Law as defined by Lange, that is the behavioural proposition that the sum of excess demands for all goods except money is zero. It is doubtful if any serious economist ever believed this to be true in the short run. Even Ricardo, who clearly believed in the long run neutrality of money, was aware that monetary movements had some short-run real effects.[13] The Keynesian model of the neoclassical synthesis appeared to be a special case of the general Walrasian model with institutional rigidities in money wages and the interest rate. These resulted in the failure of the labour market to clear. Aggregate output could be less than full employment output and the automatic mechanisms to restore full equilibrium were painfully slow.

Thanks to Clower we now have the distinction drawn between the planning budget constraint called Say's Principle (1965, p. 116) and the market principle of Walras' Law, the basic point being that the former requires that the sum of planned excess demands for all goods including money is zero whereas the latter is the much stronger proposition that the sum of effective excess demands for all goods including money is zero. Keynes's attack on the law of markets was an attack on the proposition with respect to effective excess demands. When people are thrown out of work there is an excess supply of labour but there is no offsetting effective excess demand for goods. Money plays a crucial role because it is only if we can trade our leisure for money that we can make our notional demand for goods effective in the absence of credit linked to the notional transformation possibilities of the economy. As Malthus would have put it there is no way the unemployed can obtain 'patents'. This problem has been characterised in a number of ways: the absence of forward markets; the reversal of the Marshallian adjustment velocities. Leijonhufvud even attempted to give it a choice theoretic basis with a generalisation of liquidity preference. The key elements though are simple. Money wages move more slowly than money prices. A shock to the economy produces income effects through so-called 'false trading', the most important of these being through the trades that *do*

[13] The relative importance to be ascribed to these, as qualifications to his main argument or as bearing the thrust of it, is a major issue of contention in Ricardian scholarship. See Hollander (1979, ch. 9) and O'Brien (1981)

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not take place because the real wage is wrong. Workers become unemployed. Consumption is constrained by current money incomes so a downward multiplier process sets in. The ideas that prices lead money wages, that income distribution effects lead to quantity responses in the labour market and that consumption is money income constrained were all used in the depression processes previously outlined.[14]

While Malthus does not have a modern analytic apparatus to draw on he is emphatic on the need for goods to exchange for money so that demand can be effective and it is for this reason, no doubt, that Keynes credited him with an understanding that a modern market economy cannot be analysed in a model based on barter in the manner Ricardo proposed.

Conclusion

A lively debate has persisted for many years over whether Malthus deserved the accolades Keynes bestowed upon him. The early commentators who supported Keynes, for instance O'Leary (1942) and Lambert (1962), had their analysis dismissed by later commentators such as Sowell as being trivial in merely showing the employment of similar phraseology (1972, p. 6). The general consensus of the critical literature has been that Keynes foisted his own economics on to Malthus and misinterpreted him as a result. However, this paper has argued that the focus of the debate has been wrong. It has been consistently and usually implicitly assumed that the correct comparison is with the economics of Keynes's General Theory. This has led to undue concentration on whether by oversaving Malthus meant hoarding or overinvestment. Too little attention has been paid to the timing of the claims Keynes made for Malthus. The critical references to the principle of effective demand were added to the Essay on Malthus in 1933, suggesting that it is with the economics of the Treatise that we should make our comparison. When the depression process outlined in in the Treatise with its stress on relative price movements is juxtaposed with Malthus's analysis of the post-Napoleonic depression, a close correspondence can be discerned. It therefore becomes possible to grasp why Keynes, at this stage in the development of his thought, recognised the underlying similarities of their conceptions.

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[14] The argument presented does not depend on Clower's Keynes with an implicit Walrasian theory of household behaviour. Even those who take a more 'Cambridge' view argue that Keynes did attack Walras' Law and they emphasize the process analysis of the Treatise. See Chick (1978).

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