

“On Hollander’s and Keynes’s ‘Canonical’ Interpretations of Malthus”*

Prologue

I was honoured to present a paper at the Conference ‘Reflecting on the Canon’ to celebrate Professor Samuel Hollander. Years ago, he came up to Carleton to address my History of Economic Thought students on what was then his New View of Ricardo. Professor Hollander elevated their study to a new level of exacting scholarship and my account of classical economics to one of excitement and immediacy of relevance. What a lasting impact Professor Hollander made on those fortunate students!

Introduction

Two attributes characterise Classical Economics (The content of one of Professor Hollander’s works so titled explains what I mean by such a phrase). The first, a matter of prediction, is that populations and capitals grow relative to land, that land is exogenous and independent of the growth process. The second, a more normative characteristic, is that money should also be exogenous. Now, stocks of money, if metallic, do grow relative to land, as metals are ripped from the land, even if under conditions of diminishing returns. So, the ‘canonical’ classical growth model would say that commodity or real wage rates and net real rates of return to capital would fall (or may be initially rising as initial knowledge and returns to scale are realized but would approach stationary levels) so that

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population growth and capital accumulation would come to their respective standstills.¹ One would say, in Marshallian terms, that the prices of working and waiting would equilibrate at levels such that the flow of working and waiting would be just sufficient to maintain stocks of population and capital. The classical stationary state would eventually prevail.

If the stock of monetary metals grew apace with capital then commodity prices in money terms, e.g., the gold prices of (say) consumption goods, would on average remain unchanged. If the stock of metals did not grow apace, because of diminishing returns, then one would predict that the gold price of commodities would be falling.² The growing scarcity³ of land is a natural phenomenon provided the passion between the sexes keeps the classical canonical growth model fueled. The scarcity of fiat money, which replaces metallic money, is, however, not a natural phenomenon, it is contrived. Classical monetary theory and policy argued that the contrivance of money should be run as if it were land, run, that is, as if it were strictly exogenous. The money supply should itself be governed by natural laws so that the long run price of gold in terms of commodities should be governed by its cost of production. If a fiat or conventional money is in existence, then the money price of gold should be fixed. It should not be an unconstrained nor even a constrained private or public contrivance. It should

¹ See Samuel Hollander, “The canonical classical growth model: Content, adherence and priority”, Journal of the History of Economic Thought, xx, September 1998,253-278

²For the case for a falling price level in a growing economy as something to be arranged rather than just as a classical prediction, see George Selgin, LESS THAN ZERO, IEA Hobart Paper #132, Institute for Economic Affairs, 1997.

³One would also predict that the monetary metallic price of land would be rising until it reached the classical equilibrium level since with real rates of return to capital constant or falling, a rising price of land is necessary for rentals not to be falling relative to wages and profits.

not be unconstrained for fear of inflation. Even constrained private or public contrivances such as central banks with inflation targets, since such constraints are so costly to enforce, are not advisable.

A related theme in classical economics, if I may neglect the full equilibrium effects of discoveries of monetary metals and the effects of steady inflation or deflation, is that money is neutral. Real wage rates, real net rates of returns and real prices of land are given independent of stocks of nominal or fiat monies (though not of monetary metals).

The two canons⁴ of classical economics are (i) the growth model implying declining real wage rates and net rates of return to capital and (ii) the neutrality of money. They are based on the natural exogeneity of land and the maintained exogeneity of money. Both are critically based on the assumption of an unchanging given stock of knowledge.

The First Canon and Technical Advance

John Rae's attack on classical economics is based on his perception that classical (or Smithian) economics had failed to account for the interaction between technical progress and capital accumulation.⁵ If technical progress is exogenous then we have the Solow version of the classical growth model. If technical progress is a function of the rate of accumulation, then we have one aspect of the theory of endogenous growth. Certainly, Smith had increasing returns to scale, the crucial fact however being that as the economy expanded, different machines would sequentially come into play

⁴The Shorter Oxford English Dictionary on Historical Principles (Oxford: At the Clarendon Press, 1973) offers a number of definitions of 'canon'. The one I like best, with tongue in cheek, is 'A book of the rules of a monastic order'!

⁵I have attempted an understanding of Rae's growth theory in "On Rae and capital and growth", eds. O.F. Hamouda, C. Lee and D. Mair, THE ECONOMICS OF JOHN RAE (London: Routledge, 1998).

with the whole problem of measuring capital and the Cambridge Capital Controversy thus coming to the fore. I cannot find any reference in Malthus to the effect that with increasing returns or continuous endogenous technical progress undermining the scarcity of land, real wages might *continually* rise with growing stocks of capital and constant rates of profit, which means workers and capitalists together *continually* gain from growth. Certainly, there are passages, as Professor Hollander points out in his *THE ECONOMICS OF THOMAS ROBERT MALTHUS*, where Malthus stresses that the approach to unchanging real wages and unchanging real stocks of capital and unchanging real stock prices of land might take a long time and where necessity may be the mother of invention.⁶ That is, however, not the same thing as postulating exogenous or endogenous technical progress so that steady state growth in real wages and real prices of land with constant profit rates could be conceived. Thus, I do not subscribe to Professor Eltis's interpretation of Malthus of having, in his theory of capital accumulation, a constant rate of exogenous technical progress and a rate of endogenous technical progress being positively related to rates of return to capital above some minimum rate of return.⁷ It is hard for me to see where the steady state characteristics, outlined above, of such assumptions about advances in knowledge are spelled out by Malthus. To assume advances in knowledge, some of which are

⁶ See T. R. Malthus, *PRINCIPLES OF POLITICAL ECONOMY* considered with a view to their practical application (London: John Murray, 1820), reprinted in the Variorum Edition ed. John Pullen, (Cambridge: Cambridge University Press for the Royal Economic Society, 1998) in particular Chapter VII, Section V On Inventions to save Labour, considered as a Stimulus to the Continued Increase of Wealth.

⁷ See W. Eltis, *THE CLASSICAL THEORY OF ECONOMIC GROWTH* (London; Macmillan, 1984), in particular equation 5.7 on p. 169. I am uncertain of Professor Waterman's views on this point. See A. M. C. Waterman, "Malthus, mathematics, and the mythology of coherence", *History of Political Economy*, xxx, Winter 1998, 571-600.

produced by the economic system, which must constantly undermine the scarcity of land and the natural laws so characteristic of classical economics and at the same time not find in Malthus a preeminent awareness of such far-reaching implications, suggests that the assumption of unchanging stocks of knowledge remains a classical and Malthusian preoccupation. Rae's critique of classical economics stands and the limitations of Canon I clearly understood.

Yet, in Malthus, increased savings, particularly reduction in expenditure of rents on luxuries, involved a problem of the transfer of resources from the consumption goods to investment goods sectors. Keynes in *THE GENERAL THEORY* refers to Malthus's argument that excessive savings, by depressing profit rates, might dampen accumulation, whereas a proportionate balance of expansion in unproductive consumption would not impair motives to production and thus prematurely check the progress of wealth.⁸

Malthus did not assume that saving out of (say) rents was automatically invested, rather it depressed profits (and savings?) and consequently accumulation.⁹ The distress of 1815-20, Keynes stresses, was interpreted by Malthus as requiring for its solution increased public works and increased

⁸CWJMK, VII, *THE GENERAL THEORY*, 362, taken from X, 99 from letters from Malthus to Ricardo, July 1821.

⁹Because I have eliminated steady growth with technical progress from this paper, I cannot say that an increase in savings will lower real rates of return and as a consequence capital accumulation and growth. I cannot attribute therefore to Malthus problems with what Joan Robinson calls the Keynesian paradox thrown into the long run, namely increased thriftiness lowers the real net rate of return, the rate of accumulation, technical progress and growth. See J. Robinson, *ESSAYS IN THE THEORY OF ECONOMIC GROWTH* (London: Macmillan, 1962), 48 Mrs. Robinson sets out the crucial problem in endogenous growth theory, the co-determination of rates of growth and rates of return to capital, independent of the overall capital intensity conditions, independent that is of the Cambridge Capital Controversy and the Sraffian interpretation of one commodity models.

consumption by "...landlords and persons of property..." to offset the unfavourable effects on profits and accumulation stemming from the reduction in collective consumptive military expenditures.

Yet, if increased frugality, private or collective, did reduce the net rate of return to capital or profit rate, why did not both investment and consumption increase to resolve the glut problem?

As Professor Hollander has written (177) if "...savings are positively stimulated by the return to capital, $s = f(r)$, reflecting both the motive and ability to save....", then, an increase in savings would lower the rate of return and, as capital increased relative to land, would lead to even more capital intensive techniques of production being employed and lower rates of saving. Was there in Malthus's analysis the canonical classical capital model, where lower real rates of return are supposedly associated with more capital intensive techniques? It is not easy to say but the Malthusian equilibrium to which his system was tending certainly entailed more capital and lower rates of return. If so, the problem of the glut as stated by Malthus must be a short run problem of adjustment of the labour force between consumption and investment goods trades. No doubt such problems could exist but this is not what Keynes was dealing with in *THE GENERAL THEORY*.

In his biographical essay after restating Malthus's argument that to encourage the greatest increase in wealth there had to be some balance between investment and consumption since excess saving would damage motives to capital accumulation and production, Keynes goes on to say

Surely, it was a great fault in Ricardo to fail entirely to see any significance in [Malthus's] line of thought. But Malthus's defect lay in his overlooking entirely the part played by the rate of interest. Twenty years ago I should have retorted to Malthus that the state of affairs he envisages could not occur unless the rate of interest had first fallen to zero. Malthus perceived, as others, what was true; but it is essential to a complete comprehension of why it is true, to explain how an excess of frugality does not bring with it a decline to zero in the rate of

interest.¹⁰

The question Keynes poses is difficult for a classical economist to answer in any other way than to say that, abstracting from any Marshall-Fisher effects in different real and nominal rates of interest, rates of interest must be determined by real net rates of return to capital, abstracting from the fact some trades are riskier than others, a fact well-recognized by classical economics. Then, the rate of profit must adjust to ensure that a glut is but temporary.¹¹ If a general glut did exist, then prices must fall. What prices? Money prices!

The counter to Malthus, if what is contemplated is a general glut, is that all money prices must fall, including wage rates and nominal rentals on capital goods and land through a fall in the stock prices of capital goods and lands. This must be the operation of any metallic standard so free up the money metals such that the excess savings would come to an end or with the banking system eventually so replete with resources that interest rates would fall¹² so that again the excess savings would be eliminated. For one country on (say) the gold standard, the balance of trade would improve to counterbalance the advance effects of the increased savings on the 'motive to production'. One does not, I think, have to rely on 'real balance' effects to offset supposed classical dichotomies to see that if

¹⁰CWJMK, X, 102.

¹¹ If saving takes the form of capital accumulation, then excess savings in Malthus's sense must mean excessive capital accumulation so that rates of return would be driven down. Is there some minimum rate of return below which the motive to accumulation would fall? Why? One could argue there would be some minimum rate savers would require but then would not the excess saving correct itself? Is there any evidence in classical and Malthusian economics that investment and savings would equilibrate at negative rates of interest? If not, the general glut must be a temporary thing, a problem of adjustment. Again, this has little if anything to do with Keynes.

¹²Sometimes called the 'Keynes effect'.

a general glut should set in motion a general fall in prices, the operation of metallic standards, with banking systems seeking to expand loans and deposits as the real value of their reserves grows, or by improvements in the balance of trade, the general glut would eventually be eliminated.

As Hollander points out (in Chapter Thirteen, *Money and Banking*), Malthus did argue that any expansion in the money supply would do little to raise economic activity if (say) new notes were put in the hands of the entrepreneurs, with an expansion of real capital occurring via a forced saving process, because under a convertible system, the ability of the banks to expand their note issue would be sharply restrained. And any expansion with a rise in prices would be offset by balance of trade effects. The equilibrating process under a convertible system works in the other direction: If notes were extracted from entrepreneurs by saving and were returned by savers to the banks, the banks would find re-issue immediately profitable and/or any fall in prices would be offset by balance of trade effects. It was the possibility of inconvertibility that was a bane to Malthus. Why? While it is believed that inconvertibility would unleash the demons of inflation, the theoretical problem, which it is doubtful Malthus understood, is that inconvertibility with fiat money means price level indeterminacy and the failure of the preceding equilibrating arguments to hold.

The Second Canon and Technical Advance

What is involved with technical progress or advances in knowledge, however, is the realization that the efficiency gains resulting from moving to a system of inconvertibility exist. That is, it is both privately and socially profitable to switch to fiat money without a base. What is involved as Edgeworth¹³

¹³F.Y. Edgeworth, "The mathematical theory of banking", Journal of the Royal Statistical Society, LI, 1888, 113-27.

and following him, Wicksell¹⁴ pointed out, is that banking develops, via clearing arrangements, to a point where reserves have shrunk to zero and a pure credit economy emerges. What to Wicksell was a theoretical possibility became to Keynes in *A TREATISE ON MONEY* a possible state of affairs to which our world today of reserve-less central banking attests. No matter how small, if monetary metals play some reserve role and bank notes (and deposits) are redeemable at any unchanged prices, then the monetary canon of classical orthodoxy holds. (Of course the empirical reality of the canon, like all 'real' balance effects, becomes truly monastic.)

Unemployment equilibrium is an impossibility in classical economics, which is surely the outcome of the Malthus-Ricardo debate. It was Malthus's failure, as Keynes notes, to deal with the monetary aspects which separates Malthus from Keynes.¹⁵ Once it is realized, as I claim Keynes did¹⁶, that the existence of base money was otiose, then the money prices of commodities must be determined in an endogenous or discretionary way. What really is the base of the monetary system is not gold or central bank notes but rather the conduct of monetary policy by the Central Bank. All this was in the *Treatise*.¹⁷

¹⁴ K. Wicksell, *INTEREST AND PRICES* Translated by R. F. Kahn (London; Macmillan, 1936)

¹⁵This is, as I understand him, the final conclusion of Kates on the Malthus-Keynes connection. See the Symposium, 'Say's Law Revisited' organized by Steven Kates, in the *Eastern Economic Journal*, XXIII, Spring 1997, 191-239, though the importance of money is not stressed in his "Keynes, Say's law and the theory of the business cycle", *History of Economics Review*, xxv, Winter-Summer 1996, 119-126. Nor is the importance of money stressed by Waterman. See A. M. C. Waterman, "Reappraisal of "Malthus the Economist", 1933-97", *History of Political Economy*, xxx, Summer 1998, 293-334

¹⁶Thomas K. Rymes, "Keynes and anchorless banking", *Journal of the History of Economic Thought*, XX, 1998, 71-82.

¹⁷Though I take a different slant, Rutherford's claim that it was the Keynes of the *TREATISE* who is relevant in a comparison of him and Malthus is well founded. See R.P. Rutherford "Malthus and

In Keynes's version of a competitive pure credit economy, that is, 'the banana plantation parable', it is real events which determine the price level which essentially from a monetary viewpoint is indeterminate. I attach greater significance to the plantation parable than does Professor Rutherford because it is Keynes's monetary theory in its purest form. The Central Bank operates on the price level by affecting the supply of central bank liquidity services — not money — by operating on Bank Rate. What this entails, however, is the Keynesian theoretical innovation, namely, that the rate of interest, and therefore, the real rate of return to capital, cannot be determined independently of the supply of liquidity services, required in a world of Keynesian uncertainty, by the Central Bank. The second of the canons of classical economics falls to the ground in the sense that the information or technical knowledge which is pertinent to a monetary economy is incomplete and endogenous, a fact partly but importantly calling for the existence of a Central Bank.

Conclusion

The two canons of classical economics, which were embraced by Malthus are: (i) commodity wage rates and real net rates of return to capital run up against the inelasticity in the supply of natural agents with given stocks of knowledge and (ii) money prices are set by money stocks which if gold is one part of the given natural agents. (If the money stock is bank notes they are set exogenously by adherence of Central Banks to gold standards rules so that these values are also determined indirectly by the natural agents.) The central Canon in classical economics was the fixity of nature and knowledge. Thrift and capital accumulation undermined natural scarcity but given the assumptions about knowledge could not

Keynes", Oxford Economic Papers, XXXIX, March 1987, 175-89.

undermine it in a perpetual way. Bank notes might be over issued but, if convertibility applied, Hume's 'poverty, beggary and sloth' would be avoided. Money rates of interest could be lowered but only inflation would result in the long run if such rates lay below real net rates of return to capital (In our day, we say monetary policy cannot affect real rates of interest — a direct contradiction to the theory Keynes offered in his TREATISE and GENERAL THEORY.)

Like Professor Hollander, I think Kates overstates his claim that Keynes's theory of effective demand is to be found in Malthus because, as Keynes himself states, the problem is about money rates of interest and satisfactory theorizing about them is simply not found in Malthus. Fundamentally, Keynesian uncertainty, the disjointing effects of which are soothed but never resolved by the supply of liquidity services by Central Banks, is continually in existence in the short run and the long run.¹⁸ Malthus's emphasis, in Keynes's interpretation, on the short run is consistent with Keynes's views¹⁹ on knowledge. There can be no doubt, however, that Malthus and Ricardo adhered to long run economic analysis where the turbulent uncertainty associated with the ever changing facets of incompleteable knowledge was set aside. It would not be possible to understand Keynes's criticism of Malthus, of not having a theory of the money rate of interest necessary to maintain effective demand and to offset a permanent general glut without basing it on Keynes's abandonment of the fundamental canon of classical economics, that knowledge was given and incompleteable. Keynes broke with classical

¹⁸Colin Rogers, "Existence of a monetary long-period unemployment equilibrium", eds. G.C. Harcourt and P.A. Riach, A 'SECOND EDITION' OF THE GENERAL THEORY (London: Routledge, 1997).

¹⁹ Good accounts of Keynes's views of incompleteable knowledge are Bradley W. Bateman, KEYNES'S UNCERTAIN REVOLUTION (Ann Arbor: University of Michigan Press, 1996) and eds. S. Dow and J. Hillard, KEYNES, KNOWLEDGE AND UNCERTAINTY (Aldershot: Elgar, 1995)

economics by dealing with uncertainty.

This is Keynes's canonical break with classical economics and is why Keynes's emphasis on money and monetary institutions is so pre-eminent compared with classical economics. It is certainly wrong to attribute this break to Malthus as well --- Keynes did not, I think, make this mistake.

Conjectural Postscript

If landowners (actual or potential) should save in an endeavour to hold land (rather than capital) for liquidity purposes, then Keynes may have thought about providing a land-'monetary' theoretic basis for Malthus's theory of general gluts. Keynes says (CWJMK, VII, THE GENERAL THEORY, 241-2)

There is, clearly, no absolute standard of 'liquidity' but merely a scale of liquidity — a varying premium of which account has to be taken, in addition to the yield of use and the carrying-costs, in estimating the comparative attractions of holding different forms of wealth. The conception of what contributes to 'liquidity' is a partly vague one, changing from time to time and depending on social practices and institutions. The order of preference in the minds of owners of wealth in which at any given time they express their feelings about liquidity is, however, definite and is all we require for our analysis of the behaviour of the economic system.

It may be that in certain historic environments the possession of land has been characterized by a high liquidity-premium in the minds of owners of wealth; and since land resembles money in that its elasticities of production and substitution may be very low, it is conceivable that there have been occasions in history in which the desire to hold land has played the same role in keeping up the rate of interest at too high a level which money has played in recent times. It is difficult to trace this influence quantitatively owing to the absence of a forward price for land in terms of itself which is strictly comparable with the rate of interest on a money debt. We have, however, something which has, at times, been closely analogous, in the shape of high rates of interest on mortgages. The high rates of interest from mortgages on land, often exceeding the probable net yield from cultivating the land, have been a familiar feature of many agricultural economies. Usury laws have been directed primarily against encumbrances of this character. And rightly so. For in earlier social organization where long-term bonds in the modern sense were non-existent, the competition of a high interest-rate on mortgages may well have had the same effect in retarding the growth of wealth from current investment in newly produced capital-assets, as high interest rates on long-term debts have had in more recent times.

That the world after several millennia of steady individual saving, is so poor as it is in accumulated capital-assets, is to be explained, in my opinion, neither by the improvident propensities of mankind, nor even by the destruction of war, but by the high liquidity-premiums formerly attaching to the ownership of land and now attaching to money. I differ in this from the older view as expressed by Marshall with an unusual dogmatic force in his *Principles of Economics*, p. 581

Everyone is aware that the accumulation of wealth is held in check, and the rate of interest so far sustained, by the preference which the great mass of humanity for present over deferred gratifications, or, in other words, by their unwillingness to `wait`.

Yet, as Lerner²⁰ pointed out, an increased demand for land for liquidity purposes should drive up the consumption good price of land until the real rate of return on land, adjusted for the liquidity premium, would equal the real rate of return on capital so that, if saving were maintained, capital accumulation would be maintained.

[Of course, the same argument would seem to apply to gold or fiat money. An increased demand to hold money would lower money prices of consumption goods and increase `real` money balances until the liquidity premium adjusted rate of return on money would equal the real rate of return on capital so maintaining again capital accumulation. In the two cases, if land-wealth or money-wealth becomes high enough, savings will be reduced and consumption increased. The Malthusian glut problem and the Keynesian unemployment equilibrium problem vanish.]

One can argue, as Robinson did, that there may be times when lending to impecunious landlords by erstwhile owners of capital may be less risky than investment, a phenomenon which may limit capital accumulation. She did not, I think, attach much significance to this argument and ,

²⁰ Abba P. Lerner, "The essential properties of interest and money", Quarterly Journal of Economics, reprinted in his *ESSAYS IN ECONOMIC ANALYSIS* (London: Macmillan, 1953), 375.

in general, argued that when Keynes was writing Chapter 17, he was “...groping for ideas that were new to him, and I do not think that he ever quite succeeded in seizing them.”²¹

It is meaningless to attempt to rescue Keynes’s conjecture in a world where, with the assumption of unchanging technology or steadily Harrod land augmenting technical progress, land is held as wealth across overlapping generations with positive time preference. Samuelson carefully demonstrates in such a world that an increase in the supply of land, if it lowers the marginal product of land and leads entrepreneurs to hire proportionately more of it, then the increase in the ‘demand’ for land per person will raise the rate of interest if the desired supply of land per person for wealth holding purposes with respect to the rate of interest does not behave perversely.²²

Yet in Samuelson’s own analysis, which is concerned with the effects on the rate of interest of the supply of land, an increased desire to hold land for wealth purposes (again neglecting perversities) will lead to a lower rate of interest, contrary to Keynes’s result.

Once liquidity preference is expressed over land, gold or even fiat money, the Lerner-Robinson structures against Keynes’s conjecture hold. Keynesian support for the Malthusian glut stems not from the holding of land, gold or fiat money for liquidity needs but from the fact that the sources of liquidity are attached not so much to a money but are produced by the services of the private financial intermediaries

²¹ Joan Robinson, “Own rates of interest”, *Economic Journal*, reprinted in her *COLLECTED ECONOMIC PAPERS, III* (Oxford: Blackwell, 1965), 138. I think that Mrs. Robinson believed that Keynes’s conception of liquidity preference as part of the explanation of the level of the rate of interest pertained only to short-period considerations.

²²Paul A. Samuelson, ‘Land and the rate of interest’, eds. H.I. Greenfield et al., *THEORY FOR ECONOMIC EFFICIENCY: Essays in the Honor of Abba P. Lerner* (Cambridge, MS: The MIT Press, 1979.)

and the central banks under whose control the private intermediaries operate. The general level of prices is not determined fundamentally by the stock of money. Nor is it that money is endogenous, which would seem to undermine the second classical Canon embraced by Malthus. It is rather that the services of liquidity, essential in a world of uncertainty but undefined in the classical world, are produced privately and collectively through banks and central banks, with such services always playing a role in the maintenance of effective demand. It is not surprising that, since he could see no role for central banks, Malthus was, as Professor Hollander notes, led to advocate the abolition of the Bank of England in favour of a more laissez-faire banking system such as the American one based strictly on convertibility²³.

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²³ Samuel Hollander, *THE ECONOMICS OF THOMAS ROBERT MALTHUS* (Toronto: University of Toronto Press, 1997), 676.