1994

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Citation of this paper:
RESEARCH REPORT 9408

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April 1994

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ROBERTSON IN THE 1920S*

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David Laidler

*An earlier draft of this paper was presented at the second HERMES min-conference on the History of Economic Thought, held at York University on April 15, 1994, and to the Economic History and History of Thought Workshop at the University of Western Ontario. I am grateful to Avi Cohen, Peter Howitt, Susan Howson, Paul Mizen, Donald Moggridge, John Presley, Neil Quigley, Tom Rymes and John Smithin for useful comments. I am particularly grateful to Moggridge for drawing my attention to the extent to which Robertson’s evidence to the Macmillan Committee clarifies his views on public works and commodity buffer stocks. This paper forms part of a broader study of the development of macroeconomics in the inter-war period which is being carried out with the much appreciated financial support of the Lynde and Harry Bradley Foundation.
INTRODUCTION

In his Introduction to the first edition of Hayek's *Prices and Production* Lionel Robbins was, as elsewhere in his writings of that time, rather disparaging about the efforts of his British contemporaries to understand the cycle. He made an exception of one work, however, Dennis Holme Robertson’s *Banking Policy and the Price Level* (1926) (Robbins, 1931, p. XI). Though Robbins did not explicitly say so, certain elements of Robertson’s analysis had strong affinities with Austrian work, not least Hayek’s, even though it had been developed, according to Robertson’s own later account, (Robertson 1949) at a time when he was unaware of the work of "Wicksell or Schumpeter, Mises or Hahn." (1949, p. vii). Robertson’s work was a good deal more eclectic than Hayek’s and lacked what we would now call explicitly worked out micro-foundations such as Hayek had found in Walrasian general equilibrium analysis and Austrian capital theory. Even so, Chapters V and VI of *Banking Policy and the Price Level* present a subtle and varied treatment of the phenomenon of forced saving and its role in cyclical fluctuations, anticipating much of what Hayek was to say about these matters in *Prices and Production*, so much so, indeed, that this aspect of Robertson’s work, taken by itself, would amply justify describing him as almost an Austrian.1

Robertson’s policy positions, however were so different from those taken by Mises, Hayek, Robbins et al. as to render any such characterisation utterly inappropriate. Where the Austrians were later to argue that attempts to cure unemployment by expansionary policies, either monetary or fiscal, were bound to be self defeating, so that the only way to deal with depression was to wait it out, Robertson was pragmatic and eclectic, finding room for both monetary and fiscal counter-cyclical measures. Moreover, this sharp divergence of Robertson’s policy views from those later defended by Hayek, Robbins et al. do stem from differences between their positive analyses, even though these differences might appear, at first sight, rather minor.
In the following pages, I shall develop the above arguments in more detail, and I shall suggest that the similarities between Robertson's positive analysis and Austrian theory are important for our understanding of the evolution of macroeconomics in the 1920s and 1930s. Robertson's cycle theory was developed independently of the Austrians, and *Banking Policy and the Price Level* was published earlier than their key works. Moreover, that book was the result of close collaboration with Keynes. These facts imply that the charges of misplaced originality stemming from ignorance of the German language literature, often levelled at the Cambridge economists in the early 1930s, were largely beside the point. Robertson and Keynes were, no doubt, not as well informed as they should have been about the ideas of some of their continental contemporaries, but their ignorance was essentially irrelevant for the subsequent progress of their work, for the simple reason that they had developed many of the same ideas for themselves by 1930 well before Hayek appeared upon the British scene in 1931.

**THE REAL ELEMENT IN ROBERTSON'S CYCLE THEORY.**

*Banking Policy and the Price Level* was not an isolated and obscure work. It represented an attempt to extend a line of enquiry that Robertson had begun in 1915 with his *Study of Industrial Fluctuations*, and

"... to interweave with the mainly "non-monetary" argument of that work a discussion of the relation between saving, credit creation and capital growth ... a subject of whose difficulty I had become acutely aware in attempting to give an elementary account of the nature of banking in my book *Money* (1922)." (1949, p.vii)

The essential results of that attempt were presented by Robertson not only in this 1926 book, but
also in a lecture delivered at the London School of Economics in February of 1928, which was published later that year in *Economica* under the title "Theories of Banking Policy" (Robertson 1928b). Those same results were also incorporated into the third edition of his above-mentioned primer on *Money* (Robertson 1928a) which had already become, and was to remain for another two decades, a standard text on the subject. Some of them were also set out, (with due attribution) by Marshall’s successor Arthur C. Pigou in his (1927) *Industrial Fluctuations* (cf. in particular pp. 253 et seq.). Moreover, as Robertson noted at the time,

"I have had so many discussion with Mr. J. M. Keynes on the subject matter of Chapters V and VI, and have rewritten them so drastically at his suggestion, that I think neither of us now knows how much of the ideas therein contained is his and how much is mine." (1926, p. 5)

In short, in the late 1920s, Robertson’s work on the cycle occupied a prominent and highly visible place in the English language literature dealing with the subject.

Robertson’s (1915) *Study of Industrial Fluctuations* . . . had made a considerable break with earlier Cambridge treatments of the cycle in treating it as fundamentally a "real" phenomenon. Swings in output, rather than prices, were there said to be its principal feature, and their causes too were sought in the real economy. Money made its first appearance, as a complicating factor in the story, on page 206 of a book of but 253 pages. Under the acknowledged influence of Aftalion (1913), (See, (1926) p.5) for Robertson was by no means totally ignorant of continental literature, his 1915 analysis of the cycle focused on indivisibilities in investment projects, the fact that they take time to complete, and their durability once completed, as crucial factors in ensuring that the economy’s response to various discontinuous "real" shocks would inevitably be cyclical. Such shocks could arise on the supply side of the economy -
"...one form in particular of lowered costs... seems to be of considerable importance both in inducing immediate prosperity and in stimulating the over-investment which sows the seeds of future depression; and that is a lowering of costs due to invention" (1915, p. 66)

though "...the course of events is in many cases impossible to explain completely without recourse to the hypothesis of a change in demand" (1915, p. 69).³

Like Schumpeter (1912) and indeed Wicksell (1907), Robertson thus based much of his 1915 argument on the idea that some fluctuations in output about its trend were integral to economic growth and were therefore, to use his adjective, "appropriate"; and considerable enthusiasm for cyclical fluctuations as necessary characteristics of economic progress would also mark his 1926 study. Typically such appropriate fluctuations would involve bursts of investment in durable capital whose long gestation period and durability explained why their output varied with greater amplitude than that of consumption goods. Robertson nevertheless argued that, desirable though they may be, periods of relatively rapid expansion were all too likely to end in "overinvestment", a state of affairs in which

"... unless and until the consumable goods created by the new instruments appear in sufficient quantities. ... it will be physically impossible for the investment in construction goods to be maintained on the scale on which it has begun. The fundamental cause in such circumstances of the collapse of constructional enterprise is... the scarcity of real capital available for investment" (1915, p. 171)

Once we understand that the phrase "real capital" refers here to the working capital necessary to satisfy the consumption demands of the workers engaged in completing fixed investment projects, the essential similarity between this argument and the diagnosis offered by later Austrian analysis
of the "crisis" phase of the cycle will be evident. Robertson’s more general observation that "The fundamental meaning of over-investment is failure to attain the ideal distribution of the community’s income of consumable goods through time." (1915, p. 180) also has a strong Austrian flavour to it; but he did not then squarely address the question which anyone familiar with later Austrian analysis (e.g. Hayek, 1929) would naturally pose: namely, how it could come about, as he put it, that "... the temptation to over-investment may involve a general rupture between the sacrifice involved in postponing consumption and the future satisfaction procured by that sacrifice" (1915 p. 200) rather than simply inducing a rise in the rate of interest which would remove the temptation in question before it led to any such rupture.

The answer usually given to this question in the literature of the inter-war years, a far from uniquely Austrian answer of course, is to be found in the operation of the monetary system. 4 In 1915, however, Robertson associated the monetary element in cycle theory with the hypothesis that monetary impulses were the primary (even the only) cause of fluctuations. He seems not to have appreciated that, even if the impulses leading to over-investment originated elsewhere - in technical change, for example - the banking system still might have a vital role to play in permitting them to dislocate saving and investment. Robertson’s neglect of this possibility is surprising, because the view that the monetary system played an all important permissive, and frequently amplifying, role in the cycle, was a well established conclusion of pre-World-War-1 Cambridge analysis, not least that contained in Pigou’s (1912) Wealth and Welfare. This book was, by Robertson’s own (1949) account, "in my hands" when A Study of Industrial Fluctuations was written, but it is evident that he had not fully digested it.

Towards the end of that book, Robertson noted with satisfaction that

"The fact that our long, complicated, and perhaps not unfruitful discussion has
been conducted so far almost entirely without reference to specifically monetary phenomena relieves us of the necessity of a formal refutation of those who, like Clement Juglar and Mr. Hawtrey, find in monetary influences the sole and sufficient explanation of industrial fluctuations." (1915, p. 211)

but he did not also note that this same lack of reference to monetary phenomena left the discussion in question crucially incomplete. It is hard to resist the conclusion that, at this early stage of his career, Robertson’s grasp of monetary economics was relatively superficial. Indeed, his uncertain handling of some topics in the first edition (1922) of Money, and his total neglect of others - notably the whole Cambridge cash balance approach to the quantity theory, which had received an extensive exposition in Wealth and Welfare even before Pigou published his definitive version of it in 1917 - suggests that this particular deficiency was not completely removed until his collaboration with Keynes in developing the analysis which was to appear in Banking Policy and the Price Level (1926). The very title of this second book reflects a major change of emphasis in Robertson’s thinking.

THE MONETARY SYSTEM AND FORCED SAVING

As Robertson told his readers, four of the six substantive chapters of Banking Policy and the Price Level, "...II, III, IV, and VII are in large part a restatement and development of part of the analytic framework of [A] Study of Industrial Fluctuations" (1926, p.5). The restatement in question is highly condensed and, more important, the material is presented in a different order too. The notion that the very process of economic development is likely to lead to "Appropriate Fluctuations of Output", the major original theme of the earlier work, is restated at the outset (in Ch. II, which bears the phrase as its title), but now, and in contrast to the structure of his 1915
argument, an account of "The Wage and Money Systems" (Ch. III) precedes Robertson's discussion of "Inappropriate Fluctuations in Output." (Ch.IV). As in the earlier book, he draws attention to the tendency of money wages to lag behind prices over the course of the cycle, and hence to induce countercyclical changes in real wages, and to the tendency of "...these changes [to] exert the same influence on the output policy of the employer as though they were ... changes in real cost..." (1926 p. 21); and, again as in the earlier book, he expresses serious doubts about the universal desirability of stabilising prices and with them the cycle.

"I do not feel confident that a policy which, in the pursuit of stability of prices, output and employment, had nipped in the bud the English railway boom of the fifties, or the American railway boom of 1869-71, or the German electrical boom of the nineties, would have been on the balance beneficial to the populations concerned." (1926, p. 22)

This was to remain a constant theme in Robertson's subsequent writing too, even after the publication of the General Theory (cf. e.g. 1936, 1937).

Banking Policy and the Price Level, makes it clear, as Industrial Fluctuations had not, that, in Robertson's view, the monetary system had much to do with what he took to be an unarguable fact, namely that "... actual fluctuation in industrial output tend greatly to exceed the rational or appropriate fluctuations hitherto examined" (1926, p. 34, italics in original), and that monetary policy has a key role to play in dealing with its consequences as well.

"The aim of monetary policy should not be to prevent all fluctuations of the general price-level, but to permit those which are necessary to the establishment of appropriate alterations in output and to repress those which tend to carry the alterations in output beyond the appropriate point. The importance of this distinction
will become still plainer when we come to examine more closely the time-element in production and the nature of a modern monetary system. To that task we must now turn" (1926, p.38, italics in original)

The two chapters (V. "The Kinds of Saving", and VI. "Short Lacking in the Trade Cycle") which immediately follow this statement have no counter-part in Industrial Fluctuations; they are the most original in Banking Policy and the Price Level; and they are also the ones to which Robertson explicitly referred when he remarked that ". . . neither of us [himself and Keynes] now knows how much of the ideas contained therein is his and how much mine". (1926, p. 5). They develop an analysis of forced saving which anticipates many of the results later to be found in Hayek’s Prices and Production, and which, in certain respects, goes beyond anything to be found in that later work. As we shall see in due course, moreover, those very aspects of Robertson’s analysis which depart from the Austrian treatment of forced saving are an important part of the underpinning of his much more pragmatic policy views.

The most immediately striking, and least attractive feature of the treatment of the role of the monetary system in affecting the inter-temporal allocation of resources in Banking Policy and the Price Level is the idiosyncratic vocabulary which Robertson uses: - "lacking" instead of "saving", "spontaneous and automatic lacking" for voluntary and forced saving, "real hoarding" for the quantity of real balances demanded, and so on. His slightly later and less detailed accounts of that analysis (1928 a & b), however, revert to conventional usage and are a good deal more approachable.

Robertson began, as Hayek was later to do, from the institutional fact, relevant to the Britain of his day - but less so to the United States as Robertson explicitly noted (1928b, p.42) - that the deposit liabilities of commercial banks represent the liability side of a balance sheet which displays,
as its principal asset, short term commercial loans. Hence one role played by the banks was to co-ordinate, or to fail to co-ordinate, the short term saving of the public ("short lacking") with the business community's demand for working capital. But the banking system also created, as a by-product of its lending, deposits that nevertheless functioned as means of exchange - "chequerings" in the colourful language of Money (1928a). It was, therefore, more than a simple intermediary between willing savers and investors. In particular, by making loans and placing newly created money in the hands of firms, it enables them to carry out their investment plans by bidding resources away from the consumption goods industries, by imposing forced saving - "automatic lackings" in the eccentric terminology of Banking Policy and the Price Level - upon households. As Robertson put it, when new bank credit was created, "The "saving" which [the public] do is done under-duress; and unlike ordinary saving it gives rise to no new fund of value in their possession which they can draw upon if they feel inclined to be extravagant at some future date." (1928a p. 92). This insight is exactly the same as that to be found in Austrian analysis.

Like the Austrians too, though Robertson usually associated forced saving with inflation, he was well aware that it could be imposed by the money creation necessary to hold the price level stable in a growing economy. And yet again like the Austrians, the example he chose to illustrate this phenomenon (in 1928b) was the contemporary United States, where, he remarked, "In so far as the Federal System [sic] has not gone all out for stabilising the price of labour, it can not, I think, be wholly absolved from the charge of having burgled from the public in these years of rapidly advancing productivity" (pp. 39-40, italics in original). Robertson did not go on to forecast an inevitable crisis in the United States, as would the Austrians on the basis of a similar interpretation of the evidence (cf. Robbins, 1931, p. xii) though he was clearly uneasy: ". . . if that great country should ever become even temporarily saturated with fifty story buildings and motor
cars, can we be certain that any purely monetary policy would meet the needs of the situation" (p. 41, italics in original).

INDUCED LACKING AND INTER-TEMPORAL CO-ORDINATION

In contrast to Hayek (1931), Robertson did not regard forced saving as an inevitable harbinger of economic crisis. A particular feature of his analysis of its mechanics, which differentiates it from the Austrian approach, prevented him going that far: namely, an equilibrating mechanism acting on saving which permitted the process to continue indefinitely. This mechanism, which Robertson called "induced lacking", amounted to an extension of the analysis of the inflation tax which Keynes had developed in the Tract on Monetary Reform (Keynes 1923); and indeed, Robertson drew explicit attention in his (1949) Preface to the footnote acknowledgement on p. 50 of the original that "Induced Lacking belongs to Mr. Keynes". In (1926) Robertson defined the concept as follows:

"Induced Lacking occurs when, the same process that imposes Automatic Lacking on certain people having also reduced the real value of their money stocks, these people hold money off the market, and refrain from consuming the full value of their current output, in order to bring the real value of their money stocks up again to what they regard as an appropriate level. Thus Induced Lacking differs from Automatic Lacking in being voluntary and designed; but it resembles it, and differs from Spontaneous Lacking, in being the direct result of an increase in the stream of money directed onto the market." (1926, p. 49)

To put it in modern terms, to the extent that an inflation tax was being extracted by this mechanism, it was levied by the banks and its proceeds transferred to the business community: and
such a transfer could continue indefinitely. Austrian analysis, particularly in the hands of Mises (1912, 1924), had made use of the Cambridge cash-balance approach to the quantity theory, but he had not considered this implication of the idea; and when Alvin Hansen and Herbert Tout (1933) later deployed a version of it in a critique of Prices and Production, Hayek attempted to counter them by arguing (erroneously in my view) that continuously rising, and hence unsustainable, inflation would be required to keep such a process going.\textsuperscript{12} That such an equilibrating mechanism could exist as an integral part of the process of forced saving and permit the monetary authorities permanently to change real variables by way of policy, while the economy continued at full employment, was always to be anathema to the Austrians.

Be that as it may, and here we have another contrast with the Austrians, Robertson simply did not believe that market mechanisms would always be capable of co-ordinating saving and investment in the absence of a banking system capable of imposing forced saving on the system:

"...the fundamental feature of the upward swing of a trade cycle is a large and discontinuous increase in the demand for Short Lacking [working capital], occurring as the essential preliminary to an expansion of output 'justified' for one or more of the reasons set out in Chapter II ...the supply of Short Lacking is not sufficiently elastic to cope with such pronounced, and discontinuous increases in demand, and ... the responsibility for meeting them rests almost entirely upon the banking system" (1926, pp. 71-72)

Hence, it was his opinion, always delicately put - in (1928b) he referred to it as "my own private heresy" - but rather frequently repeated, that "I am not sure that a little forced saving now and again may not be the necessary price we have to pay for what we call progress" (1928b. p. 40). No-one who took seriously that particular combination of Walrasian general equilibrium analysis and Austrian capital theory which was to form what we would now call the "microfoundations" of
Hayek's cycle theory could hardly have subscribed to this heresy, but in 1928 of course, Robertson, like virtually all of his British contemporaries, was at best only dimly aware of these ideas.\textsuperscript{13}

Perhaps it was also general skepticism about the reliability of market mechanisms that caused Robertson to pay more attention than did the Austrians to the potential effects of variations in velocity on the inter-temporal allocation of resources. Hayek certainly understood that his policy recommendation that the quantity of nominal money should be held constant, in order to prevent the occurrence of any forced saving, had in practice to be modified to one of stabilising the rate of flow of nominal expenditure in order to cope with variations in velocity. He was, however, to treat this qualification almost as an afterthought in \textit{Prices and Production}, where all the basic theoretical results are derived on an explicit simplifying assumption of constancy in the \textit{transactions} velocity of circulation.\textsuperscript{14} Robertson, on the other hand, developed around the same point an elaborate analysis of a phenomenon which, in (1926), he called "abortive lacking", and of the monetary policy needed to offset it.

An increase in the public's demand for real balances, a fall in velocity, would, Robertson noted, cause the price level to fall, and enable money holders to acquire a greater command over goods in the form of money. However, he took it that such actions would stem, not from a desire on the part of agents to hold larger stocks of means of exchange, but from a desire to command more goods in future, that is to hold more money as a store of value pure and simple. He therefore went on to note that agents' attempts to save by adding to their cash balances would not automatically result in provision for the production of more future goods.\textsuperscript{15} If the nominal volume of bank deposits remained constant, and agents' attempts to build up their money holdings caused them to obtain extra real balances through a fall in the price level,

"... they have achieved this object without any of the usual inconvenience of
saving—without being obliged to refrain from the consumption of any desirable goods and services. . . . The intended thrift of the public has all gone to waste, and failed to benefit trade and industry in any way.

Now suppose in these circumstances the bank adds to its loans in such wise that the increased demand of those to whom the new loans are made just balances the reduced demand of the thrift-smitten depositors, and so prevents shopkeepers from lowering prices. If it acts in this way the bank will be acting not as an oppressor but as a benefactor; it will not be imposing unsought burdens on the public, but merely enabling their thrifty intentions to bear fruit." (1928a, p. 95)

The importance which Robertson attached to this analysis can be gauged from the fact that he devoted the first substantive section of his (1931) "evidence in chief" to the Macmillan Committee to expounding it, and from the fact that he there derived from it a proposal to set differential reserve requirements against deposit accounts (time deposits) and current accounts (demand deposits) in keeping with American practice. In his view, echoed by Pigou in his evidence to the same committee (Pigou 1931), a desire by the public to hold increasing savings in the form of bank liabilities would tend to be concentrated on deposit accounts, and a lower reserve ratio for those would encourage the banks to increase their nominal supply in response.16

Now it is his treatment of "induced lacking" that most strongly differentiates Robertson’s analysis of forced saving from that of Mises, Hayek and Robbins; and induced lacking is, as I have already noted, of particular significance, because it deals with a mechanism that robs forced saving of the inevitably destructive power that Austrian analysis accorded it.17 It should be stressed, nevertheless, that for Robertson, unlike the Austrians, the capacity of forced saving to dislocate saving and investment was not the sole explanation of the cycle. In his view it was but one,
sometimes important, feature of a complex phenomenon with multiple causes. In particular, where the Austrians believed that, in the absence of forced saving, market mechanisms would always perfectly co-ordinate the inter-temporal allocation of resources, Robertson did not. We have already seen evidence of this in his "private heresy" that a little inflation might be desirable to provide working capital at the peak of an innovation-induced cycle; but his scepticism was more pervasive than that.

Robertson's older Cambridge colleagues, Pigou and Frederick Lavington, had taken it for granted that steady secular growth was a desirable norm for the economy, and that is one reason why he took particular pains to show that, even under ideal conditions, some fluctuations in output would still be, to use his adjective, "appropriate". As he put it, "I do not think it is even nearly true that if all businessmen always made, and acted upon, true judgements about their own self interest, industrial fluctuations of a fairly rhythmical character would disappear." (1926, p.3) But Robertson was at one with Lavington and Pigou, and indeed Marshall for that matter, in doubting that "businessmen always made and acted upon true judgements about their own self-interest". He believed, as did his Cambridge colleagues, that businessmen as a group were prone to waves of "error" (i.e. excessive optimism and pessimism) about the future profitability of investment, and he therefore doubted, as did they, and as the Austrians did not, the capacity of market mechanisms to cope with inter-temporal co-ordination problems even in the absence of monetary disturbances. For that reason Robertson took a pragmatic (and very un-Austrian) view of the scope for activist counter-cyclical monetary policy. It was the Lavington-Pigou "psychological" theory of cyclical impulses that he had in mind when he remarked that

"My differences with the dominant schools of thought are therefore partly differences of analysis and partly differences of emphasis. But I am anxious not to
overstate these differences, and I have tried at appropriate points of my argument to indicate, even though briefly, my appreciation of the importance of Error, and of the partial Remediability of Error by monetary manipulation" (1926, p. 3)

COUNTER-CYCLICAL POLICY

It is quite clear that Robertson's emphasis on the possibility of "appropriate fluctuations" in output led him to doubt neither the ubiquity of "inappropriate fluctuations", nor the desirability of deploying activist monetary policy to eliminating them. He was, nevertheless, somewhat pessimistic about the powers of monetary policy, particularly when it came to inducing the expansion of an already depressed economy. In the 1928 edition of Money, for example, he remarked that "...it is... unlikely that the monetary system will ever be able to cope unaided with a trade slump... as efficiently as with a trade boom. It is likely to require the assistance of a more powerful ally - the Government of the country itself" (1928a, p.178). He then went on to make a case for public works expenditures as a complementary policy.

"What, after all, can be more sensible than that the Central Government should organise a collective demand for telephone equipment, or the local governments a collective demand for municipal lavatories, to take the place of an individual demand for ships or steel rails which has rightly and reasonably fallen temporarily away? If the public's desire to save is increasing so fast, or the processes of manufacture and salesmanship are being speeded up so rapidly, that private industry is left bothered and bewildered as to how to harness the productive forces thus released, what can be more sensible than that the Government, using the monetary system as its handmaiden, should intervene to turn them to good account, instead of
allowing them to leak away in the form of unlooked-for windfalls to some and undeserved ruin to others?" (Robertson, 1928, pp., 178-179)

All this is rather conventional by the standards of British economic thought of the time; though it is worth noting that, in the *Treatise on Money* (1930) Keynes was to be more optimistic about the power of monetary policy than Robertson had been, presenting public works expenditures as a second best counter-cyclical policy, particularly useful in an open economy whose monetary authorities were constrained by adherence to the gold standard and a shortage of reserves. Conventional or not, however, two questions about Robertson’s advocacy of public works expenditures need to be addressed. First, how did he cope with the implications of his own, essentially Austrian, view of the cycle’s upper turning point about the effectiveness of such policies: if the problem was that the private sector had already indulged in overinvestment, how would it help matters to have the public sector continue to do so? And, second, how did he deal with the so called "Treasury view" that public works expenditure would simply crowd out an equal amount of private sector demand, with no net gain in the aggregate?

A partial answer to the first of these questions is to be found, not in *Money* from which the passage advocating public works expenditures quoted above is taken, but in *Banking Policy and the Price Level*, and in Robertson’s evidence to the Macmillan Committee. In the academic monograph, but not in the popular textbook, we do find Robertson expressing doubts about the desirability of attempting to cope with a slump by such policies, if the slump in question was the result of previous overinvestment:

"Heroic schemes of capital development by public authorities, or quasi-public bodies such as railway and liner companies, have their place in the clinics of the trade cycle; but there is some danger of their being applied too early and too
enthusiastically . . . the argument that it is better that shipwrights and steelworkers should make something rather than being paid for making nothing undoubtedly has much force. Even so, however, there is a limit to the extent to which it is wise to promote artificial revival in the constructional trades" (1926. pp. 94-95)

These warnings about promoting an "artificial revival" have a very Austrian ring to them, but they did not lead Robertson, as similar warnings would later lead Hayek and Robbins to advocate inaction on the policy front. He was inclined instead to regard them as merely providing reasons to be cautious about specific projects in specific circumstances, as his Macmillan Committee evidence (1931) makes clear: "Anyone ought to have been able to see in 1920 that the world was so clogged with ships . . . that it would not be a good or sensible use of the Trade Facilities Act to invoke it for the production of new ships." (1931, para. 11) And under questioning by Ernest Bevin, he characterized this example as "... an instance of the fact that an attempt to encourage capital construction, which I advocate, must be used with discretion" (1931, para. 4842).

It is worth nothing that in (1926) and (1931) Robertson combined his warnings about public works programmes with advocacy of a rather more drastic form of state intervention in the marketplace. He suggested that, during the slump and early recovery phase of the cycle, the state might intervene to purchase and build up stocks of wage goods and raw materials with a view to ensuring that the next boom would not be brought to a premature end by a shortage of working capital. Such schemes had, as he noted ". . .been put forward. . . mainly by those who cherish affectionate memories of war time controls" but, as he also noted, "The theoretical case for such suggestions rests on the sound basis that the community, acting as a whole, can afford to take longer views than even the richest individual or private corporation" (1926, p. 97). Such policies, he thought, ". . . might ultimately prove more fruitful in damping down the virulence of the trade
cycle than the once equally heretical, but now perhaps over respectable, policy of ‘public works’. (1926, p. 96)\textsuperscript{20} In short, such doubts as Robertson entertained about public works expenditures seem to have made him more, rather than less, of an interventionist. For him the cycle usually had an element of market failure about it and there was, therefore, a presumption that a properly conceived programme of government intervention, in which public works expenditure had a part to play, was appropriate to counteract that failure.

The so-called "Treasury view" of the futility of public works found its most coherent expression in the writings of Ralph Hawtrey.\textsuperscript{21} In Hawtrey’s version, it suggested that, given the level of money wages, the level of employment depended upon the aggregate rate of flow of money expenditure in the economy, and that, unless an increase in expenditure emanating from one sector - government in this case - could be shown to imply an increase in this aggregate, it should be presumed that it would set in motion an equal reduction in the expenditure of some other sector. Since, according to Hawtrey, ". . . it is only in exceptional circumstances that Government expenditure on public works will itself bring about an increase in velocity" (1929 p. 637), such expenditure would indeed usually be fruitless.

Hawtrey's version of the Treasury view deserves more respect than it is usually given. It did, after all, derive from a simple income-expenditure approach to output determination that identified the level of nominal aggregate demand as the key factor through which any policy designed to increase output and employment would have to operate. Moreover, the fact is that, before 1936, advocates of public works expenditures found it very hard to counter Hawtrey's arguments, and were usually explicit that the success of such policies would be contingent upon their being accompanied by appropriate monetary measures.\textsuperscript{22} Robertson for one was content to bury the monetary aspects of public works expenditures in the admonition that, in implementing
them, the government should use "the monetary system as its handmaid" (1928a p.179); and it is worth noting that, when Richard Kahn (1931) addressed the same issue in his classic article on the employment multiplier effects of public works expenditure, he took exactly the same position, albeit stating it with more precision.

"It is, however, important to realise that the intelligent co-operation of the banking system is being taken for granted. . . . If the increased circulation of notes and the increased demand for working capital that may result from increased employment are made the occasion for a restriction of credit, then any attempt to increase employment . . . may be rendered nugatory" (1931, pp. 174-175)

Such a qualification would have met no opposition from Hawtrey, who would, however, have preferred to interpret the resulting increase in demand as being caused not by public works expenditure per se, but by newly created money. He would have argued, and indeed did argue in a number of places, that an equal amount of money creation, unaccompanied by the government expenditure it was designed to accommodate, would have had the same overall effect on output. The crucial incompleteness of this argument, however, had to await the publication of the General Theory, with its thorough working out of the implications of an interest elastic liquidity preference function, before it became generally apparent.

POSSIBLE INFLUENCES ON ROBERTSON'S ANALYSIS

The claims made in the introduction to this essay about the strong similarities between certain of the analytical aspects of Robertson's cycle theory of the 1920s, and the results published a little later by Hayek and Robbins, not to mention their widely divergent policy views, have now been substantiated. It is well known, and uncontroversial, that the origins of Austrian theory lay in
the attempts of Mises to adapt Wicksell's cumulative process model of secular movements in the price level in the pure credit economy case to the analysis of cyclical phenomena, and that the results of these attempts were first published in the second German edition (1924) of his *Theory of Money and Credit*. But, it has also been noted that Robertson (1949) disclaimed any knowledge of the work of Wicksell and Mises (among others) when he wrote *Banking Policy and the Price Level*. It is an intriguing question, therefore, as to what influences might have set him working along lines so similar to those followed by the Austrians.

The first point to make here is that perhaps Robertson, as well as his teacher and later collaborator Keynes, were not quite so ignorant of Wicksell and Mises as Robertson was later to recall. Wicksell had, after all, published a succinct, but essentially complete exposition of his cumulative process in the *Economic Journal* for 1907, an account which had also been presented to the annual conference of the British Association for the Advancement of Science, at that time a far more important academic event than it has now become. And the first German edition (1912) of Mises *Theory of Money and Credit* was reviewed by none other than Keynes himself in the September 1914 issue of the *Economic Journal*. 23 To be sure, the review was superficial, indeed condescending - "Dr. Mises strikes an outside reader as being the very highly educated pupil of a school, once of great eminence, but now losing its vitality" (p.417); and Mises' first edition contains but a very brief and eclectic account of cycle theory, beneath whose surface the concept of forced saving can be discerned only with the hindsight that comes from having read the much expanded treatment of the same topic in his second (1924) edition. Even so could it really be the case that Keynes failed so much as to mention Mises work to his then pupil Robertson?

Perhaps Robertson had, after all, heard of Wicksell and Mises, while he was Keynes' pupil, but there is still no reason to believe that they made any intellectual impression upon him important
enough that it should have been remembered in 1949, or, more to the point, that it might have influenced him in the early 1920s. Furthermore, the following comment on Tugan-Baranowky, appears in the course of a long review which Robertson published in the March 1914 *Economic Journal* (i.e. six months before Keynes' review of Mises appeared), "If only it had struck him [Tugan-Baranowsky] that the fundamental aspect of the crisis is the failure, not of monetary purchasing power, but of real savings of consumable goods . . ." (1914 p. 84). This is surely evidence enough from the published record that Robertson's ideas on the role of saving in the cycle were already well developed by then; and in any event, *Industrial Fluctuations*, had been completed in its original form as a fellowship dissertation in 1913.24

It seems far more likely that, in the matter of the parallel development of the analysis of forced saving by Robertson and Keynes in England, and Mises and Hayek in Austria, we have an example of that rather widespread phenomenon "multiple discovery", than that the English pair had surreptitiously borrowed ideas from the continental literature. Wicksell, on whose work the Austrians explicitly built, had grounded his work just as firmly and explicitly in the tradition of English Classical monetary economics as had Alfred Marshall in whose footsteps the Cambridge economists were following; and Wicksell was also familiar with Marshall's monetary economics. Furthermore, as Hayek (1932) was later to document, the idea of forced saving had been introduced into classical monetary economics by Jeremy Bentham and Henry Thornton; and though it never occupied a central place in subsequent literature, the idea continued to make frequent appearances. As the following quotation from John Stuart Mill's *Principles* . . . attests, it was also well understood.

"But . . .if the notes are added to the currency, instead of being substituted for the metallic part of it - all holders of currency lose, by the depreciation of its value, the
exact equivalent of what the issuer gains. A tax is virtually levied on them for his benefit. It will be objected by some, that gains are also made by the producers and dealers who, by means of the increased issue, are accommodated with loans. Theirs, however, is not an additional gain, but a portion of that which is reaped by the issuer at the expense of all possessors of money. The profits arising from the contribution levied upon the public, he does not keep to himself, but divides with his customers.” (1871, p. 565)

This passage does not deal with the cycle; it occurs in the context of a discussion of the inflationary effects of inconvertible paper currency. Nor does it deal with what Robertson was to call "induced lacking". But the idea of money creation as a source of revenue analogous to a tax, whose proceeds may be passed on to borrowers by accommodating loan demands with newly created money was obviously completely understood by Mill. Occurring as it does in the most widely read textbook of orthodox Classical economics, this passage and others like it, were available to any creatively intelligent reader to develop further.25 And no-one would suggest that Wicksell, Mises and Hayek on the one hand, and Marshall, Keynes and Robertson, on the other lacked creative intelligence. Is it then all that surprising that the idea of forced saving played a prominent role in the work of both Cambridge and Austrian economists, even at a time when they were only dimly aware of one another’s efforts?

**SOME IMPLICATIONS**

I have described the analysis of forced saving as it appeared in Robertson’s business cycle theory of the 1920s; and I have drawn attention to its striking, though by no means complete, similarity to the theory developed more or less simultaneously, but published somewhat later, by
Austrian theorists, notably Mises and Hayek. It is well known that, in the early 1930s, before the publication of the *General Theory*, Austrian theory made a vigorous bid to become the dominant strand in business cycle analysis, and it is also well known that strong and systematic resistance to this bid emanated from Cambridge in particular. To be sure, Keynes’ *Treatise on Money* was by then the major source of an alternative body of systematic doctrine, and forced saving, and matters having to do with the time structure of production played a peripheral role in the purely theoretical sections of the latter work, which paid far more attention to the economy’s demand side as a source of cyclical variations.26 This emphasis in Keynes analysis marks the beginning of the well known and much documented divergence of his views from those of Robertson. But the emerging analytic differences, which were in due course to help bring their collaboration to an end, did not then (or indeed later) extend in any serious way to matters of policy.

The first implication to follow from all this is quite straightforward: namely, that whatever might have been the Cambridge economists’ reasons for rejecting Austrian theory and its associated policy doctrines, a failure to appreciate its potential importance stemming from ignorance of the literature from which it had developed could not have been one of them. *Banking Policy and the Price Level* contains too much analysis that is similar to the arguments of *Prices and Production*, and was too widely read, for this argument to be remotely credible. The second implication is surely that the differences in analysis that did exist between Robertson and the Austrians were nevertheless crucial when it came to policy matters. If Robertson found the *Treatise on Money* somewhat disappointing, and the *General Theory* even more so, he nevertheless remained a policy activist in what is nowadays, misleadingly, called the Keynesian tradition.

There were also differences between Robertson’s analysis of the 1920s and that of the Austrians. First, as we have seen, for Robertson, not all cyclical fluctuations were undesirable,
and, where they were, forced saving associated with credit creation was only one possible cause. He paid more attention to variations in velocity than did the Austrians, and his relative neglect of "error" on the part of the business community - which would re-emerge as variations in "animal spirits" in Keynes' work - had more to do with the fact that it had already been much discussed by other Cambridge economists than with any belief on Robertson's part that it was unimportant empirically. But these other sources of inappropriate (to use Robertson's adjective) cyclical fluctuations impinged upon the demand side of the economy, and their effects were open to correction by monetary and fiscal policy. Moreover, those problems associated with forced saving were also amenable to monetary policy, at least to the extent that "induced lacking", a phenomenon absent from Austrian theory, provided a mechanism to convert it from a disequilibrium to an equilibrium phenomenon.

In short, where Austrian cycle theory was monocausal, Robertson's was eclectic; and, notwithstanding the emphasis that the Austrians placed on monetary factors, their analysis was inferior to that emanating from Cambridge in its failure to grasp the significance of the cash balance approach to the quantity theory for understanding money creation as a tax on cash balances. These analytic differences underpin the stark contrast between the activist policy agenda that emanated from Cambridge from the mid-1920s onwards, and the laissez-faire nihilism of the Austrians. It is hard to resist the conclusion that it was the Austrians, rather than the Cambridge School, who were the losers from the relative isolation in which the two schools developed their ideas in the 1920s.
ENDNOTES

1. None of this is to claim that Hayek had not made progress on his own part before 1926. An extended footnote (#4, pp. 27-28) to Hayek (1925) sets out his version of the cycle theory sketched out in the second (1924), but not the first (1912) edition of Mises Theory of Money and Credit. It is worth noting that, though Hayek did cite Robertson's book in the first edition of Prices and Production (1931, p. 30) it is as a source of an explanation of the cycle in terms of exogenous real shocks. He does not mention the elaborate analysis of forced savings that the book contains. It is hard not to suspect that, in 1931, Hayek had failed to read Banking Policy and the Price Level through to the end.

2. Indeed Presley (1978 p. 3) goes so far as to suggest that Robertson's Money, and Banking Policy and the Price Level, as well as Keynes' Tract on Monetary Reform (1923) and Treatise on Money are all the result of a collaborative effort between Robertson and Keynes. In (1986) Presley also cites the Keynes-Robertson treatment of "induced lacking" discussed below, as compelling evidence that, by the mid-1920s, those two had understood the mechanics of what was later called the "real balance effect".

3. Goodhart (1992) has argued, with considerable justice, that Robertson's emphasis on shocks to technology was so great as to warrant treating him as an important precursor of what we now call "real business cycle theory". So too was Jevons (1884), of course, and, explicitly following Jevons, Robertson also paid considerable attention to variations in agricultural output as sources of shocks to the demand for industrial output that were capable of leading to the fluctuations in industrial output that formed the subject of his (1915) book.

4. As Hayek put it in (1929, translated 1933) "One instance of these disturbances in the price mechanism, brought about by monetary influences. . . is that putting out of action of the "interest brake" which is taken for granted by the Trade Cycle theories examined above" (p.94).

5. John Hicks (1966, pp.14-15) also comments on the relative weakness of Robertson's grasp of monetary economics at the beginning of the 1920s, and the extent of its strengthening in the course of that decade.

6. Presley (1978, eg, p.16, p.115) notes the essential similarity between Robertson's analysis of forced saving and Hayek's. See, however, fn. 10 below.

7. But he was to revert to his eccentric vocabulary again in 1933, surely one of his least readable articles!

8. The possibility of credit creation fuelling consumer spending is important, since it opens up the possibility that credit creation will not necessarily lead to over-investment and a distorted inter-temporal allocation of resources. Sraffa (1932) was to make this point in refutation of Hayek's claims about the inevitability of a cyclical downturn following any credit creation, and Hayek conceded it in the second edition of Prices and Production. In (1928a) Robertson put the matter as follows: "There is one more expedient at the disposal
of the banks—an expedient, to the Victorian mind, of an even more dubious kind. When you have pumped into the producer all the money he can absorb, you can try it on the consumer as well" (p. 178).

9. It is worth stressing explicitly that to treat bank deposits, not only as a means of exchange, but also a store of value in their own right, and hence as a way of holding savings, was to take a large step towards liquidity preference theory.

10. Though he was careful to note in this case, as the Austrians were not, that this result was only relevant to an economy in which growth stemmed from technical progress, rather than population growth. See fn. 16 below for a further discussion. Presley (1978), in comparing Robertson’s analysis of forced saving with Hayek’s suggests that "Robertson believed that a decrease in the value of money was responsible for forced saving."(p.128) Evidently, this characterisation of Robertson’s views does not do justice to their subtlety.

11. Robertson (1949 p. x) refers his readers to p. 49, where the footnote in question begins, and confirms that this slightly cryptic phrase does indeed mean that it was Keynes who was responsible for the inclusion of induced lacking in Banking Policy and the Price Level. See also Presley (1978, p. 103).

12. Hayek’s reply appeared first in Econometrica (1934) and was then appended to the second edition of Prices and Production. My reasons for disagreeing with the logical validity of Hayek’s predictions of the inevitability of explosively rising inflation are discussed in Laidler (1992).

13. Even so, it is worth noting that Ralph Hawtrey probably the least inclined to micro-theory of Robertson’s important British contemporaries, took him to task on this very point - "Mr. Robertson’s problem of circulating capital is governed by the postulate that short lacking is unprocurable except through the agency of banks. . . . This assumption is erroneous . . ." (1926, pp.432-433).

14. The assumption is not relaxed until p.118 (second edition) of a book whose text runs for less than 150 pages, and as a component of Hayek’s argument that stabilising monetary policies are so difficult that they should not be attempted - " . . . the course of our argument so far underestates rather than overstates the real difficulties." (1936, p. 118)

15. Robertson’s analysis of abortive lacking here bears a strong family resemblance to Keynes’ (1930, I, pp.158-160) celebrated parable of the thrift campaign in the banana plantation. The fact that Robertson treats the desire to hold more money as stemming from a desire to hold more command over future goods is further evidence that there were strong elements of what was to develop into liquidity preference theory in his analysis of this phenomenon. Robertson discussed the relationship between his own and Keynes’ (1930) analysis in (1933). See also fn. 9 above. Note that, (1969) Milton Friedman saw no problem arising from an increased demand for money being met by a fall price level. That is because in Friedman’s analysis the demand for money stems from the services provided by a
"temporary abode of purchasing power", and not from its being a means of holding savings.

16. This analysis also led Robertson to distinguish between real growth driven by technical change, which, as did Hayek, he believed should be met by no increase in the money supply if forced saving was to be avoided, and that resulting from population growth. The latter should be matched by credit expansion sufficient to finance the production of the real resources needed to provide the future consumption for which new members of the population signalled their demand as they acquired their cash balances.

17. In this respect, Robertson's work bears a certain affinity to that of the Stockholm School who also believed that forced saving need not necessarily cause trouble. Indeed, as we shall see below, Robertson's overall vision of monetary policy as a tool to be deployed actively by authorities for whom it was impossible to lay down simple mechanical rules of behaviour also has a strong Swedish flavour to it. It is well to recall that he developed his ideas before, not after the Swedes did so, and that his work was available and known to them.

18. Pigou's version of the Cambridge "psychological" theory of cyclical impulses was set out in (1912) and further developed in (1927). Lavington's (1922) brief and readable exposition of the same doctrine deserves to be better known than it is, for it is far more accessible to the modern reader than Pigou. The view that ". . . the key to the causes of business fluctuation lies in the mind of the entrepreneur, in the influences which determine his confidence in the business future" (Lavington 1922, p. 28) is of course preserved in Keynes' view that variations in the business community's perception of the marginal efficiency of capital are largely responsible for driving the cycle.

19. Thus Keynes argued

My remedy in the event of the obstinate persistence of a slump would consist, therefore, in the purchase of securities by the central bank until the long-term market rate of interest has been brought down to the limiting point, which we shall have to admit . . ." (1930 II, p 332)

But he then went on to note that, if open market operations carry with them the risk of a provoking " . . . an outward flow of gold on a larger scale than it can afford. . . the government must itself promote a programme of domestic investment" (1930 II, p. 337).

20. It is worth noting that, in the Treatise, particularly its second "Applied" volume, Keynes paid considerable attention to the large fluctuations in the demand for working capital that attended the trade cycle, and to the inadequacy of existing privately held stocks of what he called "liquid capital" to meet these fluctuations. But he also explicitly opposed Robertson's "private heresy" that a little inflation-induced forced saving might not, therefore, come amiss during the upswing. Keynes nevertheless did not mention Robertson's advocacy of government held buffer stocks of commodities in either the Treatise or the General Theory, nor did the Macmillan Report of 1931 (Committee on Finance and Industry (1931)) refer to Robertson's advocacy of the idea in his evidence to the Committee (Robertson 1931 para. 12). The idea would, however, surface in a (1938) article of Keynes, apparently
isolated from the mainstream of his macroeconomic thought; but, as Dimand and Dimand (1990) have shown, his arguments here were indeed related to stabilisation policy concerns. These authors also suggest, however, that Keynes’ analysis harks back to his own work of the early 1920s, so perhaps Robertson picked this particular idea up from his collaborator.

21. There were, in fact, several versions of the Treasury view of the futility of public works expenditure, of varying degrees of intellectual coherence. One of these amounted to arguing that government expenditure and its associated borrowing would have an adverse effect on business confidence, and hence crowd out private sector investment by that route. This argument also played a role in American debates of the time, and was prominent in the Treasury’s evidence to the Macmillan Committee. A succinct statement of the Treasury’s position on these matters is to be found in paragraph # 5565 of Sir Richard Hopkins (1931).

22. Anyone who doubts the difficulties of those who tried to counter Hawtrey without benefit of a clear conception of how an interest elastic demand for money function fitted into the macroeconomic system, is referred to Pigou (1927, pp.317 et.seq.) for an example of an extensive, but ultimately incoherent, attempt to refute his argument.

23. I am indebted to Robert Dimand for drawing this review to my attention. I accept his conjecture, expressed to me in conversation, that the attitude towards Mises displayed therein by Keynes makes it implausible to think that he would have taken the trouble to read the 1924 German edition of this book when it first appeared.

24. I am indebted to Donald Moggridge for drawing my attention to this fact. Note, however that Aftalion’s work, also dealt with in the (1914) Review, did influence Robertson’s work, by his own account. See p. 3 above.

25. Presley (1978 pp.108-111) also discusses the origins of the forced saving doctrine, and possible sources with which Robertson may have been familiar. Perhaps he goes too far in suggesting that the idea is not to be found in Marshall, who did come very close to it in his Gold and Silver commission evidence when discussing how an inflow of gold affected prices. For Marshall, a divergence of the market rate of interest from its "natural" value would accompany credit creation which puts "... more capital in the hands of speculative investors, who come to the market for goods as buyers, and so raise prices." This account is repeated on p. 256 of Money, Credit and Commerce (Marshall, 1923) whence this quotation is taken. Finally, note that Wicksell was familiar with this evidence of Marshall’s, and referred to it in Interest and Prices.

26. This is much less true of Keynes’s treatment of the "Applied Theory of Money" in Volume II of the Treatise, where extensive discussions, both analytic and empirical, of the cyclical behaviour of the supply and demand for working capital are to be found.
REFERENCES


Committee on Finance and Industry (The Macmillan Committee) (1931) *Report* London HMSO.


_________ (1931-32) "Reflections on the 'Pure Theory of Money' of Mr. J. M. Keynes" (2 parts), *Economica* 11 (Aug.) 270-295 and 12 (Feb.) 22-44.


Hopkins Sir R. (1931) "Evidence" (to the Macmillan Committee) in Committee on Finance and Industry: Minutes of Evidence Vol. II London HMSO.


_______ (1917) "The Value of Money" *Quarterly Journal of Economics* (as reprinted in H. Ellis and W. Haley (eds.), *Readings in Monetary Economics* Homewood Ill., Richard Irwin for the AEA 1954.)


_______ (1931) "Evidence" (to the Macmillan Committee) in Committee on Finance and Industry: *Minutes of Evidence* Vol. II London HMSO.


_______ (1928b) "Theories of Banking Policy" (as reprinted in *Essays in Money and Interest* Selected by Sir John Hicks, London, the Fontana Library (1966)).
(1931) "Evidence" (to the Macmillan Committee) in Committee on Finance and Industry: *Minutes of Evidence* Vol. I London HMSO.

(1933) "Saving and Hoarding" (as reprinted in *Essays in Money and Interest* Selected by Sir John Hicks London, the Fontana Library (1966)).

(1936) "The Snake and the Worm" (as reprinted in *Essays in Money and Interest* selected by Sir John Hicks London, the Fontana Library (1966)).

(1937) "The Trade Cycle - an Academic View" (as reprinted in *Essays in Money and Interest* selected by Sir John Hicks London, the Fontana Library (1966)).

(1949) "Introduction" to Robertson (1926).


Sraffa P. (1932) "Dr. Hayek on Money and Capital" *Economic Journal* 42 (March) 42-53.


(1907) "The Enigma of Business Cycles" (English tr. C.G. Uhr, included in 1962 Augustus Kelley reprint of English tr. of *Interest and Prices* (1936).