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MISCONCEPTIONS ABOUT THE REAL BILLS
DOCTRINE AND THE QUANTITY THEORY:
A COMMENT ON SARGENT AND WALLACE*

by

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In their (1982) paper "The Real Bills Doctrine and the Quantity Theory: A Reconsideration" Thomas J. Sargent and Neil Wallace develop certain properties of Paul A. Samuelson's (1958) overlapping-generations-consumption-loan model under alternative monetary policy regimes. They argue that their analysis casts new light upon the well-known debate to which they refer in their title, claiming that their results call for "something of a rehabilitation of the Real Bills doctrine". (p. 1214)
Their analysis per se has all the characteristics which we have come to expect from these authors: it is elegant and rigorous, yielding conclusions provocatively strong to the point of being paradoxical. However, Sargent and Wallace's attempt to relate their new results to the issues dealt with in the recurring debate about the Real Bills doctrine suffers from the following deficiencies: (1) the conclusions upon whose basis they seek to rehabilitate the Real Bills doctrine would have been anathema to its proponents; (2) what they refer to as the Real Bills doctrine is not the Real Bills doctrine; (3) they misinterpret Adam Smith's analysis of the social productivity of banking; and (4) their model is not useful for expressing the main criticisms traditionally advanced by opponents of the Real Bills doctrine. I shall take up these points in turn.

II
Sargent and Wallace show that what they call a "free banking or real bills regime" (p. 1214) will lead to a fluctuating and perhaps indeterminate price level or perhaps to no monetary equilibrium at all,
but that such a regime will also lead to a Pareto optimal allocation of resources. The latter result to them justifies their defense of the regime, because their model provides no grounds for attaching any welfare significance to price level instability or indeterminacy \textit{per se} (cf. pp. 1233-34). More recently, Wallace (1982) has cited Sargent and Wallace (1982) in support of his contention that

"So far as we know, the claim that a stable price level is good is as naive as the claim that a stable relative price between, say eggs and steel is good. In fact it has been argued that the two are on the same footing." (p. 12)

Such a conclusion is indeed implicit in Sargent and Wallace's model. Moreover, they tell their readers, correctly, that the main criticism levelled at the Real Bills doctrine by its opponents has been that, when implemented, the doctrine leads to price level instability. They fail to note, however, that 18th and 19th century advocates of the doctrine regarded the maintenance of price level stability as a vital principle of social organization, and would not have entertained a defense of their doctrine which showed that it failed to ensure such stability.

The views of Adam Smith, one of the originators of the Real Bills doctrine, are typical in this respect. \footnote{He did not, of course, talk in terms of such standard devices of modern monetary theory as "money in the utility function", "money in the production function", or "transactions technologies", which Sargent and Wallace dismiss as arbitrary and therefore
irrelevant to their concerns (cf. pp. 1233-34). However, he certainly regarded the monetary system as being of the utmost importance for economic well-being, likening the stock of money to a piece of fixed capital (a water wheel and a waggon-way were among his analogies) which enhanced the productivity of labor by extending the market, and thereby promoting the division of labor. Though he did not comment explicitly on the desirability of a situation in which there was no monetary equilibrium, it is safe to say that, given his views about the productivity of the monetary system, he would not have approved of an institutional framework which might lead to such a state of affairs.

Smith did discuss conditions of fluctuating, and in particular rising, prices with strong disapproval. Unlike Sargent and Wallace, he did not attribute perfect foresight to agents, and he took careful account of the fact that, in the world around him, there existed long-term contracts denominated in money. Smith therefore understood the potential of price level fluctuations for redistributing wealth in an arbitrary fashion, and feared that potential: words such as "injustice", "fraudulent" and "cheat" enter his vocabulary when he discusses these matters. (cf., e.g., p. 350). Such sentiments are not confined to Smith. All subsequent important adherents of the Real Bills doctrine held similar views. Thus, when Thomas Tooke, a leading figure in the Banking School and a Real Bills advocate, argued in (1840) that the maintenance of the convertibility of currency into specie at a fixed price was "the sine qua non of any sound system of currency" (p. 177) he was expressing a view which had been a commonplace on both sides of the Real Bills-Quantity Theory debate for four
decades, and was to remain so well into the twentieth century.  

Sargent and Wallace assert that the Real Bills Doctrine

"...relies on market forces to prevent excessive 'credit creation' by private banks." (p. 1213)

However, they do not point out that advocates and opponents alike of the Real Bills doctrine agreed about what constituted "excessive credit creation". For them, when paper was convertible into specie, credit creation which led to a drain of specie from the reserves of the banking system, and hence endangered the maintenance of convertibility was excessive. When paper was not convertible, credit creation by the banking system which led to a rising price level was excessive. The Real Bills doctrine is also known as the Real Bills fallacy precisely because the operating procedures it advises are not adequate for avoiding excessive credit creation thus defined. Sargent and Wallace's results, showing that their laisser-faire banking regime will lead to a fluctuating and perhaps indeterminate price level, or even to no monetary equilibrium at all, far from providing the basis for a rehabilitation of the Real Bills doctrine, thus in fact confirm its fallaciousness; or rather they would do so if their version of laisser-faire banking was the same thing as a Real Bills regime; but it is not, as I shall now argue.

III

Sargent and Wallace tell their readers that the Real Bills Doctrine

"...proposes that there should be unrestricted discounting of evidences of indebtedness which...are free of default
risk...

The key prescription of the doctrine is that no government regulation ought to restrict the scope of such intermedation." (pp. 1212-13)

It is instructive to compare this assertion with Adam Smith's statement of the doctrine, part of which Sargent and Wallace quote (p. 1213, fn. 1), but which I here reproduce in full.

"When a bank discounts to a merchant a real bill of exchange drawn by a real creditor upon a real debtor, and which as soon as it becomes due, is really paid by that debtor; it only advances to him a part of the value which he would otherwise be obliged to keep by him unemployed, and in ready money for answering occasional demands. The payment of the bill, when it becomes due, replaces to the bank the value of what it had advanced, together with interest. The coffer of the bank, so far as its dealings are confined to such customers, resemble a water pond, from which, though a stream is continually running out, yet another is continually running in, fully equal to that which runs out; so that, without any further care or attention, the pond keeps always equally, or very nearly equally full. Little or no expense can ever be necessary for replenishing the coffers of such a bank." (Smith, 1776, p. 325)
Note that Smith does not advocate "unrestricted discounting of... evidence of indebtedness which...are free of default risk". Rather, he proposes that by restricting its discounting to a narrow subset of such evidences of indebtedness, the bank will avoid a drain on its "coffers" (reserves of specie), a drain which would threaten the convertibility of its liabilities. Note also that Smith suggests that bank lending be confined to a certain class of customers, namely merchants, who should be thought of as borrowing to finance goods in the process of production and distribution. As an empirical matter, Smith did not believe that a banking system left unregulated would confine itself to so narrow a range of business. His insistence, which Sargent and Wallace note (p. 1213, fn. 1), that banks be forced by law to issue only liabilities convertible on demand into specie was designed precisely to help guarantee the price level stability which an unregulated banking system would not provide.

Smith is not the only advocate of legal restrictions upon banking among protagonists of the Real Bills doctrine. Torrens, its principal exponent during the restriction period (1797-1821) in Britain, is recorded by Mints (1947) as having argued that, although under convertibility, restrictions on bank lending per se would be unnecessary, under an inconvertible regime such as ruled at the time, legislation was required to ensure that "the operations of banking are confined within their proper limits". The proper limits in question involved discounting only good short-term bills (cf. Mints, 1947, p. 50, where Torrens' views are explained and the above phrase from his writings is quoted).
Similar views, particularly about the need for a legal requirement of convertibility, are to be found in the contributions of the Banking School to the debate about Sir Robert Peel's 1844 Bank Charter Act.³

In short, it was of the very essence of the Real Bills doctrine that, far from bank lending being unrestricted, it should be confined to loans made on the security of short-term bills of exchange issued by reputable merchants or manufacturers to finance the production and distribution of real goods. Furthermore, proposals to limit banks' activities, either by requiring specie convertibility on demand of their notes, or in its absence, by restricting the class of bills eligible for discount, were an integral part of the policy proposals associated with the Real Bills doctrine. That doctrine did not, as Sargent and Wallace imply, involve a defense of laissez-faire in the banking industry. Moreover, a model in which banks are permitted to make unlimited consumption loans, the only kind that exist in the world analyzed by Sargent and Wallace, surely cannot be used to rehabilitate a doctrine whose central feature, as we have now seen, was that bank lending be restricted to short-term loans to finance current production and distribution, only one of the many kinds of loan available in the world analyzed by Adam Smith and subsequent Real Bills advocates.

IV

Sargent and Wallace analyze a laissez-faire banking system with no convertibility obligations, and also one in which bank paper is convertible at a fixed price into commodity money, noting correctly, that
Adam Smith's analysis of the productivity of banking is carried on in the context of the latter system. In discussing this matter, they attribute to Smith views which he did not hold. Specifically, they say

"...Smith argued that, through substitution of paper liabilities for gold in lenders' portfolios, the spread of banking would provide more favorable terms for borrowers...

We regard Smith as arguing that interest rates on loans would be lower and less gold would be held if banks were left largely unregulated." (pp. 1228-29)

These conclusions follow from Sargent and Wallace's model, but are only tenuously related to Smith's views, even as expressed in the passages from the Wealth of Nations which Sargent and Wallace quote. These passages make no reference to the rate of interest or to the terms available to borrowers.

Smith's theory of profits, and hence of interest, was not well developed in comparison with that of later English Classical writers, but an acceptable summary of it would say that the supply and demand for real capital determined the rate of interest. Smith was emphatic that despite superficial appearances to the contrary, interest was not a monetary phenomenon.

"Almost all loans at interest are made in money, either of paper, or of gold and silver. But what the borrower really wants and what the lender really
supplies him with is not the money but the money's worth, or the goods which it can purchase...
The money is, as it were the deed of assignment, which conveys from one hand to another those capitals which the owners do not care to employ for themselves." (pp. 376-77)

For Smith, banking enhanced the economy's wealth, not because it lowered the rate of interest by allowing agents to hold default free claims to future goods rather than the stocks of goods themselves, as it does in Sargent and Wallace's model, but because, in replacing gold with paper in circulation, it left the monetary system as productive as ever - though not quite as safe - while permitting gold to be exported in exchange for wage goods. These in turn could be used to support a larger and more productive labor force.

The effects which Sargent and Wallace describe certainly follow from their own model, but in that model, population is exogenous and there is no production. Such a model cannot, as Sargent and Wallace claim, permit "a formal representation of arguments that Adam Smith advanced" (p. 1227). These hinged upon the endogenous response of the size of the working population, and hence of output, to an increase in the stock of circulating capital, whose purchase on world markets was made possible by the replacement of gold by paper money in domestic circulation. In Smith's model such effects come about with no fall in the rate of interest, because that model is not closed, as is for example Ricardo's (1817)
development of it, by diminishing returns in agriculture. 4

V

Sargent and Wallace's model does not permit a rehabilitation of the Real Bills doctrine; nor is it useful for formulating the major arguments which 19th century critics of that doctrine advanced against it. These arguments found their first full expression in Henry Thornton's Paper Credit (1802), and were central to the Bullion Report (1810), (see Cannan, 1919). Their analytic core later formed the basis of Knut Wicksell's monetary economics (cf., e.g., 1898, 1905), and they may be expressed as follows: under a Real Bills regime (and under the kind of laissez-faire banking regime analyzed by Sargent and Wallace), if the banking system sets its rate of discount too low, inflation will ensue and continue for as long as this too low value persists. Sargent and Wallace refer to "...a Wicksellian situation in which both the price level and the money supply are indeterminate" (p. 1213) as forming the basis of a "telling criticism" of the Real Bills doctrine, and refer the reader to Sargent (1979), Chs. 5 and 15, for an account of this situation. Sargent (1979), pp. 92-95, does touch upon Wicksellian analysis, but the situation with which he deals on pp. 360-363, like that analyzed in the paper under discussion here (see particularly pp. 1217-19) is neither the one which concerned early 19th century critics of the Real Bills doctrine, nor that with which Wicksell dealt. 5

Sargent (1979), pp. 360-363, and Sargent and Wallace (1982) analyze only situations in which the banking system makes unlimited loans
at an "appropriate nominal interest rate" (p. 1213), in which, that is to say, the Wicksellian money and natural (or normal) rates of interest are equal. Indeterminacy of the equilibrium price level will arise in both the model of Sargent (1979, pp. 360-63) and in that of Sargent and Wallace (1982) when there is unregulated bank lending at such an "appropriate" rate, but this indeterminacy does not come about in Wicksell's model when the money and natural interest rates are equal to one another.

Sargent and Wallace's result follows from their assumption that agents have perfect foresight, or more generally from the assumption that expectations are forward looking. In contrast, Wicksell usually, and quite explicitly, assumed that the current price level was expected by agents to persist into the future. As he put it in his Lectures (1905), when describing the cumulative process, the current price level

"...will constitute the foundation and starting point for all economic calculations and agreements...

Entrepreneurs...have reason to expect the same increased [i.e. relative to last period] price for their own products in the future." (p. 196)

For Wicksell, equality between the money and natural interest rates produced a determinate value of zero for the rate of inflation, the price level remained at its historically given value, and expectations about it were thus validated. There is no indeterminacy to either the price level or the money supply in such a case.
"The general price level...is, on the assumption of a monetary system of unlimited elasticity, in a position of indifferent equilibrium of the same kind as that of a ball or cylinder on a plane, though somewhat restricted, surface: the ball...from inertia and friction remains where it has been placed; if forces of sufficient strength to drive it from the position of equilibrium are brought into play, it has no tendency to resume that position, but if the forces which set it in motion - i.e. in this case the difference between the normal or real rate and the actual loan rate - cease to operate they (sic) will remain in a new and also indifferent position of equilibrium." (p. 197)

This conclusion of Wicksell's that, with an elastic money supply, and an "appropriate" value for the money rate of interest, the price level is in meta stable equilibrium is not the same as Sargent and Wallace's that it is indeterminate. 8

The core of Wicksell's monetary economics lies in his analysis of the cumulative process of inflation which arises when the money rate of interest lies below the natural rate. This process is briefly described by Sargent (1979, p. 95) but does not figure in his later analysis (pp. 360-63), nor in that of Sargent and Wallace (1982). The discrepancy between interest rates which drives the process represents a disequilibrium situation which is ruled out by Sargent and Wallace's
assumption that the banking system always makes its loans at an "appropriate" nominal rate. This is an important point because all major critics of the Real Bills doctrine, not least Thornton and the Bullion Committee, explicitly rest their objections to it on the lack of guidance which it gives as to how the appropriate discount rate is to be fixed by the banks, and on the inflationary consequences of its being fixed too low. In early 19th century Britain these concerns were particularly well-grounded, given that the usury laws put a maximum of 5% on the rate of discount. Brief quotations from Paper Credit and the Bullion Report will help to make these points.

"Any supposition that it would be safe to permit the Bank paper to limit itself is...altogether erroneous. It implies that there is no occasion to advert to the rate of interest in consideration of which Bank paper is furnished..."

(Thornton, 1802, p. 253)

"It is necessary to observe, that the law, which in the country limits the rate of interest, and of course the rate at which the Bank [of England] can legally discount, exposes the Bank to still more extensive demand for commercial discounts. While the rate of commercial profit is very considerably higher than 5% as it has lately been in many branches of our foreign trade, there is in fact no limit to the demands which merchants of perfectly good capital, and of the most prudent spirit
of enterprise may be tempted to make upon the Bank for accommodation and facilities by discount." (Cannan, 1919, p. 50)

In short, the time-honored basis for criticism of a Real Bills regime, and of laisser-faire banking such as Sargent and Wallace analyze and seek to defend, has been its capacity for permitting a disequilibrium to arise between the rate of interest which borrowers are willing to pay and that which banks charge, and the inflationary potential inherent in such a disequilibrium when it is the latter rate which is too low. Such a discrepancy between interest rates is assumed never to arise in Sargent and Wallace's equilibrium model. Hence that model cannot be used to discuss the historical debate between adherents of the Real Bills doctrine and their critics.

VI

If Economics is to make progress, it clearly needs new analytic results, and Sargent and Wallace have certainly provided these. However, new results are only a necessary condition for progress, which also requires that, in the process of working out new ideas, we do not lose sight of, or distort, old ones. I hope that this note has done something to help ensure that, in the process of absorbing Sargent and Wallace's new and provocative analysis, readers of the Journal of Political Economy do not lose sight of what was at stake in earlier monetary debates.
REFERENCES


FOOTNOTES

*I am grateful to Peter Howitt, Michael Parkin, Lawrence H. White, and two anonymous referees for helpful comments on earlier versions of this essay.

I have dealt with Adam Smith's monetary economics in a recent paper, Laidler (1981). My treatment of his analysis in this comment is of necessity brief, and the reader who is looking for a fuller account of it, well substantiated with quotations from the Wealth of Nations, is referred to that paper. The main body of Smith's monetary economics is to be found in Book 2, Chapter 2 of the Wealth of Nations, but relevant material is also to be found in Book 1, Chapter 5.

Of course there were always, as there are nowadays, inflationary cranks who were unconcerned about price stability. In Tooke's day the Birmingham School sometimes took this position. The reader's attention is drawn to the fact that, until the discovery of the Californian and Australian gold fields in the middle of the 19th century, economists discussing the determinants of the general price level would often couch their discussion in terms of the paper money price of specie, because stability of the price of goods in terms of specie was usually taken for granted. During the Restriction Period (1797-1821), however, one element in monetary debates concerned the extent to which the high price of gold bullion reflected a rise in the general price level, and how far it reflected an increase in the price of gold relative to goods in general, brought about by wartime conditions.
Detailed arguments to support the above interpretation of Smith are to be found in Laidler (1981). I have discussed the Banking School-Currency School debate in my essay "Thomas Tooke on Monetary Reform" reprinted as Ch. 11 of Laidler (1975). Detailed and documented support for some of the positions I take in this comment are to be found there.

The mechanism whereby, according to Smith, this export of gold took place was in some respects similar to the real balance effect which lies at the heart of the modern monetary approach to balance of payments analysis. On this, see Laidler (1981), pp. 188-92. See also Bloomfield (1975), p. 480. The reader might note, that in terms of the logic of his own model, Smith could have argued that an increase in the stock of wage goods brought about by an export of gold could temporarily raise wages and depress profits and hence interest during the time which it took the population's size to respond to this larger stock of circulating capital. As far as I know, he made no such argument while discussing banking matters.

As with my treatment of Smith, so too my treatment of Wicksell in this paper is necessarily brief. I have given a much fuller, and properly documented account of his monetary economics in my paper "On Wicksell's Theory of Price Level Dynamics," reprinted as Chapter 5 of Laidler (1975).

I here beg the question of whether it is appropriate to speak of a Wicksellian natural rate of interest as being synonymous with that which borrowers are willing, on the margin, to pay in a model, such as Sargent and Wallace analyze, with no production.
Nevertheless, Wicksell does occasionally recognize that an on-going inflation might itself generate expectations of further inflation. Cf. (1898), p. 96, and (1905), p. 197. Wicksell did not, however, integrate this idea into the main body of his analysis, other than to say that its effect is "...clearly the same as that of a corresponding easing of credit" (1898), p. 96. Wicksell seems to have referred to the kind of forward looking expectations upon which Sargent and Wallace rely in only two places in his writings: (1898), pp. 96-97 and 148, and draws tentative conclusions about their consequences which approach, but do not quite reach those of Sargent and Wallace. However these passages are parenthetical to the main thrust of Wicksell's analysis, and the ideas which they touch upon are otherwise absent from his work.

8 The assumption of an elastic money supply is a simplifying one which Wicksell occasionally made when analyzing the cumulative process per se. As both Patinkin (1965), Note E, and Jonung (1979) have stressed, Wicksell was a quantity theorist. The role of the cumulative process in his monetary theory was to provide an account of the forces which moved the price level from one equilibrium value to another in a world in which the convertibility of the liabilities of the banking system into specie prevented that system from maintaining the money rate of interest below the natural rate indefinitely. A diagrammatic exposition of the forces at work here is given by Laidler (1975), p. 104.