

## Marx, Money, and Modern Themes

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### I

The threefold issues I have proposed in my title will be somewhat unevenly developed in what follows. My principal concern is with certain aspects of what has occurred in the history of thought about money and monetary systems. My preoccupation is with a rather narrow set of questions and the manner in which they have been accorded more or less rigorous analytical attention. Or, as will emerge, I am concerned with the manner in which, in what is now the long history of our subject, certain aspects of those questions that I take to be important have been substantially neglected.

Considerable progress had been made in the theory of money in the preclassical period that came to an end with Adam Smith's *Wealth of Nations* in 1776. But the achievements that had been realized were submerged by the very different theoretical predilections of the English classical system. Dissents and rumblings towards further progress occurred during the nineteenth century, and Marx, for one, and Wicksell for another, raised new and important conceptions related to money and monetary flows in the economy. But a recrudescence of a more meaningful monetary theory had to wait until the fourth decade of the twentieth century. Following that, however, it was not long before classical thought forms reasserted themselves, and we have now seen another eclipse of real-time monetary analysis.

I shall, as my title promises, refer to Marx. But I am not here concerned with the contributions that Marx made in areas of ideology, or political philosophy, or in his idiosyncratic attack on economic theories of value, labor shares, the surplus product, and the laws of capitalist development. My interest in Marx is provoked by the fact that he made some important statements of attitude and analysis in the theory of money. They place him in clear opposition to earlier developments and they anticipate some much-needed later discoveries. In the same way as Marx and his relation to the earlier classical scheme stands on one side of my argument about money, so certain modern themes, which in themselves attest an unfortunate relapse to classical analytical constructions, will appear on the other.

It is one of the most remarkable aspects of the history of our subject that analytical economics should for so long have neglected the reality that we live in a monetary economy. Of course much has been said, and much has been said for a long time, about the functions that money performs in the market system. Its use and significance as a medium of exchange projected the discussion of its relevance in widening the area of exchange and in facilitating the division of labor and the specialization of production. But all of that, and much that has been logically related to it, has been submerged *analytically* by a fascination for the economics of real, as opposed to monetary, relations and determining forces. Even before we adduce some relevant issues of intellectual development, what I suggest is the principal question of monetary analysis needs to be recognized. That is, quite simply, the question: Is money neutral?

When we address that basic question of the neutrality of money we are asking essentially what difference is made in economic structure and affairs by the presence and the circulation of money. Or more particularly, we are asking what differences are made if and when certain changes occur in the amount of money in circulation and in the way that

circulation behaves. Money is neutral, we can say, if a change in the amount of money in circulation does not lead to any change in what we have come to call equilibrium solution values of certain real variables that describe the existing economic state. Those real variables include, for example, the level of real national production, the level of employment, relative commodity prices, and the real rate of interest. It is clear on the surface of the history of thought that for too long money was considered to be neutral in those important respects. Money was a veil. What it was important to understand, or what it was primarily necessary to analyze and explain, took place in the real sector, and money essentially had nothing to do with it.

Schumpeter, with his impressive and generally sure-footed perception, understood the significance of what had occurred during the high days of nineteenth-century classical and neoclassical thought. In the course of his evaluation of an important work by Joseph Harris in the earlier eighteenth century, his *Essay upon Money and Coins*, Schumpeter stated that Harris's treatment of his subject "contrasts favourably with that of all those authors, old and new, who fail to see that any satisfactory theory of money implies a theory of the economic process in its entirety" (Schumpeter 1954, 291-92). But Schumpeter properly laments that the period that ends at roughly the close of the third quarter of the eighteenth century "ends with a victory of Real Analysis that was so complete as to put Monetary Analysis practically out of court for well over a century" (Schumpeter 1954, 282; see Vickers 1959).

In fact, as late as 1949 Arthur Cecil Pigou, of Cambridge, England, could publish his book with the title *The Veil of Money*. That and similar preoccupations led, as is by now well known, to the long debate that Patinkin's work largely precipitated regarding the validity or invalidity of the so-called classical dichotomization of the analysis of the macro-monetary system.

## II

Perspective on the issues I plan to bring under review is maintained by a recognition of the important body of work that had emerged in monetary theory before Adam Smith's *Wealth of Nations* in 1776. I addressed those developments almost half a century ago in a book which, I am led to believe, has stood the test of time pretty well so far as the intellectual history of economics is concerned. In my *Studies in the Theory of Money* (1959) I observed that while the age of mercantilism was an age of pamphleteering, the emergence of the economics treatise can be safely dated from that period. William Petty's *Treatise on Taxes and Contributions* in 1662 (see Hutchison 1988) attracted the attention of Marx, who went so far as to describe Petty as "the founder of political economy" (Hutchison 1988, 3). In the works of John Locke (1691), Richard Cantillon (1734), David Hume (1752), and Sir James Steuart (1767) the treatise is well established (See Vickers 1959, 1975).

John Maynard Keynes's interesting, but quite incomplete, comments on the preclassical period occur in the concluding sections of his *General Theory*. He observes on David Hume, for example, that he "had a foot and a half in the classical world. For Hume began the practice amongst economists of stressing the importance of the equilibrium position as compared with the ever-shifting transition towards it, though he was still enough of a mercantilist not to overlook the fact that it is in the transition that we actually have our being" (Keynes 1936, 343n.). Perhaps it would be more correct to say that it was in the preclassical world that Hume had a foot and a half. For it was, in fact, the genius of the preclassical period that realized that what was important about money took place in what Keynes here calls the transition. We fail completely to understand Hume if we say that he is important primarily for his equilibrium conceptions, or for the impetus he gave to a staticized quantity theory of

money. He was much concerned with the dynamics of changes in money supplies, with implied employment-generating effects, and with the monetary flows that lay behind what he also perceived as self-balancing mechanisms. His international money-flow analysis in that respect is well known.

To leave aside the rich analytical literature of the same period, for example Cantillon's *Essay on the Nature of Commerce*, Mandeville's *Fable of the Bees*, Berkeley's *Querist*, and John Law's *Money and Trade Considered*, it will suffice to take a brief note of Sir James Steuart's *Principles of Political Oeconomy*. Steuart's *Principles* marks a turning point in the history of the theory of money. To be guilty for a moment of an anachronism, and to recall our comment on the essential question in monetary theory, Steuart saw clearly, consistently with a long line of authors who preceded him, that money was not neutral. His work provides essentially the polar opposite understanding of the economic system from that offered by Adam Smith. He, along with the economist-authors of the first three quarters of the eighteenth century, was very much concerned with the possibility, indeed the likelihood in the light of what he observed, that the monetary economy would not automatically equilibrate at a condition of the full employment of economic resources. Under the guise of what he referred to as the "statesman", Steuart examined extensively the need for government participation in ironing out disturbances in employment levels and cycles of economic activity.

The spirit of Steuart's work, and a flavor of the impressive body of preclassical thought, is instanced by his reaction to what was a popular argument regarding economic growth. "It is a good maxim", he observes, "increase the inhabitants of the state; the strength and power of a state is in proportion to the number of its inhabitants ... [but] ... I think it absurd to wish for new inhabitants without first knowing how to employ the old ... I shall then begin by supposing that inhabitants require rather to be well employed than increased in numbers" (1767, Vol. I, 59-60).

### III

But all of that implied interaction between the monetary and the real was submerged by the classical period that followed. It is not necessary at this time of day to argue at length as to how and why the classical economists solved the involuntary unemployment problem by assuming it away. In the context of the Real Analysis which, as Schumpeter observed, gained ascendancy, the endogenously clearing labor market determined the employment level and the real wage rate, and it pointed, thereby, to the full employment level of national production and real income. It is one of the most unfortunate features of latter day economics that a return has been made so completely to the classical and neoclassical endogenously clearing labor market. We are where we are now, the theory tells us, because we are where our utility functions tell us we want to be in the labor market, and if anybody is unemployed, then what we have, simply, is voluntary unemployment. We should accept happily, we are therefore told, what automatically emerges from the system as the natural rate of unemployment, even if we have to observe that the natural rate of unemployment increases from one real business cycle to another.

It is a strange economic world in which, as a result, we are asked to live. The new classical economics stands awkwardly, we might be forgiven for thinking, on its tripartite legs of (i) everywhere atomistic utility optimization and competitive outcomes, (ii) the assumption of rational expectations, which, we may see, is the stochastic analogue of the earlier classical assumption of perfect knowledge and expectation (see Bausor 1983), and (iii) infinitely rapid market-clearing velocities. Equilibrium in logical time, where the movements of real historical and economic time are not allowed to exert their rupturing influences, has all too

easily, and relatively completely, seduced our analytical imagination.

I have suggested in an earlier essay (1975) that it was not in the area of the theory of money that Adam Smith made his most significant contribution. His arguments regarding the functioning of markets, the natural prices and the market prices of commodities, his "invisible hand", and the significance for "the wealth of nations" of saving and capital formation are well known. But it is important for our present purposes to recall the essence of what has been called the Turgot-Smith doctrine of saving and investment (see Schumpeter 1954, 324). "What is annually saved", it was claimed, "is as regularly consumed as what is annually spent, and nearly in the same time too; but it is consumed by a different set of people" (Smith [1776] 1937, 321).

Here we have the crux of what it was that shunted economics onto a sidetrack for more than a century and a half. It is what we can call the savings-is-investment theorem of classical economics. It is an implication of the pervasive Say's Law assumption, and it implied that income that was not spent in one way would be spent in another. It led to what has been labeled the classical theorem of the impossibility of general overproduction. It was understood, or imagined, that all of the incomes generated in producing the national product would be spent in purchasing the national product. There could never be a deficiency of demand for what the economy was capable of producing. There could not occur, therefore, a deficiency of demand for the factors of production necessary to produce the national output. And as a consequence, there could not occur any deficiency of demand for labor. The unemployment problem was thereby analytically solved. It was unfortunate that for too long the facts belied the theory.

The work on monetary questions in the classical period was not confined, of course, to such a generalized Say's Law and its related savings-investment implication. But the function of money was exhausted substantially, it has to be said, by regarding it as a medium of exchange and, as we have said, a veil over what took place in the real sector of the economy. Contrary to Hollander's influential judgment, the theory of money did not receive a "definitive exposition" in Smith's famous work (Hollander 1911, 432).

Money of a suitable form was seen to be necessary for the effective functioning of the exchange economy. The early chapter "Of the origin and use of Money" in book 1 of *The Wealth of Nations* puts that question beyond doubt. Further, it was not that Smith had no notion of bank money, money substitutes, and paper money circulation. His discussion of banking and his clear and articulate anticipation of the real-bills doctrine put that question beyond doubt also. But for him the principal utility and the significance of banking lay in its money-moving rather than its money-creating function, and he did not elaborate clearly what was to be seen as the relevance of banking for the velocity of circulation of money.

For Smith, "the sole use of money is to circulate consumable goods" ([1776] 1937, 323). And in the course of viewing money as essentially a medium of exchange, Smith argued that causation ran, not from the amount of money in circulation to the level of commodity prices, but in precisely the opposite direction. That, of course, is a most interesting inversion of what had become by that time a fairly well understood quantity theory of money explanation of the price level. Locke, in 1691, had seen that clearly, and Hume in 1752 had driven the point home.

Smith's understanding of what I have just referred to as the direction of causation between money and prices is clear in his statement that "The quantity of money, therefore, which can be annually employed in any country, must be determined by the value of the consumable goods annually circulated within it" ([1776] 1937, 323). He goes on to say further that "The quantity of money ... must in every country naturally increase as the value of the annual produce increases. The value of the consumable goods annually circulated within the

society being greater, will require a greater quantity of money to circulate them" (idem.).

It is of interest that Marx, to whom I shall return in a moment, was later to hold to the same direction of causation ([1867] 1967, 1:117). That means, of course, that it is not to Marx that we can look for an effective discussion of the quantity theory of money explanation of the price level. Marx's almost complete focus on commodity money inhibited any progress by him in that direction. His considerable importance for monetary theory lies, we shall see, on a quite different level.

But the point I have just made does enable us to bring into focus a further characteristic of Smith's monetary thought. Granted that he understood that an "additional quantity of gold and silver [will be] necessary for circulating" a larger amount of produced goods, and observing that this additional quantity of metallic money may be obtained from higher exports of goods, Smith then observes: "The increase of those metals will in this case be the effect, not the cause of the public prosperity" ([1776] 1937, 324). Shackled as he was to the thought forms that emanated from a focus on the real economy, and captured by the Say's Law methodology, Smith was not able to incorporate into his argument the employment-generating effects of exogenous increases in money supplies. In that respect he fell far below his eighteenth century predecessors.

We must acknowledge at this point an important implication for what was said in Smith's time regarding the function and the utility of banking and the creation of monetary substitutes. What needs to be said on that level should retain the perspective that classical thought was centered substantially on hard metallic or commodity money. That continued to be the case, we have seen, with Marx also. If bank money, or paper money, was issued, the maximum maintainable circulation of paper money was determined by the amount of gold and silver money whose use could be economized because paper was used to replace it. (Smith [1776] 1937, book 2, chap 2). The sustainable size of the money supply was determined by the level of real activity and the needs of trade. In the extensive discussion of money in book 2 of *The Wealth of Nations* it is argued that if an excess of money above that required by the needs of trade were issued, it would return to the issuing bank for redemption, and in the absence of investment opportunities at home the money metals would be sent abroad. Here we have the doctrine of money reflux that is to be seen as the other half of what became known as the real-bills argument.

That doctrine occupied a prominent place in the early nineteenth century debates between the Banking School and the Currency School. The Banking School embraced substantially the real-bills doctrine that envisaged money creation as an endogenous process depending on the needs of trade. In that important respect it anticipates modern emphases on the endogeneity of the money supply. But in its earlier formulation it was, unfortunately, subject to two main defects of analysis. First, it imagined that the creation of money could be based on the value of certain collateral assets. John Law, a hundred years earlier, had canvassed the same idea, and his scheme led to speculative excesses that doomed it to failure. In the later reincarnation of the real-bills' notion of endogenous money it was overlooked that the values of assets that potentially functioned as collateral for money creation were not themselves independent of the amount of money that was put into circulation. Increased money supplies and larger monetary circulation could well point to increased asset values. That, in turn, could permit increases in money supplies. And so a money-price spiral could develop.

The second problem with the real-bills or the needs of trade doctrine was its imagination, as Smith, and later Marx, saw it, that money supplies in excess of the needs of trade would return to the issuing authority. A reflux as well as a flux of money was envisaged. It was not sufficiently clearly understood that a more complex causation of outcomes in the

monetary sector existed. Money and its circulation was not clearly seen to have logically separable but interdependent price-forming effects, employment-generating effects, and interest rate effects. The veil of money, and the Real Analysis that it precipitated, clouded the economists' vision. In the outcome, the Banking School lost that nineteenth century debate, at least in the sense that in the banking reform that was accomplished by the Bank Charter Act of 1844 it was the ideas of the Currency School that were most influential.

In our remarks to this point we have left unsaid a great deal that warrants investigation in the classical theory of money. Hollander's classic essay (1911) deserves close examination for the light it throws on the classical period. And indeed, some scholars have taken a quite different view of Smith from what I have proposed. David Laidler, for example, has observed that "Adam Smith was a much better monetary economist than he is usually given credit for" (1981, 185), and that, Laidler says, "I am inclined to praise Smith for the very reasons that leads Vickers to criticize him". Laidler, of course, is informative as well as honest in stating, as he puts it, that our different perspectives derive from "different opinions about the relative merits of alternative traditions in monetary economics" (1981, 192).

Differences in perspectives do, without doubt, orient our critical evaluations. But the attitudes I shall be concerned with primarily in what follows - namely the activity and employment-generating effects of monetary circulation, the endogeneity of money, the controversion of the old quantity theory, the dynamic failures that emanate from real-time interruptions to monetary flows - aspects of these questions did receive some fairly sophisticated attention within the classical context. In the early nineteenth century Henry Thornton had published his *Enquiry into the Nature and Effects of the Paper Credit of Great Britain* ([1802] 1939), which Schumpeter has referred to as an "amazing performance ... No other performance of the period will bear comparison with it" (1954, 689). Thornton's highly significant work anticipated Wicksell in its argument regarding the effect on the price level of the interest rate mechanism and what became the famous Wicksellian cumulative process.

Thornton's *Enquiry*, furthermore, also anticipated Keynes in some respects, as Hicks has very insightfully observed. Hicks notes that Thornton draws a distinction between the short run and the long run, and that as to the short run, "he is Keynesian; far more consistently Keynesian than the muddled Malthus". But as to the long run, Hicks goes on to say, "Thornton is the hardest of hard-money men. He is every bit as hard as Ricardo" (1967, 186). We know that Thornton aligned with Ricardo in the bullionist controversies of that time, when the so-called bullionists argued for the resumption of convertibility of the British pound by the Bank of England (see Viner 1937; Laidler 1987).

As to the substance of the theory of money, finally, we should keep in mind that a running argument ensued from the failure in the classical period to effect a complete integration of monetary and value theory. The point can be mentioned briefly, and we shall return to its significance in our discussion of Wicksell and more modern themes. It has to do with the value of money. On that question, a clear linkage existed during the nineteenth century with the classical notions of the cost of production theory of the value of commodities in general. At a time when money was essentially commodity money, though it might be represented by paper currency that was understood to be fully convertible into the money commodity, the value of money was anchored to the marginal cost of producing the money metal on which the system was based. That was, of course, for the main part gold, though experiments in bimetallism, in which gold and silver alternately functioned as the monetary base, were conducted (see Robertson 1948, 67ff; Laidler 1991, 29-32, 50-53, chap.6). On the other hand, the value of money was understood to be explained also by what became the highly developed quantity theory of money explanation of the general commodity price level.

The analytical question existed as to whether the quantity theory explanation of the

value of money was to be understood as a short-run supplement to the cost of production theory, in which the latter addressed the more fundamental issue of a general theory of value, or whether the quantity theory itself provided the more fundamental and correct explanation. But by the time of Wicksell the quantity theory had gained ascendancy and was taken to provide the more general explanation of the value of money. We have already observed on Marx's lack of clarity on the question of the causation implicit in the quantity theory explanation of things, and we shall return to Wicksell's criticism of Marx in that respect.

#### IV

But Marx, I have said, should be accorded a significant place in the nineteenth century history of the theory of money. Indeed, it is not too wide of the mark to suggest that Marx, notwithstanding the other respects in which his work has been evaluated, critiqued, and reincarnated, is finally understandable only when his views on monetary questions are integrated with the remainder of his work. When we have successfully wrested ourselves free from Marx's emphasis on commodity money, we encounter in his *Capital* a most insightful treatment of the dynamics of monetary flows. In the dynamic analytical framework in which he presents his argument, we have a dialectical interplay between the monetary and the real sectors, such that the laws of motion of neither sector are discernible without reference to those of the other. No scholar has more completely grasped the significance of Marx in those critically important respects than Crotty (1985).

For our present purposes, the importance of Marx's accomplishment on those levels is that he pointed the way to a clearer understanding of the meaning of monetary dynamics in the context of real historical time. I have argued at some length in recent work (see Vickers 1994; 1995), most extensively in my *Economics and the Antagonism of Time*, that canonical neoclassical constructions in economics fail by reason of their capitulation to timeless, equilibrium-theoretic analysis. To the extent that any mention at all is accorded to time, that appears in the analytical scheme of things as essentially a logical or a serially dated variable. So-called systems of intertemporal dynamic analysis have, of course, appeared, perhaps in excessive profusion. But for the main part they have constituted what I have referred to as pseudotemporal dynamic systems in which time is, as I have said, simply a logical variable. The equations of motion of the system, for example, are themselves time-invariant, and the differential equation system that describes the model is structured in such a way, *a priori*, that real time's unidirectional movement can have no disrupting effects. Allied to the highly questionable invocation of the probability calculus, what might have been envisaged as a real future in real economic time is abolished by an essentially wave-of-the-hand assumption. That is the assumption that the future values of certain variables can be described by subjectively assigned probability distributions. The real future is abolished, in the respect that it is replaced by certainty equivalents. Or in other terms, what we might have envisaged as true, residual uncertainties as we look out upon possible futures are thereby transmogrified into probabilistically reducible risk (see also Crotty, 1994).

Marx, of course, did not address all of these relevant questions. But Marx's scrupulous analysis of market capitalism and, it is not always sufficiently realized, the integral importance to that analysis of his theory of money and monetary circulation (see Crotty 1985), constitute the bulk and provide the historic significance of his literary bequest. Three points that are relevant to our present enquiry are implicit in Marx's and neoMarxian discussions.

First, Marx did take cognizance of the assumption content of Say's Law that we found to be influential at the heart of the classical monetary-macroeconomic argument. But he did so

in a number of different ways. In setting out in the early chapters of *Das Kapital* what he understood as the simple system of reproduction or the circulation of values in the economy, he did so in such a way as to show that even if Say's Law postulates were to hold, there would still exist reason why, as he saw it, the capitalist market system would tend towards collapse. That would follow from the tendency, inherent in the structure of the system, to a declining rate of profit on capital investment (see Shoul [1957] 1960).

The Marxian theory contained a precisely defined view of what determined the rate of profit. It was positively related to the so-called rate of exploitation. That was defined as the ratio of surplus value generated by labor, on the one hand, to the variable capital employed, or, that is, to the wage payments that were made to labor; and the rate of profit was negatively related to the organic composition of capital, or the ratio of constant or fixed capital to the total capital employed. If, as Marx saw things, there should occur an increase in the organic composition of capital, the implied substitution of capital for labor meant that the relative amount of labor employed, or the presence in the system of the surplus-generating factor, was now diminished. Relatively less surplus would therefore tend to be realized, and the rate of profit would decline. The tendencies to decline in the rate of profit might be offset, however, by an increase in the rate of exploitation.

But secondly, Marx presents a more important body of argument than that contained in his acceptance of Say's Law in that introductory discussion. He is there concerned with an historical and institutionally non-specific commodity-producing and circulating economy. He did, in the subsequent parts of his work, when he moved to the analysis of specifically capitalist production, dissent from the assumptions and the operative significance of Say's Law. In an exposition of the monetary counterpart of his notion of surplus production he envisaged a process of the successive transformation of values in the course of market exchange activity. Initially, a certain amount of money would be transformed to commodity values, to be followed at a subsequent time by a retransformation from commodities into money values. Hopefully, the final retransformation from commodities to money would result in a larger amount of money than was initially entered into the circular exchange process. Here we have Marx's well-known transformation process of  $M \rightarrow C \rightarrow M'$ , where  $M' > M$ . The extra amount of money, the profit, is another representation of the surplus value that was produced.

Thirdly, Marx was at pains to explain that inherent in all of this in a monetary economy, real time passes between the different stages of the production and circular exchange process. For that reason there may well be times at which not all of the money realized from market transactions will be passed on to other market participants, and the total level of monetary expenditure may therefore decline. That would conceivably have two possible effects. On the one hand, the decline in expenditures pointed to a decline in economic production, sales, and employment, thereby adding to the reserve army of unemployed. On the other hand, the interruption to the monetary flows in the economy, along with the excessive indebtedness that may have been incurred when expectations of continued good times were held, may lead to the inability of debtors to meet their obligations for interest and debt redemption payments. The problem arises because, as Marx has argued at length, money is to be seen not only as a means of circulation in the market process, but as a means of payment. It is, then, the relative unavailability of money as a means of payment to settle contractual debts that precipitates the crisis (see Crotty 1985; cf. Minsky 1982, 1986).

Marx put quite bluntly these last and highly important points, relating to the circular flow of values in real economic time and the money-commodity-money metamorphoses that may lead to economic dislocation and crisis. He argues that "Nothing can be more childish than the dogma, that because every sale is a purchase, and every purchase a sale, therefore the



circulation of commodities necessarily implies an equilibrium of sales and purchases ... No one is forthwith bound to purchase, because he has just sold. Circulation bursts through all restrictions as to time, place, and individuals, imposed by direct barter ... If the interval in time between the two complementary phases of the complete metamorphosis of a commodity become too great, if the split between the sale and the purchase become too pronounced ... [this] asserts itself by producing a crisis ([1867] 1967, 1:113-14).

Marx has here seen what John Locke, as far back as 1691, had very clearly explained. "The money of the nation", Locke said, "may lie dead, and thereby prejudice trade" ([1691] 1870, 226). Keynes, of course, was to see it again in due course. But between Marx and Keynes, the fact that developments and dislocations in real time may rupture the calmness of market exchange processes did not acquire a prominent place in the logical structure of economic argument. That is not to say that there was no awareness of, and no concern for, cyclical instability in the long-dominant neoclassical economics. But what I am referring to at this point is the question whether the realities of genuine, historical, economic time entered in a determinative way into the logical structure of economic argument. The fact that Keynes's neoclassical predecessors were concerned about unemployment is clear from the fact that Pigou, who, as we know, became Keynes's favorite whipping boy, actually joined with Keynes in recommending contracyclical public works expenditures in the late 1920s. But what economists were saying in making such recommendations was said, not because those recommendations followed from the logical structure of their theory, but rather in spite of their theory.

The relevance of all this for our present purposes is twofold. First, Marx implies quite clearly that the comfortable assumptions of Say's Law cannot be thought to hold automatically and efficiently in a monetary economy. That in itself is a considerable advance beyond what we have seen as the earlier classical position. Say's Law could not be relied upon to guarantee the automatic full employment of the economy's resources. Say's Law may be shown to hold in a pure barter economy, but in a monetary market system a vastly different set of considerations came into view. Second, Marx, in the argument we have noted, is taking account, as I have emphasized, of real economic time. The importance of that is that economics was not for him, as it was for many of the classical economists, particularly for Ricardo on some of whose ideas Marx otherwise depended, a timeless body of analysis.

Marx's complete discussion of the theory of money did, of course, include more than I have so far drawn attention to. He discussed at length metallic money, paper money substitutes, the distinction between money as a means of circulation and money as a means of payment, and money hoarding and money reflux. On some of these questions he undoubtedly made false starts and ran into analytical dead ends. On the point of money flows from hoards into circulation and, depending on the needs of trade, its reflux, Marx's argument leads to the same kind of inverse causation between prices and money flows that was noted earlier in Smith's discussion of the needs of trade and its money requirements. It is in that context that we see that Marx did not have a clear view of what was being consolidated by that time as the quantity theory of money explanation of the price level (see De Brunhoff 1973; Marx [1867] 1967, vol.3).

Scrupulosity in intellectual history, moreover, requires us to acknowledge that in the context of what we shall see in a moment as his important contribution to monetary theory, Wicksell took issue with Marx on this very point. By the time of Wicksell the quantity theory had gained ascendancy and was taken to provide the more general explanation of the value of money. The cost of production explanation of its value had by that time been displaced. Wicksell, following Fisher and the Cambridge economists, was able, as he saw it, to sound the death knell of the Marxian emphasis. "Karl Marx", Wicksell argued, "and his school who

generally carry the classical theory of value to its extreme, and consequently to the point of absurdity, adhere to the cost of production theory as a simple and tangible explanation of the value of money and oppose the Quantity Theory, which Marx calls an illusion" ([1901, 1915] 1934-35, 2:147).

## V

Our present objectives do not call for or permit a full, or even a reasonably thorough, review of the neoclassical theory of money. But a mention must be made of Wicksell, the general flavor of whose contributions are undoubtedly quite familiar. Those contributions have been generally highly regarded, though they have been evaluated, of course, from a variety of perspectives. Jurg Niehans, for example, in his *History of Economic Theory*, has given us what we might think is a jaundiced view of Keynes and his relation to neoclassical theory, and has insisted that Say's Law, as "a proposition about long-run equilibrium ... is valid" (1990, 114). Leaving aside what such a claim implies for the neutrality or nonneutrality of money, Niehans goes on to complain that "if Keynes had learnt his economics from Wicksell, the world might have been spared the 'Keynesian revolution'" (250). Keynes, as Niehans sees it, "bequeathed to the profession an entirely distorted picture of the classical tradition" (349); and with somewhat of an ill humor Niehans observes that Keynes's "phenomenal success caused others to use the same tactics. They were mostly those who had never been, or were no longer, able to contribute to mainstream economics" (316).

What we should see at this point, however, is that Wicksell, in spite of the chastisement he meted out to Marx, did stand with Marx in his view of the potentially dislocating effects of short run interruptions to the money flow process. With John Locke in 1691, with David Hume in the eighteenth century, whose argument was not completely grasped by the classical school, and with Marx in the mid-nineteenth century, Wicksell focused his analytical attention on the short run significance of monetary flows. He argued that the difficulties in the way of forming proper conceptions in that respect arise "because we have accustomed ourselves, with J.B. Say, to regard goods themselves as reciprocally constituting and limiting the demand for each other. And indeed *ultimately* they do so. *here*, however, we are concerned with precisely what occurs, *in the first place*, with the middle link in the final exchange of one good against another, which is formed by the demand of money for goods and the supply of goods against money" ([1910, 1915] 1934-35, 2:159).

Here Wicksell, with Marx, is alert to the possibility that Say's Law might not hold good in a monetary as distinct from a barter economy. He echoes the insightful, but generally overlooked, statement of Marshall that "though men have the power to purchase they may not choose to use it" (Marshall 1920, 710). The same point had been made by John Stuart Mill in his essay "On the influence of consumption upon production", which appeared in his *Essays on Unsettled Questions of Political Economy* ([1844] 1948). Here is again the same insight into short run monetary disturbances, that were observed by the neoclassical economists as empirical phenomena but were not incorporated *in a rigorous and systematic sense* into their scheme of macro-monetary analysis. Mill observes that "If, however, we suppose that money is used, these propositions [regarding the impossibility of overproduction] cease to be exactly true.... The buying and selling being now separated, it may very well occur that there may be, at some given time, a very general inclination to sell with as little delay as possible, accompanied with an equally general inclination to defer all purchases as long as possible. This is always actually the case in those periods which are described as periods of general excess" ([1844] 1948, 69-70).

Wicksell's broadmindedness in these connections is evidenced by the manner in which

he drove the point home, coming as it did in a milieu in which, we have seen, the quantity theory had gained ascendancy. "The advocates of the Quantity Theory", he says, "have perhaps not sufficiently considered this point. They actually make the mistake of postulating their assumptions instead of clearly proving them. That a large and a small quantity of money can serve the same purpose of turnover if commodity prices rise or fall proportionately to the quantity is one thing. It is another thing to show why such a change of price must always follow a change in the quantity of money and to describe what happens. Nor is this so easy, especially with our modern and extremely complicated monetary and credit system" ([1901, 1915] 1934-35, 2:160).

We should note that though Wicksell wrote very much within the neoclassical quantity theory of money tradition, his work as a whole, certainly when his cumulative process is taken fully into account, is directed to explaining the outcome of the system on other than simply quantity theory grounds. That achievement is the more important for the following reason. In the neoclassical scheme of things as a whole, notwithstanding what we have seen as the dissent by Marx, Mill, Marshall, and Wicksell that raised doubts about the functioning efficiency of Say's Law in the short run, a definite predisposition remained to adhere to such equilibrating propositions in a longer run context. The classical theorem of the impossibility of general overproduction was to remain fairly secure, on the level of monetary analysis, until several more decades had passed.

Our primary interest in Wicksell, however, is for the present in his short run dynamic argument that has been generally referred to as his study of the cumulative process. Here we have a fairly rigorous incorporation into monetary analysis of what had troubled the economic mind from time to time in the past. We have seen the notion of it raising its head in the real-bills or the needs of trade doctrine. It is the fact that in real world affairs money is created in response to the demand for it. That, essentially, is what we mean by endogenous money creation. Coming to new analytical prominence in Wicksell's cumulative process, then, is the notion of endogenous, as against, exogenous, money.

In that context, the issue of prime importance is the view that is taken of the transmission process, or the transmission channels, by and through which changes in the demands for and the supply of money work out their effects. Wicksell gave extended treatment to that question in his *Interest and Prices* ([1898] 1936) and he returned to the theme in his *Lectures*. His consistent focus was on the possibility and the effects of a divergence of the rate of interest at which banks made loans available from what he referred to as the natural rate of interest. Wicksell introduced his *Lectures* with the proposition that "The interest on loans of money in particular, which should theoretically be only a form, a market embodiment of the natural rate of interest on real capital used in production, may diverge from the latter for a longer or shorter period, especially with the assistance of credit institutions. Two consequences then ensue. In the first place, the monetary institutions may ... exert considerable influence, either by stimulating or retarding economic life. In the second place, and more important, a change in the relation between the natural and the market rate of interest cannot fail to exercise a determining influence on the extent to which credit is used, and thus on the factor by which the value of money, or its purchasing power, is finally regulated" ([1901, 1915] 1934-35, 2:27).

A fuller examination of Wicksell's cumulative process would clarify the respects in which the monetary expansion is brought to an end by the pressure on the banks' reserve positions, and, in the context of an international gold standard, the need to maintain convertibility of the currency. But the detail of those questions is beyond our immediate concern. What we have brought to focus are essentially three things. First, Say's Law was understood by a healthy weight of opinion at that time not to have any immediate relevance to

the functioning of a monetary, as opposed to a barter, economy. Second, the endogeneity, as opposed to the exogeneity, of the money supply needed to be cognized and incorporated into systematic analysis. And third, it needed to be understood that monetary market transactions were conducted in real historical economic time, and that it was the reality of the temporal structure of the system that made possible disrupting dislocations.

Marshall, at Cambridge, and Fisher, in the United States, also addressed the question of the short run transmission mechanism, with varying degrees of perception as to its incorporation into their larger analytical apparatus. In the *Principles*, Marshall addressed "the Money Market and the causes which render the supply of capital for immediate use much larger at some times than at others" (1920, 591), and he traced the way in which the transmission process that ensued from "a disturbance of the money market" (592) depended on the impetus given to events by the changes in the rate of interest.

But in all the attention that was in these ways paid to the potentially disrupting and dislocating effects of monetary flows, it is necessary, in the interest of maintaining historical perspective, to observe one important point with which we can end this part of our discussion. In the last analysis, the thing that these neoclassical economists were concerned about was the manner in which the disturbances they envisaged were to be traced finally to their effects on the general price level and the value of money. The associated variations in real activity did not come to expression in as clear or consistent a fashion. That was no doubt due to the fact that what we saw at the beginning as Schumpeter's reference to the victory at that time of Real Analysis continued to place residual blinkers on the economic mind. The monetary-economic system could easily, as we have now seen, get out of kilter. But somehow, there were underlying real forces that would in due course, perhaps, unfortunately, a due course that was a very long run, bring it back to a reasonably full employment equilibrium. The scandal of the assumption of automatic adjustment mechanisms survived, and if it was below the surface, it was never very far below.

In his discussion of the transmission mechanism, Marshall had seen the rise and fall of commodity prices as the thing that principally characterized the disturbance he had in view (See Marshall, 1920, 594-95; Fisher [1911] 1926, 71-72). As with Wicksell, the devil in the piece was the irregularity of bank credit expansion and contraction. Irving Fisher commented on the relevant passage in Marshall's *Principles* in a manner that illumines the prior concern at that time for price-level, rather than employment-level, variations.

We conclude at this point with Fisher's illuminating statement regarding induced variations in the price level. "Suppose", he says, "that a doubling in the currency in circulation should not at once raise prices, but should halve the velocities instead; such a result would evidently upset for each individual the adjustment which he had made of cash on hand. Prices being unchanged, he now has double the amount of money and deposits which his convenience had taught him to keep on hand. He will then try to get rid of the surplus money and deposits by buying goods. But as somebody else must be found to take the money off his hands, its mere-transfer will not diminish the amount in the community. It will simply increase somebody else's surplus. Everybody has money on his hands beyond what experience and convenience have shown to be necessary. Everybody will want to exchange this relatively useless extra money for goods, and the desire to do so must surely drive up the price of goods.... This tendency will continue until there is found another adjustment of quantities to expenditures, and the  $V$ 's are the same as originally ... the only possible effect of doubling [the money supply] will be a doubling of the  $p$ 's; for ... the  $V$ 's cannot be permanently reduced without causing people to have surplus money and deposits, and there cannot be surplus money and deposits without a desire to spend it, and there cannot be a desire to spend it without a rise in prices" ([1911] 1926, 153-54).

Following such a variation in prices there would be, as Fisher saw it, an offsetting change in the rate of interest, causing a divergence, that is, between the nominal and the real rates of interest. The resulting adjustment in nominal interest rates, which has been absorbed into the literature as the "Fisher effect", is well known. But further discussion in that direction lies beyond our immediate objective.

## VI

The lessons to be drawn from our discussion reside not only within the scope of the intellectual history of our subject. On that level, we have seen a number of significant implications. The classical period of monetary thought proceeded within the context of very different theoretical predilections from what had informed the preclassical period. Those classical predilections were consistent with what has been properly called a victory of Real Analysis that lasted for the next century and a half. Concerns were expressed from time to time regarding short run monetary instability, though in the end the analytical bequest of aggregative equilibrium conceptions generally triumphed. The potentially unstable monetary transmission processes were, in one way or another, ironed out by the inexorability of real sector pressures. It was, of course, unfortunate that the long run that was in that sense contemplated could well be an unconscionably very long run.

But important also are the implications and the lessons that can be drawn for the construction of a more robust and empirically meaningful theory of money. They are lessons to which I have tried to draw attention on previous occasions (see Vickers, 1985, 1991a, 1991b, 1994, 1995).

First, economic activity takes place in real historical time. I shall return to the significance of that important point. Second, the shackles of the neoclassical assumption of logical time, its effective abolition of the future by the invocation of the probability calculus, and the assumption of certainty or certainty equivalents, have eviscerated meaning from too much of what purports to be the analysis of the monetary economy.

Third, the quantity theory of money, in its old or its latter day forms, and notwithstanding the struggles to formulate it more precisely during the neoclassical period, seduces analysis into byways that have meaning for neither the dynamics of price formation or the explanation of employment and activity levels. Keynes understood that when he escaped from its prior influence to move from his *Treatise* to the *General Theory*.

Fourth, money is in no sense neutral in the short run, and if it is not neutral in the short run it cannot be neutral in the long run. For the very effects that monetary disturbances exert in the short run have rippling implications, or implications of hysteresis, for the long run.

The reality is, as we saw Keynes observe in his comment on Hume, we live in the short run, or what he called the transition. It is always in the short run that we make our economic decisions, and as Marshall wisely said, things change before the forces we release by our decisions have time to work out their full effects. The long run is an analytical figment. In economic reality, it never arrives. But that is a reality that economics as a discipline has not successfully addressed. The problem is that our subject has not understood with adequate clarity the meaning of the futures that are created by the decisions we make. The future, we should see, is not in some ontological sense out there waiting to be discovered. Our economic actions and choices are themselves history-creating. But the irony of our analytical position is that theoretical economics has assumed the future away by its capitulation to the analytics of logical or notional, as distinct from real economic time.

Fifth, the complex of problems and issues that, it is suggested, should be more effectively recognized in monetary theoretic analysis cannot therefore be effectively discussed

by the recently fashionable return to classical emphases. The new classical economics, founded, as we have seen, on the tripartite pillars of atomistic optimization, rational expectations, and infinitely rapid market-clearing velocities, amounts, on a close inspection, to only a pseudo-sophisticated stochastic analogue of the classical perfect knowledge and perfect expectations.

Finally, in one way or another, the analysis of the monetary-macro system, and of the decisions and actions that are taken in it, must take account of the uncertainty and ignorance in which, by reason of the realities of historical time, those decisions and activities are bound. The future is not only unknown. It is unknowable. Money, in the last analysis, is important for its significance in relation to the manner in which we contemplate the future. Money is, of course, a medium of exchange, or, as Marx saw it, a means of circulation and a means of payment. But it is not something that veils all else that is real and significant in economics. Money is also a device for dealing with uncertainty. It is a refuge from uncertainty; not, that is, from probabilistically reducible risk. We demand money because we do not know, at given instances in time, what decisions we might make in the future and what might ensue from them. Money is in that important sense a time-and-uncertainty phenomenon (See Shackle 1974, 61; 1969, 1972).

It would not appear that much of final significance has been served by returning our subject to the embrace of the "rational economic man". Time, uncertainty, ignorance, the epistemic uniqueness of individuals, and the uniqueness of individual decision points in real historical time stand in the way. The rational economic man, autonomous, extremum-seeking, materialistic, and, above all, omniscient, does not appear to be a trustworthy custodian of our more significant analytical inventions. Perhaps the most important lesson to be learned is that economics has fallen to a moribund state, and to a condition of substantial empirical irrelevance, because we have not been prepared to learn the lessons that a closer attention to the intellectual history of our subject would have taught us.

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