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## Money as a Commodity and ‘Neutral’ Symbol of Commodities

There can be no unerring measure of either length, of weight, of time or of *value* unless there be some object *in nature* to which the standard itself can be referred.

David Ricardo in Sraffa 1951: 401, emphasis added

Monetary facts . . . have no direct significance for economic welfare. In this sense money clearly is a veil. It does not comprise any of the essentials of economic life.

Pigou 1949: 14

[E]ven in the most advanced industrial economies, if we strip exchange down to its barest essentials and peel off the obscuring layer of money, we find that trade between individuals or nations largely boils down to barter.

Samuelson 1973: 55

The late nineteenth-century theorists who established the methodology of modern economics held to one version or another of the commodity theory of money. ‘Money proper’ referred to either precious metal or its convertible paper symbol. Money was essentially material and tangible; it could be stored and passed from hand to hand – it circulated. The accepted theory of money was the theory of

the gold standard. Money in this sense was distinguished from credit, regardless of whether the latter was understood as the practice of the book clearance of debits and credits in the banking system or the issue of circulating credit instruments – such as bills of exchange and promissory notes.

But the theory at the heart of the new economic science was in fact very old. Many of the most influential seventeenth- and eighteenth-century political economists – Locke, Petty, Hume, Cantillon – subscribed to the essentials of Aristotle's explanation of the evolution and functions of money. A little later, 'Adam Smith substantially ratified it' (Schumpeter 1994 [1954]: 290). Late nineteenth-century economists simply incorporated the well-established theory of precious metal coinage into their theories of marginal utility and supply and demand.

Moreover, despite the subsequent disappearance of all forms of precious metal money (either as actual currency or as a non-circulating standard of value), the fundamental assumptions of modern orthodox economic thinking remain grounded in this earliest known theory of the origins and functions of money. I shall argue that this intellectual provenance is the root cause of the significant deficiencies in mainstream economic thinking on the nature of money. Aristotle had produced an *ethical critique* of the pursuit of 'value' as an end in itself in the form of money, as opposed to the satisfaction of wants and the gaining of utility by the production and exchange of commodities.<sup>1</sup> This critique was derived from his conception of an idealized 'natural' economy that was neither capitalist nor market-based. He was concerned with how money *ought* to be used in a society whose 'moral ethos was unfavourable to the values of commerce' (Meikle 2000: 167). It is therefore not surprising that theories implicitly based on his analysis have proved to be a very poor guide to the money of the modern capitalist world.

### **The Meta-theoretical Foundations of Orthodox Monetary Analysis**

The theorems of modern economic micro-economics that deductively model the decision making of rational utility-maximizing individuals and the exchanges between them are derived from a stylized conception of a simple trading economy in which exchange ratios of commodities express their 'real' values. The model comprises *object-object relations* (exchange ratios between commodities, or the 'production function') and *individual agent-object relations* (individual acts of utility calculation, or the 'utility function'). (For similar distinctions,

see Ganssmann 1988; Weber 1978: 66–9.) Together, *object–object* and *agent–object* relations constitute what Schumpeter described as the ‘real’ economy.

Real analysis proceeds from the principle that all the essential phenomena of economic life are capable of being described in terms of goods and services, of decisions about them, and of relations between them. Money enters the picture only in the modest role of a technical device that has been adopted in order to facilitate transactions . . . so long as it functions normally, it does not affect the economic process, which behaves in the same way as it would in a barter economy: this is essentially what the concept of Neutral Money implies. Thus, money has been called a ‘garb’ or ‘veil’ of the things that really matter . . . Not only can it be discarded whenever we are analyzing the fundamental features of the economic process but it must be discarded just as a veil must be drawn aside if we are to see the face behind it. Accordingly, money prices must give way to the exchange ratios between the commodities that are the really important thing ‘behind’ money prices. (Schumpeter 1994 [1954]: 277)<sup>2</sup>

Other than the ‘higgling’ to arrive at a mutually agreed exchange, *agent–agent*, or *social, relations* form no part of the model (Ganssmann 1988). It is assumed that a continuous process of ‘higgling’ is able to transform the myriad bilateral exchange ratios between all the different commodities, based on individual preferences, into a single price for any uniform good. Money, in the form of a highly liquid commodity, may be introduced into the model to ‘lubricate’ the process of exchange. As a commodity, the medium of exchange can have an exchange ratio with other commodities. Or, as a symbol, it can *directly* represent real commodities. It is in this sense that money is a ‘neutral veil’ that has no efficacy other than to overcome the ‘inconveniences of barter’ which, in the late nineteenth-century formulation, result from the absence of a ‘double coincidence of wants’. In his influential *Money and the Mechanism of Exchange* (1875), Jevons illustrated these deficiencies with two examples. The first tells how a French opera singer, Mlle Zélie, on tour in the South Pacific, had a contract to receive payment of one third of receipts. After one concert, her share comprised quantities of pigs, turkeys, chickens, coconuts and other tropical fruits. She could not consume them and, instead, provided a feast for the local population. In the second illustration, Jevons recounts how Wallace, the naturalist and protagonist of evolutionary theory, had to go hungry in the Malay Archipelago during the 1850s. Despite a general abundance of available food, Wallace’s party, on occasion, did not have anything that was acceptable in barter for it.

As we have noted, two slightly different versions of the basic orthodox conception of the medium of exchange may be distinguished. The medium of exchange may be either an actual commodity that maintains an exchange rate with other commodities or, as in Walrasian general equilibrium theory, a symbol of a ‘representative’ commodity or ‘basket’ of commodities. The Walrasian device of an arbitrarily assigned *numéraire* (symbolic representation of existing commodity values) enables the modelling of an exchange economy in which the market ‘clears’ (Allington 1987) – that is to say, an equilibrium where prices are reached at which no goods remain unsold. Further analytical assumptions of instantaneous – that is, ‘timeless’ – multilateral trades under conditions of certainty and perfect information are made in order render this ‘general equilibrium’ amenable to a precise mathematical expression. But these conditions also render money redundant – particularly as a store of value and means of final payment, or settlement. As a leading exponent of such theorizing explains:

The most serious challenge that the existence of money poses to the theorist is this: the best model of the economy cannot find room for it. The best-developed model is, of course, the Arrow–Debreu version of a Walrasian general equilibrium. A world in which all conceivable contingent future contracts are known neither needs nor wants intrinsically worthless money. (Hahn 1982: 1)

In Walras’s equation, the *numéraire* is not explained; rather, it is simply introduced along with the ‘auctioneer’ in order to render the model operational – that is to say, to get the bidding started.<sup>3</sup> But money does no more than lubricate the transaction process. It is not an autonomous force – it does not make a difference to the level of economic activity and welfare; it merely enables us, according to Mill, to do more easily that which we could do without it.

This conception of money runs as a continuous thread through the development of orthodox economic analysis. Hume’s essay *Of Money* (1752) more or less paraphrases Aristotle: ‘Money is not, properly speaking, one of the objects of commerce, but only an instrument . . . It is none of the wheels of trade: It is the oil which renders the motion of the wheels smooth and easy’ (quoted in Jackson 1995: 3). In the late nineteenth century, Alfred Marshall affirmed the orthodoxy that money is no more than a device by which the ‘gigantic system of barter’ is carried out. As the third epigraph to this chapter tells us, one of the most influential economists of all time would have us believe that money is an ‘obscuring layer’ over the economic exchange in modern capitalism that ‘largely boils down to barter’ (Samuelson 1973: 55).<sup>4</sup>

Despite money's status as a 'neutral veil', the fact that it was seen as a commodity enabled the new economic methodology to provide a theory of its origins as a medium of exchange. Menger's (1892) rational choice analysis of the evolution of money remains the basis for today's neoclassical explanations (Dowd 2000; Klein and Selgin 2000). Money is the unintended consequence of individual economic rationality. In order to maximize their barter options, traders hold stocks of the most tradable commodities, which, consequently, become *media of exchange* – beans, cigarettes.<sup>5</sup> Coinage is explained with the further conjecture that precious metals have additional advantageous properties – such as durability, divisibility, portability, etc. Metal is weighed and minted into uniform pieces, and the commodity becomes money. (Thus, the commodity theory is sometimes referred to as the 'metallist' theory of money (see Schumpeter 1994 [1954]; Goodhart 1998).) In short, all orthodox economic accounts of money are *commodity-exchange* theories. Both money's historical origins and logical conditions of existence are explained as the outcome of economic exchange in the market that evolves as a result of individual utility maximization.

### Quantity Theory and the Value of Money

By the mid-nineteenth century, four interrelated propositions were characteristic of classical economic monetary thought. First, money's existence 'does not interfere with the operation of any laws of value' (J. S. Mill, *Principles of Political Economy* (1871), quoted in Laidler 1991: 9).<sup>6</sup> Second, the value of money is determined by the value of the precious metals it contains, which can be explained under the rubric of the theories of relative prices and costs of production. The value of money 'is determined . . . temporarily by supply and demand, permanently and on the average by costs of production' (Mill, quoted in Laidler 1991: 10). Third, variation in the quantity of money causes price movements, and not vice versa. Fourth, the existence of bank liabilities in the form of notes and bills are acknowledged as part of the money supply only if they are convertible into gold and/or silver. Other increasingly important forms of credit – such as bills of exchange and promissory notes – were usually simply left out of the reckoning. This was achieved, as I have already noted, by the evasive, inconsistent and unclear distinction between 'credit' and 'currency' (that is, 'cash in hand', or 'money proper').

Eventually, as we shall see, the incoherence of the efforts to maintain the distinction between money and credit proved to be the most problematic for orthodox analysis. But in the second half of the

nineteenth century, concern was focused on tension in classical economics between two explanations of the determination of value – that is, in terms of either the immediate interplay of supply and demand for money, or the ultimate costs of its production. The details need not concern us here, but most mid-nineteenth-century economists were agreed that the values of gold and silver are ultimately governed, like those of all other commodities, by the costs of production (Laidler 1991: 31). By the late nineteenth century, however, there had been a decisive move away from this theorem. As Marshall pointed out in his *Evidence to the Indian Currency Committee* (1899), gold and silver were so durable that a year's supply is never more than a very small part of the total stock of circulating coins (Laidler 1991: 56). That is to say, the 'velocity' of money meant that its value would not conform closely to its costs of production. Increasing emphasis was given to the *individual demand* for money, which, it was argued, ultimately determined its aggregate stock in the economy. The demand for 'cash balances' depended upon the balance between the convenience obtained and the risk avoided (Pigou, quoted in Laidler 1991: 63). That is to say, the demand for money depended on its 'marginal utility' for the individual.<sup>7</sup>

Theoretically, this meant that the questions of what money is and how it actually gets into the economy were subordinated to the question of *how much* of it is *demand*ed at any time. The empirical facts of its issue from mints and banks were obvious; but precisely how this happened was not considered to be theoretically relevant. Money was called forth by demand, but the specification of the actual *transmission mechanism* whereby demand induced increases in the quantity of money and, in turn, raised the level of prices remained a matter of *conjecture*. From a strictly theoretical standpoint, late nineteenth-century monetary theory was concerned with the *consequences* and not the causes of variations in the supply of money. These might stem from gold discoveries or unsound inconvertible paper money that was to be avoided, such as the infamous *assignats* of Revolutionary France and the 'greenbacks' of the American Civil War.<sup>8</sup>

'Quantity theory' received its classic exposition in Fisher's *The Purchasing Power of Money* (1911). By defining money as both notes and coins (M) and current account bank deposits (M<sub>1</sub>), Fisher moved some way towards taking bank money into account; but in accord with the general approach, the question of the origin of the supply of bank deposits was left indeterminate. He simply asserted that 'under any given conditions of industry and civilisation, deposits tend to hold a *fixed or normal* ratio to money in circulation' (Fisher 1911: 151). Fisher's starting-point was the Cambridge 'equation of exchange', as

formulated by Edgeworth (1887) and others. This expressed, in algebraic form, the balance of the quantity of money and the price level as a result of all individual exchanges of money for goods over the period of a year. It was one of the first mathematical models of the 'real' economy in which, as we have seen, money is *not* distinguished from other goods.

The equation is saved from tautology by the addition of two further variables which were allowed to *vary independently* of the quantity of money. These are velocity of circulation ( $V$ ) and transaction volumes ( $T$ ). In his hands the quantity equation was written as follows:

$$MV + M^1 V^1 = \Sigma pQ = PT$$

Money is notes and coin ( $M$ ) and chequable deposits ( $M^1$ );  $V$ s are their velocities of circulation;  $p$  is the money price of any good;  $Q$  is its quantity; so  $P$  is the general price level. An index of the  $p$ s and  $T$ , the volume of the transactions, is an index of the  $Q$ s. All Fisher's efforts were directed to demonstrating that *causation could not run from prices to money*, and, as the equation was logically true, it had, therefore, to operate in the opposite direction. In short,  $MV$  (money and its velocity) caused the level of  $PT$  (prices and transactions). He rejected outright any explanations of the *autonomy* of rising prices as the result, for example, of pressure from 'industrial and labour combinations' (1911: 179). But the transmission mechanism from quantity to price was not demonstrated, nor was it supported by empirical data. Fisher simply asserted that 'high prices at any *time* do not cause an increase in money at that time; for money, so to speak flows *away* from that time . . . people will seek to avoid paying money at the high prices and wait until the prices are lower' (1911: 173, original italics). Of course, the opposite might also occur. One could equally well argue, to continue with Fisher's metaphor, that money might 'flow' towards the prices in order to avoid the impact of future price rises, as argued in later orthodox economic models of hyperinflation, where individual rationality causes this unwelcome unintended consequence. In his review, Keynes observed that Fisher paid insufficient attention to the process that starts prices rising *in the first place* (Keynes 1983: 377). We shall return to this important question.

Despite the inexorable growth of bank credit-money, orthodox academic economists clung, with increasing desperation, to the anachronistic theory. Their model of money supply was, in effect, an empirical generalization of a naturally constrained supply of a metallic monetary base provided by a central authority (the mint) that was

outside the market. That is to say, in the terminology of the late twentieth century, it was ‘exogenous’.<sup>9</sup> The retention of the commodity theory and its assumptions was achieved by maintaining a sharp distinction between money-proper and credit. The credit supply was seen as the top of a large inverted pyramid on the narrower base of the gold standard.

The direct question of whether credit was money was studiously avoided in orthodox circles, but given its pivotal importance in capitalist economies, credit was gradually incorporated into orthodox quantity analysis. However, this merely exposed the contradictions and inconsistencies in the commodity theory. For example, most orthodox economists of the early twentieth century got little further than seeing credit as a means of economizing on money-proper. But they all stopped short of the idea that bank loans might *create credit-money* in the form of deposits that were relatively autonomous with respect to the stock of precious metal money. Credit could not easily be accommodated in the concept of the ‘real’ economy as a structure of exchange ratios (object–object relations) based on the preferences of individual utility maximizers (agent–object relations). The creation of money by the creation of the *social relation* of debt (agent–agent relations) was utterly incompatible with the methodology of orthodox neoclassical economics. And the extension of this idea – to be considered in the following chapters – that *all* forms of money, including commodity-money, are constituted by a social relation of credit was anathema.

### **An Analytical Critique of Commodity Theory**

As we shall see in Part II, the historical record does not support the orthodox theory of money’s sequential development from barter to commodity-money to ‘virtual’ money (see also Wray 1998, 2003). Here we are concerned with an internal, or analytical, critique of the theory.

#### **The specificity of money**

As I noted in the Introduction, the orthodox theory of money, as a medium of exchange, is unable uniquely to specify money except in terms of a purely *logical description*. Money is specified as the commodity that can be traded for *all* other commodities (Clower 1984 [1967]: 86).<sup>10</sup> In Menger’s conjectural history, money evolves from the rational use of the most tradable commodity as a medium of exchange

that maximizes trading options. However, he realized that base metal coins and inconvertible paper money broke this link. Why, Menger (1892) asked, should individuals be ready to exchange goods for 'worthless' little metal disks or paper symbols?

Subsequently, neoclassical economics has tried to resolve the problem and establish the 'micro-foundations' of money by showing that holding (non-commodity) money reduces transaction costs for the individual (for example, Jones 1976; Dowd 2000, Klein and Selgin 2000). However, these arguments cannot explain the existence of money, and, moreover, they express the logical circularity of neoclassical economics' methodological individualism. It is only 'advantageous for any given agent to mediate his transactions by money *provided that all other agents do likewise*' (Hahn 1987: 26). To state the sociologically obvious: the advantages of money for the individual presuppose the existence of money as an *institution* in which its 'moneyness' is established.

Despite its absence from the model of the 'real' economy, the obvious fact that money is used as a store of abstract value led to efforts to accommodate this function in orthodox micro-economic analysis. These have been entirely unsuccessful. For example, the very title of Samuelson's classic paper – 'An exact consumption-loan model of interest with or without the social contrivance of money' (1966 [1958]) – betrays the logical problem. This analysis of money as a means for the intergenerational transfer of value was completely unable to specify why money, as opposed to any alternative financial asset, performs this role. Why, he asked, are stocks and bonds not money? Samuelson correctly observed that money could not be uniquely specified as a store of value; but he was unable to explain this function of money within the framework of orthodox micro-economic methodology. The fact that money has proved to be a relatively poor store of value – especially during periods in the twentieth century – merely adds to the difficulties for neoclassical economic analysis. A huge literature has resulted from the efforts to resolve the problem; but it would appear to be incapable of a solution within this school. Micro-economic methodology becomes locked into exactly the same kind of circularity that we saw above in the explanation of money's existence as a medium of exchange. With the tenet that all phenomena must be explained as a result of their utility for the maximizing individual, orthodox economics cannot answer the question it poses. Is money a means of final payment (settlement) because it is a store of value? Or, conversely, is it a store of value because it is accepted as a means of debt settlement? As we shall see, the only way to break the circularity is to move from the analytical confines of the

methodological individualism of micro-economics and the model of the 'real' economy.

### Money of account

The fundamental problem in economic orthodoxy, from which all the other difficulties stem, is the misunderstanding of *money of account*. Medium of exchange is the key function, and it is assumed that all the others follow from it. The market spontaneously produces a transactions-cost-efficient medium of exchange that becomes the standard of value and numerical money of account. Coins are said to have evolved from *weighing* pieces of precious metal that were cut from bars and, *after* standardization, *counted*. Alternatively, a standard commodity or 'bundle' of commodities, *with a given value*, acts as the *numéraire*.

The nub of the issue, as we have noted, is whether money of account can be convincingly shown to be the spontaneous outcome of 'truck barter and exchange', as economic orthodoxy implies. In other words, can money of account be deduced from the existence of a medium of exchange? This conjecture is illustrated with examples such as the use of cigarettes in prisons, not merely as media of exchange that maximize trading opportunities, but also as a unit of account, in which offers of goods are priced. (For the classic participant observation study of a World War II POW camp, see Radford 1945.) But it is not clear that cigarettes are actually a unit of account, as opposed to being the commodity most in demand. The fact that non-smokers were willing to offer their goods for cigarettes does not make them, in Keynes's terms, anything more than a 'convenient medium of exchange on the spot' (Keynes 1930: 3). Two points are relevant. First, it was the atypical conditions of repeated 'spot' exchanges in the small-scale, closed prison camp economy, with few commodities, that gave cigarettes their stable exchange ratio. In such a relatively stable population, all the traders' preferences were sufficiently well known for the non-smoking trader to learn the likely exchange ratios and that he would not have to hold a stock of cigarettes for long. Second, orthodox analyses argue that the *market exchange-value* of cigarettes produced a stable unit of account, and that precious metallic standards are analogous (Dowd 2000: 143–4). But unless the exchange-value of a cigarette was fixed in terms of another linchpin commodity, its exchange-value would vary from trade to trade for the same commodity. Consequently it would not function as money. For the cigarette to be a money of account, as opposed to the commodity that could be traded for all others, its value would have to be stabilized in some other way in relation to another commodity. (As we shall see, the gold

standard was a *promise*, made in an abstract unit of account, to redeem a note for an amount of the precious metal. The exchange rate between the two was *fixed by an authority*, not determined by the market.)

Complex multilateral indirect exchange – that is, an authentic market – presupposes a money of account. Even with a relatively small number of commodities, barter exchange produces myriad diverse exchange ratios. Without further assumptions, it is difficult to envisage how a money of account could emerge from myriad bilateral barter exchange ratios based upon subjective preferences. One hundred goods could possibly yield 4,950 exchange rates (Davies 1996: 15). How could discrete barter exchange ratios of, say, 3 tins of peaches: 1 cigarette, or 5 tins: 1 cigarette, and so on, produce a single unit of account? The conventional economic answer that a ‘cigarette standard’ emerges spontaneously involves a circular argument. That is, a *single* ‘cigarette standard’ cannot be the equilibrium price of cigarettes established by supply and demand because, in the absence of a money of account, cigarettes would continue to have multiple and variable exchange-values. A genuine market which produces a single price for cigarettes requires a money of account – that is, a stable yardstick for measuring value. As opposed to the *commodity* cigarette, the *monetary* cigarette in any cigarette *standard* would be an *abstract* cigarette. The very *idea* of money, which is to say, of abstract accounting for value, is *logically anterior and historically prior to market exchange*. If the process of exchange could not have produced the abstract concept of money of account, how did it originate? The question is actually at the very heart of a problem that distinguishes economics from sociology. Can an *inter*-subjective scale of value (money of account) emerge from myriad subjective preferences? As we noted in the Introduction, the question of money is at the centre of the general question in Parsons’s sociological critique of economic theory – although it has not been seen in this light. From its starting-point of individual subjective preferences, utilitarian theory cannot explain social order (Parsons 1937).

### Capitalism and credit: the ‘real’ economy and the ‘natural’ rate of interest

The model of the natural barter economy with its ‘neutral veil’ of money is singularly inappropriate for understanding the capitalist monetary system. In the ‘real’ economy, money exists *only* as a *medium* for the gaining of utility through the *exchange* of commodities (commodity → money → commodity, or C-M-C<sub>1</sub>). It models the

‘village fair’ in which capitalist financing of production does not occur (Minsky 1982). In the ‘real’ economy of continuous spot transactions, there is no investment in Keynes’s ‘money wage or entrepreneurial economy’ (Smithin 2003: 3–4). Capitalism, it will be argued, is distinguished by the entrepreneurial use of credit-money produced by banks to take speculative positions regarding the production of commodities for future sale, or with regard to fluctuations in the value of money itself. Either  $M$  (bank credit-money)  $\rightarrow M-C-M_1$ ; or  $M$  (bank credit-money)  $\rightarrow M-M_1$ . (Aristotle and, of course, Marx deplored both forms of exchange.)

The existence of credit was obviously recognized by the early twentieth-century orthodox theorists, but, as we have seen, could not be accommodated readily within the ‘real’ analysis model of a barter economy. Wicksell’s work was the most accomplished attempt to do this, and continues to provide some of mainstream economics’ core theoretical assumptions (see Smithin 2003). His analysis is based on a comparison of two abstract models – a ‘pure cash economy’ and a ‘pure credit economy’. In the latter ‘there is no need for any money at all . . . neither in the form of coin (except perhaps for small change) nor in the form of notes, but where all domestic payments are effected by means of the Giro system and bookkeeping transfers’ (Wicksell 1962 [1898]: 70). He doubted that such a state of affairs would ever occur; but it was a logical possibility with which the commodity theory was unable to cope. (Apart from any other consideration, how, in the hypothetical absence of an actual ‘stock’ of commodity-based money, were changes in the price level to be explained?)

Most contemporary thinking held that, in a cash economy, the demand for money loans was determined by the supply of a stock of loanable money, mediated by the rate of interest. But in the ‘pure credit economy’ there could not be a money rate of interest that was determined by the existence of the banks’ actual stocks of cash, for none would exist. Consequently, Wicksell argued, in accordance with the underlying meta-theory of the ‘real’ economy, that in a pure credit economy the interest rate would have to be the ‘real’ one. This would still be determined by the normal mechanism of supply and demand for loans; but in this case these could not be in money, but rather ‘in the form of real capital goods’ (1962 [1898]: 102). In the absence of actual stocks of money, the ‘natural rate’ of interest is that which ‘corresponds to the expected yield on the newly created capital’ (Wicksell 1935 [1915]: 193), which in turn depends on its marginal productivity (Wicksell 1907; see Laidler 1991: 130).<sup>11</sup>

Wicksell held firmly to the basic ‘real’ analysis tenet that the rate of interest for money was not an independent force in the economy.

Therefore, as Ricardo had argued, the question of the manipulation of the rate of interest to the advantage of the owners and controllers of money simply did not arise (see Smithin 2003: ch. 6). In Wicksell's 'thought experiment' borrowers and lenders bartered, without the existence of money and banks, to produce a 'natural rate' of interest. He then moved to a closer approximation of actual capitalist economies by introducing four typical roles: entrepreneurs, labour, banks and capitalists (the source of loans to entrepreneurs). Their relations and the economy are set in motion with the *assumption* that the contractual rate of money interest charged by banks is equal to the natural rate. In essence, the natural rate determines the money rate, which in turn determines the quantity of money (both cash and credit-money). But this hypothetical causal sequence is based entirely on the axioms of the theory of the 'real' economy, and is nowhere explained or, more importantly, described empirically. 'The money rate of interest . . . is always *tending* to coincide with an ever changing natural rate' (Wicksell 1962 [1898]: 117, emphasis added). However, the tendency is left as an unexplained conjecture.

It should be noted that Wicksell's pure credit economy describes only *one* of the two forms that credit-money might take. He was concerned only with the giro system for the settlement of transactions of debit and credit – that is, book transfer between accounts. But capitalist banks are not merely intermediaries in a giro system; they also produce credit-money through lending and the creation of deposits. As Schumpeter explained, banks are introduced into 'real' analysis only as neutral cost-reducing intermediaries. They place the aggregated savings of many small depositors at the disposal of borrowers of money-capital. In classical theory, 'deposits make loans'. Armed with the common-sense cloakroom analogy, the eminent English economist Cannan defended classical orthodoxy, scornfully dismissing the converse notion that loans make deposits (Cannan, quoted in Schumpeter 1994 [1954]: 1113). The lending of coats left with an attendant for safe keeping, he argued, does not involve the 'creation' of more coats. Before the owners could use them, they would have to be returned. But, as Schumpeter points out, this is precisely what does *not* happen in capitalist banking. Here, depositors and borrowers have simultaneous use of the 'same' money, and, furthermore, new lending creates new money (Schumpeter 1994 [1954]: 1113–14). This notion that 'loans make deposits' (of money) is explored in the next chapter.

In short, for Wicksell, the money rate of interest was a *direct* function of the capacity of productive capital. But, as Schumpeter implied, 'real' analysis is unable to provide an adequate theoretical account of capitalist financing without recourse to considerable intellectual contortion. In

this model, ‘saving and investment must be interpreted to mean saving of some real factors of production . . . such as buildings, machines, raw materials; and though “in the form of money”, it is these physical capital goods that are “really” lent when an industrial borrower arranges for a loan’ (Schumpeter 1994 [1954]: 277). As we shall see, it was precisely this impasse that Keynes sought to break with his early heterodox work, *A Treatise on Money* (1930). This alternative view, to be explored later, sees the money rate of interest as influenced in a relatively autonomous way by the operation of the financial system itself. In Keynes’s rather obscure phrase, ‘the marginal efficiency of capital is determined by forces partly appropriate to itself’ (Keynes 1973: 103).

### The Persistence of Orthodoxy

Towards the end of the capitalist crises of the 1930s and during the so-called Golden Age after World War II, both theoretical and practical monetary orthodoxy was moved off centre stage – or, at least, had to share it with Keynesian economic theory. Keynes’s own *rapprochement* with orthodoxy and the general accommodation of his work within a mainstream ‘neoclassical synthesis’ need not concern us here (see Rogers and Rymes 2000; Smithin 2003). Some aspects will be considered subsequently; here I shall simply indicate how the ‘meta-theory’ of the ‘real economy’ and the axioms of quantity theory continue to inform both academic theory and the practice of monetary policy. (The practical implications of this persistence are discussed in Part II, in chapters 7–9.)

#### Monetarism

The need to deal with the inflation of the 1970s brought to the fore Friedman’s restatement of Fisher’s orthodox quantity theory, and his empirical work with Schwartz became the focal point of the ‘monetarist’ revival (see Smithin 1996). It was conceded that changes in the supply of money could influence the level of economic activity, as they believed events had shown. But monetarists argued in time-honoured fashion that this could only be a *short-run* effect. In the long run, any ‘money illusion’ would wear off as the ‘real’ values of the economy reasserted themselves and money resumed its ‘natural’ neutrality (Friedman 1969). They held to the Wicksellian assumption that in the long run changes in the *money* rate of interest could not affect the *natural* rate. But short-run divergence between the two could create serious economic problems – most notably, inflation.

Without any violation of the 'real' economy model, it could be argued that states, analytically outside the economy, perform a 'public goods' role by providing sound money. It is only when they exceed this function and pursue their own interests that economic dislocation occurs – for example, when sovereigns increase the profits of *seigniorage* by debasing precious metal coins, or governments pursue inflationary policies to reduce the burden of state debt. But, most importantly, as the monetarists contended, post-war governments had responded irresponsibly to democratic pressure by increasing the money supply to maintain full employment and provide welfare. This had caused the economy to operate beyond the natural capacity that private economic decision making would have otherwise maintained. The excess money supply and the overheating of the economy had produced the surge in inflation.

Nevertheless, monetarists maintained that the monetary authorities (central banks and treasuries), if they so wished, could control the supply of money, because their debts (liabilities) were held by the banking system as a whole and, by expanding the system's 'fractional' reserves, were a base for the extension of bank credit. (The question is discussed further in Part II, chapters 7 and 8.) Analytically, this government and central bank debt ('high-powered money') had taken the place of the metallic base in the determination of the money supply. It was assumed, at least implicitly, that the monetary authorities could control these reserves with the same precision as a physical commodity. Furthermore, it was asserted that banks were constrained to adapt to the central authority's 'exogenous' creation of money – not vice versa, as argued by the proponents of the theory of 'endogenous' money (see Part II, chapter 7).

Despite the overwhelming preoccupation with the 'over'-supply of money and inflation, monetarists argued, with logical consistency, that monetary authorities and the banking system were equally capable of introducing too little money into the economy. For example, Friedman and Schwartz maintained that the contraction of the money stock between 1929 and 1933 was an important causal factor in the US depression of the 1930s. But even after such a severe contraction, the propensities of the 'real' economy would, in the long run, gradually reassert themselves, and the natural trajectory of economic activity would resume (Friedman and Schwartz 1963). Thus, the key to economic stability was seen to be the control of the supply of money in relation to the *natural rhythms* of the 'real' economy. It followed that if there was a 'natural rate of interest', then there was also a 'natural rate of unemployment'. The aim of economic analysis was to uncover these natural propensities and rhythms in order that

the exogenous supply of money could be carefully calibrated to act, as it should, as a 'neutral veil'. If a monetary stimulus reduced unemployment below the natural rate in any particular economy – that is, the rate determined by the marginal productivity of the factors of production ('natural rate of interest') – then inflation would follow.

Monetarist theory was practically applied most vigorously in the UK and the USA from the late 1970s to the mid-1980s; but it proved to be a short-lived experiment. The proximate cause of the abandonment of these attempts directly to control the supply of money was that the theory could not be operationalized. Early applications of the theory referred to a 'narrow money', as some of the early twentieth-century theorists had done, which comprised currency and/or current accounts upon which cheques could be drawn ( $M_1$ ). But, as we shall see, it is a central characteristic of capitalism that its financial system is able continuously to devise new forms of credit instruments. These may become part of a bank's assets and, consequently, form a base for further lending ('broad money'). Or IOUs such as promissory notes may become a 'near money' means of payment within capitalist business networks. Moreover, when the authorities attempt to regulate and control any particular form of credit instrument or 'near money', the private capitalist financial system creates new ones that are not covered by the regulation.<sup>12</sup> As we shall see in Part II, there is no hard and fast distinction in capitalism between the various forms of increasingly *fungible* credit instruments and the so-called money-proper. This feature of capitalism was intensified, with contradictory effects, by the financial deregulation during the 1980s. Credit instruments proliferated and were rendered more fungible and transferable into cash by the measures. For example, in the both the USA and the UK, the hard and fast regulatory separation of deposit, or savings, accounts and current (cheque) accounts was relaxed, and the money supply was, consequently, augmented and increased. The practical consequences of the well-established, but untenable, distinction between money and credit slowly became more apparent, but not before the myriad forms of credit-money supply had given rise to new measures of the money supply.  $M_2$  led to  $M_3$  and so on to  $M_{17}$ . The policy became increasingly inoperable. Later, in the early 1990s, as credit-money continued to expand at annual rates of over 25 per cent per year, but inflation fell quite markedly, the very foundations of quantity theory came under question (Henwood 1997: 201–2; Guttman 1994).

Monetarism's policy incoherence directly reflected the theoretical incoherence of the revamped orthodox theory of money, which, it must be remembered, was already anachronistic at the time of its refinement by Fisher in the early twentieth century. Monetarist theory

was developed, with no significant modification of the assumptions regarding the natural economy. In the hands of the early classical economists, precious metal currency was seen to be an *exogenously* provided 'public good'. Credit-money and bank clearance, which accounted for virtually all the significant transactions of the capitalist economy, were excluded from this category of money-proper. It is, therefore, not too surprising that this analytical framework proved to be totally inadequate for the understanding of the process whereby capitalism's money is created and controlled.

### 'Rational expectations' and inflation

With the failure of monetarism, orthodox monetary policy has become ever more detached from orthodox monetary theory. The fundamental tenets and assumptions, such as the long-run neutrality of money, survive, but they do not *directly* inform the immediate concerns of practical policy making.<sup>13</sup> Attention is now almost exclusively focused on the means by which 'inflation expectations' might be stabilized (see Part II, chapter 7). 'Rational expectations' theory contends that rational economic agents will wish to avoid inflation. If governments can create a credible commitment to low and stable inflation, then rational agents will not be tempted to engage in a self-defeating round of wage increases in order to try to keep ahead of an anticipated rise in prices.

The forging of 'rational expectations' is seen to be the responsibility of governments, whose fiscal policies are the major determinants of the money supply and, therefore, inflation (Barro and Gordon 1983). To this limited extent, the rational expectations approach to money is consistent with the orthodox ideas that the quantity of money affects prices and that the money supply is exogenously determined (see Part II, chapter 7). It is contended that the expansion of the economy beyond the natural rhythms of the business cycle is largely the result of governments departing from sound monetary principles. The latter may have changed since the days of the gold standard, but the belief remains that such principles exist, and that they are dictated by the natural propensities of the economy. However, we shall pursue an alternative conception of money and monetary policy, in which production of money is seen as the result of a power struggle between the major contending groups and interests in society. The relationships between wages, the level of employment, the 'real' rates of interest, and the exchange rate, as these are represented in macro-economic models, express these struggles (Ingham 1996b; Smithin 2003). In rational expectations models, however, there is no social and political structure from which conflict could result. Rather, the entire analysis

is based on the hypothetical responses of rational ‘representative agents’ to available information.

### ‘New monetary economics’

Towards the end of twentieth century, in a prescient anticipation of the Internet, ‘new monetary economics’ suggested that computerized bookkeeping could become the basis for gigantic Walrasian ‘sophisticated barter systems’. Economic exchange could take place without money, as in the ‘real’ economy, by the exchange of transferable forms of wealth – that is to say, commodities and financial assets (Fama 1980; Trautwein 1993; see Smithin 2003). Computer technology might be able to eradicate the inconveniences of barter and create markets in which *all* goods are potentially media of exchange and means of payment. Walras had understood that for market clearing prices to develop, there would need to be a *numéraire* in terms of which goods could be priced and their exchange rates established. But there would be no universal form of value outside these goods. That is to say, there would be no good called ‘money’, which existed as an independent store of value outside the economic ‘space’ that was constituted by the transactions network of the ‘real’ economy. With the development of the Internet, this analysis has gained influence. There would be no actual money supply in such a sophisticated barter system, and, consequently, central banks could become redundant (King 1999). They would no longer be required to produce and regulate a supply of money, and, moreover, as quantities of money no longer existed, they could not have an independent distorting effect on prices. The general question of information and communication technology and the debates on the ‘end of money’ and ‘new monetary spaces’ will be explored in chapter 9.

### Optimum currency area theory

Optimum currency area theory (OCA), first developed by Mundell (1961), has been recently applied to the question of the development of new monetary spaces, such as currency unions, the ‘dollarization’ of previously independent currencies, and to the question of the economic rationale for the euro. OCA uses the orthodox theory of money to explain the existence and spatial distribution of different currencies. Geographical areas that form internally consistent and coherent economic systems, in terms of structure and costs of production, will tend to evolve a uniform medium of exchange, through a process of transactions-cost minimization. Thus, arguments for and

against joining the euro are couched in terms of the degree of alignment of the 'real' characteristics of a potential entrant's economy with those of the existing participants – that is, interest rates, labour market flexibility and so on. The criticisms of the orthodox theory of money outlined above apply to OCA, and will be elaborated in Part II, chapter 9. From this orthodox viewpoint, monetary space is no more than a reflection or representation of transactional, or 'market', space, as this is conceptualized in 'real' analysis. Here we might simply repeat the basic counter-argument that monetary space is a social and political construction. Moreover, the authoritative imposition of a money of account over a geographical space can be the *active* element in the creation of a hitherto fragmented market space. The creation of monetary space defined by the geographical extent of a money of account is an act of sovereignty.

## Conclusions

By the early twentieth century, academic economic theorists held four closely interrelated methodological assumptions and theoretical tenets. Regardless of the institutional changes in monetary systems and actual forms of money, these have guided all subsequent orthodox economic analyses of money. First, mainstream economics operates with a model of a 'real' economy of essentially barter exchange in which money merely symbolizes the underlying real exchange ratios; it is a 'neutral veil', and not an economic force *sui generis*. In the long run, money is unimportant and inessential. Money is able to perform its fundamental role as a *medium of exchange* because it is itself a tradable commodity, or the direct representative of a commodity or commodities. Money is specified as a money-stuff that has an exchange-value. Second, money's functional role in an economy (or its logical origins) is explained in terms of its elimination of the inefficiencies of direct barter – that is, the removal of costly inconveniences caused by the search for a co-trader with congruent wants. This explanation of money's existence in terms of its minimization of transaction costs for the rational individual is consistent with the canon of economic neoclassicism, and is referred to as the 'micro-foundations' of money. Third, as it is a commodity (or the direct symbolic representation of a commodity), money's value may be explained by general economic theories of value – such as supply and demand and/or marginal utility. Fourth, it follows, *ceteris paribus*, from both these theories (supply and demand and marginal utility) that the price level is a function of the ratio of the *quantity* or *stock* of

money in circulation to the quantity of goods. I have argued that the approach is unable adequately to deal with three fundamental questions that a theory of money should answer. What does money do; or what is money? How is it produced; or how does it get into society? How is the value of money determined?

Most fundamentally, the analytical focus on money's role as a *medium of exchange* fails to identify the quality of 'moneyness', which is to be found, rather, in the abstract measure of value – the unit of account. Economic orthodoxy implies, and sometimes argues, that money of account is directly provided by the commodity standard of value, which consists in, or is represented by, the medium of exchange. Thus media of exchange simply require counting in order to produce a money of account. The notion of the *numéraire* shows that the assertion of the *logical* primacy of money of account is not incompatible with the Walrasian version of neoclassical economic analysis. However, it is significant that this is simply posited as the *arbitrary* assignment of a commodity with an already established value as a standard. The question of the origins of the standard is not addressed. The market model of the spontaneous emergence of a common medium of exchange fails to explain how myriad bilateral exchange ratios of barter trades could produce a stable price for any commodity standard. Rather, it is the money of account, regardless of the existence of any media of exchange or means of payment, which makes an orderly market possible. Money of account is logically anterior to the market (Innes 1913; Hawtrey 1919; Keynes 1930; Einaudi [1953] 1936; Grierson 1977; Hoover 1996; Ingham 1996a). This alternative conception is discussed in the next chapter.

The category error in identifying 'moneyness' with a money-stuff is evident in Adam Smith's 'classical' misinterpretation of two examples of commodity-money which he thought to be vestiges of the primitive stage of monetary evolution (Smith 1986 [1776]: ch. 4). Media of exchange, such as nails in Scotland and dried cod in Newfoundland in the eighteenth century, are not, as Smith argued, examples of primitive 'money'. They were, rather, *payment in kind* of debts that were calculated with *an abstract money of account*. The fishermen and traders in Newfoundland calculated in pounds, shillings and pence. It is absurd, as Mitchell Innes explained nearly a century ago, to conclude that the staple commodity (dried cod) was money, because 'if the fishers paid for their supplies in cod, the traders would equally have to pay for their cod in cod' (Innes 1913: 387).<sup>14</sup> To repeat: it was the unit of account that conferred the quality of 'moneyness' on the nails and cod, and not the converse. Divergences between the money of account in which prices are reckoned and the commodities by which debts are

discharged is historically commonplace. However, when the value of a commodity is 'fixed by law or custom' – for example, when 1 pound weight of the best tobacco became the legal equivalent of 3 shillings – then it becomes money (Grierson 1977: 17).

Answers to the second question of how money gets into the economy expose further ambiguities within economic orthodoxy. From a purely theoretical standpoint, the answer is that the supply of money in circulation, and its consequent value, is most efficiently resolved by being left to the market. In other words, the needs of the 'real' economy will dictate the money supply. Indeed, the ultra-orthodox 'free banking' school argues along these lines. 'Free bankers' argue that provision of money is best left entirely to the market, which is understood as comprising rational, perfectly informed individuals who are able to discriminate amongst a range of competing moneys. This school contends that central banks, regardless of their structure or policy, have always distorted the market in money, and hence economic processes in general (L. White 1990). In this account, the history of money is seen as the history of the misuse of political power to further special monopoly and rent-seeking interests. States are tempted to defraud the public by expanding the money supply, inducing inflation, and thereby reducing the value of their indebtedness. Or, in the case of democratic states, they 'print money' in order to finance spending to appease mass electorates. Most other branches of orthodox economics, however, would favour a 'public goods' explanation of the state's role in producing an efficient medium of exchange. Thus, for example, monetary authorities should follow non-inflationary policies and strive to provide transparent information on their operations in order to cultivate 'rational expectations'. None the less, the analytical presuppositions of the extreme free banking school and the economic mainstream are essentially the same.

Mainstream economics' answer to the third question is that the value of money is determined by the ratio of its quantity to that of other commodities. Again, it should be noted that regardless of the nature of modern forms of money, this position is an elaboration of the theory of the origins of money as the most tradable commodity. It is also consistent with the more general axiom of 'marginalist', or neoclassical, economics, that value can be established only in exchange. We have seen that this part of the theory is also beset by considerable logical problems.

Modern macro-economics retains the orthodox idea that it is, in principle, possible, by means of an apolitical search for the most technically efficient means, to arrive at an *optimum* supply of *neutral* money – that is to say, a supply of money that does no more than

express the values of the 'real' economy. It is held that this long-run equilibrium of both goods and goods and money and goods is a theoretical possibility. Beyond this, however, the question of precisely how money gets into the economy has not, from a strictly *analytical* standpoint, engaged economic *theory* to any significant degree. Monetary institutions are relevant only in so far as they aid or impede the attainment of the theoretical monetary optimum. Some institutional arrangements are to be preferred in so far as they are believed to stabilize inflation expectations and thereby facilitate the movement to an equation of the quantities of money and goods. To be sure, expectations are important, but they are not formed rationally simply on the basis of economic information about the propensities of the 'real' economy. As we shall see when we return to the question in chapters 7 and 8, the institutional structure of the monetary system comprises relations of power.

Finally, an obvious question arises from this preliminary assessment. How can such inadequate intellectual underpinnings remain the basis for conduct of monetary affairs? (As we shall see, this is asked, if not quite so brusquely, even by mainstream economists who are concerned directly with monetary policy.) The most obvious answer is that this is to be expected in 'normal science'; 'paradigms' can be sustained by the social organization of the scientific community beyond the point that they cease to provide clear understanding (Kuhn 1970). The mainstream conception of money outlined here is an integral part of the dominant paradigm in modern economics. If it were to be seriously challenged from within orthodoxy, it would have equally serious consequences for accepted methodology in general.

However, academic entrenchment can be only part of the explanation for the persistence of this intellectually inadequate meta-theory. For a time, it was reasonable to think that the economics of 'reals', and its associated theory of money, had been superseded. Writing in the middle of the twentieth century, Schumpeter asked a similar question in his magisterial history of economic analysis. He gave a rather unconvincing explanation of the failure of seventeenth- and eighteenth-century credit theory to displace the Aristotelian legacy (Schumpeter 1994 [1954]: 287), but assumed that with the rise of Keynesian economics, what he referred to as 'monetary', as opposed orthodox 'real', analysis, would prevail (p. 278). No doubt he would have been surprised by the revival of nineteenth-century orthodoxy in the analysis of the 'real' economy after the 1970s, but it adds force to our original question.

The analytical reduction of money to a natural commodity, to the mere symbol of a commodity, or to nothing more than the neutral

representation of existing values, is a powerful ideological tool. However, money is not merely a useful technique, comparable to weights and measures; it also consists in social relations that are inherently relations of inequality and power. We shall see that in the actual process of the social production of money, promises to pay are ranked hierarchically in a way that expresses and reproduces these inequalities. Money is not naturally robust like gold, but even in the age of dematerialized money, ideological naturalization in economic theory helps to disguise the reality of its fragile social nature. (See Douglas 1986: 48).