

Concepts of Money

Interdisciplinary Perspectives from Economics, Sociology and Political Science

Edited by
GEOFFREY INGHAM

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Concepts of Money

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Concepts of Money

Interdisciplinary Perspectives from Economics, Sociology and Political Science

Edited by

Geoffrey Ingham

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CRITICAL STUDIES IN ECONOMIC INSTITUTIONS

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Introduction

Geoffrey Ingham

It is one of money's many puzzles and paradoxes that there is such widespread disagreement on the essential nature of something that has been a commonplace, constituent element of human society for such long time. The question of the 'moneyness' of money continues to produce a range of quite different answers. Keynes is reputed to have said that he knew of only three people who really understood money: a professor at another university; one of his students; and a rather junior clerk at the Bank of England (quoted in Lietaer, 2001: 33).The financier Baron Rothschild had made a similar observation a century earlier, but also added that unfortunately they disagreed (Paarlberg, 1971: 64).

The puzzles have a long history, and the lineage of the most recent debates may be traced to the late medieval period in Europe (Wood, 2002). The intensity of the discourse has ebbed and flowed with the pace of economic, social and political change. Periods of stability tend to give rise to greater levels of agreement or, perhaps more accurately, more widespread indifference to the question of the ontology of money, as it becomes a relatively unproblematic and more taken-for-granted part of everyday life. It is often assumed that this is when money functions best; but it seems more useful to take the Marxian view that it is precisely at such times that a particular ideology of money – as a 'natural' phenomenon – takes hold and, in a process of alienation, distorts our understanding (see Ingham, 2004: 37). Indeed, periods of monetary instability have produced the most probing and intellectually acute analyses of money's nature: for example, in preparation for the creation of the Bank of England in the late seventeenth century; the return to the gold standard in Great Britain in the early nineteenth century after its suspension during the Napoleonic Wars; the adoption of the gold standard in the USA at the end of the century; and, of course, Keynes's efforts to deal with chronic unemployment and the underutilization of society's resources and capacities.

It is in such circumstances that the two fundamentally opposed conceptions of money come face to face. There are, as Schumpeter observed, 'only two theories of money that deserve the name ... the commodity theory and the claim theory. From their very nature they are incompatible' (quoted in Ellis, 1934: 3). On the one hand, it is contended that money takes its properties from its status as a commodity with intrinsic (or exchange) value. These are able to act as *media of exchange*. (As we shall see, these money things need not be actual commodities, but symbolic representations of commodities.) On the other hand, money is seen as a socially and politically constructed means of payment that takes the form of a token 'claim' or 'credit'. Its form and, in particular, whether it comprises a valuable commodity is not the essential element. Schumpeter's remark was made in the early twentieth century when the intellectual debate on the nature of money, and its practical political consequences, was at its most intense. Two kinds of money coexisted side by side – precious metal currency and the rapidly expanding system of bank credit, but it was not concluded that there could be two equally valid theories that accounted for the respective forms. On the contrary, the question of the nature of money became deeply

embroiled in the acrimonious debate on the methodology of the social sciences (*Methodenstreit*) between the economic theorists, on the one hand, and the historians and sociologists, on the other. This intellectual conflict was played out most intensely in Germany, but its influence was felt throughout academia in most of the advanced capitalist states (Hodgson, 2001).

Each side insisted that their concept and theory of money explained its origins and captured its distinctive and specific nature. The economic theorists made a sharp distinction between 'money' and 'credit'. Precious metal commodities whose values were established in a process of market exchange were 'money proper' which acted as the foundation for the expansion of bank credit. The latter was a proxy for the real thing and in order to function effectively it had to be convertible on demand for a fixed quantity of the precious metal, as in the gold standard. On the other hand, notwithstanding the greater heterogeneity and contradictions of their views, the 'historical school' tended to argue that all money was credit, or a token claim, regardless of the particular form it took. In its most radical version money was held to be a socially and politically constructed *abstract* value, not concrete or material – 'the value of things without the things themselves' in Chapter 14 (Simmel, 1978 [1907]: 124).

The settlement of *Methodenstreit* after World War I resulted in the division of intellectual labour in the social and historical sciences that has characterized academia since the early twentieth century. The study of economics came to be dominated by the 'high theory' of neoclassical economics based upon the models of the decision making of rational utility-maximizing agents and the equilibrium of supply and demand that these decisions were thought to produce. Economics' hegemony involved the application of this methodology to all economic phenomena, including money. Money was a 'commodity' – not merely because it consisted in a material 'thing' such as precious metal, but also because it could be understood with the same methods (see Ingham, 2004). The more historical, institutional and sociological analysis of economic phenomena and institutions lingered on in marginal branches of economics, but in the main these approaches became organized into the other distinct disciplines that we know today – economic history, sociology, political science, political economy, and so on. However, these other social sciences neglected their inheritance of an alternative analysis of money. It would appear to have been assumed that as money was the quintessential economic phenomenon it should be left to economic science. Consequently, the social and political sciences have tended to accept the mainstream economic conception. Randall Collins astutely observed that sociology appeared to have neglected money because it was not 'sociological enough' (Collins, 1979; Ingham, 2004). As we shall see, the concept of money that was developed and refined by the economic theorists during the *Methodenstreit* continues to inform mainstream economic analysis. Chapters 1–5, in Part I, are representative of this orthodox tradition.

Although Marx's political economy was developed in opposition to classical economics and has continued to inform critiques of the modern economic mainstream they both, nevertheless, share some fundamental assumptions concerning money (Part II, Chapters 6–9).

Chapters 10–13 in Part III are concerned with, among other things, advancing the argument that money's essential and specific character is to be found in the concept of money of account (or unit of account). This approach has sometimes been referred to a 'nominalist' theory, as opposed to 'materialist' commodity theories.

An emphasis on the primacy of money of account is very closely associated with the heterodox credit or claim theory of money which is represented in the following Part IV (Chapters 14–18; but see also Chapters 11 and 12 in the previous section).

An important strand of historical and sociological thought in the *Methodenstreit* culminated in Knapp's *The State Theory of Money*. The recent revival of interest in this work is represented in Part V (Chapters 19–23).

As we have noted, the more distinctively sociological analysis of money has remained underdeveloped since the disciplinary separations of the social sciences widened in the mid-twentieth century. However, there is now a growing revival of these heterodox analyses of money (Part VI, Chapters 24–25; see also Chapters 12 and 14).

This classification is necessarily arbitrary and, as the following introduction points out, many chapters overlap considerably.

Part I Orthodox Economic Conceptions of Money

Since the late nineteenth century most mainstream elementary economic textbooks have followed Francis Walker's decision to put the 'metaphysics of money' aside and to be guided by the simple assumption that 'money is what money does' (see Schumpeter, 1994 [1954]: 1086). Four functions of money are usually listed: *medium of exchange*; *store of value*; *means of unilateral payment* (or, *settlement*); *measure of value* (*unit/money of account*). Leaving aside the misleading implication that these 'functions' explain the origins and existence of money, two questions arise. Do all the functions have to be performed before the specific nature of money is identified? If not which is/are the definitive function(s)?

For two thousand years or so, money was identified with coin and subsequently with notes that represented or were convertible into precious metal coin. It appeared to be self-evident that money's appearance explained its essence and functions; it was a medium of exchange that passed from hand to hand in exchange for commodities. However, for much of this period, coins were not inscribed with a numerical value – that is to say, they did not bear a unit/money of account. In medieval Europe, for example, sovereigns assigned a nominal value to the unnumbered coins in accordance with their declared money of account. Changes in the value of money were frequently the simple result of an alteration to the nominal unit of account by the king in relation to an 'imaginary' standard of value – that is, 'crying down' or 'crying up' the coinage. As an indirect means of increasing taxation, kings would 'cry down' the coinage by declaring, for example, that more silver Xs would now be needed equal to the money of account Y. Furthermore, many units of account were 'imaginary' – for example, the 'pounds' of pounds, shillings and pence were not minted as coin until much later in their existence; and guineas continued as a money of account long after the coins had ceased to circulate. These and other anomalies are not pursued in the orthodox economic literature, but they will be examined in the following sections. In short, for orthodox economics, money is primarily a *medium of exchange* and it is strongly implied that all other functions follow from it (for a representative mainstream text, see Champ and Freeman, 2001, Chapters 1 and 2.)

The underlying conception in orthodox economic analysis has been described as the 'real' economy which consists in the exchange ratios between commodities ('object–object' relations) as these are established by individual acts of utility calculation ('agent–object relations'). 'Agent–agent' – that is, social – relations do not form part of the model. (See the discussion of Schumpeter's description of the 'real' economy in Chapter 12 (Ingham, 1996)); on 'object–object', 'agent–object', and 'agent–agent' relations, see Chapter 9 (Ganßmann, 1988). This

conception of the 'real' economy is essentially one of barter, where 'higgling' transforms myriad exchange ratios into a single price for a uniform commodity. Money is introduced into the analysis as a commodity to act as a medium of exchange to facilitate the process – for example, cigarettes in prison (see Chapter 2 (Radford, 1945)). As a commodity, the medium of exchange can have an exchange ratio with other commodities and act as a 'neutral veil' that has no economic function other than to overcome the 'inconveniences' of barter. In his influential *Money and the Mechanism of Exchange* (1875), Jevons illustrated these 'inconveniences' with, among other examples, the story of how Wallace, the naturalist and protagonist of evolutionary theory, had to go hungry on an expedition to the Malay Archipelago in the 1850s. Despite a general abundance of available food, Wallace's group did not have anything that was acceptable in barter for it. Exchange with money is more *efficient* than barter, but, from this analytical standpoint, they are the same. Consequently, orthodox economics has difficulty in analytically distinguishing money from other commodities – that is, it cannot uniquely specify the quality of money (see the discussion in Chapter 5 (Clower, 1967)).

In Menger's classic analysis (Chapter 1 (Menger, 1892)), it is asserted that the rational search for an efficient means of overcoming the 'inconveniences' accounts for the development of money out of barter. In order to maximize their opportunities for exchange, traders hold stocks of the most tradable commodities which become the media of exchange – beans, cigarettes, etc. Coinage is explained with the further conjecture that precious metals have additional advantageous, or 'efficient', properties – such as durability, divisibility, portability, etc. Metal is weighed and minted into uniform pieces that are counted and, in this way, the commodities become money. As Menger recognized, the increasing use of base metal coins, paper, and credit instruments broke the explanatory link between individual rationality and collective advantages. The institution of money brought collective benefits, but these were not necessarily in the individual interests of all parties. Why should an individual be willing to exchange goods for base metal discs? In answer to the question, modern mainstream neoclassical economics has tried to demonstrate that money, as a medium of exchange, reduces transactions costs for the individual (see Chapter 3 (Jones 1976); Dowd, 2000; Klein and Selgin, 2000).

'General equilibrium' analysis, which is widely regarded as modern neoclassical economics' most analytically refined conception of the 'real' economy of barter exchange, is based upon Walras's late nineteenth century mathematical models. Myriad acts of utility calculation result in a price which clears the market. Here money as an actual commodity is absent; but it is represented symbolically by Walras's *numeraire* – that is, the numerical value that is arbitrarily assigned to a commodity in the model in order that the agents are able to make the necessary calculations to clear the market and achieve an equilibrium price. The orthodox economic theorist Frank Hahn considered it to be a serious problem that his discipline could not find an essential place for money, and set out to remedy the situation. He rejected Menger's conjectural history and searched for a theoretical – that is, logical – solution. His honest and rigorous attempt is instructive. First, it exposes the circularity of neoclassical economics' 'methodological individualism'. As Hahn pointed out it is only 'advantageous for any given agent to mediate his transactions by money provided that all other agents do likewise'. Second, he had to concede that orthodox economic methodology could neither distinguish money from a commodity, nor barter from monetary exchange (see Chapter 4 (Hahn, 1987: 26); also the discussion in Chapter 12 (Ingham, 1996)).

Attempts to identify the specific quality of money by its function as a transactions cost-efficient medium of exchange fail to see that the specific quality of 'moneyness' is conveyed by the concept of money of account. Money of account, according to Keynes, is the 'primary concept of a theory of money' so that '[s]omething which is used as a convenient medium of exchange on the spot may approach being money ... But if this is all, we have scarcely emerged from the stage of barter' (see Chapter 11 (Keynes, 1971 [1930]: 3)). However, before we move on to discuss this contention and supporting analyses, we should look briefly at the basic concept of money in Marxist analysis in which money is also understood as a commodity.

Part II Marxist Concepts of Money

Marx contended that the 'principal difficulty in the analysis of money is surmounted as soon as it is understood that the commodity is the origin of money' (see Chapter 6 (Marx, 1971: 64)). On one level, Marx follows the classical labour theory of value. Precious metal can become the universal measure of value because mining and minting embody labour, which can be expressed in 'the quantity of any other commodity in which the same amount of labour time is congealed' (Marx, 1976: 186). Forms of credit are derivative: bank notes and bills of exchange are money in so far as they directly represent both precious metals and/or other commodities in exchange. However, on another level, Marx advances his effective critique of classical economics. Monetary relationships do not represent underlying natural economic relations between commodities, as they do in the orthodox barter model of the 'real' economy; rather, they mask the underlying social relations of production. Monetary relations are the alienated expression of the power structure of bourgeois–proletarian relations. Money is a veil, as it is in orthodox economic analysis; but one that needs to be torn away in order to demystify capitalism, which will then become 'visible and dazzling to our eyes' (Marx, 1976: 187).

In quite a conventional way Marx argued that bank credit could expand beyond 'its necessary proportions' and become 'the most potent means of driving capitalist production beyond its own limits, and this has become one of the most effective vehicles of crises and swindle' (Marx, 1981: 735–9). Hilferding's *Finance Capital* (1981 [1910]) applied this approach to the analysis of the dominance of money-capital in the late nineteenth century. Credit creation is anchored in the 'real' economy of production; and 'the quantity of credit money is limited by the level of production and circulation' (Hilferding, 1981 [1910]: 64–5). Banks are seen purely as intermediaries that gather the bourgeoisie's 'idle capital' with the 'idle money of all the other classes for use in production' (Hilferding, 1981 [1910]: 90). However, as Schumpeter, Keynes and their followers have argued, capitalism is an economic system that is distinguished by the 'endogenous' creation of money through the advance of loans in the form of bank deposits. This is sometimes referred as the creation of *new* money *ex nihilo* in the sense that it is not a direct representation of existing commodities, nor is it merely the collection of already existing idle savings (see Part IV below). (However, it should be noted that credit-money is of course produced by *something* – that is to say, it is constituted by the *social* relation of the debtor–creditor contract and the *promise* of repayment.)

Like orthodox economics, the Marxist analysis of money has been impeded by the search for the nature of money in the *commodity* (see the exchange, in Chapters 7 and 8, between Fine and Lapavitsas, 2000 and Ingham, 2001. See also Ganßmann's Marxist-influenced critique

of the analysis of money in both mainstream economics and sociology). In fact, Marx's analysis of capital as a social relation applies equally to money itself. But most Marxists have not taken this route and, consequently, in much the same way as mainstream economics, they have not considered the argument that all money consists in tokens of *abstract value*, denominated in *money of account*, that signify and are constituted by its own *social relations* of credit–debt.

Part III Money as Money of Account

As noted in Part I, mainstream economics identifies money primarily as a medium of exchange. It is argued that the market spontaneously produces a transactions cost-efficient medium of exchange that becomes a standard of value and numerical money of account. Coins are said to have evolved from weighing bars of precious metal that were then cut into uniform pieces, struck, and counted. On the other hand, a heterodox tradition has argued that money's *specific* character is to be found in its role as an *abstract* measure of value by which the countability of the money things is established (see Chapters 10–14; also Ingham, 2004). Money is the 'description' conferred by money of account and particular things (lumps of metal, paper, electronic impulses, magnetic traces, shells, beans, etc.) are forms of money because they 'answer the description' (Chapter 11). In most circumstances, such things could be, in Keynes's terms, 'convenient media of exchange' for conducting transactions; but it is improbable that they could produce an agreed scale of abstract value 'in which debts, prices and general purchasing power are *expressed*' (Chapter 11 (Keynes: 3). Emphasis in original). The fundamental question is whether a single scale of values could emerge exclusively from the higgling and haggling of the market. In this respect, it should be noted that in the Walrasian version of orthodoxy referred to above a commodity with an already established value is *arbitrarily* chosen as the *numeraire*. The pivotal question, as we shall see, is how this value can be established *before* the choice.

Studies such as Radford's account of the use of commodities (such as cigarettes) in a World War II prisoner-of-war camp continue to be referred to in support for the orthodox theory of money (Chapter 2 (Radford, 1945)). It is contended that these media of exchange become the basis for a unit of account and that monetary systems such as the gold standard are analogous (see also Dowd, 2000: 145). Two related observations are pertinent. First, cigarettes were able to attain relatively stable exchange ratios with other commodities and, consequently, to act as a unit of account because of the atypical conditions of repeated spot exchanges in the small-scale prison camp economy. In such a stable population, 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 the cigarettes for long. However, unless *all* preferences were identical the exchange value of cigarettes would continue to vary from trade to trade. In order to achieve a universal standard of value and unit of account, the value of a cigarette would have to be fixed in terms of another linchpin commodity. For example, as Grierson (1977) observed, tobacco was used as a medium of exchange in sixteenth-century Virginia, but it only became money when its value became the legal equivalent of 3 shillings. (N.B. The shillings were not minted, but existed only as money of account. See the discussion in Chapter 12 (Ingham, 1996).) In the case of the gold standard a promise was made, in an abstract money of account, to redeem a

note for an agreed amount of the metal. Their exchange rate was fixed by an authority, not determined by market exchange (see Innes, 2004 [1913] in Wray, 2004).

Large-scale complex multilateral exchange – that is, an authentic market – presupposes a stable standard of value expressed in a money of account. Money as 'the stable pole contrasts with the eternal movements, fluctuations of the objects with all others' in Chapter 14 (Simmel, 1978 [1907]: 121). Barter exchange produces myriad complex exchange ratios; for example, 100 goods could yield 4950 exchange rates. Outside the atypical economic conditions of a prison in which all preferences are stable and known, how could separate barter exchanges of, say, one cigarette to three, four, five or more chocolate bars produce a single money of account for pitching prices and contracting debts? This conception of money reverses the historical and logical process of the Mengerian account and argues that any commodity value standard is essentially abstract in the sense that it is fixed authoritatively with regard to an 'imaginary' standard (see Chapter 13 (Einaudi, [1936] 1953)). That is to say, the very idea of money is logically anterior and historically prior to the market, conceptualized not merely as exchange but as an institution for producing a single price for a uniform good.

If the process of exchange could not have produced the money of account, how did it originate? The nineteenth-century Historical Schools of economics produced a range of conjectural answers (see Einzig, 1966), all of which are compromised by the paucity of the historical record. One of the more interesting of these has been developed by Grierson, the great Cambridge historian and numismatist, who has argued that the origins of the 'phenomenon of money', which lie behind any particular form such as coin, are not to be found in the market but in an earlier stage of communal development when 'worth and wergeld were interchangeable terms' (see the discussion of Grierson in Chapter 12 (Ingham, 1996)). *Wergeld* ('worthpayment') institutions were common in pre-market societies. They consisted of scales of tariffs for fines and compensations for injuries and insults. It has been suggested that these scales of tariffs and fines were embryonic moneys of account and may be understood, in the terms of Durkheimian sociology, as 'collective representations' for society's evaluation of its own social worth or value (Chapter 12 (Ingham, 1996); see also Henry, 2004 and Hudson, 2004 in Wray, 2004).

Part IV Money as Credit

As far as we can see, the idea that the nature of *all* money consisted in socially valid claims or credits, rather than in the material from which it was made, began to emerge with the development of capitalism in Western Europe. There may have been similar conceptualizations of money in ancient Near Eastern empires – for example, Babylon 4000 years ago – but no direct written evidence exists (on these early origins of money see Henry, 2004; Hudson, 2004). These social systems used 'money' in that they used a money of account, as Keynes observed; but they did not mint coin (Chapter 11 (Keynes, 1971 [1930]: 11)). However, it is quite clear that the intellectual efforts to understand a puzzling aspect of the monetary arrangements in late medieval and early modern Europe led to a 'credit theory of money'. (Schumpeter contrasts this with the orthodox 'monetary theory of credit' which maintains that credit is advanced from a base, or reserve, of precious metal money.)

The puzzle concerned the apparent 'dematerialization' of money. In the wake of the collapse of the Roman Empire and the cessation of minting coins, moneys of account – as in Babylon –

continued to be used for assigning values, calculation, etc.; but they were no longer directly linked to actual coins. They were referred to as 'imaginary' or 'ghost' moneys and were also eventually used to denominate the various forms of commercial paper of early capitalism – promissory notes, bills of exchange, etc. By the sixteenth century these instruments of trade credit were widely used and were created independently of any monetary base (see the most thorough analysis in Boyer-Xambeu *et al.*, 1994; also Ingham, 2004, Chapters 2 and 6). That is to say, in the terminology of modern Post Keynesian monetary theory, this credit was 'endogenous' as opposed to 'exogenously' determined metallic currency (see the discussion in Chapter 18 (Parguez and Seccarrecia, 2000)). But were the credit instruments 'money'? This state of affairs resulted in conceptual uncertainty that persists to this day. As Fullarton observed during the important debate between the Banking and Currency schools in mid-nineteenth century England:

> The real question then to be considered is not whether this or that particular form of credit be entitled to the designation of money, but whether, without a perversion of terms and an outrage of principle, that denomination can be applied to credit in any shape. (John Fullarton, *On the Regulation of Currencies*, 1844, quoted in Wray, 1990: 105)

To oversimplify matters, it could be said that three answers are to be found. First, mainstream economics continues, at least, strongly to imply that there is a clear distinction between money and credit and that the latter is created on a monetary base. Second, some heterodox and Post Keynesian economists argue that there is a distinction to be made between, on the one hand, the now defunct system of an inelastic 'exogenous' supply of metallic money determined by the availability of bullion and, on the other, the elastic supply of credit money. This does not have a distinct monetary base but is produced 'endogenously', *ex nihilo*, by the capitalist banking system in response to the demand for the financing of capitalist production in the monetary 'circuit'. A third position contends that all money is credit in so far as it is, in essence, no more than a token claim. (It should be noted that there exists a further refinement of this position which maintains that, although all money is credit, not all credit is money. Gardner, for example, distinguishes between primary credit, such as a bilateral agreement (IOU) for deferred payment, and secondary credit, where the IOU is transferable and can be assigned to pay a third party (Gardner, 2004; see also Ingham, 2004).

'Endogenous' Money and the Theory of the Monetary 'Circuit'

Despite his ambivalence on the question of whether all money was credit, Schumpeter had argued in the early twentieth century that the *differentia specifica* of capitalism was the elastic creation of credit money (Chapter 16). Keynes followed along the same lines with his conceptualization of bank money (Chapter 11). Others took guidance from the Banking School's analysis of the 'flux' and 'efflux' of bank credit in the normal course of financing of capitalist production (see Rochon, 1999; Smithin, 2003 for accounts of these views). These analyses crystallized into the theory of 'endogenous' money whose three related propositions stand in opposition to the orthodox mainstream economic theory of 'exogenous' money. First, loans make deposits (as opposed to deposits permitting loans to be made). Second, it is these loans consisting in pure credit that make up the reserves of the banking system. Third, the demand for money induces its supply, not the existence of an available 'stock' of money (Wray, 1990:

73–4). There are differences within this broad heterodox camp (see Rochon, 1999; Smithin, 2003), but perhaps one of the most marked is that between Anglo-US Post Keynesianism and the theory of the 'monetary circuit' (Rochon and Rossi, 2004, Introduction).

These mainly French and Italian theorists differ from Post Keynesians in their focus on the structure of the social and economic relationships that comprise the monetary circuit (Chapters 17 and 18). In more orthodox manner, Post Keynesians tend to emphasize the role of individual motivation (Keynes's 'liquidity preference') in holding money as a hedge against uncertainty. The idea that money actually consists in the credit relations that are described in capitalist double-entry bookkeeping accounts is more explicit in circuit theory. In a similar vein to Simmel, it is asserted that money 'is a social reality within the system: a non-commodity in a universe of commodities' (de Vroey, 1984: 383). These formulations have moved away from the orthodox concept of money as a 'thing' that 'flows' with a 'velocity'. Rather, money is *created* by the of bank credit (efflux) and *destroyed* by the repayment of the debt (reflux). That is to say, it does not flow but 'appears' in an 'emission' and 'disappears' in the debits and credits of capitalist accounts. The basic 'circuit' is a three-way, balance-sheet relation between the issuers of credit (banks), the borrowers (firms), and consumers (Chapter 18 (Parguez and Seccareccia: 101)). Graziani has outlined this structure in more detail in which the relative autonomy of the circuit that constitutes money is emphasized (Chapter 17: 11).

The Credit Theory of Money

There is a tendency in some of the above theorising to accept that the orthodox conceptualization of money as a commodity, with an 'intrinsic' exchange value whose scarcity is naturally determined, provides an adequate understanding of pre-capitalist coinage. As we have noted, however, there is another more radical heterodox tradition which asserts that *all* money – regardless of its form – is credit. This thesis that all money is token 'credit', denominated in an abstract measure of value (money of account), has never been more succinctly expressed than it was by Mitchell Innes in two relatively obscure articles published in 1913–14. (The second article 'The credit theory of money' is Chapter 15 in the present collection. The first – 'What is money?' – and a discussion of Mitchell Innes's work is contained in Wray, 2004.)

At the apogee of the gold standard and the moment of its adoption by the USA, Mitchell Innes declared that there had never such a thing as a metallic standard of value; rather, money was an abstract measure of credit/debt. 'The eye has never seen, nor the hand touched a dollar. All that we can touch or see is a promise to pay or satisfy a debt due for an amount called a dollar' (Chapter 15 (Innes, 1914: 155)). His critique of the commodity theory of money exposed its illogical arguments and historical inaccuracy. If it were the case, as Adam Smith observed, that dried cod was used as money in Newfoundland, did the traders have to buy their cod from the fishermen with cod? Moreover, as we have already noted, Mitchell Innes stressed that throughout history coinage was only exceptionally struck with a numerical value; rather its value was usually manipulated by an alteration of the money of account.

Unknown to Mitchell Innes, the sociologist Georg Simmel had advanced similar arguments a few years earlier in his monumental *The Philosophy of Money* (Chapter 14 (Simmel, 1978)). He rejected all economic theories, including Marxism, which located money's value in the material of the money thing; rather, money is an *abstract* measure of value. Money is the 'distilled exchangeability of objects ... the relation between things, a relation that persists in

spite of the changes in the things themselves' (Simmel, Chapter 14, 1978 [1907]: 124). In criticizing the commodity theory's argument that money should consist of an intrinsically valuable material, Simmel points out that measures of length are long because they share with the measured object the abstract quality of length. 'To establish a proportion between two quantities, not by direct comparison, but in terms of the fact that each of them relates to a third quantity and that these relations are equal or unequal' is one of society's greatest accomplishments (Simmel, 1978 [1907]: 146).

In a complete contradiction of the orthodox economic analysis of money, Simmel insists that money and barter have different *social structures* and that the former consists in the social relation of credit. Money is a form of 'sociation', and not a 'thing'. In exchange by money the 'pivotal point in the interaction of the two parties recedes from the direct line of contact between them, and moves to the relationship which each ... has with the economic community that accepts money' (Simmel, 1978). This relationship and not the material commodity of the money thing is the important element in understanding the phenomenon. The distinction between 'money' and 'credit' is misleading because '[m]etallic money is also a promise to pay and ... it differs from the cheque only with respect to the size of the group which vouches for its being accepted. The common relationship that the owner of money and the seller have to a social group ... provides the sociological constellation in which money transactions, as distinct from barter are accomplished' (Simmel, 1978).

Thus money is a social relation in the sense that it is constituted by the social relation of credit–debt (Chapter 12 (Ingham, 1996)). Issuers of money incur a liability (debt) in so far as they promise to accept their issue in payment of a debt owed to them (Ingham, 2004: 12). In this way, money becomes a claim on goods within a given monetary space defined by money of account. The next question is: how is this monetary space constructed and maintained? Simmel considers that it is more than merely a question of trust and requires the enforcement of money transactions by a viable state. Moreover, 'the value of money is based on a guarantee represented by the central political power, which eventually replaces the significance of the metal' (Simmel, 1978). Similarly, Mitchell Innes (Chapter 15) placed the role of the state at the centre of his credit theory. He argued that all coins were tokens and that the weight and composition of the metal was not a central concern. What was important was 'the name or distinguishing mark of the issuer, which was never absent' (Chapter 15: 382). The mark did not necessarily guarantee a metallic standard, but simply that the issuer would accept the token in payment of a tax debt. In other words, the money was issued as a token of indebtedness on the part of the issuer.

Part V Money and the State

Knapp thought it absurd to attempt to understand money 'without the idea of the state' (*State Theory of Money*, 1973 [1924]: vii–viii. The first edition in German was 1905). In a direct confrontation with Menger's economic theory, he argued that money did not originate as a medium that emerges from exchange, but rather as a means of accounting for debts (money of account) and as a means of payment for their unilateral settlement. The most important of these have been tax debts. Debts are expressed in 'the unit in which the amount of payment is expressed' and the actual means of payment, or form of money, is 'a bearer of units of value'

(Knapp, 1973 [1924]: 7–8). The material of the form of money is of secondary importance because it is 'moveable' (8–25); that is to say, in Keynes's terms, that which answers the 'description' of money provided by the abstract money of account can be, and frequently is, subject to change in the tokens that represent it – precious or base metal coins, other commodities, paper, etc. By declaring what it will accept for the discharge of a tax debt the state creates money and establishes its 'validity' (*Geltung*). Using the Latin word *charta* (token), Knapp defined money as 'a Chartal means of payment'. States issue money as a token of indebtedness in the sense that they promise to accept them in payment of tax.

The economic theorists poured scorn on Knapp's analysis (see von Mises, 1934 [1912]: 413–18) and what they took to be his assertion that the state and not the market could determine the value of money. Leaving aside the fact that modern state expenditure is large enough to have precisely this effect, the theorists had misconstrued Knapp's argument. They argued that value can only be established in market exchange, but as we have seen, this tradition of economic theory has been unable to explain why all goods with value do not become money, or why goods with negligible exchange value – for example, paper – could be valuable. Knapp was showing how the 'validity', or 'valuableness' of money was established, not its *actual exchange value* at any point in time (see Weber's distinction between the *formal* and *substantive* validities of money (Weber, 1978: 169)). As orthodox economic theory acknowledges, the *historical* role of the state in fixing and manipulating a standard of value is incontrovertible and, moreover, this fact can be readily incorporated into an orthodox 'public goods' theory of money (for an explicit comparison between orthodox and state theories, see Chapter 19 (Goodhart, 1998)). However, Knapp argues that the state is a necessary, or *logical*, condition for money's existence as a money of account, as outlined above in Part III. Woodruff's analysis of the disintegration of the Russian monetary system after the fall of communism in the late 1980s shows clearly how this was the result of the state's loss of control of the money of account (Chapter 23). The state lost the capacity to declare what should 'count' as money. Enterprises maintained the economic interdependencies that were forged under the Soviet system by evolving media of exchange that were anchored in the 'real' exchanges of their networks. In this way local government administrations and industry tried to preserve the economic way of life of their regions by protecting it from the market forces that a centrally imposed and controlled money would have unleashed. With the loss of control of the money of account and the proliferation of quasi-barter media of exchange and means of payment the state was unable to tax effectively, which further weakened its monetary position. In fact, the Russian economy had exhibited precisely those features that are emphasized in orthodox economic theory. The agents in the 'real' economy had developed their own media of exchange that were anchored in the exchange and circulation of commodities; but the result was chaos.

Knapp's analysis is endorsed by Keynes in *A Treatise on Money* (Chapter 11: 4), but there is no further reference to it in his subsequent writings. However, the idea that money was 'a creature of the state' was taken up during the 1940s by the American Keynesian, Lerner (Chapter 20 (Lerner, 1947)). He argued that the traditional doctrines of 'sound finance' should be replaced by 'functional finance' in which the level of government spending 'was neither greater nor less than that rate which at the current prices would buy all the goods that it is possible to produce' (Lerner, 1943: 39).

More recently, a flourishing 'neo-chartalist' school has become centred on the University of Missouri-Kansas City (Chapters 21 and 22 (Wray, 1998; Bell, 2000)). In a bold reversal of

orthodox thinking that also owes much to Post Keynesian and monetary circuit theories, Wray and his colleagues argue that the state does not have the need of its citizens' tax payments before it can spend. Rather, distinctively 'modern' fiat money is issued by the sovereign power in the form of its liabilities in order to make payments for expenditure to stimulate any level of economic activity that is consistent with the public interest and purpose. The population is constrained to earn income in the form of money acceptable to the state to make tax payments. Furthermore, taxes cannot pay for government expenditure because, following the balance sheet conception of money, tax payments are the 'reflux' that destroys the original 'efflux' from the government expenditure that is financed by its 'fiat' money. Rather, the tax system is a means of cancelling the initial supply of fiat money and thus helps to maintain the necessary scarcity of money. (Differences have emerged between some Post Keynesians, circuit theorists and neo-chartalists on, amongst other things, the functions of taxation and whether central bank money is 'really' state money. See Rochon and Rossi (eds) (2003); also the special issue of *Journal of International Political Economy*, 2004.)

Part VI The Social Construction of Money

Most heterodox economic conceptions of money see money as credit and, consequently, it is implied that it consists in a 'social relation' rather than as a 'thing'. This is made more explicit in some sociological writing although it is true to say that most modern sociology focuses on money's social and cultural consequences and meanings rather than how it is socially constructed as an institution. Simmel's focus on money's role as an expression of the discontinuity, fragmentation, and relativity of 'modernity' has been continued by the sociological tradition; but those parts of *The Philosophy of Money* that deal with the social construction of money have received less attention (for an exception to this trend, see Chapter 12 and Ingham, 2004). Zelizer's study of the different contextually embedded 'social meanings' of money at the 'micro' is a useful corrective to the conception of money as embodying only a single economic function (Chapter 25 (Zelizer, 1989)).

However, from the same sociological mainstream, Carruthers and Babb (1996) take an explicitly 'macrocultural' approach in their study of the debates leading to the adoption of the gold standard in the USA during the late nineteenth century (Chapter 24). In contrast to orthodox economic explanations of particular forms of money in terms of their efficient consequences, Carruthers and Babb emphasize the power struggles that accompany the social and political construction of money, as different interests attempt to impose the form that is most advantageous to themselves. They also show how the conception of money as a material thing has the effect of ideologically naturalizing money by masking those conflicts that necessarily accompany its social construction.

One of the most concise formulations of the construction of the 'social reality' of money is given by the philosopher John Searle (Searle, 1995: 31–58). Money is an 'institutional fact' whose functions cannot be deduced from its material or physical structure. Rather, money is constructed as an 'institutional reality' by an ongoing process of 'collective intentionality' that assigns 'constitutive and regulative rules' to the practices that are money. Money is a 'self-referential' concept in the sense that it emerges in conformity to the rules by which it is described. Simmel expressed the same understanding with his statement that 'money is one of those

normative ideas that obey the norms that they themselves represent' in Chapter 14 (Simmel, 1978 [1907]: 122), as did Keynes with his concept of money conforming to the 'description' of money provided by the money of account.

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Part I
Orthodox Economic Concepts of Money

[1]

ON THE ORIGIN OF MONEY.

I.—Introduction.

There is a phenomenon which has from of old and in a peculiar degree attracted the attention of social philosophers and practical economists, the fact of certain commodities (these being in advanced civilizations coined pieces of gold and silver, together subsequently with documents representing those coins) becoming universally acceptable media of exchange. It is obvious even to the most ordinary intelligence, that a commodity should be given up by its owner in exchange for another more useful to him. But that every economic unit in a nation should be ready to exchange his goods for little metal disks apparently useless as such, or for documents representing the latter, is a procedure so opposed to the ordinary course of things, that we cannot well wonder if even a distinguished thinker like Savigny finds it downright 'mysterious.'

It must not be supposed that the *form* of coin, or document, employed as current-money, constitutes the enigma in this phenomenon. We may look away from these forms and go back to earlier stages of economic development, or indeed to what still obtains in countries here and there, where we find the precious metals in an uncoined state serving as the medium of exchange, and even certain other commodities, cattle, skins, cubes of tea, slabs of salt, cowrie-shells, etc.; still we are confronted by this phenomenon, still we have to explain why it is that the economic man is ready to accept a certain kind of commodity, *even if he does not need it, or if his need of it is already supplied,* in exchange for all the goods he has brought to market, while it is none the less what he needs that he consults in the first instance, with respect to the goods he intends to acquire in the course of his transactions.

And hence there runs, from the first essays of reflective con-

templation in social phenomena down to our own times, an uninterrupted chain of disquisitions upon the nature and specific qualities of money in its relation to all that constitutes traffic. Philosophers, jurists, and historians, as well as economists, and even naturalists and mathematicians, have dealt with this notable problem, and there is no civilized people that has not furnished its quota to the abundant literature thereon. What is the nature of those little disks or documents, which in themselves seem to serve no useful purpose, and which nevertheless, in contradiction to the rest of experience, pass from one hand to another in exchange for the most useful commodities, nay, for which every one is so eagerly bent on surrendering his wares? Is money an organic member in the world of commodities, or is it an economic anomaly? Are we to refer its commercial currency and its value in trade to the same causes conditioning those of other goods, or are they the distinct product of convention and authority?

II.—Attempts at Solution hitherto.

Thus far it can hardly be claimed for the results of investigation into the problem above stated, that they are commensurate either with the great development in historic research generally, or with the outlay of time and intellect expended in efforts at solution. The enigmatic phenomenon of money is even at this day without an explanation that satisfies; nor is there yet agreement on the most fundamental questions of its nature and functions. Even at this day we have no satisfactory theory of money.

The idea which lay first to hand for an explanation of the specific function of money as a universal current medium of exchange, was to refer it to a general convention, or a legal dispensation. The problem, which science has here to solve, consists in giving an explanation of a general, homogeneous course of action pursued by human beings when engaged in traffic, which, taken concretely, makes unquestionably for the common interest, and yet which seems to conflict with the nearest and immediate interests of contracting individuals. Under such circumstances what could lie more contiguous than the notion of referring the foregoing procedure to causes lying outside the sphere of individual considerations? To assume that certain commodities, the precious metals in particular, had been exalted

into the medium of exchange by general convention or law, in the interest of the commonweal, solved the difficulty, and solved it apparently the more easily and naturally inasmuch as the shape of the coins seemed to be a token of state regulation. Such in fact is the opinion of Plato, Aristotle, and the Roman jurists, closely followed by the mediæval writers. Even the more modern developments in the theory of money have not in substance got beyond this standpoint.[1]

Tested more closely, the assumption underlying this theory gave room to grave doubts. An event of such high and universal significance and of notoriety so inevitable, as the establishment by law or convention of a universal medium of exchange, would certainly have been retained in the memory of man, the more certainly inasmuch as it would have had to be performed in a great number of places. Yet no historical monument gives us trustworthy tidings of any transactions either conferring distinct recognition on media of exchange already in use, or referring to their adoption by peoples of comparatively recent culture, much less testifying to an initiation of the earliest ages of economic civilization in the use of money.

And in fact the majority of theorists on this subject do not stop at the explanation of money as stated above. The peculiar adaptability of the precious metals for purposes of currency and coining was noticed by Aristotle, Xenophon, and Pliny, and to a far greater extent by John Law, Adam Smith and his disciples, who all seek a further explanation of the choice made of them as media of exchange, in their special qualifications. Nevertheless it is clear that the choice of the precious metals by law and convention, even if made in consequence of their peculiar adaptability for monetary purposes, presupposes the pragmatic origin of money, and selection of those metals, and that presupposition is unhistorical. Nor do even the theorists above mentioned honestly face the problem that is to be solved, to wit, the explaining how it has come to pass that certain commodities (the precious metals at certain stages of culture) should be promoted amongst the mass of all other commodities, and accepted as the generally acknowledged media of exchange. It is a question concerning not only the origin but also the nature of money and its position in relation to all other commodities.

[1] *Cf.* Roscher, *System der Volkswirthschaft*, I. § 116; my *Grundsätze der Volkswirtschaftslehre*, 1871, p. 255, *et seq.*; M. Block, *Les Progrès de la Science économique depuis A. Smith*, 1890, II., p. 59, *et seq.*

III. The Problem of the Genesis of a Medium of Exchange.

In primitive traffic the economic man is awaking but very gradually to an understanding of the economic advantages to be gained by exploitation of existing opportunities of exchange. His aims are directed first and foremost, in accordance with the simplicity of all primitive culture, only at what lies first to hand. And only in that proportion does the value in use of the commodities he seeks to acquire, come into account in his bargaining. Under such conditions each man is intent to get by way of exchange just such goods as he directly needs, and to reject those of which he has no need at all, or with which he is already sufficiently provided. It is clear then, that in these circumstances the number of bargains actually concluded must lie within very narrow limits. Consider how seldom it is the case, that a commodity owned by somebody is of less value in use than another commodity owned by somebody else! And for the latter just the opposite relation is the case. But how much more seldom does it happen that these two bodies meet! Think, indeed, of the peculiar difficulties obstructing the immediate barter of goods in those cases, where supply and demand do not quantitatively coincide; where, *e.g.*, an indivisible commodity is to be exchanged for a variety of goods in the possession of different persons, or indeed for such commodities as are only in demand at different times and can be supplied only by different persons! Even in the relatively simple and so often recurring case, where an economic unit, A, requires a commodity possessed by B, and B requires one possessed by C, while C wants one that is owned by A—even here, under a rule of mere barter, the exchange of the goods in question would as a rule be of necessity left undone.

These difficulties would have proved absolutely insurmountable obstacles to the progress of traffic, and at the same time to the production of goods not commanding a regular sale, had there not lain a remedy in the very nature of things, to wit, *the different degrees of saleableness* (*Absatzfähigkeit*) *of commodities*. The difference existing in this respect between articles of commerce is of the highest degree of significance for the theory of money, and of the market in general. And the failure to turn it adequately to account in explaining the phenomena of trade, constitutes not only as such a lamentable breach in our science,

but also one of the essential causes of the backward state of monetary theory. *The theory of money necessarily presupposes a theory of the saleableness of goods.* If we grasp this, we shall be able to understand how the almost unlimited saleableness of money is only a special case,—presenting only a difference of degree—of a generic phenomenon of economic life—namely, the difference in the saleableness of commodities in general.

IV. Commodities as more or less Saleable.

It is an error in economics, as prevalent as it is patent, that all commodities, at a definite point of time and in a given market, may be assumed to stand to each other in a definite relation of exchange, in other words, may be mutually exchanged in definite quantities at will. It is not true that in any given market 10 cwt. of one article = 2 cwt. of another = 3 lbs. of a third article, and so on. The most cursory observation of market-phenomena teaches us that it does not lie within our power, when we have bought an article for a certain price, to sell it again forthwith at that same price. If we but try to dispose of an article of clothing, a book, or a work of art, which we have just purchased, in the very same market, even though it be at once, before the same juncture of conditions has altered, we shall easily convince ourselves of the fallaciousness of such an assumption. The price at which any one can at pleasure buy a commodity at a given market and a given point of time, and the price at which he can dispose of the same at pleasure, are two essentially different magnitudes.

This holds good of wholesale as well as retail prices. Even such marketable goods as corn, cotton, pig-iron, cannot be voluntarily disposed of for the price at which we have purchased them. Commerce and speculation would be the simplest things in the world, if the theory of the 'objective equivalent in goods' were correct, if it were actually true, that in a given market and at a given moment commodities could be mutually converted at will in definite quantitative relations—could, in short, at a certain price be as easily disposed of as acquired. At any rate there is no such thing as a general saleableness of wares in this sense. The truth is, that even in the best organized markets, while we may be able to purchase when and what we like at a definite price, viz.: the *purchasing price*, we can only dispose

of it again when and as we like at a loss, viz.: at the *selling price*.[1]

The loss experienced by any one who is compelled to dispose of an article at a definite moment, as compared with the current purchasing prices, is a highly variable quantity, as a glance at trade and at markets of specific commodities will show. If corn or cotton is to be disposed of at an organised market, the seller will be in a position to do so in practically any quantity, at any time he pleases, at the current price, or at most with a loss of only a few pence on the total sum. If it be a question of disposing, in larger quantities, of cloth or silk-stuffs at will, the seller will regularly have to content himself with a considerable percentage of diminution in the price. Far worse is the case of one who at a certain point of time has to get rid of astronomical instruments, anatomical preparations, Sanskrit writings, and such hardly marketable articles!

If we call any goods or wares *more or less saleable*, according to the greater or less facility with which they can be disposed of at a market at any convenient time at current purchasing prices, or with less or more diminution of the same, we can see by what has been said, that an obvious difference exists in this connection between commodities. Nevertheless, and in spite of its great practical significance, it cannot be said that this phenomenon has been much taken into account in economic science. The reason of this is in part the circumstance, that investigation into the phenomena of price has been directed almost exclusively to the *quantities* of the commodities exchanged, and not as well to the greater or less *facility* with which wares may be disposed of at normal prices. In part also the reason is the thorough-going abstract method by which the saleableness of goods has been treated, without due regard to all the circumstances of the case.

The man who goes to market with his wares intends as a rule to dispose of them, by no means at any price whatever, but at such as corresponds to the general economic situation. If we are going to inquire into the different degrees of saleableness in goods so as to show its bearing upon practical life, we can only do so by consulting the greater or less facility with which they may be disposed of at prices corresponding to the general economic

[1] We must make a distinction between the higher purchasing prices for which the buyer is rendered liable through the wish to purchase at a definite point of time, and the (lower) selling prices, which he, who is obliged to get rid of goods within a definite period, must content himself withal. The smaller the difference between the buying and selling prices of an article, the more saleable it usually proves to be

situation, that is, at *economic* prices.[1] A commodity is more or less saleable according as we are able, with more or less prospect of success, to dispose of it at prices corresponding to the general economic situation, at *economic* prices.

The *interval of time*, moreover, within which the disposal of a commodity at the economic price may be reckoned on, is of great significance in an inquiry into its degree of saleableness. It matters not whether the demand for a commodity be slight, or whether on other grounds its saleableness be small; if its owner can only bide his time, he will finally and in the long run be able to dispose of it at economic prices. Since, however, this condition is often absent in the actual course of business, there arises for practical purposes an important difference between those commodities, on the one hand, which we expect to dispose of at any given time at economic, or at least approximately economic, prices, and such goods, on the other hand, respecting which we have no such prospect, or at least not in the same degree, and to dispose of which at economic prices the owner foresees it will be necessary to wait for a longer or shorter period, or else to put up with a more or less sensible abatement in the price.

Again. account must be taken of the *quantitative* factor in the saleableness of commodities. Some commodities, in consequence of the development of markets and speculation, are able at any time to find a sale in practically any quantity at economic, or approximately economic, prices. Other commodities can only find a sale at economic prices in smaller quantities, commensurate with the gradual growth of an effective demand, fetching a relatively reduced price in the case of a greater supply.

[1] The height of saleableness in a commodity is not revealed by the fact that it may be disposed of at any price whatever, including such as result from distress or accident. In this sense all commodities are pretty well equally saleable. A high rate of saleableness in a commodity consists in the fact that it may at every moment be easily and surely disposed of at a price corresponding to, or at least not discrepant from, the general economic situation—at the economic, or approximately economic, price.

The price of a commodity may be denoted as *uneconomic* on two grounds: (1) in consequence of error, ignorance, caprice, and so forth; (2) in consequence of the circumstance that only a part of the supply is available to the demand, the rest for some reason or other being withheld, and the price in consequence not commensurate with the actually existing economic situation.

V. Concerning the Causes of the different Degrees of Saleableness in Commodities.

The degree to which a commodity is found by experience to command a sale, at a given market, at any time, at prices corresponding to the economic situation (economic prices), depends upon the following circumstances.

1. Upon the number of persons who are still in want of the commodity in question, and upon the extent and intensity of that want, which is unsupplied, or is constantly recurring.

2. Upon the purchasing power of those persons.

3. Upon the available quantity of the commodity in relation to the yet unsupplied (total) want of it.

4. Upon the divisibility of the commodity, and any other ways in which it may be adjusted to the needs of individual customers.

5. Upon the development of the market, and of speculation in particular. And finally,

6. Upon the number and nature of the limitations imposed politically and socially upon exchange and consumption with respect to the commodity in question.

We may proceed, in the same way in which we considered the degree of the saleableness in commodities at definite markets and definite points of time, to set out the *spatial and temporal limits* of their saleableness. In these respects also we observe in our markets some commodities, the saleableness of which is almost unlimited by place or time, and others the sale of which is more or less limited.

The *spatial* limits of the saleableness of commodities are mainly conditioned—

1. By the degree to which the want of the commodities is distributed in space.

2. By the degree to which the goods lend themselves to transport, and the cost of transport incurred in proportion to their value.

3. By the extent to which the means of transport and of commerce generally are developed with respect to different classes of commodities.

4. By the local extension of organised markets and their intercommunication by ' arbitrage.'

5. By the differences in the restrictions imposed upon commercial intercommunication with respect to different goods, in interlocal and, in particular, in international trade.

The time-limits to the saleableness of commodities are mainly conditioned—

1. By permanence in the need of them (their independence of fluctuation in the same).
2. Their durability, *i.e.* their suitableness for preservation.
3. The cost of preserving and storing them.
4. The rate of interest.
5. The periodicity of a market for the same.
6. The development of speculation and in particular of time-bargains in connection with the same.
7. The restrictions imposed politically and socially on their being transferred from one period of time to another.

All these circumstances, on which depend the different degrees of, and the different local and temporal limits to, the saleableness of commodities, explain why it is that certain commodities can be disposed of with ease and certainty in definite markets, *i.e.* within local and temporal limits, at any time and in practically any quantities, at prices corresponding to the general economic situation, while the saleableness of other commodities is confined within narrow spatial, and again, temporal, limits; and even within these the disposal of the commodities in question is difficult, and, in so far as the demand cannot be waited for, is not to be brought about without a more or less sensible diminution in price.

VI. On the Genesis of Media of Exchange.[1]

It has long been the subject of universal remark in centres of exchange, that for certain commodities there existed a greater, more constant, and more effective demand than for other commodities less desirable in certain respects, the former being such as correspond to a want on the part of those able and willing to traffic, which is at once universal and, by reason of the relative scarcity of the goods in question, always imperfectly satisfied. And further, that the person who wishes to acquire certain definite goods in exchange for his own is in a more favourable position, if he brings commodities of this kind to market, than if he visits the markets with goods which cannot display such advantages, or at least not in the same degree. Thus equipped he has the prospect of acquiring such goods as

[1] *Cf.* my article on 'Money' in the *Handwörterbuch der Staatswissenschaften* (Dictionary of Social Science), Jena, 1891, iii., p. 730 *et seq.*

he finally wishes to obtain, not only with greater ease and security, but also, by reason of the steadier and more prevailing demand for his own commodities, at prices corresponding to the general economic situation—at economic prices. Under these circumstances, when any one has brought goods not highly saleable to market, the idea uppermost in his mind is to exchange them, not only for such as he happens to be in need of, but, if this cannot be effected directly, for other goods also, which, while he did not want them himself, were nevertheless more saleable than his own. By so doing he certainly does not attain at once the final object of his trafficking, to wit, the acquisition of goods needful to *himself*. Yet he draws nearer to that object. By the devious way of a mediate exchange, he gains the prospect of accomplishing his purpose more surely and economically than if he had confined himself to direct exchange. Now in point of fact this seems everywhere to have been the case. Men have been led, with increasing knowledge of their individual interests, each by his own economic interests, without convention, without legal compulsion, nay, even without any regard to the common interest, to exchange goods destined for exchange (their "wares") for other goods equally destined for exchange, but more saleable.

With the extension of traffic in space and with the expansion over ever longer intervals of time of prevision for satisfying material needs, each individual would learn, from his own economic interests, to take good heed that he bartered his less saleable goods for those special commodities which displayed, beside the attraction of being highly saleable in the particular locality, a wide range of saleableness both in time and place. These wares would be qualified by their costliness, easy transportability, and fitness for preservation (in connection with the circumstance of their corresponding to a steady and widely distributed demand), to ensure to the possessor a power, not only 'here' and 'now,' but as nearly as possible unlimited in space and time generally, over all other market-goods at ecomomic prices.

And so it has come to pass, that as man became increasingly conversant with these economic advantages, mainly by an insight become traditional, and by the habit of economic action, those commodities, which relatively to both space and time are most saleable, have in every market become the wares, which it is not only in the interest of every one to accept in exchange for his own less saleable goods, but which also are those he actually does readily accept. And their superior saleableness depends only upon the relatively inferior saleableness of every other kind of

commodity, by which alone they have been able to become *generally* acceptable media of exchange.

It is obvious how highly significant a factor is habit in the genesis of such generally serviceable means of exchange. It lies in the economic interests of each trafficking individual to exchange less saleable for more saleable commodities. But the willing acceptance of the medium of exchange presupposes already a knowledge of these interests on the part of those economic subjects who are expected to accept in exchange for their wares a commodity which in and by itself is perhaps entirely useless to them. It is certain that this knowledge never arises in every part of a nation at the same time. It is only in the first instance a limited number of economic subjects who will recognise the advantage in such procedure, an advantage which, in and by itself, is independent of the general recognition of a commodity as a medium of exchange, inasmuch as such an exchange, always and under all circumstances, brings the economic unit a good deal nearer to his goal, to the acquisition of useful things of which he really stands in need. But it is admitted, that there is no better method of enlightening any one about his economic interests than that he perceive the economic success of those who use the right means to secure their own. Hence it is also clear that nothing may have been so favourable to the genesis of a medium of exchange as the acceptance, on the part of the most discerning and capable economic subjects, for their own economic gain, and over a considerable period of time, of eminently saleable goods in preference to all others. In this way practice and habit have certainly contributed not a little to cause goods, which were most saleable at any time, to be accepted not only by many, but finally by all, economic subjects in exchange for their less saleable goods: and not only so, but to be accepted from the first with the intention of exchanging them away again. Goods which had thus become generally acceptable media of exchange were called by the Germans *Geld*, from *gelten*, *i.e.* to pay, to perform, while other nations derived their designation for money mainly from the substance used,[1] the shape of the coin,[2] or even from certain kinds of coin.[3]

1 The Hebrew *Keseph*, the Greek ἀργύριον, the Latin *argentum*, the French *argent*, &c.

2 The English *money*, the Spanish *moneda*, the Portuguese *moeda*, the French *monnaie*, the Hebrew *maoth*, the Arabic *fulus*, the Greek νόμισμα, &c.

3 The Italian *danaro*, the Russian *dengi*, the Polish *pieniądze*, the Bohemian and Slavonian *penize*, the Danish *penge*, the Swedish *penningar*, the Magyar *penz*, &c. (*i.e. denare* = *Pfennige* = *penny*).

It is not impossible for media of exchange, serving as they do the commonweal in the most emphatic sense of the word, to be instituted also by way of legislation, like other social institutions. But this is neither the only, nor the primary mode in which money has taken its origin. This is much more to be traced in the process depicted above, notwithstanding the nature of that process would be but very incompletely explained if we were to call it 'organic,' or denote money as something 'primordial,' of 'primæval growth,' and so forth. Putting aside assumptions which are historically unsound, we can only come fully to understand the origin of money by learning to view the establishment of the social procedure, with which we are dealing, as the spontaneous outcome, the unpremeditated resultant, of particular, individual efforts of the members of a society, who have little by little worked their way to a discrimination of the different degrees of saleableness in commodities.[1]

VII. The Process of Differentiation between Commodities which have become Media of Exchange and the Rest.

When the relatively most saleable commodities have become 'money,' the event has in the first place the effect of substantially increasing their originally high saleableness. Every economic subject bringing less saleable wares to market, to acquire goods of another sort, has thenceforth a stronger interest in converting what he has in the first instance into the wares which have become money. For such persons, by the exchange of their less saleable wares for those which as money are most saleable, attain not merely, as heretofore, a higher probability, but the certainty, of being able to acquire forthwith equivalent quantities of every other kind of commodity to be had in the market. And their control over these depends simply upon their pleasure and their choice. *Pecuniam habens, habet omnem rem quem vult habere.*

On the other hand, he who brings other wares than money to market, finds himself at a disadvantage more or less. To gain the same command over what the market affords, he must first convert his exchangeable goods into money. The nature of his economic disability is shown by the fact of his being compelled to overcome a difficulty before he can attain his purpose, which difficulty does not exist for, *i.e.* has already been overcome by, the man who owns a stock of money.

[1] *Cf.* on this point my *Grundsätze der Volkswirtschaftslehre*, 1871, p. 250 *et seq.*

This has all the greater significance for practical life, inasmuch as to overcome this difficulty does not lie unconditionally within reach of him who brings less saleable goods to market, but depends in part upon circumstances over which the individual bargainer has no control. The less saleable are his wares, the more certainly will he have either to suffer the penalty in the economic price, or to content himself with awaiting the moment, when it will be possible for him to effect a conversion at economic prices. He who is desirous, in an era of monetary economy, to exchange goods of any kind whatever, which are not money, for other goods supplied in the market, cannot be certain of attaining this result at once, or within any predetermined interval of time, at economic prices. And the less saleable are the goods brought by an economic subject to market, the more unfavourably, for his own purposes, will his economic position compare with the position of those who bring money to market. Consider, *e.g.*, the owner of a stock of surgical instruments, who is obliged through sudden distress, or through pressure from creditors, to convert it into money. The prices which it will fetch will be highly accidental, nay, the goods being of such limited saleableness, they will be fairly incalculable. And this holds good of all kinds of conversions which in respect of time are compulsory sales.[1] Other is his case who wants at a market to convert the commodity, which has become *money*, forthwith into other goods supplied at that market. He will accomplish his purpose, not only with certainty, but usually also at a price corresponding to the general economic situation. Nay, the habit of economic action has made us so sure of being able to procure in return for money any goods on the market, whenever we wish, at prices corresponding to the economic situation, that we are for the most part unconscious of how many purchases we daily propose to make, which, with respect to our wants and the time of concluding them, are compulsory purchases. Compulsory sales, on the other hand, in consequence of the economic disadvantage which they commonly involve, force themselves upon the attention of the parties implicated in unmistakable fashion. What therefore constitutes the peculiarity of a commodity which has become money is, that the possession of it procures for us at any time, *i.e.*

[1] Herein lies the explanation of the circumstance why compulsory sales, and cases of distraint in particular, involve as a rule the economic ruin of the person upon whose estate they are carried out, and that in a greater degree the less the goods in question are saleable. Correct discernment of the uneconomic character of these processes will necessarily lead to a reform in the available legal mechanism.

at any moment we think fit, assured control over every commodity to be had on the market, and this usually at prices adjusted to the economic situation of the moment: the control, on the other hand, conferred by other kinds of commodities over market goods is, in respect of time, and in part of price as well, uncertain, relatively if not absolutely.

Thus the effect produced by such goods as are relatively most saleable becoming money is an increasing differentiation between their degree of saleableness and that of all other goods. And this difference in saleableness ceases to be altogether gradual, and must be regarded in a certain aspect as something absolute. The practice of every-day life, as well as jurisprudence, which closely adheres for the most part to the notions prevalent in every-day life, distinguish two categories in the wherewithal of traffic—goods which have become money and goods which have not. And the ground of this distinction, we find, lies essentially in that difference in the saleableness of commodities set forth above—a difference so significant for practical life and which comes to be further emphasized by intervention of the state. This distinction, moreover, finds expression in language in the difference of meaning attaching to 'money' and 'wares,' to 'purchase' and 'exchange.' But it also affords the chief explanation of that superiority of the buyer over the seller, which has found manifold consideration, yet has hitherto been left inadequately explained.

VIII. How the Precious Metals became Money.

The commodities, which under given local and time relations are most saleable, have become money among the same nations at different times, and among different nations at the same time, and they are diverse in kind. The reason why the *precious metals* have become the generally current medium of exchange among here and there a nation prior to its appearance in history, and in the sequel among all peoples of advanced economic civilisation, is because their saleableness is far and away superior to that of all other commodities, and at the same time because they are found to be specially qualified for the concomitant and subsidiary functions of money.

There is no centre of population, which has not in the very beginnings of civilization come keenly to desire and eagerly to covet the precious metals, in primitive times for their utility and

peculiar beauty as in themselves ornamental, subsequently as the choicest materials for plastic and architectural decoration, and especially for ornaments and vessels of every kind. In spite of their natural scarcity, they are well distributed geographically, and, in proportion to most other metals, are easy to extract and elaborate. Further, the ratio of the available quantity of the precious metals to the total requirement is so small, that the number of those whose need of them is unsupplied, or at least insufficiently supplied, together with the extent of this unsupplied need, is always relatively large—larger more or less than in the case of other more important, though more abundantly available, commodities. Again, the class of persons who wish to acquire the precious metals, is, by reason of the kind of wants which by these are satisfied, such as quite specially to include those members of the community who can most efficaciously barter; and thus the desire for the precious metals is as a rule more effective. Nevertheless the limits of the effective desire for the precious metals extend also to those strata of population who can less effectively barter, by reason of the great divisibility of the precious metals, and the enjoyment procured by the expenditure of even very small quantities of them in individual economy. Besides this there are the wide limits in time and space of the saleableness of the precious metals; a consequence, on the one hand, of the almost unlimited distribution in space of the need of them, together with their low cost of transport as compared with their value, and, on the other hand, of their unlimited durability and the relatively slight cost of hoarding them. In no national economy which has advanced beyond the first stages of development are there any commodities, the saleableness of which is so little restricted in such a number of respects—personally, quantitatively, spatially, and temporally—as the precious metals. It cannot be doubted that, long before they had become the generally acknowledged media of exchange, they were, amongst very many peoples, meeting a positive and effective demand at all times and places, and practically in any quantity that found its way to market.

Hence arose a circumstance, which necessarily became of special import for their becoming money. For any one under those conditions, having any of the precious metals at his disposal, there was not only the reasonable prospect of his being able to convert them in all markets at any time and practically in all quantities, but also—and this is after all the criterion of saleableness—the prospect of converting them at prices corresponding at

any time to the general economic situation, *at economic prices*. The proportionately strong, persistent, and omnipresent desire on the part of the most effective bargainers has gone farther to exclude prices of the moment, of emergency, of accident, in the case of the precious metals, than in the case of any other goods whatever, especially since these, by reason of their costliness, durability, and easy preservation, had become the most popular vehicle for hoarding as well as the goods most highly favoured in commerce.

Under such circumstances it became the leading idea in the minds of the more intelligent bargainers, and then, as the situation came to be more generally understood, in the mind of every one, that the stock of goods destined to be exchanged for other goods must in the first instance be laid out in precious metals, or must be converted into them, even if the agent in question did not directly need them, or had already supplied his wants in that direction. But in and by this function, the precious metals are already constituted generally current media of exchange. In other words, they hereby function as commodities for which every one seeks to exchange his market-goods, not, as a rule, in order to consumption but entirely because of their special saleableness, in the intention of exchanging them subsequently for other goods directly profitable to him. No accident, nor the consequence of state compulsion, nor voluntary convention of traders effected this. It was the just apprehending of their individual self-interest, which brought it to pass, that all the more economically advanced nations accepted the precious metals as money as soon as a sufficient supply of them had been collected and introduced into commerce. The advance from less to more costly money-stuffs depends upon analogous causes.

This development was materially helped forward by the ratio of exchange between the precious metals and other commodities undergoing smaller fluctuations, more or less, than that existing between most other goods,—a stability which is due to the peculiar circumstances attending the production, consumption, and exchange of the precious metals, and is thus connected with the so-called intrinsic grounds determining their exchange value. It constitutes yet another reason why each man, in the first instance (*i.e.* till he invests in goods directly useful to him), should lay in his available exchange-stock in precious metals, or convert it into the latter. Moreover the *homogeneity* of the precious metals, and the consequent facility with which they can serve as *res fungibiles* in relations of obligation, have led to forms of con-

tract by which traffic has been rendered more easy; this too has materially promoted the saleableness of the precious metals, and thereby their adoption as money. Finally the precious metals, in consequence of the peculiarity of their *colour*, their *ring*, and partly also of their *specific gravity*, are with some practice not difficult to recognise, and through their taking a durable stamp can be easily controlled as to quality and weight; this too has materially contributed to raise their saleableness and to forward the adoption and diffusion of them as money.

IX. Influence of the Sovereign Power.

Money has not been generated by law. In its origin it is a social, and not a state-institution. Sanction by the authority of the state is a notion alien to it. On the other hand, however, by state recognition and state regulation, this social institution of money has been perfected and adjusted to the manifold and varying needs of an evolving commerce, just as customary rights have been perfected and adjusted by statute law. Treated originally by weight, like other commodities, the precious metals have by degrees attained as coins a shape by which their intrinsically high saleableness has experienced a material increase. The fixing of a coinage so as to include all grades of value (*Wertstufen*), and the establishment and maintenance of coined pieces so as to win public confidence and, as far as is possible, to forestall risk concerning their genuineness, weight, and fineness, and above all the ensuring their circulation in general, have been everywhere recognised as important functions of state administration.

The difficulties experienced in the commerce and modes of payment of any country from the competing action of the several commodities serving as currency, and further the circumstance, that concurrent standards induce a manifold insecurity in trade, and render necessary various conversions of the circulating media, have led to the legal recognition of certain commodities as money (to legal standards). And where more than one commodity has been acquiesced in, or admitted, as the legal form of payment, law or some system of appraisement has fixed a definite ratio of value amongst them.

All these measures nevertheless have not first made money of the precious metals, but have only perfected them in their function as money.

Karl Menger.

Translated by Caroline A. Foley, M.A.

The Economic Organisation of a P.O.W. Camp

By R. A. Radford

Introduction

After allowance has been made for abnormal circumstances, the social institutions, ideas and habits of groups in the outside world are to be found reflected in a Prisoner of War Camp. It is an unusual but a vital society. Camp organisation and politics are matters of real concern to the inmates, as affecting their present and perhaps their future existences. Nor does this indicate any loss of proportion. No one pretends that camp matters are of any but local importance or of more than transient interest, but their importance there is great. They bulk large in a world of narrow horizons and it is suggested that any distortion of values lies rather in the minimisation than in the exaggeration of their importance. Human affairs are essentially practical matters and the measure of immediate effect on the lives of those directly concerned in them is to a large extent the criterion of their importance at that time and place. A prisoner can hold strong views on such subjects as whether or not all tinned meats shall be issued to individuals cold or be centrally cooked, without losing sight of the significance of the Atlantic Charter.

One aspect of social organisation is to be found in economic activity, and this, along with other manifestations of a group existence, is to be found in any P.O.W. camp. True, a prisoner is not dependent on his exertions for the provision of the necessaries, or even the luxuries of life, but through his economic activity, the exchange of goods and services, his standard of material comfort is considerably enhanced. And this is a serious matter to the prisoner: he is not "playing at shops" even though the small scale of the transactions and the simple expression of comfort and wants in terms of cigarettes and jam, razor blades and writing paper, make the urgency of those needs difficult to appreciate, even by an ex-prisoner of some three months' standing.

Nevertheless, it cannot be too strongly emphasised that economic activities do not bulk so large in prison society as they do in the larger world. There can be little production; as has been said the prisoner is independent of his exertions for the provision of the necessities and luxuries of life; the emphasis lies in exchange and the media of exchange. A prison camp is not to be compared with the seething crowd of higglers in a street market, any more than it is to be compared with the economic inertia of a family dinner table.

Naturally then, entertainment, academic and literary interests, games and discussions of the "other world" bulk larger in everyday life than they do in the life of more normal societies. But it would be

wrong to underestimate the importance of economic activity. Everyone receives a roughly equal share of essentials; it is by trade that individual preferences are given expression and comfort increased. All at some time, and most people regularly, make exchanges of one sort or another.

Although a P.O.W. camp provides a living example of a simple economy which might be used as an alternative to the Robinson Crusoe economy beloved by the text-books, and its simplicity renders the demonstration of certain economic hypotheses both amusing and instructive, it is suggested that the principal significance is sociological. True, there is interest in observing the growth of economic institutions and customs in a brand new society, small and simple enough to prevent detail from obscuring the basic pattern and disequilibrium from obscuring the working of the system. But the essential interest lies in the universality and the spontaneity of this economic life; it came into existence not by conscious imitation but as a response to the immediate needs and circumstances. Any similarity between prison organisation and outside organisation arises from similar stimuli evoking similar responses.

The following is as brief an account of the essential data as may render the narrative intelligible. The camps of which the writer had experience were Oflags and consequently the economy was not complicated by payments for work by the detaining power. They consisted normally of between 1,200 and 2,500 people, housed in a number of separate but intercommunicating bungalows, one company of 200 or so to a building. Each company formed a group within the main organisation and inside the company the room and the messing syndicate, a voluntary and spontaneous group who fed together, formed the constituent units.

Between individuals there was active trading in all consumer goods and in some services. Most trading was for food against cigarettes or other foodstuffs, but cigarettes rose from the status of a normal commodity to that of currency. RMk.s existed but had no circulation save for gambling debts, as few articles could be purchased with them from the canteen.

Our supplies consisted of rations provided by the detaining power and (principally) the contents of Red Cross food parcels—tinned milk, jam, butter, biscuits, bully, chocolate, sugar, etc., and cigarettes. So far the supplies to each person were equal and regular. Private parcels of clothing, toilet requisites and cigarettes were also received, and here equality ceased owing to the different numbers despatched and the vagaries of the post. All these articles were the subject of trade and exchange.

The Development and Organisation of the Market

Very soon after capture people realised that it was both undesirable and unnecessary, in view of the limited size and the equality of supplies,

to give away or to accept gifts of cigarettes or food. "Goodwill" developed into trading as a more equitable means of maximising individual satisfaction.

We reached a transit camp in Italy about a fortnight after capture and received ¼ of a Red Cross food parcel each a week later. At once exchanges, already established, multiplied in volume. Starting with simple direct barter, such as a non-smoker giving a smoker friend his cigarette issue in exchange for a chocolate ration, more complex exchanges soon became an accepted custom. Stories circulated of a padre who started off round the camp with a tin of cheese and five cigarettes and returned to his bed with a complete parcel in addition to his original cheese and cigarettes; the market was not yet perfect. Within a week or two, as the volume of trade grew, rough scales of exchange values came into existence. Sikhs, who had at first exchanged tinned beef for practically any other foodstuff, began to insist on jam and margarine. It was realised that a tin of jam was worth ½ lb. of margarine plus something else; that a cigarette issue was worth several chocolate issues, and a tin of diced carrots was worth practically nothing.

In this camp we did not visit other bungalows very much and prices varied from place to place; hence the germ of truth in the story of the itinerant priest. By the end of a month, when we reached our permanent camp, there was a lively trade in all commodities and their relative values were well known, and expressed not in terms of one another—one didn't quote bully in terms of sugar—but in terms of cigarettes. The cigarette became the standard of value. In the permanent camp people started by wandering through the bungalows calling their offers—"cheese for seven" (cigarettes)—and the hours after parcel issue were Bedlam. The inconveniences of this system soon led to its replacement by an Exchange and Mart notice board in every bungalow, where under the headings "name", "room number", "wanted" and "offered" sales and wants were advertised. When a deal went through, it was crossed off the board. The public and semi-permanent records of transactions led to cigarette prices being well known and thus tending to equality throughout the camp, although there were always opportunities for an astute trader to make a profit from arbitrage. With this development everyone, including non-smokers, was willing to sell for cigarettes, using them to buy at another time and place. Cigarettes became the normal currency, though, of course, barter was never extinguished.

The unity of the market and the prevalence of a single price varied directly with the general level of organisation and comfort in the camp. A transit camp was always chaotic and uncomfortable: people were overcrowded, no one knew where anyone else was living, and few took the trouble to find out. Organisation was too slender to include an Exchange and Mart board, and private advertisements were the most that appeared. Consequently a transit camp was not one

market but many. The price of a tin of salmon is known to have varied by two cigarettes in 20 between one end of a hut and the other. Despite a high level of organisation in Italy, the market was morcellated in this manner at the first transit camp we reached after our removal to Germany in the autumn of 1943. In this camp—Stalag VIIA at Moosburg in Bavaria—there were up to 50,000 prisoners of all nationalities. French, Russians, Italians and Jugo-Slavs were free to move about within the camp: British and Americans were confined to their compounds, although a few cigarettes given to a sentry would always procure permission for one or two men to visit other compounds. The people who first visited the highly organised French trading centre, with its stalls and known prices, found coffee extract—relatively cheap among the tea-drinking English—commanding a fancy price in biscuits or cigarettes, and some enterprising people made small fortunes that way. (Incidentally we found out later that much of the coffee went "over the wire" and sold for phenomenal prices at black market cafés in Munich: some of the French prisoners were said to have made substantial sums in RMk.s. This was one of the few occasions on which our normally closed economy came into contact with other economic worlds.)

Eventually public opinion grew hostile to these monopoly profits—not everyone could make contact with the French—and trading with them was put on a regulated basis. Each group of beds was given a quota of articles to offer and the transaction was carried out by accredited representatives from the British compound, with monopoly rights. The same method was used for trading with sentries elsewhere, as in this trade secrecy and reasonable prices had a peculiar importance, but as is ever the case with regulated companies, the interloper proved too strong.

The permanent camps in Germany saw the highest level of commercial organisation. In addition to the Exchange and Mart notice boards, a shop was organised as a public utility, controlled by representatives of the Senior British Officer, on a no profit basis. People left their surplus clothing, toilet requisites and food there until they were sold at a fixed price in cigarettes. Only sales in cigarettes were accepted—there was no barter— and there was no higgling. For food at least there were standard prices: clothing is less homogeneous and the price was decided around a norm by the seller and the shop manager in agreement; shirts would average say 80, ranging from 60 to 120 according to quality and age. Of food, the shop carried small stocks for convenience; the capital was provided by a loan from the bulk store of Red Cross cigarettes and repaid by a small commission taken on the first transactions. Thus the cigarette attained its fullest currency status, and the market was almost completely unified.

It is thus to be seen that a market came into existence without labour or production. The B.R.C.S. may be considered as "Nature" of the

text-book, and the articles of trade—food, clothing and cigarettes—as free gifts—land or manna. Despite this, and despite a roughly equal distribution of resources, a market came into spontaneous operation, and prices were fixed by the operation of supply and demand. It is difficult to reconcile this fact with the labour theory of value.

Actually there was an embryo labour market. Even when cigarettes were not scarce, there was usually some unlucky person willing to perform services for them. Laundrymen advertised at two cigarettes a garment. Battle-dress was scrubbed and pressed and a pair of trousers lent for the interim period for twelve. A good pastel portrait cost thirty or a tin of " Kam ". Odd tailoring and other jobs similarly had their prices.

There were also entrepreneurial services. There was a coffee stall owner who sold tea, coffee or cocoa at two cigarettes a cup, buying his raw materials at market prices and hiring labour to gather fuel and to stoke ; he actually enjoyed the services of a chartered accountant at one stage. After a period of great prosperity he overreached himself and failed disastrously for several hundred cigarettes. Such large-scale private enterprise was rare but several middlemen or professional traders existed. The padre in Italy, or the men at Moosburg who opened trading relations with the French, are examples : the more subdivided the market, the less perfect the advertisement of prices, and the less stable the prices, the greater was the scope for these operators. One man capitalised his knowledge of Urdu by buying meat from the Sikhs and selling butter and jam in return : as his operations became better known more and more people entered this trade, prices in the Indian Wing approximated more nearly to those elsewhere, though to the end a " contact " among the Indians was valuable, as linguistic difficulties prevented the trade from being quite free. Some were specialists in the Indian trade, the food, clothing or even the watch trade. Middlemen traded on their own account or on commission. Price rings and agreements were suspected and the traders certainly co-operated. Nor did they welcome newcomers. Unfortunately the writer knows little of the workings of these people : public opinion was hostile and the professionals were usually of a retiring disposition.

One trader in food and cigarettes, operating in a period of dearth, enjoyed a high reputation. His capital, carefully saved, was originally about 50 cigarettes, with which he bought rations on issue days and held them until the price rose just before the next issue. He also picked up a little by arbitrage ; several times a day he visited every Exchange or Mart notice board and took advantage of every discrepancy between prices of goods offered and wanted. His knowledge of prices, markets and names of those who had received cigarette parcels was phenomenal. By these means he kept himself smoking steadily—his profits—while his capital remained intact.

Sugar was issued on Saturday. about Tuesday two of us used to visit Sam and make a deal; as old customers he would advance as much of the price as he could spare then, and entered the transaction in a book. On Saturday morning he left cocoa tins on our beds for the ration, and picked them up on Saturday afternoon. We were hoping for a calendar at Christmas, but Sam failed too. He was left holding a big black treacle issue when the price fell, and in this weakened state was unable to withstand an unexpected arrival of parcels and the consequent price fluctuations. He paid in full, but from his capital. The next Tuesday, when I paid my usual visit he was out of business.

Credit entered into many, perhaps into most, transactions, in one form or another. Sam paid in advance as a rule for his purchases of future deliveries of sugar, but many buyers asked for credit, whether the commodity was sold spot or future. Naturally prices varied according to the terms of sale. A treacle ration might be advertised for four cigarettes now or five next week. And in the future market "bread now" was a vastly different thing from "bread Thursday". Bread was issued on Thursday and Monday, four and three days' rations respectively, and by Wednesday and Sunday night it had risen at least one cigarette per ration, from seven to eight, by supper time. One man always saved a ration to sell then at the peak price: his offer of "bread now" stood out on the board among a number of "bread Monday's" fetching one or two less, or not selling at all—and he always smoked on Sunday night.

The Cigarette Currency

Although cigarettes as currency exhibited certain peculiarities, they performed all the functions of a metallic currency as a unit of account, as a measure of value and as a store of value, and shared most of its characteristics. They were homogeneous, reasonably durable, and of convenient size for the smallest or, in packets, for the largest transactions. Incidentally, they could be clipped or sweated by rolling them between the fingers so that tobacco fell out.

Cigarettes were also subject to the working of Gresham's Law. Certain brands were more popular than others as smokes, but for currency purposes a cigarette was a cigarette. Consequently buyers used the poorer qualities and the Shop rarely saw the more popular brands: cigarettes such as Churchman's No. 1 were rarely used for trading. At one time cigarettes hand-rolled from pipe tobacco began to circulate. Pipe tobacco was issued in lieu of cigarettes by the Red Cross at a rate of 25 cigarettes to the ounce and this rate was standard in exchanges, but an ounce would produce 30 home-made cigarettes. Naturally, people with machine-made cigarettes broke them down and re-rolled the tobacco, and the real cigarette virtually disappeared from the market. Hand-rolled cigarettes were not homogeneous and prices could no longer be quoted in them with safety: each cigarette was examined before it was accepted and thin

ones were rejected, or extra demanded as a make-weight. For a time we suffered all the inconveniences of a debased currency.

Machine-made cigarettes were always universally acceptable, both for what they would buy and for themselves. It was this intrinsic value which gave rise to their principal disadvantage as currency, a disadvantage which exists, but to a far smaller extent, in the case of metallic currency;—that is, a strong demand for non-monetary purposes. Consequently our economy was repeatedly subject to deflation and to periods of monetary stringency. While the Red Cross issue of 50 or 25 cigarettes per man per week came in regularly, and while there were fair stocks held, the cigarette currency suited its purpose admirably. But when the issue was interrupted, stocks soon ran out, prices fell, trading declined in volume and became increasingly a matter of barter. This deflationary tendency was periodically offset by the sudden injection of new currency. Private cigarette parcels arrived in a trickle throughout the year, but the big numbers came in quarterly when the Red Cross received its allocation of transport. Several hundred thousand cigarettes might arrive in the space of a fortnight. Prices soared, and then began to fall, slowly at first but with increasing rapidity as stocks ran out, until the next big delivery. Most of our economic troubles could be attributed to this fundamental instability.

Price Movements

Many factors affected prices, the strongest and most noticeable being the periodical currency inflation and deflation described in the last paragraphs. The periodicity of this price cycle depended on cigarette and, to a far lesser extent, on food deliveries. At one time in the early days, before any private parcels had arrived and when there were no individual stocks, the weekly issue of cigarettes and food parcels occurred on a Monday. The non-monetary demand for cigarettes was great, and less elastic than the demand for food: consequently prices fluctuated weekly, falling towards Sunday night and rising sharply on Monday morning. Later, when many people held reserves, the weekly issue had no such effect, being too small a proportion of the total available. Credit allowed people with no reserves to meet their non-monetary demand over the week-end.

The general price level was affected by other factors. An influx of new prisoners, proverbially hungry, raised it. Heavy air raids in the vicinity of the camp probably increased the non-monetary demand for cigarettes and accentuated deflation. Good and bad war news certainly had its effect, and the general waves of optimism and pessimism which swept the camp were reflected in prices. Before breakfast one morning in March of this year, a rumour of the arrival of parcels and cigarettes was circulated. Within ten minutes I sold a treacle ration, for four cigarettes (hitherto offered in vain for three), and many similar deals went through. By 10 o'clock the rumour was denied, and treacle that day found no more buyers even at two cigarettes.

More interesting than changes in the general price level were changes in the price structure. Changes in the supply of a commodity, in the German ration scale or in the make-up of Red Cross parcels, would raise the price of one commodity relative to others. Tins of oatmeal, once a rare and much sought after luxury in the parcels, became a commonplace in 1943, and the price fell. In hot weather the demand for cocoa fell, and that for soap rose. A new recipe would be reflected in the price level: the discovery that raisins and sugar could be turned into an alcoholic liquor of remarkable potency reacted permanently on the dried fruit market. The invention of electric immersion heaters run off the power points made tea, a drug on the market in Italy, a certain seller in Germany.

In August, 1944, the supplies of parcels and cigarettes were both halved. Since both sides of the equation were changed in the same degree, changes in prices were not anticipated. But this was not the case: the non-monetary demand for cigarettes was less elastic than the demand for food, and food prices fell a little. More important however were the changes in the price structure. German margarine and jam, hitherto valueless owing to adequate supplies of Canadian butter and marmalade, acquired a new value. Chocolate, popular and a certain seller, and sugar, fell. Bread rose; several standing contracts of bread for cigarettes were broken, especially when the bread ration was reduced a few weeks later.

In February, 1945, the German soldier who drove the ration waggon was found to be willing to exchange loaves of bread at the rate of one loaf for a bar of chocolate. Those in the know began selling bread and buying chocolate, by then almost unsaleable in a period of serious deflation. Bread, at about 40, fell slightly; chocolate rose from 15; the supply of bread was not enough for the two commodities to reach parity, but the tendency was unmistakable.

The substitution of German margarine for Canadian butter when parcels were halved naturally affected their relative values, margarine appreciating at the expense of butter. Similarly, two brands of dried milk, hitherto differing in quality and therefore in price by five cigarettes a tin, came together in price as the wider substitution of the cheaper raised its relative value.

Enough has been cited to show that any change in conditions affected both the general price level and the price structure. It was this latter phenomenon which wrecked our planned economy.

Paper Currency—Bully Marks

Around D-Day, food and cigarettes were plentiful, business was brisk and the camp in an optimistic mood. Consequently the Entertainments Committee felt the moment opportune to launch a restaurant, where food and hot drinks were sold while a band and variety turns performed. Earlier experiments, both public and private, had pointed the way, and the scheme was a great success. Food was bought at

market prices to provide the meals and the small profits were devoted to a reserve fund and used to bribe Germans to provide grease-paints and other necessities for the camp theatre. Originally meals were sold for cigarettes but this meant that the whole scheme was vulnerable to the periodic deflationary waves, and furthermore heavy smokers were unlikely to attend much. The whole success of the scheme depended on an adequate amount of food being offered for sale in the normal manner.

To increase and facilitate trade, and to stimulate supplies and customers therefore, and secondarily to avoid the worst effects of deflation when it should come, a paper currency was organised by the Restaurant and the Shop. The Shop bought food on behalf of the Restaurant with paper notes and the paper was accepted equally with the cigarettes in the Restaurant or Shop, and passed back to the Shop to purchase more food. The Shop acted as a bank of issue. The paper money was backed 100 per cent. by food; hence its name, the Bully Mark. The BMk. was backed 100 per cent. by food: there could be no over-issues, as is permissible with a normal bank of issue, since the eventual dispersal of the camp and consequent redemption of all BMk.s was anticipated in the near future.

Originally one BMk. was worth one cigarette and for a short time both circulated freely inside and outside the Restaurant. Prices were quoted in BMk.s and cigarettes with equal freedom—and for a short time the BMk. showed signs of replacing the cigarette as currency. The BMk. was tied to food, but not to cigarettes: as it was issued against food, say 45 for a tin of milk and so on, any reduction in the BMk. prices of food would have meant that there were unbacked BMk.s in circulation. But the price of both food and BMk.s could and did fluctuate with the supply of cigarettes.

While the Restaurant flourished, the scheme was a success: the Restaurant bought heavily, all foods were saleable and prices were stable.

In August parcels and cigarettes were halved and the Camp was bombed. The Restaurant closed for a short while and sales of food became difficult. Even when the Restaurant reopened, the food and cigarette shortage became increasingly acute and people were unwilling to convert such valuable goods into paper and to hold them for luxuries like snacks and tea. Less of the right kinds of food for the Restaurant were sold, and the Shop became glutted with dried fruit, chocolate, sugar, etc., which the Restaurant could not buy. The price level and the price structure changed. The BMk. fell to four-fifths of a cigarette and eventually farther still, and it became unacceptable save in the Restaurant. There was a flight from the BMk., no longer convertible into cigarettes or popular foods. The cigarette re-established itself.

But the BMk. was sound! The Restaurant closed in the New Year with a progressive food shortage and the long evenings without lights due to intensified Allied air raids, and BMk.s could only be spent in

the Coffee Bar—relict of the Restaurant—or on the few unpopular foods in the Shop, the owners of which were prepared to accept them. In the end all holders of BMk.s were paid in full, in cups of coffee or in prunes. People who had bought BMk.s for cigarettes or valuable jam or biscuits in their heyday were aggrieved that they should have stood the loss involved by their restricted choice, but they suffered no actual loss of market value.

PRICE FIXING

Along with this scheme came a determined attempt at a planned economy, at price fixing. The Medical Officer had long been anxious to control food sales, for fear of some people selling too much, to the detriment of their health. The deflationary waves and their effects on prices were inconvenient to all and would be dangerous to the Restaurant which had to carry stocks. Furthermore, unless the BMk. was convertible into cigarettes at about par it had little chance of gaining confidence and of succeeding as a currency. As has been explained, the BMk. was tied to food but could not be tied to cigarettes, which fluctuated in value. Hence, while BMk. prices of food were fixed for all time, cigarette prices of food and BMk.s varied.

The Shop, backed by the Senior British Officer, was now in a position to enforce price control both inside and outside its walls. Hitherto a standard price had been fixed for food left for sale in the shop, and prices outside were roughly in conformity with this scale, which was recommended as a " guide " to sellers, but fluctuated a good deal around it. Sales in the Shop at recommended prices were apt to be slow though a good price might be obtained : sales outside could be made more quickly at lower prices. (If sales outside were to be at higher prices, goods were withdrawn from the Shop until the recommended price rose : but the recommended price was sluggish and could not follow the market closely by reason of its very purpose, which was stability.) The Exchange and Mart notice boards came under the control of the Shop : advertisements which exceeded a 5 per cent. departure from the recommended scale were liable to be crossed out by authority : unauthorised sales were discouraged by authority and also by public opinion, strongly in favour of a just and stable price. (Recommended prices were fixed partly from market data, partly on the advice of the M.O.)

At first the recommended scale was a success : the Restaurant, a big buyer, kept prices stable around this level : opinion and the 5 per cent. tolerance helped. But when the price level fell with the August cuts and the price structure changed, the recommended scale was too rigid. Unchanged at first, as no deflation was expected, the scale was tardily lowered, but the prices of goods on the new scale remained in the same relation to one another, owing to the BMk., while on the market the price structure had changed. And the modifying influence of the Restaurant had gone. The scale was moved

up and down several times, slowly following the inflationary and deflationary waves, but it was rarely adjusted to changes in the price structure. More and more advertisements were crossed off the board, and black market sales at unauthorised prices increased: eventually public opinion turned against the recommended scale and authority gave up the struggle. In the last few weeks, with unparalleled deflation, prices fell with alarming rapidity, no scales existed, and supply and demand, alone and unmellowed, determined prices.

Public Opinion

Public opinion on the subject of trading was vocal if confused and changeable, and generalisations as to its direction are difficult and dangerous. A tiny minority held that all trading was undesirable as it engendered an unsavoury atmosphere; occasional frauds and sharp practices were cited as proof. Certain forms of trading were more generally condemned; trade with the Germans was criticised by many. Red Cross toilet articles, which were in short supply and only issued in cases of actual need, were excluded from trade by law and opinion working in unshakable harmony. At one time, when there had been several cases of malnutrition reported among the more devoted smokers, no trade in German rations was permitted, as the victims became an additional burden on the depleted food reserves of the Hospital. But while certain activities were condemned as anti-social, trade itself was practised, and its utility appreciated, by almost everyone in the camp.

More interesting was opinion on middlemen and prices. Taken as a whole, opinion was hostile to the middleman. His function, and his hard work in bringing buyer and seller together, were ignored; profits were not regarded as a reward for labour, but as the result of sharp practices. Despite the fact that his very existence was proof to the contrary, the middleman was held to be redundant in view of the existence of an official Shop and the Exchange and Mart. Appreciation only came his way when he was willing to advance the price of a sugar ration, or to buy goods spot and carry them against a future sale. In these cases the element of risk was obvious to all, and the convenience of the service was felt to merit some reward. Particularly unpopular was the middleman with an element of monopoly, the man who contacted the ration wagon driver, or the man who utilised his knowledge of Urdu. And middlemen as a group were blamed for reducing prices. Opinion notwithstanding, most people dealt with a middleman, whether consciously or unconsciously, at some time or another.

There was a strong feeling that everything had its "just price" in cigarettes. While the assessment of the just price, which incidentally varied between camps, was impossible of explanation, this price was nevertheless pretty closely known. It can best be defined as the price usually fetched by an article in good times when cigarettes were

plentiful. The "just price" changed slowly; it was unaffected by short-term variations in supply, and while opinion might be resigned to departures from the "just price", a strong feeling of resentment persisted. A more satisfactory definition of the "just price" is impossible. Everyone knew what it was, though no one could explain why it should be so.

As soon as prices began to fall with a cigarette shortage, a clamour arose, particularly against those who held reserves and who bought at reduced prices. Sellers at cut prices were criticised and their activities referred to as the black market. In every period of dearth the explosive question of "should non-smokers receive a cigarette ration?" was discussed to profitless length. Unfortunately, it was the non-smoker, or the light smoker with his reserves, along with the hated middleman, who weathered the storm most easily.

The popularity of the price-fixing scheme, and such success as it enjoyed, were undoubtedly the result of this body of opinion. On several occasions the fall of prices was delayed by the general support given to the recommended scale. The onset of deflation was marked by a period of sluggish trade; prices stayed up but no one bought. Then prices fell on the black market, and the volume of trade revived in that quarter. Even when the recommended scale was revised, the volume of trade in the Shop would remain low. Opinion was always overruled by the hard facts of the market.

Curious arguments were advanced to justify price fixing. The recommended prices were in some way related to the calorific values of the foods offered: hence some were overvalued and never sold at these prices. One argument ran as follows:—not everyone has private cigarette parcels: thus, when prices were high and trade good in the summer of 1944, only the lucky rich could buy. This was unfair to the man with few cigarettes. When prices fell in the following winter, prices should be pegged high so that the rich, who had enjoyed life in the summer, should put many cigarettes into circulation. The fact that those who sold to the rich in the summer had also enjoyed life then, and the fact that in the winter there was always someone willing to sell at low prices were ignored. Such arguments were hotly debated each night after the approach of Allied aircraft extinguished all lights at 8 p.m. But prices moved with the supply of cigarettes, and refused to stay fixed in accordance with a theory of ethics.

Conclusion

The economic organisation described was both elaborate and smooth-working in the summer of 1944. Then came the August cuts and deflation. Prices fell, rallied with deliveries of cigarette parcels in September and December, and fell again. In January, 1945, supplies of Red Cross cigarettes ran out: and prices slumped still further: in February the supplies of food parcels were exhausted and the depression became a blizzard. Food, itself scarce, was almost given away in

order to meet the non-monetary demand for cigarettes. Laundries ceased to operate, or worked for £s or RMk.s: food and cigarettes sold for fancy prices in £s, hitherto unheard of. The Restaurant was a memory and the BMk. a joke. The Shop was empty and the Exchange and Mart notices were full of unaccepted offers for cigarettes. Barter increased in volume, becoming a larger proportion of a smaller volume of trade. This, the first serious and prolonged food shortage in the writer's experience, caused the price structure to change again, partly because German rations were not easily divisible. A margarine ration gradually sank in value until it exchanged directly for a treacle ration. Sugar slumped sadly. Only bread retained its value. Several thousand cigarettes, the capital of the Shop, were distributed without any noticeable effect. A few fractional parcel and cigarette issues, such as one-sixth of a parcel and twelve cigarettes each, led to momentary price recoveries and feverish trade, especially when they coincided with good news from the Western Front, but the general position remained unaltered.

By April, 1945, chaos had replaced order in the economic sphere: sales were difficult, prices lacked stability. Economics has been defined as the science of distributing limited means among unlimited and competing ends. On 12th April, with the arrival of elements of the 30th U.S. Infantry Division, the ushering in of an age of plenty demonstrated the hypothesis that with infinite means economic organisation and activity would be redundant, as every want could be satisfied without effort.

[3]

The Origin and Development of Media of Exchange

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The paper develops an explanation for the emergence of media of exchange through the unconcerted market behavior of individuals. Individuals are assumed to accomplish their ultimate exchanges through trading sequences which minimize the expected time spent searching for complementary trading partners. If individual perceptions of the trading environment are appropriately restricted, then the equilibrium pattern of trade will be some mixture of direct barter and use of a common good as medium of exchange. Although full monetization is always a locally stable exchange pattern, the economy may remain in universal direct barter or partially monetized states.

The general use of media of exchange is one of the most readily observable economic phenomena in exchange economies and represents one of the oldest and most fundamental problems of monetary theory. Media of exchange have been metaphorically described as "oil" in the economic machinery and as "shunting locomotives" in the process of trade (Wicksell 1967, pp. 5, 19), enabling society to escape the intolerable inconvenience, or even impossibility, of finding the "double-coincidence of wants" required for direct barter exchanges (Jevons 1875, p. 3). The mystery and the problem of money were clearly stated by Carl Menger over 80 years ago: ". . . that every economic unit in a nation should be ready to exchange his goods for little metal disks apparently useless as such, or for documents representing the latter, is a procedure so opposed to the ordinary course of things. . . . The problem, which science has here to

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solve, consists in giving an explanation of a general, homogeneous course of action pursued by human beings when engaged in traffic, which, taken concretely, makes unquestionably for the common interest, and yet which seems to conflict with the nearest and immediate interests of contracting individuals" (Menger 1892, pp. 239–40). The common use of media in exchange suggests a twofold problem: First, what economic gains, if any, accrue from use of a general medium of exchange over and above those accruing from direct trading? Second, how have certain commodities come to be exalted into general media of exchange? This paper addresses the second question. It develops a possible explanation for the emergence of media of exchange through the unconcerted market behavior of individuals, without decrees, centralized decisions, or explicit social agreements.

For the purposes of this paper we define a general medium of exchange as the good occupying a particular position in a particular pattern of exchange among individuals. Jevons (1875, p. 3) described direct barter as "giving what was not wanted directly for that which was wanted," and distinguished it from "sale and purchase in which one of the articles exchanged is intended to be held only for a short time, until it is parted with in a second act of exchange." The good which "temporarily intervenes in the sale and purchase is money." We shall say that an economy has a *monetary pattern of trade* if the exchanges which actually take place have the following two characteristics:[1] (*a*) There is one good that enters into every exchange. (*b*) Any other good entering an exchange, if purchased is not resold, and if sold is not repurchased. The one exceptional good is termed the "medium of exchange." This definition implies that all individuals accomplish their ultimate exchanges through two-stage trades rather than through direct one-stage trades or through longer, more indirect trading sequences. The problem is to explain why individuals specifically choose two-stage trading sequences and how all individuals come to choose the same intervening trade good.

The literature on monetary exchange has a recurring theme. A role for money can be found in the fact that exchange is decentralized, either in the sense that individuals trade with each other rather than with a central "market," or in the sense that there are separate markets for each pair of goods exchanged; and that compensation for goods given up is guaranteed by a *quid pro quo* from the individual or market to which they are delivered. One branch of the literature is concerned with the feasibility of attaining a competitive allocation of goods in a decentralized context. Interpreting *quid pro quo* as equal value given up as is received

[1] The monetary pattern of trade may be contrasted with the universal direct barter and trading-post patterns of trade, which also refer to observable regularities in the exchanges that take place in an economy.

at given market-clearing prices, Starr (1972) points out that Jevon's "double-coincidence of wants" requirement generally precludes fulfillment of excess demands through direct barter. But if there is one good, a medium of exchange, that everyone is willing to temporarily acquire though it is not ultimately desired, then a set of acceptable bilateral exchanges fulfilling all excess demands does exist. Ostroy (1973) assumes individuals meet sequentially, cannot give up goods not yet acquired, and cannot base trades on information available only to traders not yet encountered. In this context, trading rules which fulfill all excess demands with just one meeting between each pair of individuals are generally incompatible with *quit pro quo* at each exchange. Ostroy envisages money as an abstract "record-keeping device," permitting enforcement of budget constraints without requiring *quid pro quo* at every exchange, and thus allowing excess demands to be satisfied with the minimum number of meetings. If everyone is endowed with a quantity of one common good sufficient to pay for all their intended acquisitions, Ostroy and Starr (1974) indicate that the less abstract "record-keeping device" of using this good as medium of exchange with *quid pro quo* can achieve the same result. Feldman (1973) interprets *quid pro quo* to mean that bilateral exchanges are mutually utility increasing rather than balanced at previously determined prices. He proves that the existence of a good which everyone desires and holds in positive quantities, which might be interpreted as money, guarantees that such utility-increasing trades lead the economy arbitrarily close to a Pareto-optimal allocation of goods. Although these works illuminate how money might overcome logistical difficulties of reaching an efficient allocation with decentralized exchange, they offer no suggestions for how a monetary pattern of trade could evolve without a centralized decision.

The other branch of the monetary-exchange literature focuses on trading costs as determinants of the optimal and equilibrium patterns of exchange. Niehans (1969) points out that monetary exchange effects a given reallocation of goods with minimum aggregate transaction costs, subject to *quid pro quo* constraints on trades between individuals, only for particular structures of trading costs. Niehans (1971) and Karni (1973) explore the equilibrium trading and consumption decisions made by individuals subject to *quid pro quo* constraints in separate markets for each pair of goods. An appropriate structure of transaction costs can result in a monetary trade equilibrium. An objective of this paper is to suggest why the appropriate structure should be so prevalent. Section I describes the general exchange environment in which individuals trade. Section II examines how trading decisions might be made. Section III investigates the inter-relationships between individuals' trading plans and their implications for the equilibrium pattern of exchange.

I. The Nature of the Exchange Economy

We now make some general assumptions about the economy in which we investigate the equilibrium pattern of exchange. These assumptions concern the trading possibilities and information available to individuals.

1. Voluntary bilateral exchange. Trading opportunities are limited to mutually desired exchanges between pairs of individuals.[2]

2. Exchanges bilaterally balanced at given prices. Individuals are presumed to have some expectations about the terms at which they could make future trades if they acquire a good they do not intend to consume. For simplicity we assume that either tradition or a Walrasian "auctioneer" has established consistent prices in terms of an abstract numeraire at which exchanges take place and that no individual will pay more or accept less than these prices for his goods.[3]

3. Exchange is costly. We assume that exchange is costly and that each individual regards the costs of different exchanges as fixed and independent of his own trading decisions. More will be said about the nature of these exchange costs below.

4. Limited information about other specific individuals. Individuals have no prior knowledge of the endowments, excess demands, or trading plans of other specific individuals. Consequently, they do not know with whom they can or will make given exchanges. An individual may have information about other traders as a group, however, based on his past trading experience. The four assumptions serve to limit the scope of our problem.

The individual's utility function is assumed to depend only on the ultimately acquired bundle of goods, including leisure, and he jointly determines that ultimate bundle and the sequence of exchanges by which it will be acquired. Since the individual takes prices as independent of his own actions, however, the joint solution to the utility maximization problem must have the property that the planned sequence of exchanges acquires the chosen ultimate consumption bundle at minimum total transaction cost. When examining the pattern of exchange we can thus focus on the problem of making a given, fixed ultimate exchange at minimum cost.

[2] The Inca civilization of Peru, where the allocation of goods was dictated by the priest class rather than being determined by voluntary bilateral exchange, did not develop any recognizable medium of exchange. Neither did many extended family tribes, where the allocation of work and consumption was determined more by consensus and tradition than by bilateral exchange.

[3] A *quid pro quo* is required by individuals if they regard their bilateral trade agreements to be independent of one another, and hence the only compensation received for giving up a good must come from its recipient. Bilateral balance at the traditionally given prices could result from individuals believing that future opportunities will always exist for trade at those prices. If they ignore the costs of waiting for and finding those opportunities, then their buying and selling reservation prices will equal the traditionally given prices.

The individual does not know a priori with whom he will trade, and in that sense he is "trading with the market." Hence the anticipated costs of a particular exchange of one good for another can depend only on the pair of goods involved and the size of the trade. We also note that transaction costs which are additive over the goods exchanged cannot induce the indirect trading when the price of a good is independent of the good for which it is exchanged. Suppose the cost of exchanging a unit value of good i for good j was $c_{ij} = c_i^s + c_j^b$ for all pairs of goods i, j where $\{c_1^s, c_2^s, \dots\} > 0$ and $\{c_1^b, c_2^b, \dots\} > 0$ are the anticipated costs of handling unit quantities of the goods sold and bought, respectively. Then, since $c_{ik} + c_{kj} = (c_i^s + c_k^b) + c_k^s + c_j^b) > c_i^s + c_j^b = c_{ij}$, direct exchange would always accomplish a simple ultimate exchange at lower cost than indirect exchange. The importance of this point rests with the fact that transportation, storage, and inspection costs could be expected to have this additive form, yet these costs associated with intrinsic physical characteristics of goods are most often emphasized in discussions of media of exchange.[4]

What cost of exchange might depend in a nonadditive way on the pair of goods exchanged? An obvious candidate is the cost of finding someone wishing to make the complementary exchange. In fact, this is a natural cost on which to focus since classical economists felt that finding a "double-coincidence of wants" was the most inconvenient aspect of direct barter and hence the principle reason why a general medium of exchange is desirable. A double-coincidence of desired exchanges is still required for voluntary trade in a monetary economy. An individual must first find someone wishing to trade the medium of exchange for his endowment, then find someone wishing to trade the ultimately desired good for the medium of exchange. However, this indirect double-coincidence of desired exchanges may be less costly to find than a direct "double-coincidence of wants."

II. The Individual's Trading Decision

Let us now describe the trading process more closely and examine the pattern of exchange chosen by an individual. Consider an economy with n goods and many individuals, each producing or being endowed with

[4] Of course, if the price obtained or paid for a good varies with the good against which it is traded, then a more favorable ultimate price ratio might be obtained through the indirect exchange which could more than compensate for the higher transaction costs. This possibility is made explicit in Niehans (1971). But if the equilibrium price ratios favored the indirect exchange i for k for j over the direct exchange i for j, then they must favor the direct exchange j for i over the indirect exchange j for k for i. If all the additive transaction cost components are strictly positive, then it could not be optimal, in equilibrium, for both the i for j ultimate traders and the j for i ultimate traders to effect their trades indirectly through the same medium of exchange. Consequently fully monetized trade could not be an equilibrium.

only one good.[5] The good with which each individual is endowed has been previously determined and is fixed. The units in which goods are measured are chosen such that the given prices, in terms of some abstract numeraire, are 1. The only allowable type of trade is the exchange of one unit of one good for one unit of some other good. There is no saving, so whenever an individual accumulates one unit of his endowment good he goes to the market and exchanges it for one unit of some good he wishes to consume.[6] The good purchased from trip to trip may vary, however, to achieve any desired average consumption bundle, or to replenish stocks from which the individual consumes at a constant rate.

To accomplish a given exchange, say of good i for good j, the individual enters the market filled with other traders, but which has no trading posts, and randomly searches for another trader wishing to exchange good j for good i. When the complementary trading partner is found the exchange is made, and the individual either continues searching if he has further trades to make or leaves the market if he has accomplished his ultimate exchange.[7] The transaction cost to the individual is the time spent searching for complementary trading partners, and it is this cost that the individual wishes to minimize.

As indicated in the previous section, we can assume for our purposes that the individual arrives at the market with a given ultimate exchange to accomplish, even though the trading costs influence which ultimate exchanges are chosen. Before entering the market the individual plans a fixed sequence of trades which will effect this ultimate exchange. He then enters the market and stays until the planned sequence is executed.

Limiting individuals to choosing fixed trading sequences, rather than more general trading strategies which could be conditional upon the types of traders which are first encountered, is a severe restriction. From an individual's viewpoint, a conditional strategy can always do at least as well, and usually better, than a fixed strategy. The restriction is introduced primarily to allow a tractable aggregation over individual trading plans in Section III.

The actual time spent searching for a complementary trading partner is, of course, a random variable. We assume that the individual plans his sequence of trades so as to minimize the *expected* time to effect the ultimate exchange. Assuming a constant rate of search, he thus chooses a trade

[5] We leave unspecified at this point the number of individuals since we will only be concerned with the fractions of individuals having particular characteristics.

[6] The individual could come to the market less frequently, say after accumulating five units of his good, as long as he disposed of it through five one-unit exchanges.

[7] The restriction to unit exchanges at fixed prices allows all traders to fully complete their currently desired exchange upon meeting the first trader wishing to make the opposite exchange, permitting us to associate the completion of trade with a simple probabilistic event.

sequence minimizing the expected number of encounters with other individuals.[8]

The individual bases his trading plans on subjective estimates of the probabilities that a randomly encountered individual would wish to buy or sell any particular good. These estimates are derived from his previous experience in the market, and the true probabilities are the fractions of traders in the market waiting to buy or sell the respective goods. We now introduce two crucial assumptions about the individual's probabilistic beliefs.

1. The individual believes that the same fraction of traders wishes to buy each good as wishes to sell it. Since all individuals hold only one unit of a good and demand one unit of some other good, this represents a subjective belief that the market would clear at the given prices. It means that the individual's subjective probability that a randomly encountered trader would wish to buy the ith good equals the probability that he would wish to sell the ith good. Denote this common probability by p_i.

2. The individual believes that what another trader offers in trade and what he desires in return are statistically independent. We assume that the individual can estimate the relative commonness of the n goods in the economy, but that excessive computational costs prohibit him from estimating the $n(n-1)$ correlations between goods demanded and offered in trade. In keeping with assumption 4 of Section I that he has no prior knowledge of others' trading plans, he assumes no correlation as a working hypothesis. Consequently his subjective probability that a randomly encountered individual would wish to exchange good j for good i is $p_i p_j$,[9] and the expected number of encounters he anticipates is required to exchange good i for good j is $1/p_i p_j$.[10]

The above assumptions impose a particular structure on transaction costs as perceived by the individual which greatly simplifies the determination of his chosen trading sequence and which is conducive to monetary exchange.[11]

[8] Ignoring the variance of time to completion of the ultimate exchange is not critical as long as individuals are either risk neutral or risk averse with respect to the time to completion. Since we will characterize the search for a complementary trading partner as a sequence of Bernoulli trials, minimizing the expected time to completion also minimizes the variance of time to completion.

[9] The implicit belief that there are traders wishing to trade i for i can be eliminated at the cost of some notational complication, but does not qualitatively affect any of the results.

[10] The individual is assumed to be sampling with replacement. Another trader could rationally be searched twice since he may have made intervening trades since the last encounter.

[11] The implications of relaxing assumption (2) are substantial. The number and variety of equilibrium patterns of trade increase immensely and there is little reason to believe the economy would reach a monetary pattern of trade, at least if the other assumptions are retained.

Consider now the individual's choice of a trade sequence accomplishing the ultimate exchange of one unit of good i for one unit of good j in the least expected number of encounters. If the direct exchange of i for j is chosen, the number of encounters expected is

$$\frac{1}{p_i p_j}. \tag{1}$$

If good j is acquired through a two-stage indirect trade consisting of first trading i for k, then trading k for j, the expected number of encounters required is

$$\frac{1}{p_i p_k} + \frac{1}{p_k p_j}. \tag{2}$$

The individual is free to choose the intermediate good k that he will purchase then resell, and the intermediate good which minimizes (2) is clearly the good with the highest p_k. Let good n be this good: $p_n = \max\{p_k\}$. Thus the minimum expected number of encounters required to effect the ultimate exchange using a two-stage trade sequence is

$$\min_k \left(\frac{1}{p_i p_k} + \frac{1}{p_k p_j} \right) = \frac{1}{p_i p_n} + \frac{1}{p_n p_j}. \tag{3}$$

The expected encounters required to complete each stage of the trade are added together since the individual cannot start searching for someone wishing to trade j for n until he has already obtained good n.[12] Also notice that the choice of good n as intermediate trade good is independent of which pairs of goods i, j are being ultimately exchanged.

Similarly, the minimum expected number of encounters that could be anticipated using a three-stage trade sequence, involving two intermediate trade goods, would be

$$\min_{k,l} \left(\frac{1}{p_i p_k} + \frac{1}{p_k p_l} + \frac{1}{p_l p_j} \right) = \frac{1}{p_i p_n} + \frac{1}{p_n p_n} + \frac{1}{p_n p_j}. \tag{4}$$

The second trade of the nth good for itself is redundant, of course, and the best two-stage trade sequence will effect the same ultimate exchange in fewer expected encounters. Expressions corresponding to longer trade sequences are constructed analogously with the same result. There always exists a trade sequence of length 2 dominating all longer trade sequences for each ultimate exchange.

Having demonstrated that the individual would never choose an

[12] Expression (3) would not be appropriate if either negative holdings of goods (credit) were permitted, or if individuals carried excess inventories of commodities for trading purposes, thus allowing them to execute the chosen trades in more than one order. The value of such excess inventories in terms of saved search time can readily be calculated.

indirect trade sequence of length greater than two, we focus our attention on his decision between direct barter and two-stage trading. Indirect trade could effect the ultimate exchange in fewer expected encounters than the direct trade if and only if

$$\frac{1}{p_i p_j} > \frac{1}{p_i p_n} + \frac{1}{p_n p_j}. \tag{5}$$

Multiplying (5) by $p_i p_n p_j$ yields the equivalent condition

$$p_n > p_i + p_j. \tag{6}$$

The individual thus chooses an indirect trade sequence of length 2 over direct barter, using the most frequently encountered commodity as intermediate trade good, if he believes that the fraction of individuals in the market desiring to buy or sell that most common good exceeds the sum of the fractions desiring to buy or sell the two goods he is ultimately exchanging.

To the extent that all individuals have the same beliefs about which good has the highest p_k, all indirect traders will use the same intermediate trade good. Since indirect trade in the economy is limited to two-stage trades, all using the same intermediate trade good, we can properly call this nth commodity the medium of exchange. However, since (6) could be satisfied for some pairs i, j of goods and not for others, direct barter and monetary trade can consistently coexist. Given our assumptions, any equilibrium pattern of trade will be some mixture of these two extremes.

III. The Equilibrium Pattern of Trade

We next investigate the equilibrium mix of direct barter and monetary trade in the exchange economy. Starting from a situation where universal direct barter prevails, and thus where the vector $p = (p_1, \ldots, p_n)$ reflects only ultimate demands for and supplies of goods, condition (6) may be satisfied for relatively few pairs of goods. In other words, indirect exchange may initially be superior to direct barter for a relatively small fraction of the ultimate exchanges. The analysis of this section shows that the medium of exchange will, if used at all, be used much more widely than is apparent from the structure of ultimate demands and condition (6) alone.

This analysis focuses on the determination of the vector p upon which individuals base their trading strategies. A component p_i is an individual's estimate of the true fraction of individuals, denoted by q_i, wishing to buy the ith good, either for ultimate consumption *or* as an intermediate trade good. No individual knows why another purchases a good, nor is it relevant to his trading decision. But $q = (q_1, \ldots, q_n)$ will be influenced both by individuals' ultimate exchanges *and* their trading strategies. We

define an equilibrium pattern of exchange to be one where beliefs are correct, that is, $p = q$, and where q is consistent with the given ultimate exchanges and optimal trading plans based on p.

The evolutionary process we wish to capture can be described as follows and closely parallels the process envisaged by Menger (1892): Suppose, starting from a state of direct barter, that condition (6) is satisfied for some pairs of goods. The nth good would then be used as a medium of exchange to effect those ultimate exchanges. More individuals would consequently demand, and subsequently offer, the nth good in trade than in the direct barter state. To those demanding the nth good for consumption would be added those demanding it as an intermediate trade good. As this change in the state of the market is gradually revealed to individuals through their sampling of exchange offers during search, they revise upward their subjective estimate p_n (and correspondingly revise downward p_i for $i \neq n$). With the revised p condition (6) could be satisfied for even more pairs of goods, and indirect exchange of these pairs would be chosen over the previously preferred direct exchange. This would further increase the demand for, and supply from subsequent resale of, the nth good and lead to further upward revisions of p_n. An equilibrium is attained when individual beliefs, p, are consistent with the true state of the market. We are particularly interested in how close to full monetization of trade these market forces will take the economy.

Analysis of this evolutionary process requires a dynamic framework for two reasons. First, revisions in p can only take place through continued search and sampling, which takes time. Second, as use of the medium of exchange increases, the fraction of traders offering it in trade will increasingly exceed the fraction demanding it for consumption purposes. The continuous inflow of new traders into the market demanding it as an intermediate trade good makes up this discrepancy between supply and consumption demands. The requirements that the medium of exchange be increasingly common in the market yet remain a relatively small fixed fraction of ultimate demand would be inconsistent with market clearing in a one-period static model. In a dynamic context, however, we can distinguish the stock of traders in the market from the flows of traders into and out of the market and avoid this inconsistency.

To formalize these notions we must specify the distribution of ultimate exchanges, how individual trading decisions are aggregated to determine the state of the market, and a learning process by which individual beliefs embodied in p are revised in accordance with changes in the state of the market. The central variable in which we are interested is the fraction of ultimate exchanges which are executed indirectly through the medium of exchange. We denote this fraction $0 \leq s \leq 1$.

The market is assumed to operate at discrete intervals called "days." Each day a constant number, m, individuals enter the market to make

given ultimate exchanges. However, each individual is permitted to make only one trade per day. Those choosing direct barter can effect their ultimate exchange on the day they enter the market, and leave. Those choosing indirect trade will acquire the medium of exchange in return for their endowment on the day they enter the market, but return the following day to complete the second stage of their trade sequence. We assume that individuals are indifferent between appearing in the market on just one or on both days and that the relevant cost for their trading decision is still just the total expected number of encounters required when in the market to complete their ultimate exchange. The restriction guarantees that someone will hold the medium of exchange until it is sold to the next group of new entrants.

We further assume that all individuals have the same subjective estimate, p, of the state of the market on which to base their trading decisions. Since p is based on random sampling, it is in fact a random vector which could differ between individuals.[13] For simplicity we use the average p over individuals in each individual's trading decision.

A. The Distribution of Ultimate Exchanges

Let the matrix $U = [u_{ij}]$ represent the fractions of individuals entering who wish to ultimately exchange good i for good j. We assume that U is constant over time and symmetric. We define

$$u_i = \sum_{j=1}^{n} u_{ij} = \sum_{j=1}^{n} u_{ji}$$

to be the fraction of new entrants ultimately demanding and supplying the ith good. We collectively denote the u_i's by $u = (u_1, \ldots, u_n)$.

The symmetry of U implies that markets will clear at the prevailing prices, in the sense that the same fraction of new entrants demand each good as supply it, and also insures that complementary trading partners can always be found. In other words, a double-coincidence of wants is assumed to exist so that direct barter could fulfill all ultimate excess demands if individuals chose that pattern of trade. Furthermore, since condition (6) is symmetric in i and j, and since all individuals have the same p, complementary direct-barter trading partners will always exist even when some ultimate exchanges are conducted indirectly. Although this restriction is rather strong, it guarantees that a medium of exchange emerges out of individual choice rather than from necessity.

[13] These random differences between individuals' estimated p vectors introduce the possibility that different goods would be used as media of exchange by different individuals. An interesting question is whether the interaction of individual trading plans, random sampling, and expectations revisions would lead one or several media of exchange being used in a stochastic stationary state.

The assumption that U remains constant over time is also restrictive. As the state of the market and p change, so does the perceived structure of transaction costs. Hence the relative prices of goods inclusive of transaction costs change, and we should expect some revisions in the excess demands. This model ignores such changes in order to focus more clearly on the changing pattern of trade.

B. Determining the State of the Market

Either direct or indirect exchange will be chosen for a given ultimate exchange depending on whether condition (6) is satisfied or not for that pair of goods by the current p vector. Since u_{ij} is the fraction of entering individuals desiring to ultimately exchange i for j, the fraction s of new entrants choosing indirect trade is

$$s = s(U, p) = \sum_{\substack{i,j \text{ such that} \\ p_n > p_i + p_j}} u_{ij}. \tag{7}$$

Since condition (6) cannot be satisfied if either $i = n$ or $j = n$, the variable s always lies between 0 and $1 - u_n$. The situation $s = 0$ corresponds to a state of universal direct barter, and $s = 1 - u_n$ corresponds to complete monetization of exchange.

The true state of the market need not coincide with individual beliefs p about the state of the market. The vector $q = (q_1, \ldots, q_n)$ denotes the true fractions of individuals in the market demanding the respective goods in trade. The total number of traders in the market on a given day is $(m + ms)$, where m is the number of new entrants and ms is the number of traders from the previous day returning to complete their indirect exchange.

The number of individuals demanding the nth good is $(mu_n + ms)$, where mu_n represents the new entrants demanding it for consumption purposes and ms represents the new entrants demanding it as an intermediate trade good. Hence

$$q_n = \frac{mu_n + ms}{m + ms} = \frac{u_n + s}{1 + s}. \tag{8}$$

The s in the numerator properly belongs to the current day, while the s in the denominator actually belongs to the previous day. Although s may change substantially over long periods, we assume that it does not change significantly between two consecutive days, so that (8) is a close approximation to q_n at each moment in time.

The number of traders demanding any good i other than the medium of exchange is mu_i. They include the new entrants choosing to acquire the ith good by direct barter and the previous day's entrants who chose to acquire the ith good by indirect trade. To the extent that p, and hence

trading strategies, have not changed significantly from the previous day, the number choosing indirect trade yesterday to acquire i will equal the number choosing indirect trade in the current period to acquire i. Thus the total number demanding i on a given day will approximately equal the number of new entrants who ultimately demand i, namely, mu_i. Consequently

$$q_i = \frac{mu_i}{m + ms} = \frac{u_i}{1 + s} \qquad \text{for } i = 1, \ldots, n - 1. \tag{9}$$

The vector q thus constructed also represents the fractions of traders offering the respective goods in trade. The number offering the nth good is $(mu_n + ms)$, where mu_n represents new entrants with endowments of n, and ms represents traders who acquired good n the previous day as a medium of exchange. For other goods, mu_i is the number of new entrants endowed with good i.[14] Equations (8) and (9) can be used to write q as a function of u and s in vector form:

$$q = q(u, s) = u + \left(\frac{s}{1 + s}\right)(e_n - u). \tag{10}$$

The vector $e_n = (0, 0, \ldots, 0, 1)$ in the above expression.

C. The Learning Process

The commonly held beliefs p about the state of the market are assumed to be revised in accordance with the true state of the market by the simple adaptive formula

$$\Delta p^t \equiv p^{t+1} - p^t = \lambda^t(q^t - p^t) \qquad 1 > \lambda^t > 0. \tag{11}$$

Use of this formula is suggested by the optimality of the analogous-expectations adjustment formula for individuals under certain condi-

[14] We have implicitly assumed through our formulation of the q vector that the stock of traders in the market is in equilibrium, or close to it, at all times. As long as the pattern of trading does not change, the flow equilibrium of traders into and out of the market will maintain the stock equilibrium. But when individuals first switch from making a given ultimate exchange directly to making it indirectly a stock disequilibrium results. There are not enough units of the medium of exchange commodity in the market to satisfy the demand, and there are too many units of the goods now to be exchanged indirectly. In the process of moving from direct barter to full monetization, $m(1 - u_n)$, additional units of the medium of exchange commodity must be accumulated in the market and consumption of the same number of units of the other goods combined is shifted forward by 1 day. For this to occur, there must be some days when $u_{nl} > u_{ln}$ for goods $i \neq n$. We are assuming that forces not formally embodied in the model, slight price changes inducing output or consumption changes, cause appropriate temporary disequilibrium flows into the market (changes in U) to correct these stock disequilibria as they occur. If monetization takes place only slowly, then, since the total stock adjustment during the whole process is less than even 1 day's trading volume, we can expect the disequilibrium flows to be slight. Expressions (8) and (9) based on a fixed U remain valid as approximations. A more explicit analysis of this process is clearly needed, but is beyond the scope of the current model.

tions,[15] and by the fact that q^t is the expected value of a random sampling of the state of the market at time t.

The behavior over time of our dynamic variables s, p, and q is now completely determined by equations (7), (10), and (11) together with the parameters U and an initial value for p. To start the system we assume that the economy has been in a state of universal direct barter for all previous time. Since $s = 0$ implies $q = u$, we choose $p^0 = u$ as the initial value for p.

D. Evolution of the Pattern of Exchange

The dynamic system represented by (7), (10), and (11) is difficult to analyze in its current form since there are $2n + 1$ dynamic variables in p, q, and s, and since the functional dependency of s on p is discontinuous. However for our initial value of $p^0 = u$ we can reduce the system to an equivalent system with only two dynamic variables and proceed with a graphical analysis.

In equation (10) notice that the vector-valued variable q depends only on the scalar s and fixed parameter u. As s varies between 0 and $1 - u_n$ the vector q moves along a one-dimensional line segment in R^n with endpoints u and $u + (e_n - u)(1 - u_n)/(2 - u_n)$. Our initial value for p is u, and hence is on the same line segment to which q is confined. The adjustment equation (11) for p implies that p is always moving directly toward the current value of q. Since p starts on the same line segment as q in R^n, it too will always remain confined to that line. This fact allows us to summarize the $2n$ variables, p and q in two scalar variables, indicating their respective positions along the line segment.

More formally, we introduce a new variable, s^e, which will locate p along the line segment exactly as s locates $q = q(u, s)$. Supposing that

$$p^t = q(u, s_t^e) = u + \left(\frac{s_t^e}{1 + s_t^e}\right)(e_n - u), \tag{12}$$

then

$$\begin{aligned} p^{t+1} = p^t + \Delta p^t &= p^t + \lambda^t[q(u, s_t) - p^t] \\ &= (1 - \lambda^t)q(u, s_t^e) + \lambda^t q(u, s_t) \\ &= u + \left[\frac{(1 - \lambda^t)s_t^e}{1 + s_t^e} + \frac{\lambda^t s_t}{1 + s_t}\right](e_n - u) \qquad (13) \\ &= q(u, s_t^e + \Delta s_t^e) \\ &= q(u, s_{t+1}^e). \end{aligned}$$

[15] Specifically, if an individual revises his beliefs about the proportions of individuals wishing to sell various goods in a Bayesian fashion, regards his search as sampling from a multinomial distribution with unknown parameters $\hat{p} = (\hat{p}_1, \ldots, \hat{p}_n)$, has a Dirichlet

The new variable s^e may be interpreted as follows: If individuals believed that s^e was the fraction of individuals choosing indirect exchange, and if they knew the value of the parameter u, they could deduce the state of the market to be $q(u, s^e)$. It must be emphasized, however, that individuals in this economy do not actually form expectations about either u or the extent of indirect trading. They only form expectations about q without presuming rationality on the part of any other traders.

An adjustment equation for the variable s^e can now be derived. From the definition of $q(u, s)$ in (10) and the third and fourth lines of equation (13) it is clear that, suppressing the time subscripts,

$$u + \left[\frac{(1 - \lambda)s^e}{1 + s^e} + \frac{\lambda s}{1 + s}\right](e_n - u) = u + \left(\frac{s^e + \Delta s^e}{1 + s^e + \Delta s^e}\right)(e_n - u). \tag{14}$$

A straightforward manipulation allows us to solve (14) for Δs^e:

$$\Delta s^e = \left[\frac{\lambda(1 + s^e)}{1 + (1 - \lambda)s + \lambda s^e}\right](s - s^e). \tag{15}$$

Thus the variable s^e changes according to an adaptive scheme with an adjustment coefficient which varies between 2λ and $\lambda/2$ depending on the current values of s and s^e, and equaling λ whenever $s = s^e$.

The final step in the transformation is to specify s as a function of U and s^e alone. Equation (7) defines $s(U, p)$ and (10) defines $p = q(u, s^e)$. Substitution of (10) into (7) yields

$$s(U, s^e) = \sum_{\substack{i,j \neq n \text{ such that} \\ u_n + s^e > u_i + u_j}} u_{ij}. \tag{16}$$

Evolution of the pattern of exchange can now be investigated through the transformed system

$$\begin{aligned} s_t &= s(U, s_t^e) \\ \Delta s_t^e &= s_{t+1}^e - s_t^e = \alpha_t(s_t - s_t^e) \\ s_0^e &= 0. \end{aligned} \tag{17}$$

We assume that λ in (11) is less than $\frac{1}{2}$ so that α_t always lies between 0 and 1. This insures that s will not jump over one locally stable equilibrium and move on to another. The initial value of 0 for s^e indicates that direct barter was used prior to time 0. Time 0 may be thought of as the time when individuals first considered trading indirectly.

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prior distribution on $\hat{p}$ with mean p^t, and takes q^t as the sample proportions in a finite sequence of multinomial trials (i.e., a market day), then the mean p^{t+1} of his posterior distribution on $\hat{p}$ is given by (11). The scalar λ^t depends on the precision of his prior distribution and the number of trials in q^t. It is not important for our purposes that λ^t may vary from day to day.

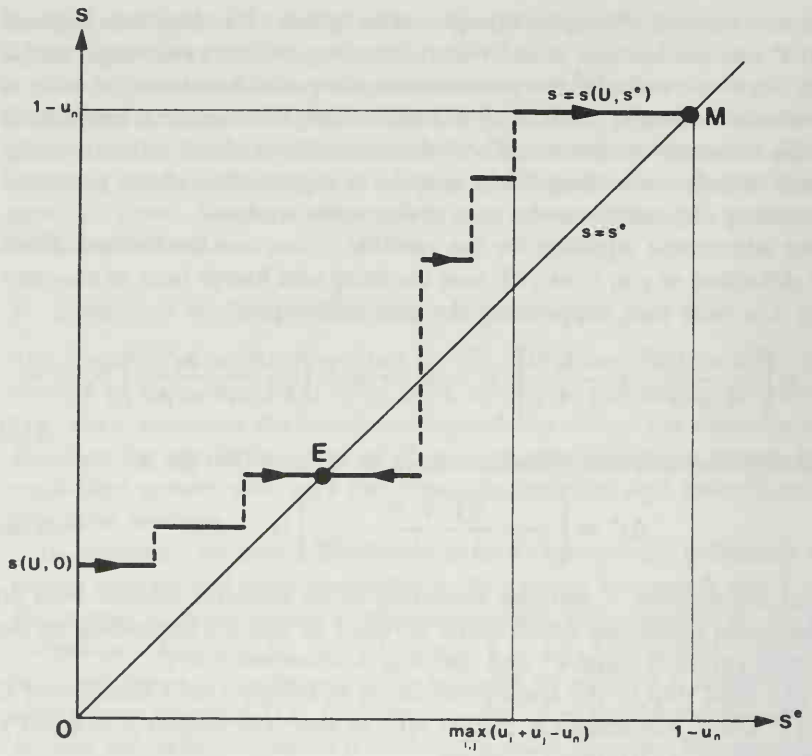


FIG. 1

System (17) is analyzed graphically in figure 1. The variables s and s^e will always be on the graph of $s(U, s^e)$. From its definition in (16), it is clear that $s(U, s^e)$ is an increasing step function in s^e and can only take on values between 0 and $1 - u_n$. It steps up whenever s^e increases sufficiently for indirect trade to be chosen for still another ultimate exchange. Furthermore, $s(U, s^e)$ attains the value $1 - u_n$ whenever s^e exceeds $u_i + u_j - u_n$ for all $i \neq n, j \neq n$.

The adjustment equation for s^e implies that s^e moves α_t of the distance from the 45° line $s = s^e$ toward that line each period. With α_t between 0 and 1, the variable s^e will never cross that line but will always move toward it. Thus a locally stable equilibrium combination of direct barter and monetary trade exists wherever $s(U, s^e)$ crosses $s = s^e$ horizontally. In the example of figure 1 both points E and M are stable equilibria. However if we start with an initial value of $s^e = 0$ the pattern of trade will only reach point E, where direct barter coexists with use of the medium of exchange. By suitably choosing the parameter matrix U of excess demands, examples can be constructed with stable equilibria at the origin, several intermediate points, and at $s = 1 - u_n$. Figure 2 depicts

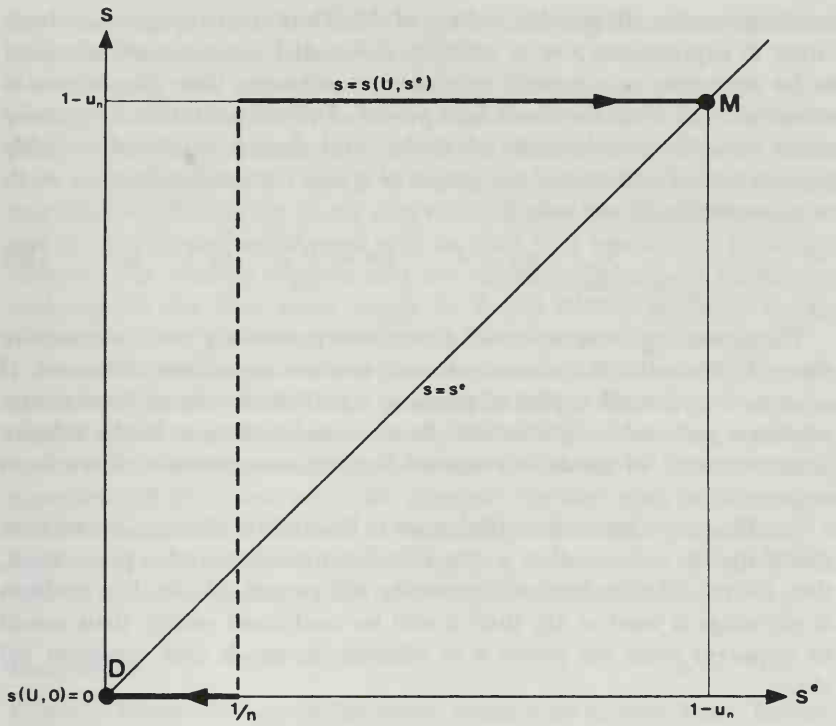


FIG. 2

the case where $u_i = 1/n$ for all i, in other words where all goods appear equally frequently in ultimate exchanges. Only the points D and M, corresponding to universal direct barter and full monetization of trade, are stable equilibria. The economy would stay in the direct barter state in which it begins.

Several dynamic properties of the pattern of exchange are now apparent. First, there may be several stable equilibrium levels of monetization of trade. Even for a single given distribution of ultimate exchanges, direct barter, full monetization, and intermediate mixes may all be locally stable situations. Although we do not develop here any criterion for evaluating alternative patterns of exchange from a welfare standpoint, multiple stable equilibria indicate that decentralized market forces such as we have considered cannot be relied upon to lead the economy to any socially optimal level of monetization. The economy could remain in a state which imposes greater total transaction costs than some other, possibly stable, state. This result is not surprising given the externalities in transaction costs present in the model.

Second, we note that full monetization, $s = 1 - u_n$, is a stable

equilibrium for all possible values of U. Thus if an exogenous shock either to expectations p or to ultimate demands U once caused any good to be accepted as a general medium of exchange, then its use would continue even after the shock had passed. Full monetization is the only stable equilibrium pattern of trade, and hence a globally stable equilibrium, if and only if the graph of $s(U, s^e)$ never lies below $s = s^e$, or equivalently, if and only if

$$\sum_{\substack{i,j \neq n \text{ such that} \\ u_n + s^e > u_i + u_j}} u_{ij} \geq s^e \qquad \text{for all } 0 \geq s^e \geq 1 - u_n. \tag{18}$$

Third, starting from an initial direct barter state of $s^e = 0$, we require that $s(U, 0) > 0$ if the economy is ever to move away from that state. If $u_n < u_i + u_j$ for all triples of goods n, i, j, then the direct barter state continues as a stable equilibrium. Some initial dispersion in the relative "commonness" of goods is required for the monetization of trade to begin.

Finally, returning to the initial point to be made in this section, we note that if $s(u, 0) > 0$, in other words, if indirect exchange takes place at all, then the equilibrium level of s generally will exceed $s(U, 0)$. If a medium of exchange is used at all, then it will be used more widely than would be apparent from the vector u of ultimate demands and condition (6) alone.

IV. Conclusions

The use of search costs to guide individuals through a market with neither trading posts nor clearing houses has yielded plausible implications for the pattern of exchange. With certain assumptions about the costs of finding traders with whom a desired exchange could be made, we have demonstrated why an individual may prefer to execute a given ultimate exchange indirectly rather than directly. Two trades can be less costly than one. However, given that we have opened up the possibility of lengthy indirect trade sequences, we have also demonstrated why sequences of more than two trades would not rationally be chosen. Three or more trades are always more costly than two. Further assuming that all individuals form their beliefs about market parameters by sampling from the same market, we have an explanation for how all traders could independently, without centralized decisions or agreements, settle on the same good as a medium of exchange. Thus individual optimization implies that the pattern of trade must always be some combination of direct barter and monetary exchange.

The particular combination of these two extreme patterns of exchange to which the economy converges depends on the specific configuration of ultimately desired exchanges and on the initial pattern of trade. There

can be multiple locally stable equilibrium combinations, but full monetization is always stable.

And finally, the approach suggests that a very common good would emerge as a first commodity money in a barter economy.[16] The important point is that this commonness is a market characteristic of goods rather than an intrinsic physical characteristic such as portability, divisibility, or cognizability. This is not to say that such physical characteristics play no role in determining *which* good will be used as a medium of exchange. However the analysis suggests that the rationale for using a medium of exchange in the first place might be found in the differing market characteristics of goods and the decentralized nature of exchange.

It need hardly be pointed out that these results were obtained in a very specialized context. Individuals were compelled to trade at given prices, not permitted to choose from more efficient conditional trading strategies, and formed their expectations about the likelihoods of various trading opportunities in a most simplistic manner. Further work relaxing these restrictions appears warranted to determine whether the phenomenon of monetary trade is indeed most naturally a consequence of individuals' limited information about each other's trading intentions.

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[16] This suggestion that a very common good would emerge as a first-commodity money does not appear inconsistent with casual anthropological evidence. In relatively primitive and decentralized societies either a staple consumption good, principal export item, or traditional obligatory gift frequently emerged as an early medium of exchange. Examples include rice in Japan, beaver pelts in Canada, tobacco in the southern American colonies, goats in British Africa, and butter in fourteenth-century Norway. Other examples can be found in Einzig (1949).

[4]

The Foundations of Monetary Theory

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I INTRODUCTION

To the pure theorist, at the present juncture the most interesting and challenging aspect of money is that it can find no place in an Arrow–Debreu economy. This circumstance should also be of considerable significance to macroeconomists, but it rarely is. Much of current macroeconomics is written as if the 'real' economy could be looked at as an equilibrium of an Arrow–Debreu economy. It is true that these economists have given the economy a sequential characterisation, but they believe that the postulate of rational expectations renders this inessential: the underlying economy could just as well be that described by Debreu. In this, I believe, they are not only careless (since the matter is never given proof) but also mistaken. It is one of my central concerns in what follows to argue this. Indeed, I shall wish to maintain the view that from our present standpoint Keynes's theory, and in particular his monetary theory, is best understood as a denial of the realism and relevance of Arrow–Debreu equilibrium. Of course, Keynes did not and could not have put it in this way and in any case, while he had a poet's insight, he lacked the seriousness and care of a theoretician.

In recent years the most notable attempt at a foundation of monetary theory was that of Patinkin (1956). There cannot be many economists who have not been profoundly, and rightly, influenced by this work. Nonetheless, it left a number of important questions unanswered and in one particular aspect it did not go nearly far enough. It was, of course, also largely written before the great advances in general equilibrium theory. Although Patinkin did develop the beginnings of a

theory of non-Walrasian equilibrium he did not complete it, and although he had much of interest to say on the underlying determinants of the demand for money, he did not establish in any rigorous way the viability of a monetary economy. The world which he considered was one of perfect competition. This, I shall argue, precludes a number of very important matters in monetary theory from being considered. He, by and large, assumed away all distributional aspects so that the economy could be looked at as if it consisted of only one household. He did not study the full asset equilibrium of an economy nor its evolution over time. Expectations were single valued and arbitrary. In short, although Patinkin clearly pointed the way, he fortunately left much for his successors to do. In the sequel some of this unfinished business will be considered.

Through much of the history of monetary theory there runs one consistent theme: the view that the nominal quantity of fiat money should not matter; that is, the real equilibria of the economy should be invariant to the magnitude. It is one of the paradoxes of present circumstances that those who hold this doctrine most fervently are also those who are most vociferous in their demands that the nominal money stock be closely controlled. But perhaps there is no paradox here at all. Perhaps these two views can be reconciled within a distinction between the short and long run, perhaps within a distinction between equilibrium and disequilibrium. We shall have to consider this, but in doing so we must not expect too much help from the current literature. It is true that Lucas (1972) has given a plausible answer: variation in the money stock can affect the real equilibrium by making it impossible to disentangle 'real' from purely 'nominal' disturbances. But to reach this conclusion he needed to suppose that the money stock itself was not directly observable. This is a very implausible assumption. In any case, Lucas set the tone and there are now quite a number of accounts of how nominal magnitudes can confuse signals and thus have real effects. There are also some fairly obvious accounts of how lack of short period price flexibility can lead nominal magnitudes to exert short period real effects. Very little of all of this has been formulated at any convincing level of generality and all of it takes Walrasian equilibrium as the appropriate point of departure. This equilibrium is always taken to be unique. Certainly the Neutrality doctrine as well as its exception merit further study.

But although these matters are all central to monetary theory and certainly central to any analysis of monetary policy, there are other

problems connected with money which while, perhaps at first sight, somewhat academic nonetheless require answers. In particular, I have here in mind the old conundrum of how fiat money can survive as an institution. By this I mean the question of what it is that ensures that money has at all times a positive exchange value.

At a common-sense level almost everyone has an answer to this, and old-fashioned textbooks used to embroider on some of the banalities at great length. But common sense is, of course, no substitute for thought and certainly not for theory. In particular, most of the models of an economy which we have, and I am thinking here of many besides those of Arrow and Debreu, have no formal account of the exchange process. The recognition that this was the case was the point of departure for Clower (1965) and Leijonhufvud (1968) who had disequilibrium situations in mind, although Clower especially attempted to model explicitly what he took as axiomatic, namely 'that only money buys goods'. This axiom, however, was not underpinned by an account of the process of transaction nor was the axiom itself subjected to extensive scrutiny. While it was an advance to take such explicit cognisance of exchange constraints, the offered solution is more like a sledge hammer than a scalpel. One still wants to ask: why does only money buy goods? I suppose that questions like this are real 'foundation questions' and I shall start with them. They are of interest for the following reason: in trying to answer them we are led to build features of the economy into our models which we might otherwise have neglected, and these features in turn will have consequences beyond the immediate desideratum of accounting for the viability of fiat money.

I have now taken note of many of the issues which I propose to discuss. Before I do so, it may be useful to attempt a synoptic formulation of what I conceive to be my task.

By monetary theory I shall understand any theory of the economy which includes a means of exchange in its specification. I define a means of exchange as a good which can be exchanged against any other good on terms at least as favourable as a good not designated a means of exchange can be exchanged. In general, although stronger than needed, we can stipulate that the terms using the means of exchange are strictly better than they are when some other good is used. We must enquire into the circumstances in which an economy with a good thus singled out can indeed sustain such singling out. The question will be sharper if the means of exchange is intrinsically worthless. In what follows these matters will be made more precise.

But it is clear that a good which is a means of exchange must necessarily be a means of intertemporal reallocation and thus a 'store of value'.

If this view of monetary theory is adopted then we shall have to consider only those economies in which there are transactions at every date. This rules out the Arrow–Debreu economy. Consequently, some of the propositions based on the latter are at risk. This will be particularly true of the Fundamental Theorem of Welfare Economics. Moreover, the specification of the economy will now essentially have to include agents' expectations of the future values of economic variables. In the Arrow–Debreu economy one is only concerned with beliefs concerning states of nature. In addition there will now emerge an interesting distinction between short- and long-run equilibrium. To pursue monetary theory thus entails large reformulations of our most powerful paradigm.

In addition, there are the traditional questions: the 'classical dichotomy', the 'neutrality' and 'super neutrality' of money. In recent years, in spite of the literature, these matters have been treated rather cavalierly, and rather badly, by the new macroeconomists. They certainly belong here, since so long as macroeconomics is far away from the 'foundations', it is also incoherent.

II THE MEANS OF EXCHANGE

I do not regard it as a very promising enterprise to attempt to give a theoretical account of the origin of monetary exchange. No doubt there is a place for theoretical history but I doubt that economists are very good at it. Indeed, there is some evidence that they are not. Thus one often encounters a demonstration that a medium of exchange may allow an allocation which Pareto-dominates that attainable by barter. It is then an easy step to the proposition that it is this circumstance which explains why money is used. But this Panglossian teleology lacks all merit until a process is described which brings about the superior outcome. Hicks has attempted a historical sketch (1969), but he leaves much unaccounted for.

A preferable route is to take the institution of money as given and to ask why and how it survives. Given all the common sense, not to say banal, answers which come to mind, this turns out to be harder to do at the level of formal theory than one might have thought. A rather simple condition for the survival of money (of no intrinsic worth) is that

the probability of it not being exchangeable against goods is for some agents bounded away from zero. This would then suffice to ensure a positive exchange value for money at all times. It is important to understand two things about this explanation: first, while, as it were, it starts in the mind, it is easy to reconcile with expectations rationally held; in every evolution of the economy the exchange value of money will in fact be positive. Secondly, the explanation implies that when a high enough price level is reached it is expected almost surely to fall. Hence the expectational assumption ensures a positive rate of return on money at a high enough price level.

Grandmont (1974) has shown that an expectational assumption of this kind is needed if one wants to demonstrate that every short period equilibrium of an economy is a monetary equilibrium. Yet I do not believe that their analysis goes far enough. The trouble is that an economy in which there is a medium of exchange is quite different from one without one. For instance, there will be large differences in the transactions and production choices – after all, Adam Smith taught us to make an important connection between the division of labour and the ease of exchange. This is also one of the drawbacks of Patinkin's approach since formally his description of the economy is unaffected whether money has a positive exchange value or not.

The difficulty can perhaps be best illustrated as follows. One of the oldest questions of monetary theory is why an agent should hold money which may have a zero-expected return when there are other assets whose expected return is positive. The introduction of uncertainty of future prices may fail to provide an answer since the dispersion of the returns on money may be as large or larger than those of other assets. In order, so it is argued, to have money held, one may require the expectation of a falling price level. But even that may fail to resolve the difficulty when there are other assets, like government bonds, denominated in money (Hahn, 1981). But we now notice that it makes a great deal of difference to the question whether the returns on 'real' assets are realisable in a monetary economy or not. When I invest all my money in corn which I plant, then the return depends a good deal whether the harvested corn can be sold for money and the money exchanged for goods, or whether I have to hawk corn from the candlestick-maker to the blacksmith. In other words, if corn were really to drive out money then it may no longer be profitable to plant corn. The limit of a monetary economy as the price level in terms of money goes to infinity, is not the economy we started with. To enunciate a paradox: corn can only

drive out money if agents believe that money will not be driven out.

This leads me to the formulation which I favour. I want to think of an economy in which transactions are mediated by money as being a Nash equilibrium of an 'exchange game'. It is thus advantageous for any given agent to mediate his transactions by money, provided all other agents do likewise. This, of course, is not a novel idea, but its formalisation is not straightforward. Moreover, there will be other Nash equilibria which are not monetary so that it is not possible to dispense with history altogether in this 'explanation' of a monetary economy.

An agent who lives in an economy where all other agents mediate their exchange by money will receive money in exchange for the goods which he sells and must offer money for the goods which he buys. This is the picture behind the Clower dictum. But it is too strong. For while other agents may always be prepared to offer and accept money, it does not yet follow that they would not be ready to offer and accept something else. What we need is that the given agent should calculate that these alternative modes of transactions will be less advantageous than those that are mediated by money. That is, we need to give some flesh to what Hicks called the 'non-moneyness' of other goods.

It is here that the traditional account is in need of some correction. This account invokes the low probability of a 'double coincidence' of wants, so that an agent wishing to exchange one good directly for another faces higher transaction uncertainty than he would if he had mediated his exchange by money. But this view is based on the presupposition that in every exchange each agent acts as if it were his last and that is a very strong presupposition. There will be terms on which a vegetarian agent will accept beef for shoes since there will be a probability that he in turn will be able to exchange beef for health foods with someone else. In other words, there is no intrinsic reason why exchange should not be speculative in this sense if the terms are right. What one needs is that the vegetarian will accept beef for shoes on terms less favourable to the beef supplier than the latter could have had by exchanging beef for money and money for shoes. At least the terms for direct exchange should not be more favourable than they are for the indirect route.

The easiest answer is that the vegetarian in accepting beef for his shoes will have to undertake two transactions to get his health food instead of one. What the beef supplier saves in transaction (not selling his beef for money), he has put on the shoemaker. If transac-

tions are costly then the shoemaker will charge a premium for accepting beef rather than money and the beef supplier loses as much as he has gained by saving on the number of his own transactions. Behind this argument in turn is the supposition that the vegetarian will not be able to get his health food as favourably by direct exchange (now against beef) as he would against money.

It will now be seen that transaction costs are not enough. It may simply lead to agents being indifferent between a barter and a monetary deal. Thus the beef supplier would simply pay the vegetarian to undertake the indirect exchange which he has avoided. Some additional element has to be brought into the story.

The missing element, in a way, is to be found in Adam Smith's analysis of the division of labour and the extent of the market. In a monetary economy agents can specialise not only in production, but also in the selling of what they produce. In my example I want to argue that the cost of selling beef (for money) is less for the supplier of beef than it is for the vegetarian shoemaker. For the idea of two agents meeting at random to engage in bilateral exchanges is not one of any descriptive merit and it misses an important feature of a monetary economy. This, of course, is the presence of anonymous markets.

There are quite clearly increasing returns to specialisation in transactions. Thus there is a set-up cost in acquiring the right initial information of where and how best to transact and there are informational economies in being known as someone willing to exchange beef for money. The beef-seller may rely on a middleman who can reap even greater advantages from increasing returns, but he will know more about such middlemen than does the vegetarian. The asymmetric transaction costs will then explain why indirect barter is more costly to the beef supplier than is monetary exchange.

We do not say that there is a market for x if there is simply a probability of bumping into someone who is willing to exchange x for something else on some terms. When we postulate a market for x the very least we can mean is that agents know where to go – to whom to go – to buy and sell x. We do not necessarily mean that agents know where to transact most advantageously. Thus, as in the current literature, agents may search for the cheapest store, but they know that it is amongst stores that they have to search. Someone wishing to exchange his house goes to estate agents or advertises – he does not, like some crazed-particle, wait to bump into a buyer.

Monetary exchange is seen to be the cheapest way in which

markets can be organised. For the information – willing to exchange beef for money – is much less costly to convey than a vector of goods for which there is willingness to exchange beef. In general, markets will have middlemen to mediate between buyers and sellers – a simple consequence of the increasing returns to transactions. Once there are middlemen, they must be known to at least one side of that particular market. I know that I can get meat for money at the butcher's, but I need not know – not being a meat producer – where to sell meat for money. Moreover, if I routinely sell meat, the appropriate middleman has information about Hahn-meat. If I turn up once at the meat wholesaler with a side of beef, I must have considerable transaction uncertainty and surely must be pretty uncertain of the terms which I can get. In short, a monetary economy by greatly economising in information through transaction specialisation leads to an asymmetry in transaction cost between agents. This in turn makes it advantageous for agents to engage in transactions mediated by money rather than barter when everyone else is doing the same.

The literature to date on this 'foundation' question of monetary theory seems to me to be rather inadequate. The reason is that it is almost entirely cast in a framework of pairwise exchange without any attention to the market arrangements which monetary exchange makes possible. In particular, what is missing from these accounts is recognition of both the increasing returns from production and from transactions. A barter economy is not the limit of a monetary one – there is a large discontinuity in the kind of economy as one passes from the former to the latter.

Let us look briefly at an example. Consider an economy in which all transactions are mediated by money and by middlemen. The latter exist because they economise in information. A middleman in good i buys at the money price q_i and sells at the money price p_i. His money costs are $a_i + b_i t_i$ where t_i is the number of transactions which he mediates. The costs per transaction are declining in t_i. If middlemen's profits are competed away then p_i/q_i will become closer to unity as the number of transactions mediated increases, provided the amount bought or sold per transaction is approximately constant.

An agent wishing to exchange one unit of good one for good two via the middlemen obtains q_1/p_2 units of good two. Another agent wishing to exchange good two for good one gives up p_1/q_2 units of good two for one unit of good one. If the first agent wants to cut out

the middleman by resorting to barter, he must offer the other agent (if he can find him) terms at least as good as these. Hence his maximum gain in good two is

$$\left[\frac{p_1}{q_2} - \frac{q_1}{p_2}\right] = \frac{p_1}{p_2}\left[\frac{p_2}{q_2} = \frac{q_1}{p_1}\right] > 0$$

However, he must incur a search cost – say c and the possibility that the search will be fruitless. Let π be the probability of successful search and let c be measured in 'utils' (say of time). Then the expected gain of cutting out the middlemen on the marginal exchange is

$$\pi u_2 \frac{p_1}{p_2}\left[\frac{q_1}{p_1} - \frac{p_2}{q_2}\right] - c - (1-\pi)\left[-u_1 + u_2\frac{q_1}{p_2}\right] \qquad (1)$$

where u_i is the partial differential coefficient of the utility function with respect to its ith argument. If the first agent initially consumed both the goods, then the last term is zero. So there are three considerations which will stop agent one from attempting barter: (a) the probability of finding the 'right' partner, π, may be small. That is the usual double-coincidence of wants argument. (b) The gain to be had in a monetary economy from cutting out the middleman may be small because of the increasing returns of the middleman and the large number of transactions since everyone else is making use of the middleman in a monetary economy. That is p_i/q_i may be close to one. (c) The costs in time and effort of search may be relatively high since they are largely of the 'set up' variety.

If this sketch is on the right lines then one will see that in certain commodities (e.g. with a thin market) exchange mediated by money and middlemen may be at risk. Barter and partial barter deals are not unknown in a monetary economy. However, in most cases the sign of (1) will be negative and the monetary exchange mechanism will be stable.

It is a consequence of this approach that a theoretical history of the origin of paper money is rather harder than one might have thought. A barter economy may easily be a Nash equilibrium as well. That is, if all other agents barter, whether through middlemen or not, then there are strong reasons why no individual agent should accept promissory notes. The first person to accept a goldsmith's IOU took considerable risks. That is, a barter mechanism may also possess considerable stability and certainly this is so for a species mechanism.

There seems to be the need for some co-operative move – perhaps through a government – to move from one of these Nash arrangements to another.

III HOLDING MONEY

All accounts which we have of why agents hold money appeal to the axiom that exchange must be mediated through money although they probably only need to postulate that exchange not so mediated is very costly. Even so, this needs to be supplemented by the postulate that selling and buying either are not, or may not, be simultaneous and that there is a utility loss from not being able to buy at a particular moment or from not being able to meet obligations in terms of money incurred in the past. Not being able to obtain money from sale at a particular moment is similar in its effects to having to pay (a brokerage fee) to insure a sale. This fee, for instance, is a central feature in the Baumol (1954)–Tobin (1958) account of the transaction demand for money.

The transaction demand for money seems to be of central importance since sole reliance on other motives seems to lead to troubles. These other motives turn on the uncertainty of returns on assets in general which, it is argued, will lead to the inclusion of money in the portfolio of a risk averse agent. The cause of the trouble I have discussed elsewhere (Hahn, 1981) and I will give only a bare outline here.

Suppose that there is a government perpetuity denominated in money. Its return is made up of interest and changes in its price. Let $p(s)$ be the price of the perpetuity in rational expectation equilibrium, if s is the 'state of the world'. For simplicity's sake suppose there is only a finite number of possible states $s_1 \ldots \ldots s_n$ and that by suitable numbering one has $p(s_1) > p(s_2) > \ldots > p(s_n)$. Then, if at the portfolio investment date, the state is s_n the investor is certain that he will make no capital loss by holding the perpetuity. Hence on these motives he will hold no money.

It is of incidental interest to ask whether this argument also applies in reverse: if at the decision date the state is s_1 then the investor knows for sure that he will not make a capital gain, but that he may make a capital loss. This might be thought to be the case where 'liquidity preference becomes absolute'. But the two situations are not symmetrical since the interest payments can, given beliefs over

states, compensate for this downward risk and, in an equilibrium, will do so.

I conclude that uncertainty of returns is not on its own sufficient to account for the demand for money. (Of course, if there were no government bonds or other assets denominated in money, the above difficulty need not arise since price level changes between two date–cost pairs can give money a positive expected real return. But there *are* government bonds, etc. in the world.) The transaction motive and the attendant institutions of exchange of a monetary economy must be the foundation on which all else rests.

The question, as always, is the appropriate formalisation of an intuition. Until that has been done one cannot even be certain that the intuition constitutes a grammatical insight – for instance, the credit card company is a device to economise on the cash balances of at least one side of the transaction by guaranteeing the purchaser's delivery. It would economise on both sides if credit cards were universally, or at least widely, used. In other words, there is an opportunity for profitable intermediation by means of a system which guarantees settlement. But it needs to be done on a wide scale to be attractive and viable and that is perhaps why it has been slow to develop.

The arguments of this and the previous section lead to a rather natural way of ordering assets by liquidity. Suppose, first, that there are no transaction costs so that any asset can be exchanged against anything else costlessly. Think of goods distinguished by date and state of nature as well as by the other usual characteristics. The agent is uncertain about the state of nature, but knows prices given the state of nature and date. Then for a given amount of asset A we can define $E(A)$ the set of goods which can be acquired given that one has that amount of asset A (and nothing else). Next consider an amount of another asset B which can be acquired at the same cost as the amount of A did. Calculate $E(B)$. Assume that $E(A) = E(B)$. Now introduce transaction costs and for definitions think as them as either brokerage fees or the use of leisure, or both. Calculate $E^*(A)$ and $E^*(B)$ taking these costs into account. One can then say that A is more liquid than B if $E^*(A) \supset E^*(B)$ but not *vice versa* when A and B satisfy the condition that they cost the same and that $E(A) = E(B)$. These conditions should be looked at as a 'Gedanken Experiment': suppose I spend equal amounts on A and B and neglecting transaction costs they give the same transaction opportunities, which is the more liquid?

Now it does not follow that the more liquid asset will command a liquidity premium. For an agent may not be interested in the whole of $E^*(A)$. But if A is money, I think we can take it that $E^*(A)$ and $E^*(B)$ share only one efficient point – that of no transactions. Then it is safe to argue that money will indeed command such a premium and thus, as Keynes argued, set a lower bound on the returns of other assets if they are to be held. Of course, agents will in general hold mixed portfolios. We can then calculate our sets for two portfolios costing the same amount, but differing in the proportion in which money is held. As the proportion of money held declines the fact that the portfolio becomes less liquid, on my definition, will become increasingly relevant to choice, since transactions in other assets will become increasingly frequent on a utility maximising consumption path. Hence lower liquidity will indeed result in a liquidity premium (in due course) and eventually in a rising premium. All of this is easy to formalise in a simple way.

It is for these sorts of reasons that I always considered the claim of an interest-inelastic demand for money as shown by data to be a 'fact' unsupported by theory and so to be rejected. For, on my way of analysing the matter, it is clear that there are many assets for which $E^*(B)$ is 'close' to E^* (money). While these other assets do not drive out money for reasons already given, they are good substitutes for money as far as liquidity is concerned. Radcliffe was surely nearer the mark then Friedman! These considerations are highly relevant to the proposal to control the quantity of money. Perhaps it can be done, but it may be that what is needed is to control the liquidity of the economy and that is something else again. I suppose all of this is reflected in the endless proliferation of money measures which monetarists tell us to concentrate on.

Before I leave these particular matters there are two further theoretical hurdles which I want to consider.

If one is interested in short period analysis – that is, if one has not tied down expectations to be not systematically disappointed with the passage of time – there is a difficulty noted by Grandmont (1982) and others. If, for instance, people hold more money than they now want, this can be rectified for the economy by a higher price level provided the expected price level can be made not to rise in the same proportion. For, if people want to get rid of money because the price level is expected to rise, then they will still want to do so when the current price level is higher, but expected prices are higher in the same proportion. This difficulty of attaining a short period monetary equilib-

rium is acute when the transaction rôle of money is ignored. One then has the possibility of a Wicksellian situation where demand is always out of joint with supply. Thus in this case a certain conservatism in expectations is postulated ('uniform tightness' – of expectations) in order to make a short period monetary equilibrium possible. My own view is that consideration of transactions obviate the need for the postulate.

The second difficulty arises from the need to suppose that the probability agents attach to money having no exchange value at some future date is bounded away from one. For this cannot be true of a finitely lived economy with rational expectations unless one introduces the fiction that agents who are short at the last gasp of the world have to pay the government a certain amount of money. (How *that* is to be enforced is obscure.) I do not propose to discuss this difficulty which is entirely of the theorist's own making. I am quite happy to live with a model in which expectations held today are rational for 10^4 years, but not 10^{20} years.

IV MONEY AND THE REAL ECONOMY

I have already argued at length that a monetary economy requires a quite different description than does a non-monetary one. I do not suppose that this is controversial, but the formal literature for the most part takes no account of this. In any case 'money matters' profoundly to the real economy and the question is whether the quantity of money also matters.

One strand of this question has to do with something called 'the optimum quantity of money' although it is the real stock that is here at issue. A good deal of what has been written on this is of little worth because no attention was paid to all those deviations from an Arrow–Debreu world which must be present if there is to be money at all. Thus it happened that the Welfare Theorems which apply to an Arrow–Debreu economy were cavalierly applied to one where they cannot be shown to hold. A notable exception to these strictures is the work of Truman Bewley (1980). He starts with what predecessors had blissfully ignored, namely the absence of the requisite number of contingent futures markets. One of the motives for holding money is then self-insurance. Although Bewley does not look at transaction costs, he at least has a well-defined objective for people to hold money. Unfortunately, it turns out that for infinitely long lived agents

the 'optimum' quantity of money is not finite. It is clear that no simple argument about a positive marginal benefit of money balances and a zero marginal cost in their production stands much chance. For instance, it turns out that the taxation arguments for financing interest payments of money are relevant to the welfare argument.

It is, of course, true that when no return accrues to money holdings more resources will be used in transacting than would be the case if money had a positive return; that is, that will be so *ceteris paribus*. But for the optimum quantity the marginal liquidity premium of money should be zero – agents are liquidity satiated. Even if that can be done with a finite real stock there are other problems. Differently placed agents will be liquidity satiated at different rates of return on money and one really requires individualised returns in the manner of Lindahl prices for public goods. Even without this complication the payments would have to be conditional on the states of nature. One would also have to investigate carefully the 'second best' aspects due to missing contingent markets.

There is only one point that I wish to make on this topic. The power of money is its purchasing power, i.e. the ability to buy. If money bears interest it is cheaper to insure the possibility of purchase and more insurance will be taken out. But that means, for welfare, that the insurance must be real, which in turn means that in states where for transaction cost reasons, when money had no return an agent abstained from purchasing as much, he will now purchase more. But that means that there must be more to purchase. This in turn may imply that inventory levels will on average have to be larger when agents are liquidity satiated than when they are not. But that is a real cost! What I am proposing here is pretty innocuous: if liquidity satiation goes with more insurance then society cannot provide it costlessly. But it is easy to show that transaction costs will reduce the variance of purchases and so the need for inventories. I believe that something on these lines has been argued before.

I now turn to more urgent matters, although it must be recalled that in the absence of non-indexed taxes and rational expectations the main cost of, for example, inflation is said to be the extra transactions induced by the economising of money balances. To remove this cost Mrs Thatcher has engineered over 3 million unemployed.

The last remarks are motivated by the doctrines of neutrality and superneutrality. These doctrines are so well known that it does not

seem necessary to rehearse their essentials – but it is worthwhile to get them right.

The basic proposition is simply a consequence of rational actions by an agent whose preferences are over commodities. Such an agent must be indifferent over two identical opportunity sets in commodity space. Moreover, his preferred set of actions depends only on this opportunity set. Abstracting from taxes it then follows that if it is possible for an agent to have a k-fold change in the value of his financial assets in every date-event pair in which all prices are k-fold what they were before, then indeed his opportunity set is invariant to these nominal changes. Notice that his financial assets include debt denominated in money.

This is a result of extraordinary simplicity and common sense. What is truly surprising is that it should have led to the claim that the real state of the economy is invariant to the quantity of money. Certainly for this claim to make even minimal sense either the quantity of money must have been correctly forecast as well as prices, or the statement must refer to 'the long run'. But in particular, and most importantly, it must be a Walrasian equilibrium allocation which is said to be invariant to the quantity of money. However, all one can possibly hope to show is that the *set* of such equilibria is invariant. These are basically Arrow–Debreu equilibria or economies in which money is what I have called 'inessential' (Hahn, 1973) so that the equilibria of a monetary sequence economy are just the Arrow–Debreu equilibria. But lack of uniqueness is endemic to these equilibria and therefore the proposition is a non sequitur even if we suppose the economy to be always in equilibrium.

I have discussed this aspect of the neutrality issue at length elsewhere (Hahn, 1981) and shall not do so again. Instead I shall first consider a simple example and then state the correct neutrality proposition for it and proceed to draw a lesson from it for the widely loved 'ineffectiveness' proposition. The example will be of a 'macro-kind', that is, it will use some notion of the representative firm. In general this is simply bad economics, but what is sauce for the gander . . .

There are many reasons why a firm should value the employees it has differently from those who are not yet employed by it. For one thing, more is known about the presently employed; for another, they are trained and familiar with the firm. Lastly, the firm may have a kind of contract with its existing employees. This too I leave to one

side since it is examined at length in another study (Hahn, 1983). In any case, it is perfectly reasonable to suppose that there is a hiring cost which is a sunk cost. Call it H. If a new hired worker were to stay with the firm forever then rH would be the flow cost which must be added to the worker's wage (r is the constant interest rate). In general, however, this cost will depend on the length of time the firm expects to employ the worker. Suppose that is given and write h for the flow cost measured in good(s).

Next I turn to the production function which is written as $f(k, \ell)$ where k is 'capital' and ℓ is labour. (Of course, everything I have to say could be said in a full input–output way and nothing turns on k.) Since we are supposed to be concerned with the long run, I make the usual assumption of constant returns to scale. Let $m(k, \ell)$ be the marginal product of labour. Then if w is the real wage the firm will be in equilibrium with ℓ^* workers and k^* if

$$w + h \geqq m(k^*, \ell^*) \geqslant w \tag{2}$$

Because of constant returns to scale this gives us a continuum of pairs (k, ℓ) which satisfy (2) – the latter can only help to fix k/ℓ.

Next, to stick closely to the new macroeconomics, let it be a condition of equilibrium that the real wage equals the marginal disutility of work:

$$u_\ell = w \tag{3}$$

where u_ℓ is the marginal disutility of work, here assumed to be the same for everyone. Hence if there are unemployed workers in equilibrium they do not care. But the unemployed are demanding leisure not goods. Hence the demand for the latter must depend on employment or more generally on $w\ell^* + rk^* = y^*$. Notice that because of constant returns to scale there is no supply function of output.

The demand for goods will also, for the usual reasons, depend on real cash balances m. Hence the 'clearing of the goods market' is a third equilibrium condition:

$$y \equiv f(\ell, k) = x(w, y, m, r) \tag{4}$$

It is important to emphasise that y is an argument of the demand function as long as there are (voluntarily) unemployed workers. To this we now add the fourth obvious equilibrium condition:

$$f_k(\ell, k) = r \tag{5}$$

and as the fifth, the equality between the demand for money and its stock, $(\bar{M})$:

$$pm(w, y, m, r) = \bar{M} \tag{6}$$

where p is the price level. The equations (2) to (6) together with the production function constitute a miniature general equilibrium system. With the usual assumptions, it can be meaningfully solved for $(w^*, r^*, \ell^*, k^*, y^*, p^*)$.

Suppose that the economy has an unemployment equilibrium. (I re-emphasise that this unemployment is voluntary by (3).) If y^* is the output in this equilibrium consider $y^{**} > y^*$ where the available labour supply suffices to produce y^{**} when the technique of production corresponds to $[{}^{w^*}/_{r^*}]$. Now give (6) the Cambridge form

$$m = \lambda y = \frac{\bar{M}}{p} \tag{7}$$

This is not needed for my argument, but the devil must have his due. Then if y^{**} is to be part of a new equilibrium it must be that $m^{**} > m_1{}^*$. But (7) enables us to write (4) as

$$y = yx(w, r, 1, \lambda) \tag{8}$$

so that that equilibrium condition becomes

$$x(w, r, 1, \lambda) = 1 \tag{4*}$$

which is independent of y. It is then clear that by a proper choice of p^{**} we have a new equilibrium $(y^{**}, p^{**}, r^*, w^*, \ell^{**}, k^{**})$. In fact the model has many equilibria.

I shall comment on the robustness of this conclusion below. But first let me emphasise the message. Suppose we start in an unemployment equilibrium and somehow the quantity of money in the hands of every agent is increased in the same proportion. Suppose further that we have complete trust that the economy, after the disturbance, will settle down again in an equilibrium. What can be predicted?

(1) Certainly if the price level increases in the same proportion as the money stock while real wages remain constant, the old equilibrium will be restored.

(2) On the other hand, y can increase at constant prices to restore the equilibrium in (7).

To say what will be the case we need dynamics and that is why the usual neutrality formulation is a non sequitur.

It is clear that a good deal will depend on expectations. For instance, we might model the dynamics as a sequence of short period equilibria under rational expectations. But if these paths are not unique, one agent's particular expectations are only rational because others expect the equilibrium which he himself expects. Thus, to come to the ineffectiveness proposition, if agents accurately predicted the increase in $\bar{M}$ they would not be much wiser unless they knew whether it would induce a purely nominal or a real adjustment. Keynesians have been at fault in neglecting (1), but monetarists never consider (2). To give an inaccurate but telling summary: the rational expectation of Mrs Thatcher's policy was that it would reduce output; it could have been rational to expect all nominal prices to be reduced by the implied amount. It could have been, but it was not the equilibrium we were in.

Now I must emphasise that although the little model which I have presented is on impeccable neo-classical lines, it is also special and not at all satisfactory. This is true of almost all of macroeconomics, but that is no excuse. So I shall now comment briefly on some of the special features.

(i) Constant returns to scale is what is usually postulated for long-run analysis. The realistic alternative is not diminishing, but increasing, returns to scale. That then requires imperfect competition. But since now a higher y can go with a higher marginal product of labour I can do without the special assumptions in (3). I shall also be able to Pareto-rank equilibria.

(ii) Inputs, in general, precede outputs and hence the demand for them will depend on expectations in the widest sense. In particular, firms producing under constant or increasing returns must anticipate demand. This will introduce a further source of multiple equilibria. Abstracting from uncertainty there will be many expectation fulfilling equilibria.

(iii) In the model which I have given, there is a continuum of equilibria. This, of course, is rather strong and not supposed to be generally so. But unique equilibria are almost as rare, except when the model consists of one firm producing under diminishing returns to labour.

(iv) My model is played by the textbook rules and they are not very good rules. In addition, I want to say that the labour market is in equilibrium when there is no incentive for anyone to change wages. This emphatically does not mean that in an equilibrium the market and the shadow wage must coincide. For instance, when there is wage bargaining then a Nash-bargaining equilibrium will, under the training assumptions which I have made, lead to a wage equal to $\bar{w} + {}^{h}/_{2}$ if the alternative to working is the unemployment wage $\bar{w}$. But then when workers are similar the wage exceeds the reservation wage, but there is no way in which it can be lowered. Thus, one can have a proper equilibrium with 'involuntary' unemployment. In that case there will be many equilibria even with diminishing returns. There are many other directions towards 'realism' which have similar implications.

Of course, all this deserves lengthy considerations, but this is not the occasion.[1] My claim, in short, is (a) that multiple equilibria make neutrality claims non-predictive even if the economy is always in equilibrium, (b) that there are equilibria which are non-Walrasian but properly founded on the theory of rational actions for which multiple equilibria are endemic, and that for the leading case of constant returns to scale this is also true of Walrasian equilibria.

Let me conclude by reiterating an observation which I have already made elsewhere (Hahn, 1981) but which, it seems to me, cannot be reiterated too often. Suppose the economy is Walrasian, but not, miraculously, always in Walrasian equilibrium. Suppose that at t the real market wage exceeds the shadow wage of labour. Neo-macroeconomists assure us that this will start a process in which real wages fall until they clear the labour market. But it will be a process – a messy and costly one if experience is any guide. Suppose instead the government injects helicopter money. Everyone believes that money prices of goods will rise. But money wages by assumption will not, since real wages are going to fall anyway. What a quick and painless way to equilibrium! More pertinently: what real effects! These will be particularly good if the helicopter money was anticipated. Keynes made this point: every time you need lower real wages it is cheaper and surer to use monetary policy. I have no idea why the current advisors of monetarist governments fail to support a point which is so much in harmony with all their theorising, bar one: that the labour market is always in Walrasian equilibrium. But *that* they can hardly hold to be even a good 'as if' hypothesis.

V FURTHER CRITICAL REMARKS

There is a close connection between the classical dichotomy and money neutrality, although it cost Patinkin much effort to stop the belief that these two were identical propositions. The classical dichotomy proposes to determine all real variables before money is brought into the picture. The neutrality proposition claims that all real variables *including* the real stock of cash are independent of the quantity of money; it, however, determines the values of *all* real variables at one go. The proper scientific statement of the neutrality proposition is as follows: the set of equilibrium allocations is invariant to the quantity of money where an allocation is in the space of goods and the real money stock.

Patinkin argued that the classical dichotomy was logically untenable. He was criticised (Archibald and Lipsey, 1958) for not considering stationary equilibria, in which no agent wished to accumulate or decumulate money. In such an equilibrium his argument via Walras's law does not work. Moreover, it may be possible, it was argued, to describe all stationary equilibria without bringing money into the picture. This, however, seems only possible when all agents are liquidity satiated which, it will be recalled, is not equivalent to the demand for money being equal to its stock. The demonstration is easy: if it is possible to liquidity satiate agents then that must be a Pareto-improvement – a real improvement – over an allocation in which satiation does not occur. Since there are also unsatiated equilibria, there is no more to say.

The mistake of Archibald and Lipsey, and indeed of much writing in this area, is that transactions are not modelled and in particular the relation between money and resources used in transactions are not modelled. But if money is only a store of value and transaction technologies are not modelled, one can hardly expect a monetary theory. Patinkin, although largely right on the dichotomy, also neglected to provide a full picture of a transacting economy and that must excuse his critics.

This brings me back to the beginning. Monetary theory can only exist in the context of a sequence economy in which transactions take place at all dates. If transactions use no resources, then even in a sequence economy the demand for money can only be rationalised when money has a return equal to its opportunity cost. Something quite analogous is true when uncertainty is introduced. Hence in that

case one finishes with a monetary theory which is daily conclusively falsified.

Monetarists, by and large, do not claim the dichotomy but only neutrality. The quantity equation $m = \lambda y$ encapsulates *the* equilibrium relation between real balances and output. Simple economics suggests that λ is itself dependent on other serious real variables in the economy. It would, for instance, be a surprising claim by a neo-classical theorist, that transaction frequencies are independent of their real cost. Friedman announced, however, that λ is a stable function and so recommended the equation as the best aid to policy. However, if the other functions are not stable then the logic of this argument is obscure for we shall not be able to determine the appropriate values of the arguments of λ. Moreover, by usual accounting if the excess demand for money is a stable function, then so must be its complement in the Walras law. Since the demand functions for other assets are claimed to be notoriously unstable this is a hard requirement, since somehow this instability must be 'undone' by the excess demand function for goods. Lastly to return to the old point: there may be several equilibria with different values of λ when the latter is taken as a stable function.

But now we must note that the dichotomy does make an appearance in some monetarist arguments. Their preferred model is the stationary state equilibrium: $f'(\ell) = w$, $f'' < 0$, $u_\ell = w$. From this, equilibrium deviations only occur through mistaken price level expectations. So, in long-run equilibrium y is determined independently of the monetary sector. This result is due to the neglect of durable inputs, that is to say, productive assets and the odd procedure of making the demand of leisure independent of real cash balances when the demand for nothing else is thus independent. That sort of 'separability' is highly implausible.

However, in general 'real cash balance effects' are now *de rigueur* and indeed much weight is put on them. In this, as I have already emphasised, the real money balance has become a 'real' variable to be determined by the 'real' economy. But how, *exactly* and *precisely*, is the latter specified? We know that tastes, endowment and production technology do not suffice for the specification of a monetary economy. At the very least we must endow agents with information and expectations. Even so, I have argued, money may slip through our fingers unless its rôle in transactions is made essential. How far the given transaction institutions and technologies are part of the

basic description of the economy and how far they are the consequence of genuinely basic features like information and geographical dispersion is open to argument.

Envoi

Monetary theory cannot be more convincing than the general theory of which it is a part. The latter, however, at the moment hardly carries conviction. The real fluctuations which we observe seem far too large for consistency with the world being in continuous Walrasian Rational Expectations Equilibrium. Moreover, the theory gives no account of how prices change and who changes them. There is a lot of work to be done and those of us not intent on manipulating the world should keep pretty quiet. As far as monetary theory proper is concerned it does not seem to have risen above the banality of the homogeneity proposition.

NOTE

1. At the time of writing this paper I was working on a study of general equilibrium with implicit contracts, the preliminary results of which confirmed the claim in the text. This is since published in Hahn (1984).

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[5]

A RECONSIDERATION OF THE MICROFOUNDATIONS OF MONETARY THEORY

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Modern attempts to erect a general theory of money and prices on Walrasian foundations[1] have produced a model of economic phonemena that is suspiciously reminiscent of the Classical theory of a barter economy.[2] My purpose in this paper is to show that the conception of a money economy implicit in these constructions is empirically and analytically vacuous, and to propose an alternative microfoundation for the pure theory of a money economy.

I

For simplicity of exposition, I shall address my critique of the general equilibrium theory of money and prices to the classic statement presented in Don Patinkin's *Money, Interest, and Prices*. Following Patinkin, suppose that we have to deal with an economy in which trading is rigidly synchronized within each of a series of discrete market periods. At the outset of every period, each transactor receives "like manna from heaven" a collection of goods that may be consumed directly,[3] or traded for a preferred collection of goods or for money at rates of exchange established by an independent market authority in accordance with prevailing conditions of market excess demand.

By hypothesis, market excess demands are defined in terms of individual demand functions for goods and money obtained as solutions to the decision problem:

$$\text{Maximize } U_j(d_{1j}, \ldots, d_{nj}, M_j/P) \qquad (1)$$

*I am indebted to an embarassingly large number of colleagues and students in both the U.S. and Great Britain for helpful comments on and criticism of earlier versions of this paper, the essential ideas of which were worked out and presented at various seminars in 1965-66 while I was Keynes Visiting Professor of Economics at the University of Essex. I particularly wish to acknowledge fruitful exchanges with my intellectual *alter ego* Meyer Burstein and with Axel Leijonhufvud, R. G. Lipsey, G. C. Archibald, W. M. Gorman, Sir John Hicks, John Williamson, Cliff Lloyd, Mitchell Harwitz, Peter Frevert, Carl Christ, Franco Modigliani, M. I. Nadiri, M. Bruce Johnson, Robert Coen, Alan Walters, Jerome Rothenberg, Robert Eisner, J. R. Harris, R. P. Armstrong, Frank Brechling, and Jurg Niehans.

[1]I refer specifically to O. Lange, *Price Flexibility and Employment* and Don Patinkin, *Money, Interest, and Prices;* but my comment applies also to certain portions of Hicks' *Value and Capital* and Samuelson's *Foundations*.

[2]Cf. Hicks, "A Rehabilitation of 'Classical' Economics?", *Econ. Jour.,* June 1957, 67, p. 278; also papers by Hahn, Negishi, and Clower in *The Theory of Interest Rates* (Eds. Hahn and Brechling), New York, 1965.

[3]Manna commodities may be considered to include all goods and services supplies of which are decision parameters rather than decision variables in the current period.

Subject to

$$\sum_{i=1}^{i=n} p_i(d_{ij} - s_{ij}) + M_j - \underline{M}_j = 0, \qquad (2)$$

where U_j satisfies familiar continuity and curvature conditions, s_{ij} and d_{ij} represent initial and desired quantities of goods, $\underline{M}_j$ and M_j represent initial and desired quantities of fiat money, and P is a fixed-weight index of the money prices $p_1, \ldots, p_n$. The empirical content of the theory thus derives ultimately from behavior restrictions implicit in (1) and (2). As it happens, the implications of the continuity and curvature conditions imposed on the utility functions (1) are exhausted in certain analytically subtle but empirically trivial restrictions involving the existence of demand functions and the continuity of their partial derivatives. The factual content of the theory depends very largely, therefore, on restrictions implicit in the budget equations (2). Accordingly, the main question that we have to answer in order to appraise the empirical significance of contemporary monetary theory is: "Do the budget equations (2) constitute an appropriate definition of choice alternatives in a money economy?"

That the appropriateness of the choice alternatives defined by (2) is open to serious question may be seen most easily by conducting a few simple conceptual experiments. First, consider an economy in which all transactors but one have a violent aversion to holding money balances. Starting from any initial distribution of money balances, market trading over one or more periods will ultimately yield a situation in which the entire stock of money is held by a single individual. Changes in initial endowments of goods or in the stock of money will generate precisely the same qualitative effects in this model as would occur in a system where all transactors were willing to hold money balances in full equlibrium; hence the model differs in no essential respect from models discussed by Patinkin and other writers. But our model is so defined that, in equlibrium, money is not used in any exchange transaction. More pointedly, the fact that $\underline{M}_j = 0$ for all but one value of j in no way prevents any transactor from exerting an influence on market excess demands for goods. For the goods variables s_{ij} enter the budget equations (2) in precisely the same manner as the money variables $\underline{M}_j$, which is to say that *goods are indistinguishable from money as sources of effective demand.*

Next consider a general Patinkin model in which all money prices except that of labor services are free to vary. Suppose that the economy, starting from a state of full equilibrium, experiences a reduction in its stock of fiat money (the result, let us say, of a disastrous fire). The price level of goods other than labor will decline; hence, real wages will rise and the demand for labor will fall. When equlibrium is eventually reestablished, therefore, labor will be in excess supply. But the excess demand for all goods but

labor will be zero. By Walras' Law, therefore, the money value of unsold labor will be positive and equal to the excess demand for money balances. If in this situation the quantity of labor offered for sale by any transactor increases, the immediate effect on demand for other goods will be the same as if the transactor had experienced an increase in his stock of money. An autonomous increase in unemployment will thus generate a rise in the price level of other goods, a decline in the real wage rate, and so an increase in employment and output! It can be shown, indeed, that an increase in unsold stocks of any commodity the price of which is fixed will, in a Patinkinesque world, generate an increase in the general price level and so, indirectly, a rise in sales of the good whose price is fixed.[4] Again, therefore, we arrive at a conclusion that is offensive to our intuitive conception of the working of a money economy, a conclusion that indicates that money plays no distinctive role in economic activity.

The same result may be reached more directly by noticing that the budget equations (2) admit as feasible trades every possible combination of commodities traded in the economy; i.e., any commodity, whether a good or money, can be offered directly in trade for every other commodity. But an economy that admits of this possibility clearly constitutes what any Classical economist would regard as a barter rather than a money economy.[5] The fact that fiat money is included among the set of tradeable commodities is utterly irrelevant; the role of money in economic activity is analytically indistinguishable from that of any other commodity.

II

The answer to our query about the appropriateness of the budget constraints of established theory as a description of choice alternatives in a money economy is negative; what presently passes for a theory of a money economy is in truth descriptive of a barter economy. I turn now to the task of reformulating accepted theory to reflect relevant restrictions on transactor behavior in a world where "money matters."

The natural point of departure for a theory of monetary phenomena is a precise distinction between money and nonmoney commodities. In this connection it is important to observe that such a distinction is possible only if we assign a special role to certain commodities as means of payment. For any commodity may serve as a unit of account and standard of deferred payment: and every asset is, by its very nature, a potential store of value. If money is to be distinguished by the functions it performs, therefore, it is to the medium of exchange function that we must address our attention.

[4]All of these conclusions are, of course, predicated on the assumption that the economic system is stable; i.e., that prices adjust so that markets for all commodities whose prices are permitted to vary ultimately clear.

[5]Cf. J. S. Mill, *Principles*, Book III, Chapter VII ("Of Money").

The only difficulty is to express analytically what is meant when we assert that a certain commodity serves as a medium of exchange.

To resolve this difficulty, we proceed by associating with any set of commodities $C = (C_1, \ldots, C_n)$ an *exchange relation, E,* defined as a subset of the Cartesian product $C \times C$ of the commodity set C; i.e., a set of ordered pairs of commodity elements (C_i, C_j). We then say that a trade involving two commodities C_i and C_j is *feasible* if and only if the pair (C_i, C_j) is an element of the exchange relation, and we write C_iEC_j (read, "Commodity i can be traded directly for commodity j") to indicate that this condition is met.

The exchange relation is necessarily nonempty and reflexive, for since any commodity available for trade can be held by the individual who possesses it, the condition C_iEC_i is satisfied vacuously for all possible values of i. Moreover, the exchange relation is symmetric; for if C_iEC_j, then by the nature of trade it must also be true that C_jEC_i.[6] In general, however, the exchange relation need not be transitive; that is to say, C_iEC_j and C_jEC_k may or may not entail C_iEC_k. Transitivity of the exchange relation of an economy is, in fact, characteristic of just one class of economies, namely, barter economies. This follows directly from the definition of a barter economy as one in which any commodity may be offered directly in trade for every commodity; i.e., an economy for which C_iEC_j is true for all values of i and j.

Now define as a *money commodity* any element C_i of C for which C_iEC_j is true for all values of j; i.e., any commodity that can be traded directly for all other commodities. It then follows that *a barter economy is one in which all commodities are money commodities.* This characterization of a barter economy may seem paradoxical at first sight; but if one ponders the matter it becomes clear that the peculiar feature of a money as contrasted with a barter economy is precisely that *some* commodities in a money economy *cannot* be traded directly for all other commodities; i.e., some exchanges necessarily involve intermediate monetary transactions. More precisely, we now define a money economy as a system involving at least one money commodity but a nontransitive exchange relation. We note in passing that the simplest money economy must contain at least three commodities as illustrated in Figure 1b (x indicates that C_iEC_j; 0 that C_iZC_j). For if it contains fewer then three, then as indicated in Figure 1a, the reflexivity and symmetry of the exchange relation implies that all elements of $C \times C$ are included in E. It follows — in keeping with common sense — that every two-commodity economy is a barter economy. Similarly, the simplest money economy that admits simultaneously of certain forms of barter (i.e., direct trading of certain commodities none of which are money

[6] Cf. the contrary but nonsensical opening statement of Patinkin's *Money, Interest, and Prices*: "Money buys goods, and goods do not buy money."

Figure 1—ALTERNATIVE EXCHANGE RELATIONS

	C_1	C_2
C_1	x	x
C_2	x	x

Barter Economy

(a)

	C_1	C_2	C_3
C_1	x	x	x
C_2	x	x	0
C_3	x	0	x

Pure Money Economy

(b)

	C_1	C_2	C_3	C_4
C_1	x	x	x	x
C_2	x	x	0	0
C_3	x	0	x	x
C_4	x	0	x	x

Nonpure Money Economy

(c)

commodities) must contain at least four commodities, as illustrated in Figure 1c. In general, the exchange relation of a money economy may contain numerous barter subsets (trade credit, blocked currencies, credit cards, demand deposits, etc.) Such *nonpure money economies* (as I shall call them) seriously complicate the task of defining relevant choice alternatives for transactors. Accordingly, I shall restrict attention in the argument that follows to *pure money economies* in which one and only one commodity can be traded directly for any other commodity.

So much for the distinction between money and other commodities and for the characterization of money as contrasted with barter economies. A commodity is regarded as money for our purposes if and only if it can be traded directly for all other commodities in the economy. Correspondingly, a money economy is one in which not all commodities are money. It should perhaps be observed that the feasibility of particular trades is tacitly assumed to be determined by institutional and environmental rather than economic considerations. That is to say, the exchange relation of an economy either does or does not assign a special role to certain commodities as money. The distinction between money and other commodities is thus a matter not of degree but of kind. One might express this thought more elliptically by saying that money is traded in all markets in a money economy, or, alternatively, by saying that transaction costs are infinite for any market exchange that does not involve the offer of money as a means of payment.

III

Having enunciated sharp definitions of relevant primitive terms, it is now a straightforward matter to characterize the choice alternatives open to transactors in a pure money economy. We begin by recalling that the peculiar feature of a money economy is that some commodities (in the present context, all but one) are denied a role as potential or actual means of payment. To state the same idea as an aphorism: *Money buys goods and goods buy money; but goods do not buy goods.* This restriction is — or ought to be — the central theme of the theory of a money economy. The

task of reformulating microeconomic analysis to accommodate those aspects of experience that are commonly supposed to distinguish a money from a barter economy consists, indeed, of little more than an elaboration of the implications of this one restriction.

Our aphorism automatically rules out the standard budget constraints of neo-Walrasian equilibrium analysis as accurate descriptions of planning alternatives open to transactors in a money economy. For, as remarked earlier, the familiar budget constraint effectively admits as feasible trades all pairwise combinations of commodities that are traded in the economy. In sharp contrast, choice alternatives in a money economy must be so defined as to satisfy the requirement that money be offered or demanded as one of the commodities entering into every trade. Analytically, what this entails is a clear separation between goods demanded for purchase (offers to sell money) and goods offered for sale (offers to buy money). This condition may be met most easily by dichotomizing the budget constraint into two branches, the first representing a constraint on money expenditure, the second representing a constraint on money income. Symbolically, we have

$$\sum_{i=1}^{i=n} P_i X_{ij} + M_j - \underline{M}_j = 0, \quad x_{ij} \equiv d_{ij} - s_{ij} \quad x_{ij} \geq 0 \qquad (3)$$

as the *expenditure constraint,* and

$$\sum_{i=1}^{i=n} P_i X_{ij} + m_j = 0, \qquad x_{ij} < 0 \qquad (4)$$

as the *income constraint,* where m_j represents desired "intra-period" receipts of money income and all other symbols are defined precisely as before.

The expenditure constraint asserts that all (net) purchase offers must be backed by a readiness to supply money in exchange. Note that the expenditure constraint cannot be satisfied for nonnegative values of all x_{ij} unless $M_j - \underline{M}_j$ is non-positive (i.e., $0 \leq M_j \leq \underline{M}_j$). Thus M corresponds to what is commonly referred to as demand for precautionary money balances; i.e., total initial cash balances less prospective (gross) depletions of cash balances for currently scheduled purchases of goods. It follows that the *total value of goods demanded cannot in any circumstances exceed the amount of money held by the transactor at the outset of the period.* Our definition of choice alternatives thereby captures the essential meaning of the traditional (but curiously nonmodern) contention that demand in a money economy is effective only if it involves a combination of desire with money purchasing power.

The income constraint asserts that all (net) sale offers involve a demand for just one other commodity, namely money, in exchange. Thus m_j corresponds to what is commonly referred to as demand for transactions bal-

ances (to replace cash currently scheduled for disbursement from initial holdings of money balances).[7] For convenient reference, I shall refer henceforth to m_j as the income demand for money, to M as the reservation demand for money. Such a separation of income and reservation demands has no place in accepted equilibrium models, for these models invariably contain a budget constraint that permits but does not require that offers to purchase goods be backed by willingness to give, and that offers to sell goods be accompanied by willingness to receive units of money in exchange. The omission of these restrictions from contemporary monetary theory is a natural consequence of the tacit presupposition, appropriate in a world of tâtonnement or recontract, that money is just one of many commodities that may be bartered directly for other commodities.

Given the budget restraints (3) and (4), we may write the utility function of a typical transactor as

$$U_j(d_{1j}, \ldots, d_{nj}, M_j/P, m_j/P) \tag{5}$$

and proceed as usual to define individual demand functions for goods, reservations balances, and money income as solutions to the problem of maximizing (5) subject to the expenditure and income constraints (3) and (4). The inequality conditions that determine whether a given net demand x_{ij} enters the expenditure or the income constraint preclude us from stating precise conditions that will guarantee the existence of the required solutions. Supposing that the decision problem has a solution, however, we arrive at individual demand and excess demand functions that differ in crucial respects from those of established theory.

As in established theory, so in our model the demand functions for goods and for real money income and real reservation balances are homogeneous of degree zero in money prices and initial money balances. In contrast with established theory, however, substitution effects of changes in price are asymmetrical unless both commodities are either offered for sale or demanded for purchase. Unlike established theory, moreover, a change in initial money balances has no "income" effect on goods offered for sale. More significantly, changes in initial endowments of goods have no "income" effect on commodities that are demanded for purchase; i.e., supply of goods does not create demand for other goods. All of these results are obvious consequences of dichotomizing budget constraints into separate expenditure and income branches.[8]

[7] The income constraint cannot be satisfied for nonpositive values of x_{ij} unless $m_j > 0$; like the variable M_j, therefore, m_j is, in general, positive.

[8] Certain qualifications are in order if the initial solution value of $x_{ij} = 0$, for in this case changes in M_j or s_{ij} determine which branch of the budget constraint the terminal solution value of x_{ij} enters.

As in established theory, the money value of the sum of all excess demands, including the excess demand for reservation balances and for money income, is identically zero; hence a proposition analogous to what has come to be known as Walras' Law applies to transactors in a money as well as to transactors in a barter economy. As noted earlier, however, in our model the money value of the sum of *gross* demands for goods and for reservation balances is identically equal to initial cash balances. Demand (and excess demand) functions in a money economy are thus subject to much more severe restrictions than are those of a barter economy — the latter category being interpreted to include all neo-Walrasian models of money and prices.

A full statement of the implications of my proposed microfoundation for monetary theory cannot be given here. For present purposes, it is sufficient to observe that the results given above ensure that the response of transactors to changes in prices or in initial endowments of goods or money will differ qualitatively from findings suggested by established theory. Correspondingly, the response of market prices and quantities traded to changes in tastes, initial endowments, or in the aggregate stock of money will differ qualitatively from findings associated with established doctrines.

IV

The tasks that I set myself in this paper were: first, to demonstrate that the conception of a money economy implicit in modern accounts of the general equilibrium theory of money and prices is formally equivalent to the Classical conception of a barter economy; second, to propose a reformulation of established microeconomic analysis suitable as a foundation for explicit analysis of the working of a money economy. The first of these tasks has, I think, been carried through to completion. The second is obviously unfinished. All I have done is to exhibit a model that is immune to the specific criticisms that can be levelled at established microeconomic analysis — a model where, in sharp contrast with established theory, money commodities play a peculiar and central role in shaping prevailing forces of excess demand. My work with this model has already yielded numerous results, including an explicit formal integration of price theory and income analysis and a wholesale reconstruction of large areas of multiple-market dynamics. These and other findings will be presented elsewhere in the near future. My central aim in this paper has been not so much to present results of finished research as to communicate to other economists what seems to me a fruitful conceptual basis for systematic theoretical analysis of large areas of experience that have hitherto eluded such treatment.

Part II
Marxist Concepts of Money

[6]

Karl Marx (1971)
Excerpt from Chapter Two 'Money or Simple Circulation'

1. MEASURE OF VALUE

The first phase of circulation is, as it were, a theoretical phase preparatory to real circulation. Commodities, which exist as use-values, must first of all assume a form in which they *appear* to one another nominally as exchange-values, as definite quantities of materialised *universal* labour-time.

The first necessary move in this process is, as we have seen, that the commodities set apart a specific commodity, say, *gold*, which becomes the direct reification of universal labour-time or the universal equivalent. Let us return for a moment to the form in which gold is converted into money by commodities.

1 ton of iron	= 2 ounces of gold
1 quarter of wheat	= 1 ounce of gold
1 hundredweight of Mocha coffee	= $^1/_4$ ounce of gold
1 hundredweight of potash	= $^1/_2$ ounce of gold
1 ton of Brazil-timber	= $1^1/_2$ ounces of gold
Y commodities	= X ounces of gold

In this series of equations iron, wheat, coffee, potash, etc., appear to one another as materialisation of uniform labour, that is labour materialised in gold, in which all distinctive features of the concrete labour represented in the different use-values are entirely obliterated. They are as values identical, *i.e.*, materialisations of the *same* labour or the *same* materialisation of labour—gold. Since they are uniform materialisations of the same labour, they differ only in *one way*, quantitatively: in other words they represent different magnitudes of value, because their use-values contain *unequal* amounts of labour-time. These individual commodities can be compared with one another as embodiments of universal labour-time, since they have been compared with universal labour-time in the shape of the excluded commodity, *i.e.*, gold. The same dynamic relation, as a result of which commodities become exchange-values for one another, causes the labour-time contained in gold to represent universal labour-time, a given amount of which is expressed in different quantities of iron, wheat, coffee, etc., in short in the use-values of all commodities, or it may be displayed directly in the infinite series of commodity equivalents. Since the exchange-value of all commodities is expressed in gold, the exchange-value of gold is directly expressed in all commodities. Because the commodities themselves assume the form of exchange-value for one another, they turn gold into the universal equivalent or into money.

Gold becomes the *measure of value* because the exchange-value of *all* commodities is measured in gold, is expressed in the relation of a definite quantity of gold and a definite

quantity of commodity containing equal amounts of labour-time. To begin with, gold becomes the universal equivalent, or money, only because it thus functions as the measure of value and as such its own value is measured directly in all commodity equivalents. The exchange-value of all commodities, on the other hand, is now expressed in gold. One has to distinguish a qualitative and a quantitative aspect in this expression. The exchange-value of the commodity exists as the embodiment of equal uniform labour-time, the value of the commodity is thus fully expressed, for to the extent that commodities are equated with gold they are equated with one another. Their golden equivalent reflects the *universal* character of the labour-time contained in them on the one hand, and its quantity on the other hand. The exchange-value of commodities thus expressed in the form of universal equivalence and simultaneously as the degree of this equivalence in terms of a specific commodity, that is a single equation in which commodities are compared with a specific commodity, constitutes *price*. Price is the converted form in which the exchange-value of commodities *appears* within the circulation process.

Thus as a result of the same process through which the values of commodities are expressed in gold prices, gold is transformed into the measure of value and thence into money. If the values of all commodities were measured in silver or wheat or copper, and accordingly expressed in terms of silver, wheat or copper prices, then silver, wheat or copper would become the measure of value and consequently universal equivalents. Commodities as exchange-values must be antecedent to circulation in order to appear as prices in circulation. Gold becomes the measure of value only because the exchange-value of all commodities is estimated in terms of gold. The universality of this dynamic relation, from which alone springs the capacity of gold to act as a measure, presupposes however that every single commodity is measured in terms of gold in accordance with the labour-time contained in both, so that the real measure of commodity and gold is labour itself, that is commodity and gold are as exchange-values equated by direct exchange. How this equating is carried through in practice cannot be discussed in the context of simple circulation. It is evident, however, that in countries where gold and silver are produced a definite amount of labour-time is directly

incorporated in a definite quantity of gold and silver, whereas countries which produce no gold and silver arrive at the same result in a roundabout way, by direct or indirect exchange of their home products, *i.e.*, of a definite portion of their average national labour, for a definite quantity of labour-time embodied in the gold and silver of countries that possess mines. Gold must be in principle a *variable* value, if it is to serve as a measure of value, because only as reification of labour-time can it become the equivalent of other commodities, but as a result of changes in the productivity of concrete labour, the same amount of labour-time is embodied in unequal volumes of the same type of use-values. The valuation of all commodities in terms of gold—like the expression of the exchange-value of any commodity in terms of the use-value of another commodity —merely presupposes that at a given moment gold represents a definite quantity of labour-time. The law of exchange-value set forth earlier applies to changes occurring in the value of gold. If the exchange-value of commodities remains unchanged, then a general rise of their prices in terms of gold can only take place when the exchange-value of gold falls. If the exchange-value of gold remains unchanged, then a general rise of prices in terms of gold is only possible if the exchange-values of all commodities rise. The reverse takes place in the case of a general decline in the prices of commodities. If the value of an ounce of gold falls or rises in consequence of a change in the labour-time required for its production, then it will fall or rise *equally* in relation to all other commodities and will thus for all of them continue to represent a *definite* volume of labour-time. The same exchange-values will now be estimated in quantities of gold which are larger or smaller than before, but they will be estimated in accordance with their values and will therefore maintain the same value relative to one another. The ratio 2:4:8 remains the same whether it becomes 1:2:4 or 4:8:16. The fact that, because of the changing value of gold, exchange-values are represented by varying quantities of gold does not prevent gold from functioning as the measure of value, any more than the fact that the value of silver is one-fifteenth of that of gold prevents silver from taking over this function. Labour-time is the measure of both gold and commodities, and gold becomes the measure of value only because all commodities

are measured in terms of gold; it is consequently merely an illusion created by the circulation process to suppose that money makes commodities commensurable.* On the contrary, it is only the commensurability of commodities as materialised labour-time which converts gold into money.

The concrete form in which commodities enter the process of exchange is as use-values. The commodities will only become universal equivalents as a result of their alienation. The establishment of their price is merely their nominal conversion into the universal equivalent, an equation with gold which still has to be put into practice. But because prices convert commodities only nominally into gold or only into imaginary gold—*i.e.*, the existence of commodities as money is indeed not yet separated from their real existence —gold has been merely transformed into imaginary money, only into the measure of value, and definite quantities of gold serve in fact simply as names for definite quantities of labour-time. The distinct form in which gold crystallises into money depends in each case on the way in which the exchange-values of commodities are represented with regard to one another.

Commodities now confront one another in a dual form, really as use-values and nominally as exchange-values.

* Aristotle does indeed realise that the exchange-value of commodities is antecedent to the prices of commodities: "That exchange took place thus before there was money is plain; for it makes no difference whether it is five beds that exchange for a house, or the money value of five beds." On the other hand, since it is only in price that commodities possess the form of exchange-value in relation to one another, he makes them commensurable by means of money. "This is why all goods must have a price set on them; for then there will always be exchange, and if so, association of man with man. Money, then, acting as a measure, makes goods commensurate and equates them; for neither would there have been association if there were not exchange, nor exchange if there were not equality, nor equality if there were not commensurability." Aristotle is aware of the fact that the different things measured by money are entirely incommensurable magnitudes. What he seeks is the oneness of commodities as exchange-values, and since he lived in ancient Greece it was impossible for him to find it. He extricates himself from this predicament by making essentially incommensurable things commensurable—so far as this is necessary for practical needs—by means of money. "Now in truth it is impossible that things differing so much should become commensurate, but with reference to demand they may become so sufficiently" (Aristoteles, *Ethica Nicomachea*, L. 5, C. 8, edit. Bekkeri, Oxonii, 1837). [The English text is from Aristotle—*Ethica Nicomachea*, Book V, Chapter 8, translation by W. D. Ross, Oxford, 1925, 1133b.]

They represent now for one another the dual form of labour contained in them, since the particular concrete labour actually exists as their use-value, while universal abstract labour-time assumes an imaginary existence in their price, in which they are all alike embodiments of the same substance of value, differing only quantitatively.

The difference between exchange-value and price is, on the one hand, merely nominal; as Adam Smith says, labour is the real price of commodities and money their nominal price. Instead of saying that one quarter of wheat is worth thirty days' labour, one now says it is worth one ounce of gold, when one ounce of gold is produced in thirty working days. The difference is on the other hand so far from being simply a nominal difference that all the storms which threaten the commodity in the actual process of circulation centre upon it. A quarter of wheat contains thirty days' labour, and it therefore does not have to be expressed in terms of labour-time. But gold is a commodity distinct from wheat, and only circulation can show whether the quarter of wheat is actually turned into an ounce of gold as has been anticipated in its price. This depends on whether or not the wheat proves to be a use-value, whether or not the quantity of labour-time contained in it proves to be the quantity of labour-time necessarily required by society for the production of a quarter of wheat. The commodity as such *is* an exchange-value, the commodity *has* a price. This difference between exchange-value and price is a reflection of the fact that the particular individual labour contained in the commodity can only through alienation be represented as its opposite, impersonal, abstract, general—and only in this form social—labour, *i.e.*, money. Whether it can be thus represented or not seems a matter of chance. Although, therefore, the price gives exchange-value a form of existence which is only nominally distinct from the commodity, and the two aspects of the labour contained in the commodity appear as yet only as different modes of expression; while, on the other hand, gold, the embodiment of universal labour-time, accordingly confronts concrete commodities merely as an imaginary measure of value; yet the existence of price as an expression of exchange-value, or of gold as a measure of value, entails the necessity for alienation of commodities in exchange for glittering gold and thus the possibility of their non-alienation. In short, there is

here contained in latent form the whole contradiction which arises because the product is a commodity, or because the particular labour of an isolated individual can become socially effective only if it is expressed as its direct opposite, *i.e.*, abstract universal labour. The utopians who wish to retain commodities but not money, production based on private exchange without the essential conditions for this type of production, are therefore quite consistent when they seek to "abolish" money not only in its palpable state but even in the nebulous, chimerical state that it assumes as the measure of value. For beneath the invisible measure of value lurks hard money.

Given the process by which gold has been turned into the measure of value and exchange-value into price, all commodities when expressed in their prices are merely imagined quantities of gold of various magnitudes. Since they are thus various quantities of the same thing, namely gold, they are similar, comparable and commensurable, and thus arises the technical necessity of relating them to a definite quantity of gold as a *unit of measure*. This unit of measure then develops into a scale of measure by being divided into aliquot parts which are in turn subdivided into aliquot parts.* The quantities of gold themselves, however, are measured by weight. The standard weights generally used for metals accordingly provide ready-made standard measures, which originally also served as standard measures of price wherever metallic currency was in use. Since commodities are no longer compared as exchange-values which are measured in terms of labour-time, but as magnitudes of the same denomination measured in terms of gold, gold, the *measure of value*, becomes the *standard of price*. The comparison of commodity-prices in terms of different quantities of gold thus becomes crystallised in figures denoting imaginary quantities of gold and representing gold as a standard measure divided into aliquot parts. Gold as measure of value

* The strange fact that the ounce of gold as the standard of money in England is not divided into aliquot parts is accounted for as follows: "Our coinage was originally adapted to the employment of silver only—hence an ounce of silver can always be divided into a certain aliquot number of pieces of coin; but, as gold was introduced at a later period into a coinage adapted only to silver, an ounce of gold cannot be coined into an aliquot number of pieces" (James Maclaren, *A Sketch of the History of the Currency*, London, 1858, p. 16).

and as standard of price has quite distinct specific functions, and the confusion of the one with the other has led to the most absurd theories. Gold as materialised labour-time is a measure of value, as a piece of metal of definite weight it is the standard of price. Gold becomes the measure of value because as an exchange-value it is compared with the exchange-values of other commodities; in its aspect as a standard of price a definite quantity of gold serves as a unit for other quantities of gold. Gold is the measure of value because its value is variable; it is the standard of price because it has been established as an invariable unit of weight. Here, as in all cases of measuring quantities of the same denomination, stability and exactitude of the proportions is essential. The necessity of establishing a quantity of gold as the unit of measure and its aliquot parts as subdivisions of this unit has given rise to the idea that a fixed ratio of values has been set up between a definite quantity of gold, whose value is of course variable, and the exchange-values of commodities. But such a view simply ignores the fact that the exchange-values of commodities are turned into prices, into quantities of gold, before gold becomes the standard of price. Quite irrespective of any changes in the value of gold, different quantities of gold will always represent the same ratio of values with regard to one another. If the value of gold should fall by 1,000 per cent, then the value of twelve ounces of gold would still be twelve times bigger than that of one ounce of gold, and so far as prices are concerned what matters is only the proportion of the different quantities of gold to one another. Since, on the other hand, a rise or fall in the value of an ounce of gold does not in any way affect its weight, the weight of its aliquot parts remains likewise unaffected; gold can thus always serve as a stable standard of price, regardless of any changes in its value.*

* "Money may continually vary in value, and yet be as good a measure of value as if it remained perfectly stationary. Suppose, for example, it is reduced in value.... Before the reduction, a guinea would purchase three bushels of wheat or six days' labour; subsequently, it would purchase only two bushels of wheat, or four days' labour. In both these cases, the relations of wheat and labour to money being given, their mutual relations can be inferred; in other words, we can ascertain that a bushel of wheat is worth two days' labour. This, which is all that measuring value implies, is as readily done after the reduction as before. The excellence of any thing as a measure of value is altogether independent of its own variableness in

As a result of an historical process, which, as we shall explain later, was determined by the nature of metallic currency, the names of particular weights were retained for constantly changing and diminishing weights of precious metals functioning as the standard of price. Thus the English pound sterling denotes less than one-third of its original weight, the pound Scots before the Union[16] only $^1/_{36}$, the French livre $^1/_{74}$, the Spanish maravedi less than $^1/_{1,000}$ and the Portuguese rei an even smaller proportion. Historical development thus led to a separation of the money names of certain weights of metals from the common names of these weights.* Because the designation of the unit of measure, its aliquot parts and their names is, on the one hand, purely conventional, and on the other hand must be accepted as universal and indispensable within the sphere of circulation, it had to be established by *legal* means. The purely formal enactment thus devolved upon the government.**

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value" (Samuel Bailey, *Money and its Vicissitudes*, London, 1837, pp. 9, 10).

* "The coins whose names are now only imaginary are the oldest coins of every nation; all their names were for a time real" (so generally stated the latter assertion is incorrect) "and precisely because they were real they were used for calculation" (Galiani, *Della Moneta*, *op. cit.*, p. 153).

** The romantic A. Müller says: "According to our views every independent sovereign has the right to introduce metallic currency and ascribe to it a social nominal value, order, position and title" (Adam H. Müller, *Die Elemente der Staatskunst*, Berlin, 1809, Band II, p. 288). The aulic councillor is right as regards the title, but he forgets the *content*. How confused his "views" are becomes evident, for instance, in the following passage: "Everybody realises how important it is to determine the price of coins correctly, especially in a country like England, where the government with *splendid generosity* coins money gratuitously" (Mr. Müller apparently assumes that the members of the British government defray the costs of minting out of their own pocket), "where it does not levy seigniorage, etc., and consequently if it were to fix the mint-price of gold considerably above the market-price, if instead of paying £3 17s. $10^1/_2$d. for an ounce of gold as at present, it should decide to fix the price of an ounce of gold at £3 19s., all money would flow into the mint and the silver obtained there would be exchanged for the cheaper gold on the market, and then it would again be taken to the mint, thus throwing the monetary system into disorder" (*op. cit.*, pp. 280, 281). Müller throws his ideas into "disorder", so as to preserve order at the mint in England. Whereas shillings and pence are merely names, that is names of definite fractions of an ounce of gold represented by silver and copper tokens, he imagines that an ounce of gold is estimated in terms of gold, silver and copper and thus confers upon the English a triple standard of value. Silver

Which particular metal served as the material of money depended on the given social conditions. The standard of price is of course different in different countries. In England, for example, the ounce as a weight of metal is divided into pennyweights, grains and carats troy; but the ounce of gold as the unit of money is divided into $3^7/_8$ sovereigns, the sovereign into 20 shillings and the shilling into 12 pence, so that 100 pounds of 22-carat gold (1,200 ounces) equal 4,672 sovereigns and 10 shillings. But in the world market, where state frontiers disappear, such national features of the standards of money disappear as well and are replaced by measures of weight generally used for metals.

The price of a commodity, or the quantity of gold into which it is nominally converted, is now expressed therefore in the monetary names of the standard of gold. Thus, instead of saying a quarter of wheat is worth an ounce of gold, one would say in England it is worth £3 17s. $10^1/_2$d. All prices are thus expressed in the same denomination. The specific form which the exchange-value of commodities assumes is converted into *denominations of money*, by which their value is expressed. Money in turn becomes *money of account.**

The transformation of commodities into money of account in the mind, on paper or in words takes place whenever the aspect of exchange-value becomes fixed in a particular type of wealth.** This transformation needs the material of gold, but only in imagination. Not a single atom of real gold is used to estimate the value of a thousand bales of cotton in terms of a certain number of ounces of gold and then to express this number of ounces in £. s. d., the names

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as the standard of money along with gold was formally abolished only in 1816 by 56 George III, C. 68, although it was in fact legally abolished by 14 George II, C. 42 in 1734, and in practice even earlier. Two circumstances in particular enabled *A. Müller* to arrive at a so-called *higher* conception of political economy: first his extensive ignorance of economic facts and second his purely amateurish infatuation with philosophy.

* "When Anacharsis was asked what the Hellenes used money for, he replied—for calculation" (Athenaeus, *Deipnosophistai*, L. IV, 49, v. II, [p. 120], ed. Schweighäuser, 1802).

** G. Garnier, one of the first to translate Adam Smith into French, had the odd idea of establishing the proportion between the use of money of account and that of real money. [According to him] this proportion is 10 to 1 (G. Garnier, *Histoire de la monnaie depuis les temps de la plus haute antiquité*, t. I, p. 78).

of account of the ounce. For instance, not a single ounce of gold was in circulation in Scotland before Sir Robert Peel's Bank Act of 1845, although the ounce of gold, called £3 17s. $10^1/_2$d. as the British standard of account, served as the legal standard of price. Similarly, silver serves as the standard of price in exchange of commodities between Siberia and China, although this trade is in fact merely barter. It makes no difference, therefore, to gold as money of account whether or not its standard unit or its subdivisions are actually coined. During the reign of William the Conqueror, one pound sterling, at that time a pound of pure silver, and the shilling, $^1/_{20}$ of a pound, existed in England only as money of account, while the penny, $^1/_{240}$ of a pound of silver, was the largest silver coin in existence. On the other hand, there are no shillings or pence in England today, although they are legal names of account for definite fractions of an ounce of gold. Money as money of account may exist only nominally, while actually existing money may be coined according to an entirely different standard. Thus in many of the English colonies in North America, the money in circulation consisted of Spanish and Portuguese coins till late in the eighteenth century, whereas the money of account was everywhere the same as in England.*

Because as standard of price gold is expressed by the same names of account as the prices of commodities—for example £3 17s. $10^1/_2$d. may denote an ounce of gold just as well as a ton of iron—these names of account are called the *mint-price* of gold. Thus the queer notion arose that gold is estimated in its own material and that, unlike all other commodities, its price is *fixed* by the State. The establishing of names of account for definite weights of gold was mistaken for the establishing of the value of these weights.**

* The Act of Maryland of 1723, which made tobacco legal currency but converted its value into English gold money, by declaring a pound of tobacco equal to a penny, recalls the *leges barbarorum*,[17] which on the contrary equated definite sums of money with oxen, cows, etc. In this case the real material of the money of account was neither gold nor silver, but the ox and the cow.

** Thus we read, for example, in the *Familiar Words* of Mr. *David Urquhart*—"The value of gold is to be measured by itself; how can any substance be the measure of its own worth in other things? The worth of gold is to be established by its own weight, under a false denomination of that weight—and an ounce is to be worth so many 'pounds' and fractions of pounds. This is falsifying a measure, not establishing a standard" [pp. 104-05].

Gold has neither a *fixed* price *nor any* price at all, when it is a factor in the determination of prices and therefore functions as money of account. In order to have a price, in other words to be expressed in terms of a *specific* commodity functioning as the *universal* equivalent, this other commodity would have to play the same exclusive role in the process of circulation as gold. But two commodities which exclude all other commodities would exclude each other as well. Consequently, wherever silver and gold exist side by side as legal money, *i.e.*, as measure of value, the vain attempt has always been made to treat them as *one and the same substance*. If one assumes that a given labour-time is invariably materialised in the same proportion in silver and gold, then one assumes, in fact, that silver and gold are the same substance, and that silver, the less valuable metal, represents a constant fraction of gold. The history of the monetary system in England from the reign of Edward III up to the time of George II consists of a continuous series of disturbances caused by conflict between the legally established ratio between the values of gold and silver and the actual fluctuations in their value. Sometimes the value of gold was too high, sometimes that of silver. The metal whose value was estimated at too low a rate was withdrawn from circulation, melted down and exported. The value-ratio of the two metals was then once again changed by law; but soon the new nominal value in its turn clashed with the actual value-ratio. In our own time, the slight and short-lived fall in the value of gold as compared with silver, brought about by the Indian and Chinese demand for silver, produced the same phenomenon on a large scale in France—the export of silver and the elimination of silver from the sphere of circulation by gold. During the years 1855, 1856 and 1857, the excess of France's gold imports over her gold exports amounted to £41,580,000, while the excess of her silver exports over silver imports came to £34,704,000.[a] In countries like France, where both metals are legally sanctioned measures of value and both are accepted as legal tender, where moreover every person can pay in the one or the other metal as he pleases, the metal whose value rises is in fact at a premium, and its price

[a] Earlier editions of *A Contribution to the Critique of Political Economy* erroneously gave this figure as £14,704,000.—*Ed.*

like that of any other commodity is measured in terms of the over-rated metal, which thus serves alone as the measure of value. All historical experience in this sphere simply shows that, where two commodities function as legally valid measures of value, it is always one of them only which actually maintains this position.*

B. Theories of the Standard of Money

The fact that commodities are only nominally converted in the form of prices into gold and hence gold is only nominally transformed into money led to the doctrine of the *nominal standard of money.* Because only imaginary gold or silver, *i.e.*, gold and silver merely as money of account, is used in the determination of prices, it was asserted that the terms pound, shilling, pence, thaler, franc, etc., denote ideal particles of value but not weights of gold or silver or any form of materialised labour. If, for example, the value of an ounce of silver were to rise, it would contain more of these particles and would therefore have to be divided or coined into a greater number of shillings. This doctrine, which arose at the close of the seventeenth century, was again advanced during the last commercial crisis in England and was even advocated by Members of Parliament in two special reports appended to the 1858 Report of the Select Committee on the Bank Acts. In England at the time of the accession of William III, the mint-price of an ounce of silver was 5s. 2d., that is $^1/_{62}$ of an ounce of silver was called a penny and 12 of these pence were called a shilling. A bar of silver weighing say six ounces would, according to this standard, be coined into 31 coins which would be called shillings. But whereas the *mint-price* of an ounce of silver was 5s. 2d., its *market-price* rose to 6s. 3d., that is to say in order to buy an ounce of uncoined silver 6s. 3d. had to be handed over. How was it possible for the market-price of an ounce of silver to rise

* "Money is the measure of commerce ... and therefore ought to be kept (as all other measures) as steady and invariable as may be. But this cannot be, if your money be made of two metals, whose proportion ... constantly varies in respect of one another" (John Locke, *Some Considerations on the Lowering of Interest,* 1691; in his *Works,* 7th Edition, London, 1768, Vol. II, p. 65).

NOTES

[1] Marx's *Zur Kritik der politischen Ökonomie*, which marks an important stage in the elaboration of Marxian political economy, was written between August 1858 and January 1859. According to Marx's original plan, the entire work was to consist of six books, and in the first of these he intended to give an analysis of capital.

In the course of his work on book one Marx composed a number of bulky manuscripts, some of which were first published under the title *Grundrisse der Kritik der politischen Ökonomie* (*Rohentwurf*) in Moscow in 1939 and 1941. They fill two large volumes of over 1,000 pages.

Although the first edition of the *Critique*, which came out in Berlin in 1859, was marked "Part One", no further parts were published, and subsequently Marx abandoned his initial design and planned to write a work on capital in four volumes. p. 19

[2] See this volume, pp. 188-217. p. 19

[3] *Rheinische Zeitung für Politik, Handel und Gewerbe*—a daily newspaper published in Cologne from January 1, 1842, to March 31, 1843. It was founded by members of the bourgeoisie in the Rhine Province who were opposed to Prussian absolutism. Marx began to contribute articles to the paper in April 1842 and became an editor of it the following October. The revolutionary and democratic character of the paper became more pronounced while Marx was editor. The government established a specially strict censorship and subsequently closed down the paper. p. 19

[4] *Allgemeine Zeitung*—a reactionary daily paper; it was founded in 1798 and from 1810 to 1882 was published in Augsburg. p. 20

[5] *Deutsch-Französische Jahrbücher*—an annual which was edited by Karl Marx and Arnold Ruge and published in German. Only one issue, a double number, came out in February 1844. In addition to Marx's *Zur Kritik der Hegelschen Rechtsphilosophie. Einleitung* (*A Contribution to a Critique of Hegel's Philosophy of Law. Introduction*), the issue also contained other essays by Marx and Engels, which indicate that the authors definitely adopted a materialist and communist standpoint. p. 20

[6] Marx refers to *Umrisse zu einer Kritik der Nationalökonomie*. (It was published under the title *Outlines of a Critique of Political*

Economy by Frederick Engels, in the Appendix to Marx, *Economic and Philosophical Manuscripts of 1844*, Moscow, 1959.) p. 22

[7] An allusion to *Die deutsche Ideologie*. (See Karl Marx and Frederick Engels, *The German Ideology*, Moscow, 1964.) p. 22

[8] Marx is referring to *Lohnarbeit und Kapital* published in English under the title *Wage-Labour and Capital*. p. 22

[9] The Association was founded by Marx and Engels towards the end of August 1847. Its aim was political education of German workers living in Belgium and propagation of the ideas of scientific communism. p. 22

[10] *Neue Rheinische Zeitung. Organ der Demokratie*—a daily paper, the militant organ of the proletarian wing of democracy, published in Cologne from June 1, 1848, to May 19, 1849. Its editor-in-chief was Marx; Marx and Engels wrote leading articles which determined the attitude of the paper to the principal questions of the revolution in Germany and Europe. After the defeat of the German revolution the paper ceased publication. p. 22

[11] *New York Daily Tribune*—an American newspaper published from 1841 to 1924. Marx was a contributor to the paper from 1851 to 1862. Many of the articles were, at Marx's request, written by Engels. p. 23

[12] Marx quotes from *A Treatise of Taxes and Contributions*, London, 1667, which was published anonymously. p. 35

[13] *The Spectator*—an English literary magazine published in London from 1711 to 1714. p. 52

[14] The "parallelograms of Mr. Owen" are mentioned in Ricardo's *On Protection to Agriculture*, London, 1822, p. 21.

In his utopian plans for social reform Owen sought to prove that settlements designed in the shape of a parallelogram or square were most appropriate from the point of view of both the economy and the home. p. 60

[15] "Theory of Exchange" is the title of the fourth chapter of *The Elements of Political Economy* by H. D. Macleod. p. 61

[16] That is before the Act of Union of 1707 as a result of which the Scottish parliament ceased to exist and all economic boundaries between England and Scotland were abolished. p. 72

[17] *Leges barbarorum* (laws of the barbarians)—Records of the customary or common law of various Germanic tribes, compiled between the fifth and ninth centuries. p. 74

[18] *Société générale de crédit mobilier*—a large French joint-stock company set up by the brothers Péreire in 1852. Its main purpose was to act as intermediary in credit operations and to further the establishment of industrial limited companies. The major part of the company's income was derived from speculative transactions on the stock exchange. *Crédit mobilier* went bankrupt in 1867 and was liquidated in 1871. The rise of this new type of financial enterprise in the 1850s was symptomatic of this period of reaction which was marked by unbridled speculation in stocks. p. 95

[19] Peter Schlemihl, the hero of Chamisso's story *Peter Schlemihls wundersame Geschichte*, sells his shadow for a magic purse. p. 115

[20] Marx is referring to the wars of independence waged by the Spanish colonies in America from 1810 to 1826, in the course of which most countries of Latin America freed themselves from Spanish domination. p. 135

[21] Shylock's words in Shakespeare's *Merchant of Venice*, Act 4, Scene 1. p. 140

[22] An allusion to the Treaty of Kyakhta, which Russia and China signed on October 21, 1727. As a result of it barter between the two countries expanded considerably. p. 150

[23] The so-called second Opium War waged by Britain and France against China. It ended with the defeat of China and the conclusion of the predatory Tientsin agreement. p. 150

[24] Peter Martyr's passage is quoted by Marx from William Hickling Prescott, *History of the Conquest of Mexico...*, Vol. I, London, 1850, p. 123, footnote. p. 154

[25] This is a reference to the reactionary trend in history and law which arose in Germany at the close of the eighteenth century. p. 167

[26] John Law, the Scottish financier and economist, attempted to put into practice his absurd notion that the State could increase the wealth of the country by issuing bank-notes without any cover. In 1716 he founded a bank in France, which was converted into a national bank towards the end of 1718. The bank issued paper notes in unlimited quantities and at the same time withdrew specie from circulation. An unprecedented spate of speculation on the stock exchange followed, until in 1720 the bank went bankrupt and with it Law's system. p. 169

[27] The "Introduction" is an unfinished rough draft, which was found among Marx's papers after his death. It was first published in the magazine *Die Neue Zeit* in 1903 and constitutes the first of the set of manuscripts published under the title *Grundrisse der Kritik der politischen Ökonomie* (*Rohentwurf*), Moscow, 1939 (reprinted in Berlin in 1953). p. 188

[28] See John Stuart Mill, *Principles of Political Economy*, Vol. I, London, 1848, Book I, *Production*. p. 191

[29] *Cf.* H. Storch, *Considérations sur la nature du revenu national*, Paris, 1824. p. 199

[30] *Das Volk*—a German weekly published in London from May 7 to August 20, 1859. Marx, Engels, Freiligrath, W. Wolff, Heise were contributors to the paper. p. 218

[31] The Netherlands, which formed part of the Holy Roman Empire from 1477 to 1555, passed to Spain when the Empire was divided in October 1555. It subsequently freed itself from Spanish rule and became an independent republic.

In consequence of the separation of the Netherlands, Germany was deprived of direct access to the principal maritime routes and

had to depend on the Dutch carrying trade; this hampered the economic development of the country. p. 218

[32] The Customs Union was formed under Prussian hegemony in 1834, and comprised most German states apart from Austria. By abolishing internal customs barriers it created a common German market. p. 219

[33] *Cameralistics*—a mixture of administration, finance and economics taught at the universities of various European countries in the Middle Ages and also later. p. 219

[34] The third part of the review did not appear and the manuscript has not been found. p. 227

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Markets and money in social theory: what role for economics?

Ben Fine and Costas Lapavitsas

Abstract

This article addresses the issue of how the market and the non-market are to be understood especially by concentrating on the theory of money. For mainstream economics, the market is simply an institution facilitating exchange, money being the key instrument for alleviating the inefficiencies of barter. In contrast, recent work in other social sciences, such as that by Zelizer, distinguishes among markets, and various roles of money, depending on cultural and social content. While being sympathetic to such an approach, we claim that the commodity is a better analytical starting point than the market. Based on Marx's work, we then show what commodities have in common and establish a common essence for money as generalized purchasing power. This is a peculiarly bland essence that allows money to undertake the variety of social roles identified by Zelizer.

Keywords: money; exchange; commodity relations; political economy; culture.

Introduction

Social theory is currently facing a number of daunting challenges. The first is to respond to dramatic events on the world stage, ranging from the collapse of centrally planned economies to the success and crisis of the East Asian NICs. The second, to some extent self-created, is to accommodate the reaction against the extremes attached to the impact of post-modernism. While the latter's influence has been both uneven and varied across the social sciences, there is a growing impatience with its lack of contact with the economic and social transformations

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that have marked the end of the millennium. Not surprisingly, these two challenges are closely associated with a third – how to incorporate an appropriate economic content into social theory. This leads, in turn, to the need to come to terms with economics as a discipline.

Previously, particularly in its uniquely hegemonic mainstream version, neoclassical economics has studied the economy in a way that has precluded the participation of the other social sciences – because of its methodological individualism, the notion that technology and preferences are given, its concern with equilibrium, and so on. More recently, however, economics has begun to challenge the other social sciences rather than retreat into the formalism attached to its mathematical models and statistical methods. In the work of those such as Becker,[1] the notion of the optimizing individual, as if in a market environment, has been extended, in principle, to every aspect of social life. Moreover, changes within neoclassical economics itself have allowed it to address the formation and functioning of social institutions and structures, albeit on an individualistic basis, as a result of analysis based on informational asymmetries and transaction costs. Each of these developments within economics has already had its counterpart within other social sciences, as in rational choice theories and network analysis, respectively. But the outward thrust from economics has been particularly strong, and there are those who welcome its incursions into other disciplines with open arms.[2]

Equally, there are those who do not. There does remain a strong commitment to theory in which the social is not considered reducible to the behaviour of individuals, even if allowed to evolve in aggregate over time. In addition, the cultural content of life, not least the meaning of activity and aggregate processes, is also irreducibly social. If post-modernism has appropriately reinforced one idea, it is that concepts such as the household, the nation, even the individual, cannot be taken for granted. They are themselves socially defined or constructed, as well as deconstructed and reconstructed, both materially and ideologically.

The main purpose of this article is to address issues relevant to the increasingly porous boundary between economics and the other social sciences, and between economic and non-economic subject matter. The social theories that have emerged in this connection are necessarily fluid. They are also influenced by the direction in which the boundary is being traversed (or even eroded), and by the specific analytical content taken as the starting point for what is inevitably an interdisciplinary journey. In this light, the present article concentrates on how the market and the non-market are to be understood, especially by focusing on the theory of money.

For mainstream economics, the market is simply an institution facilitating exchange, money being its key instrument for alleviating the inefficiencies of barter. The economy has traditionally been perceived to be confined to the totality of exchange relations; non-economic relations, in the first instance, fade into a necessary but supportive background role. Consequently, more recent developments within mainstream economics have adopted the following two

broad paths in broaching the non-economic. On the one hand, the non-economic is treated as if reducible to the economic. Both the economic and social components of life are perceived as a set of (economic) exchanges, even when the presence of markets and money is not directly observable. On the other hand, the separate and distinct nature of non-economic institutions is explicitly recognized, as in the new institutional economics. These institutions are often interpreted as the necessary counterpart to the incomplete or imperfect functioning of the economy as a purely market-based structure. Inescapably, this type of inquiry privileges the economic, however unsatisfactorily that may have been analysed, since the non-economic emerges at most as its extension or its *alter ego*.

Social scientists traversing the boundary to such economics must either accept its hegemony or, alternatively, maintain a strong hold on the salience of the non-economic as posing distinctive defining factors. Such an alternative informs the approach adopted by Zelizer (1987, 1988, 1994, 1996, 1998) in a wide-ranging, and much cited, set of contributions on what might be termed the sociology of markets (and money). The second section of this article comprises a brief outline of Zelizer's view of the market and of market theory. This is because her work presents very sharply the analytical choice between stressing the homogeneity of the market and the heterogeneity of markets. Her own preference, as she stands up against the sociologically blind thrust of mainstream economics, is to distinguish markets for their different social and cultural content. For Zelizer, a varied set of social relations continues to permeate the market. These must be brought to the fore at the outset or otherwise be lost to a homogenizing economic theory that overgeneralizes the extent to which the economy, or market, has indeed reduced economic and social life to a vulgar materialism based on the cash/market nexus.

The third section elaborates our own starting point, drawing upon Marx's political economy. Other writers, such as Polanyi and Simmel, of whom we offer a critical, if brief, appraisal, have also taken a broadly similar approach. We depart from Zelizer in two ways. First, we reject the notion that the market is itself a sufficiently well-defined category from a social or historical point of view. It is hardly surprising that Zelizer should conclude that the market is heterogeneous, given that she ranges over an extraordinarily diverse set of social relations that underpin it both within and across societies. Second, we take the commodity and not the market as our basic category. We then seek to discover what it is that commodities have in common – how they are homogeneous – in order that we can subsequently understand the nature of their differences. As a corollary, we can identify how markets differ from one another since what all markets at least have in common is (the form of) commodities.

Those familiar with old debates in political economy might, at this stage, be experiencing an uneasy feeling of *déjà vu*, suspecting that controversies about the qualitative validity of the labour theory of value are about to be rehearsed. Such debates are relevant to our argument but they are not of immediate concern. More important, and as presented in our fourth section in the course

of critically appraising Zelizer's notion of multiple monies, is to demonstrate that the choice between heterogeneity and homogeneity in markets (or commodities) has its mirror image in the understanding of money. For Zelizer, money is bound by social factors and customs, hence it is heterogeneous in nature. We argue instead that, precisely because it possesses a homogeneous aspect, money can fluidly express a variety of social relations. The same aspect, moreover, enables money to exercise considerable influence over the social relations that it expresses, without necessarily determining these.

Zelizer's objectives of defending sociology against the incursions of the dismal science as well as confronting the specificity of markets and money are laudable. We share these purposes with her but our broader concern is to advocate the reintroduction of political economy to social theory, while rejecting the method and content of mainstream economics, especially as the latter seeks to extend its scope of application beyond its traditional market terrain. A prerequisite of this is a general theory of capitalist commodities (if not of markets) and of money appropriately informed by economic analysis.

Zelizer's discussion of markets and market theory

Zelizer's (1988) review of the literature on the market, focusing on interdisciplinary content, displays a deep understanding of the issues involved. She recognizes, for instance, that there has been a separation between economics and the other social sciences, that economics has commanded analysis of the economy, and, in particular, that it has peddled an unacceptable notion of the market – one in which the market is perceived to be neutral and universal. In contrast, Zelizer (1988: 618) seeks to 'analyse the historical, cultural, and social variability of markets'.

Zelizer has also provided an organized account, from her own perspective, of themes within the non-economic literature on the market. First, there is the least satisfactory approach that views the market as 'boundless' in its invasive tendencies, undermining the social, moral, and personal content of the relations it comes across as its boundaries move forward (except for relations similar to the amoral cash nexus that lies at the market's own core). Second, there is the contrasting 'subordinate' market model which considers not only that non-economic relations offer substantial resistance to the 'boundless' market, but also that a rigid dichotomy in this context between economic and non-economic is fallacious. Rather, economic and non-economic norms, values, and institutions mutually interpenetrate one another. Zelizer suggests that the 'subordinate' market comes in two forms: first, as a consequence of the culture of the market, for example, as consumers construct their own meanings out of consumption practices and, second, through the reliance of markets upon social networks that go beyond the mere binary relations of economic exchange, as posited in the work of Granovetter (1981).

Zelizer's own approach is one of synthesis, which she terms the 'multiple'

markets model. With the exception of the 'boundless' model, with its rigid dichotomy between economic and non-economic factors and worlds, her only difference from other accounts is that they need to be more inclusive of one another. In conclusion, 'The current alternatives to the economic model are overly dichotomised into cultural or social structural arguments. We should therefore aim toward an interactive theoretical model that will explore and explain the complex historical, cultural, and social structural variability of economic life' (1988: 631).

Zelizer (1983, 1987, 1994) has also provided empirically and historically grounded case studies dealing, respectively, with the value (or evaluation) of human life, the specific changes in this value over time (and principle) in the case of children, and the failure of money to become simply abstract or a pure instrument of economic life. For her, each study is to be read as demonstrating the inevitable intrusion of the non-economic into the economic, not merely endowing it with social and cultural content but also affecting how the economic functions. To establish life insurance, human death demanded evaluation so that, 'Friends, neighbors, and relatives, who had relieved the economic misery of the eighteenth-century widow, were replaced by a profit-making bureaucracy' (1988: 630). The same has also applied to the death and the life of children – their loss being increasingly assessed by their sentimental worth as well as by a sale price, as in adoption and, most recently, surrogacy. Finally, money, despite the apparent homogeneity of its forms and functions, has continued to be used in a variety of ways, giving rise to, 'Qualitative distinctions between four different types of "special monies": domestic money, gift money, institutional money, and sacred money. Different cultural and social settings introduce special forms of controls, restrictions, and distinctions in the uses, users, allocation, regulation, sources, and meanings of money' (1988: 631).

However, Zelizer's account also has weaknesses that make for our own point of departure. The most general problem is a lack of clarity in the definition of the market itself, despite the warning that 'the very definition of the market is at stake' (1988: 618). There are two reasons for this. On the one hand, as is apparent from the examples already given, the market is perceived to be present whenever something vaguely resembling a sale or purchase (or even a gift, as of money) is involved. On the other hand, the eschewal of an economic definition leads to the market being specified in terms of the coming together of the social, the cultural, and the economic. Zelizer seems to approve of a highly flexible notion of the market, distinguished only by its being 'one among many different possible arrangements, such as barter or gift exchange, that involve economic processes' and by 'its essence [as] the rational calculation of costs and benefits and the regulation of exchange by the price mechanism' (1988: 618).

Whether deliberately or not, the lack of analytical rigour and clarity in defining the market is compensated for by reliance upon empirical studies to identify the exact configuration of economic, social, and cultural factors that comprise particular instances of the market. This represents a research strategy and methodology in which the market in general is understood as a highly varied set

of differentiated instances of market relations, subject to the relatively weak general definition suggested in the previous paragraph. Consequently, in emphasizing non-economic differentiation between markets, Zelizer is negligent in exploring and specifying what economic content they have in common.

In a sense, this is hardly surprising since Zelizer's motivation is one of discarding all general theories of the pure market, particularly that attached to neoclassical economics. Unfortunately, however, the result is a partial reading of the relevant economic literature. Because the neoclassical understanding of the market is based on universal and erroneous principles, it does not follow that any attempt to provide an abstract understanding of the common elements of markets is flawed. Moreover, Zelizer inevitably interprets any theory that seeks to extract a common property as one-sided. She treats such theories as, at most, partial raw material for what appears to her to be a more rounded and comprehensive understanding of the varied empirical instances of market relations. However, it is not true that all such theories can be neatly slotted into Zelizer's categories of 'boundless', 'subordinate', or 'multiple' markets. Marx, arguably the most sophisticated theorist of the market as embodying a core content, is mentioned by Zelizer only in so far as his early work points to the dehumanizing effects of the cash nexus. However, as shown below, Marx developed a theory of the market specifically designed to unravel what it is that commodities have in common without losing sight of the broader social and historical content of differentiated market relations.

Marx's analysis of markets and money

Markets, commodities, and labour

Marx's theory of markets in *Capital* commences with the analytical examination of the concept of the commodity rather than that of the market itself.[3] The choice of starting point reflects the complexity of the social relations comprising and sustaining markets, particularly capitalist ones. With an analytical starting point such as 'the market in general', it is very difficult to identify the relations of production and distribution of the social products exchanged in the various markets. Even worse, the process through which the products of human labour become commodities, and therefore markets come into existence, is obscured. In contrast, with a starting point such as 'the commodity', these social relations and processes can be clearly identified, even if only in embryonic form. For Marx, as is well known, commodities are at once use values and values, both aspects resulting from the labour employed in producing commodities: concrete for use value, abstract for value. The social relations characteristic of the production of commodities, and underpinning their exchange, are immediately brought to the forefront, as will be seen below.

Concrete labour is highly specific to person, time, place, and skill. There is

close correspondence here with the particularity of each commodity as use value: flour is different from steel, which is different from a haircut, and so on. The same evidently applies to the particular labours involved in producing these. More than this, various grades of flour are different from each other, and even the same grade flour of one producer differs from that of another. Minute particularity is an intrinsic element of both use value and concrete labour. The point is, though, that this particularity corresponds with a completely formless generality of the social relations under which concrete labour can be – and is – undertaken. Seen concretely, flour-making is, above all, a set of natural/scientific processes requiring human intervention, which are compatible with a wide array of social relations. Consequently, these processes reveal little about specific social relations at a given point in time and place.

That is not to deny that the calculus of use values has a determinate social content depending on social structure and custom, as for example in the list of goods entering final consumption. Nor is it to claim that use value is not a legitimate object of economic inquiry. The use value of capital goods, for instance, is of critical importance in determining the productivity of labour, the profitability of capital, and the creation of depreciation funds. It is rather to stress that the concept of concrete labour is neither designed nor expected to reveal much about the social relations within which such labour takes place, and even less about the reasons why its product becomes a commodity, that is, a thing bought and sold. The particularity of commodities is a poor guide to the social relations underpinning markets.

Abstract labour, on the other hand, is general, featureless, and homogeneous. It provides the social substance that makes commodities as values indistinguishable from each other: flour (more exactly, the labour that produces it) is rendered the same as steel, which is rendered the same as a haircut, and so forth. Yet, acknowledging the featurelessness of value affords important insight into the specific social relations that result in abstract labour. Two aspects of social organization allow flour-making to become equivalent to steel-making, to haircutting, and so on (and, analogously, allow products systematically to become commodities): first, a highly complex division of labour exists in society, comprising producers who are autonomous and in competition with each other, and, second, there is indifference among the many types of labour, typified by lack of hereditary prerogatives over particular jobs and heightened geographical mobility of workers.

By this token, the social relations of European feudalism at its peak could not have been associated with widespread commodification of products; equally, abstract labour reveals little about the social relations characteristic of such feudalism. On the other hand, advanced capitalism, characterized by independent, competing enterprises and by the existence of a working class for which the choice of employment is largely determined by monetary reward, requires reference to abstract labour. In short, the general aspect of commodities is an excellent guide to the social relations underpinning capitalist markets.

The substance and the form of value under capitalist conditions

Our argument so far is that abstract labour provides the common aspect of commodities but diverse concrete labours become systematically commensurate only under specific social and historical conditions, that is, capitalism. For labour to produce value (and commodities), specifically capitalist conditions must exist in the sphere of production, and the ability to labour must itself be traded capitalistically. Nevertheless, for Marx, not all labour undertaken in a capitalist economy results in value (and in commodities traded in markets).

The labour of workers in retailing, wholesaling, banking, finance, insurance, in state-run education and health provision, and so on, does not produce commodities and may even lack the material basis for commensuration of diverse concrete labours characteristic of commodity production. Such workers might indeed be drawn from the common social pool of labour power, and they might even be employed by capitalists, but their output is not traded in an ordinary market, though it might acquire a price and result in money profits for employers. In other words, capitalist economic conditions are a necessary but not sufficient condition for the transformation of labour into value. For commodity markets to emerge, labour must be expended within the sphere of capitalist production and its output traded in the sphere of exchange. The precise nature of concrete labour is not decisive in this respect: the output of computer programmers working for software companies and of teachers in private schools, for instance, might well be traded in capitalist commodity markets.

While labour might not result in value, the form of value can be appropriated by economic phenomena unrelated to labour (as can also happen with the culture and language of commercial exchange).[4] Put as simply as possible, the form of value is what classical political economy called 'exchange value', that is, the quantitative ratio (equivalence) of one commodity with another. Exchange value is a formal property of all commodities and quite distinct from the substance of commodity value, i.e., from abstract labour. The point here is that, under capitalist conditions, quantitative ratios (equivalences) tend to be established not only between commodities but also between commodities and the products, consequences, and results of all economic activity (as well as among the latter). Capitalist economic activity tends generally to acquire the trappings of commodity markets and adopts a complex array of forms of value (money prices, demand, supply, profit rates, and so on), whether these truly reflect the nature of the particular activity or not. Under capitalist conditions, the forms of value become the general means for facilitating economic intercourse regardless of the relation of particular activities to abstract labour.

The market for insurance is a typical example of this development: a social mechanism for the concentration of money reserves to tackle accidents and disasters appears as a 'market' in insurance 'products', and risk premiums appear as 'prices'. Forms of value are acquired by an economic activity that is inherently unrelated to the substance of value, i.e., to value creation in production that makes diverse concrete labours commensurate with each other. The analysis of

capitalist insurance by social theory needs to be aware of the *sui generis* nature of this 'market': exceptional care is necessary in attempting to extract conclusions with general applicability to other capitalist commodity markets.

Money and the forms of value

The distinction between form and substance of value is of critical importance in understanding Marx's theory of money. The first issue here is the logical derivation of the origin of money. For the classical economists money typically provided a resolution for the well-known problems of direct exchange or barter.[5] Imperfect divisibility, perishability, lack of homogeneity, incompatibility of wants and timing among commodity owners, all render direct exchange liable continually to break down. A money commodity can overcome these problems (and transform barter into monetary exchange) by functioning as a universally accepted means of exchange. The weakness of this argument, as Menger (1892) realized, is that it does not logically demonstrate how and why exchangeability becomes monopolized by the money commodity. Neoclassical economic theory has been no more successful in tackling this question. The strongest argument it can muster is that, if money is more generally accepted as a means of exchange than other commodities, it can reduce the transactions costs of barter.[6] This is a fundamentally circular argument: what makes money unique among commodities? That it is money.

The difficulties faced by classical and neoclassical economics in demonstrating the logical basis for the emergence of money arise because demonstration is sought in terms of money as means of facilitating exchange. Commodities are assumed to be directly exchangeable with each other, all the essential properties of markets are already present under conditions of barter, but somehow money must also logically emerge as a means of exchange. Successful or not, moreover, this approach inevitably leads to a very narrow view of the social role of money, identifying it with plain means of exchange. In contrast, Marx (1867: ch. 1, sec. 3) offered an original resolution for the riddle of money's monopolization of exchangeability. This resolution has profound implications for the theory of markets and the broad role of money in economic life.

For Marx, the answer to the riddle of money is already contained in the 'simple, isolated, or accidental' form of value, that is, in the most elementary relation of exchange of one commodity with another. When x of flour requests exchange with y of steel, flour is the active commodity (the relative) and steel the passive commodity (the equivalent), and exchangeability is represented by the material of the equivalent (steel). Since neither the reverse request for exchange nor the assent of the steel owner can be guaranteed, the relationship of the relative to the equivalent is not generally reversible. Naturally, flour may at the same time request exchange with several other commodities, giving rise to the 'expanded' form of value and allowing exchangeability to be represented by a wide array of equivalents. However, each one of the latter is a partial representation of value

and cannot act as a uniform means of account for value. These weaknesses are overcome as particular commodities are chosen frequently (though without fixity) by several other commodities to act as equivalents, giving rise to the 'general' form of value. The point here is that commodities temporarily acting as general equivalents acquire an additional use value, namely their exchangeability with several others. Possession of this additional use value enables one commodity eventually to become the universal equivalent that monopolizes exchangeability and allows value to be expressed generally in a uniform means of account – that is, money.[7]

One corollary of this derivation is that the emergence of money is not predicated upon the existence of social relations that give full rein to value as abstract labour, that is, capitalist relations. The forms of value, including the money form and hence price, emerge spontaneously from the anarchical relations among commodities in the process of exchange, capitalist or otherwise.[8] This result coheres closely with our earlier claim that the form of value is frequently adopted by economic processes the inherent nature of which may be unrelated to value creation. Furthermore, it facilitates analysis of the historical (as opposed to the logical) analysis of money's origin, as will be seen below.

A further corollary is that money's social functioning can be analysed in its full complexity, free from the self-imposed constraints of neoclassical theory with its focus on money as means of exchange. Rather, money is the universal equivalent and, as such, it must perform several functions in a capitalist economy. The universal equivalent inevitably functions as measure of value, since it provides the material in which commodity values are expressed; it also functions as means of exchange, since it has measured values and set prices. More importantly, since it monopolizes exchangeability, the universal equivalent functions as means of hoarding, means of payment, and world money, thus transcending the narrow confines of commodity exchange. As means of hoarding, money allows the concentration of wealth in durable form, providing a source of social, political, and economic power, also making possible the construction of a credit system. As means of payment, money splits purchase from payment, giving rise to credit relations, to the balancing of opposite obligations, and to the continuation of production even if monetary returns have not yet accrued. As world money, it settles balances among capitalist nations and influences the relations of power and hierarchy among them. Money's functioning thus possesses considerable complexity – as well as several social aspects – much removed from the simple facilitation of exchange. This point can be further reinforced by turning briefly to the historical dimension of markets and money.

Money: the 'nexus rerum' of capitalism

Markets, commodities, and money (not to mention banking, insurance, and commercial trading) are economic phenomena that long pre-date capitalism, and are also encountered today in evidently non-capitalist communities. This observation

can shed additional light on the social functions of money in a capitalist economy. For the classical economists, markets are a natural and inextricable component of human economic activity, rooted in the human propensity to 'truck, barter, and exchange one thing for another' (Smith 1776: 17). In contrast, for Marx (1867: 182, see also 1939: 103), 'The exchange of commodities begins where communities have their boundaries, at their points of contact with other communities, or with members of the latter.' In this view, commodity exchange is a phenomenon external to the essential reproduction processes of human society, until the rise of capitalism.

Marx (1939: 223, 1895: 447–8) observed that the trading peoples of antiquity, Phoenicians and Carthaginians, were present in the '*intermundia*' of the ancient world, like the gods of Epicurus. They were in a sublime state, detached from the human world and indifferent to the affairs of men; analogously, trade in pre-capitalist societies was a self-contained phenomenon, largely indifferent to the reproduction of these societies. Pre-capitalist societies organized their affairs mostly on the basis of custom, hierarchy, and command; trade (and money) arose mainly where these societies came into contact with each other. At the same time, money in pre-capitalist societies possessed a corrosive and disruptive power because it provided, in principle, for the acquisition of goods and the projection of social power in ways not necessarily related to hierarchical and customary privilege. Money could penetrate pre-capitalist societies, maintaining a marginal presence within them, but could also potentially exercise disruptive and antagonistic influence on the essential relations of social reproduction.

In contrast, capitalism is a society premised on the creation of value (and surplus value), rendering the role of markets and money fundamental to capitalist reproduction. Capitalism incorporates a tendency to undermine social hierarchies and customs, potentially replacing them by social links articulated through the market. Thus, money as the universal equivalent emerges as the *nexus rerum* of capitalist society, the supreme encapsulation of capitalist social relations that revolve around value. The moral, customary, familial, and ethical aspects of capitalist social relations are increasingly reflected through the lens of money.

Capitalism also possesses social hierarchies but these are largely based on money. As Zelizer claims, the complex social relations contained in these hierarchies can force money to acquire finer nuances according to the context in which it is used. Moreover, the meaning attached to these nuances can vary despite their common monetary outlook. Significantly, however, money can play this role precisely because it monopolizes a common aspect of commodities, i.e., exchangeability. Monopoly of exchangeability is a universal category, hence it lacks other determinations, and that is the reason why money can act as a blank screen on which more complex relations project themselves. By the same token, the broader aspects and meanings of social relations that are expressed through money find themselves trapped within the featurelessness of universal exchangeability. This is evident in Zelizer's own case studies in which the complex and multifarious social relations behind prostitution earnings, family gifts, bribes,

and wage payments receive an impoverished differentiation from each other as dollars earmarked into different boxes by their owners. Precisely because it is the universal equivalent, money can serve as the material through which a variety of social relations are expressed; for the same reason, it is incapable of projecting refined differentiation among these relations. Vespasian was essentially right to declare *non olet* (it does not smell) to proud Titus, even when money comes from public urinals.

Thus, markets, commodities, and money, despite their great historical antiquity, become fundamental to society only under specifically capitalist conditions. In this respect, there is some affinity between Marx's and Polanyi's historical analyses of markets and capitalism, especially Polanyi's view that market trading, involving haggling, market prices, and private pecuniary gain for its participants, is a recent phenomenon in the vast expanse of human history (Polanyi *et al.* 1957: 250–6). Polanyi's (1944: ch. 5) claim that nineteenth-century liberal European capitalism turned the market into the foundation of society, and, in the process, threatened the viability of society itself, is also remarkably close in spirit to Marx's approach. Polanyi based his claim on the 'unnatural' commodification of labour, land, and money, things which he saw as intrinsically different from commodities. In particular, the complete absorption of money by the processes of the market gave rise to the gold standard, the blindly automatic functioning of which undermined the social solidity of liberal capitalism. Nevertheless, several critically important points of difference between Marx and Polanyi also need to be mentioned.

First, and analytically the most important, the market indeed penetrates the core of social reproduction under capitalist conditions but this happens because the structure of society has itself changed, namely a capitalist class and a working class have emerged in the sphere of production. The creation of these classes involves far more profound processes than emergence of society-wide markets. Above all, it requires dramatic changes in ownership and control of the means of production, which typically involve dispossession of entire social strata. Such dispossession could happen through market- and money-related mechanisms, for instance, through ability to lend preferentially either privately or for purposes of national debt, but it always involves the exercise of power backed by actual or threatened violence. In short, in analysis of social structure, the independent variable is production relations rather than the degree of penetration of society by (and its integration through) market processes.

Second, analysis of the relation between the 'market' and 'money' by Polanyi and his school represents an awkward mixture of deep insight and superficial generalization. As is well-known, Polanyi (1957) distinguished between 'general-purpose' and 'limited-purpose' money. The distinction was further elaborated by Dalton (1965), who sharply differentiated between 'advanced' money that is 'homogeneous' and devoid of 'personality' and 'primitive' money that is 'heterogeneous' and often possesses 'personality'. 'Limited-purpose' monies are, presumably, interchangeable only with very great difficulty, a point which anthropologists in Polanyi's tradition, notably Bohannan (1959),[9] have tried to

establish empirically. In this light, it is deemed incorrect to ascertain the 'moneyness' of 'primitive' money by checking how many of the functions of 'advanced' money typically acknowledged by economists – such as means of exchange, means of payment, standard of deferred payment, and so on – are satisfied by it. The reason is that 'advanced' society is integrated by the market, which inevitably assigns pre-eminence to money as means of exchange, thus also dictating the order in which economists discuss money's functions. For Dalton it follows that:

> To concentrate attention on what all monies have in common is to discard those clues – how monies differ – which are surface expressions of social and economic organisation. . . . In sum, money has no definable essence apart from the uses money objects serve, and these depend upon the transactional modes that characterize each economy: as tangible item as well as abstract measure, 'money is what money does'.
>
> (Dalton 1965: 61–2)

As will be seen below, the similarities with Zelizer's 'multiple monies' are striking, including denial of a general theory of money and rejection of money's analysis by 'economists'. The difference is that Zelizer has reflected this argument back onto 'advanced' society itself.

Despite its evident insights, the approach is deeply problematic. Purely as a matter of logic, that money performs limited functions in 'primitive' societies, which are frequently non-economic and vary widely, is no demonstration of the absence of a common character of money. Rather, enumeration of the limited functions of primitive money spells out the analytical problem clearly: can the essence of money be theoretically derived in a way that allows for systematic understanding of the multiple functions (social and economic) of money? Marx's previously discussed analysis of money as universal equivalent goes a long way towards providing such a theory. It cannot be over-emphasized that Marx's derivation of the common character of money amounts to a process of logical becoming, which inevitably appears whenever commodities come into contact with each other. That some societies might not possess a universal equivalent ('general-purpose' money) or might have several general equivalents ('limited-purpose' money) is a result of the peculiar features of those societies, not an indication of the futility of a general account of money.

Even worse consequences follow from uncritical acceptance of mainstream neoclassical theory as fully comprising the domain of 'economics'. On the one hand, it hinders recognition of the simple fact that neoclassicism does not possess a theory of the common character of money, as mentioned above. On the other hand, ironically, it encourages adoption of the very neoclassical devices aimed at compensating for the absence of such a theory. Specifically, a list of arbitrarily postulated functions is adopted, and anything that fulfils those is identified as 'money'. Thus, 'money is what money does', and the heterogeneity of what it does allows either for rejection of its common character or for it to be understood primarily as means of commodity exchange. That is a complete dead

end for analysis of both the essence and functions of money. In contrast, Marx's approach to money implies that 'what money does follows from what money is': because money monopolizes exchangeability, it also measures value, facilitates exchange, settles debt, and so on. Seen in this way, there is order and internal cohesion to the functions of money – no arbitrariness.[10]

Moreover, it is particularly misleading to identify means of commodity exchange as money's dominant function in 'modern' capitalist society. Intra-capitalist trade, much consumption spending, international transactions – indeed the bulk of monetary transactions in value terms – are no longer mediated by money but by credit. Consequently, money in advanced capitalism functions primarily as means of payment and element of hoards. The implications are profound for the issue at hand. Money as means of payment and as hoard (both functions with which neoclassicism has considerable analytical difficulties) inevitably entails broad social functioning: who generates the means of payment, who holds the money hoards, who has access to them in times of distress, all are issues deeply enmeshed with power and authority in capitalist society. That neoclassicism is particularly inept at dealing with these aspects of money is not a reason for assuming that this is a weakness of 'economics'. Political economy, especially its Marxist variant, offers much richer economic and social insight into the functioning of money in capitalism.

In the same vein, Polanyi is right to claim that the extension of the form of value to labour and land is a peculiar development since neither of these traded things is capitalistically produced but, with respect to money, his argument is misleading: metallic money is a capitalistically produced commodity (gold), though valueless forms of money also exist. What is unique about capitalism's encroachments in the monetary sphere is not the extension of market principles to money (money already encapsulates these). Rather, it is the systematic transformation of idle money into loanable money capital. Under capitalist conditions, loanable capital forms a peculiar commodity that is traded in money markets and has a sharply defined price in the rate of interest. Systematic generation of loanable capital allows emergence of the financial system, an enormous structure of social relations, institutions, markets, and instruments that sharply differentiates capitalism from past social systems.[11] Interaction between capitalist production and the processes of finance can seriously disrupt the cohesion of society as a whole.

There is also affinity between Marx's and Simmel's work on money, though again the ground has to be trodden carefully. Similarly to Marx, Simmel claims that money is a 'specific realization of what is common to economic objects' (1900: 120), specifically that money 'is nothing but the pure form of exchangeability. Money embodies that element or function of things by virtue of which they are economic' (1900: 130). Simmel further saw money as a 'tool', the main means whereby human purposive actions are completed (1900: 210). The peculiarity of money is that it 'psychologically' grows into an 'end' as the cultural development of the epoch proceeds. On this basis, he analysed a variety of sentiments, including greed and avarice, extravagance, ascetic poverty, cynicism, and

so forth. What makes Simmel a leading candidate for Zelizer's 'boundless' market current, however, is his view that money contradicts the notion of 'distinction' for groups and individuals, since it stresses what is common and without determination: money 'forces an extraneous standard upon things, a standard that is quite alien to distinction' (1900: 394). When social transfers are in kind or as material contributions to a common effort, the payer normally has the right to demand reciprocal social obligations from the receiver; when social transfers are transformed into money payments the social web of mutual obligations is destroyed. Thus, money levels off and at the same time creates a sense of disorganization and disorder.

Simmel's work contains no notion of the commodity, hence none of the social relations expressed therein. The value of objects is hopelessly confused with (undefined) 'economic' value and with the subjective and common-sense 'value' of events, occurrences, and services, making it impossible to identify the deeper social reality captured by value. Thus, though Simmel declares money to be the objectification of exchangeability, his claim is assertion pure and simple, conveying nothing of the logical and historical development of commodity value. Simmel's money has no necessary connection with economic relations and the material transformation of nature to suit humanity's purposes. Though he rightly identifies the elevation of money into an 'end', Simmel ascribes this phenomenon to the autonomous development of a money culture, whose counterpart is consumer society. Production, class, and value relations are lost, thereby forging a divorce from Marx (and demonstrating that there is no single and readily dismissed theory of homogenizing money).[12]

In contrast, following Marx's approach, money becomes the 'end' of capitalist social activity because, first, it itself results from the relations of commodity value, and, second, capitalist society is based on value (and its self-expansion). Seen in this manner, the 'levelling off' and disorganization engendered by money can be more fully analysed than in Simmel's work. If money appears to destroy 'distinction' that is because capitalist labour ensures that indifference prevails between jobs, and pecuniary reward determines the incentive to work. If money appears to unravel the web of social obligations characteristic of pre-capitalist societies that is because the division of labour has reached unprecedented complexity, and autonomous producers relate to each other primarily through competition in the market. Money is not the cause of these developments but facilitates and intensifies them. Moreover, to identify class relations of production as the foundation of value and of the homogenizing presence of money is not to ignore the complex structure of social classes. The relationship of the various components of the capitalist and the working class to each other is not always exclusively determined by market relations, though an economic significance might be attached to it.

Social hierarchies and a web of moral, familial, and other relations with economic implications also emerge in capitalism. However, the point is (and in this respect Simmel's work retains relevance) that such relations are much more precariously based than equivalent pre-capitalist ones because capitalism is founded

on the creation and self-expansion of value rather than on production aimed transparently at human need. That these social relations are also frequently permeated by money is altogether appropriate since the universal equivalent accords them a bland and featureless mode of expression in line with their precarious foundations. Preferential access to and greater choice in, for instance, schooling for one's children, foodstuffs consumed, clothes worn, and entertainment enjoyed are marks of rank and hierarchy based on money and reflected through it. The expansion of use values available for consumption under capitalist conditions, alongside rising living standards above physical subsistence, also has the effect of expanding the means and content of cultural relations. In so far as these relations are expressed through money, they are impoverished in their qualitative aspects by being tied to the quantitative dictates of (commercialized) monetary relations. It is an unintended but striking conclusion from Zelizer's own work that quantities of dollars, regardless of how much ingenuity one shows in interpreting them, lack variety in expressing social meanings. That is how it should be: the dull expression of capitalist social distinctions in dollars and cents altogether matches these distinctions' fluidity and precariousness of provenance.

Thus, it is the dual nature of monetization that must always be emphasized – universal and homogenized money creates scope for expressing relations that are socially and culturally specific, though it does so in ways that necessarily lack refinement. As will be seen below, Zelizer is right to condemn 'economists' for sole emphasis on the homogenizing aspect of money, though she exaggerates their collective guilt in this respect. But she appears to swing unreasonably to the opposite extreme by denying the case for a general theory of money, and even the extent of its homogenizing influence in practice.[13]

'Multiple' markets and money

The weaknesses of Zelizer's approach

Thus, in the light of the preceding discussion, Zelizer's approach exhibits a number of weaknesses. First, despite considerable emphasis on incorporating the non-economic and the socially and historically specific, her analysis of the general character of the market is ahistorical and asocial: the market appears to be a more or less rational economic arrangement involving exchange. As such, and contrary to her intentions, Zelizer's approach is vulnerable to the colonizing attentions of neoclassical economics and its extension to non-market situations as long as rationality is present (though Zelizer's insistence on the socially constructed cultural content of markets remains a considerable barrier to mainstream economics).

Second, partly as a corollary of the first, Zelizer is negligent of economics. No doubt, this reflects a wish to bring a social and cultural content to the understanding of the market but this, surely, cannot be at the expense of an economic content. It is significant that her focus is upon the amorphous market rather than

the nature of the commodity as use value and value. Furthermore, she neglects (exchange) value and is preoccupied with use value. It is hardly surprising that there should be different markets for different use values, but the differences in the use values, and even the methods and motives attached to buying and selling, should not be taken for differences in the nature of the market itself. That the market ranges across different use values does not undermine its general properties; indeed, the latter allow for heterogeneity across individual products. The same point applies to the types and use of money.

Third, in the absence of a clear definition of what constitutes the market, Zelizer conflates it with what it represents. Consider an analogy with another social institution, marriage for example: marriages are highly varied in their history and content but this does not imply an absence of a marriage system through which they are all represented. In the absence of an appropriate theory of what markets have in common, Zelizer is unable to distinguish between differences within a common market and differences between markets – except by way of case study. As will emerge below, this is particularly significant in her understanding of monies, which are treated as different simply by virtue of their being used for different purposes.

Fourth, Zelizer's preoccupation with the 'multiple' markets model has induced her to focus upon the markets for final consumption. Significantly, quite apart from an analytical neglect of the nature of the commodity, her discussion is also remarkably free of discussion of capital not only as the most developed source of commodity production but also in its detailed functioning. The markets for labour power, except as a source of revenue, and for commodity inputs to production are notably overlooked. This reflects a deeper feature of her case studies, namely the choice of extremely unusual markets – not least for life insurance and for children. For her purposes, these are especially useful since they necessarily incorporate the social and cultural aspects that she insists belong to a greater or lesser extent to all markets. However, as has already been indicated in the section on 'Zelizer's discussion of markets and market theory', it is far from clear that such unusual markets are illuminating unless taken as exceptions.

The commodity form and 'marooned' capitalist markets

The last point can be further illustrated by considering in more detail the relationship between the commodity and the commodity form in the capitalist mode of production. In commercial retailing and wholesaling, for instance, a service is provided that involves the exercise of labour but, because it is confined to the sphere of circulation of commodities and money, neither commodities nor value are produced. The conclusion is similar in the case of unproductive labour in which a wage is paid for providing any service but without producing a commodity for profitable sale, as for domestic servants for example. In each of these cases, there might be markets for the output and for the wage labour involved

but, from a Marxist perspective, neither commodities nor value are produced. This is despite each having some of the appearance of involving a market like any other, especially for commercial activity where the motive is to appropriate a profit.

A rather different example is provided where there is the appearance of value and commodity but no labour at all is involved. The most important example in this respect is provided by land. Although it is bought and sold and is often termed a commodity, the price of land is simply the discounted value of the rent that would accrue in the future, which is in turn a claim on surplus value. It makes no more sense, again from a Marxist perspective, to consider land to be an ordinary commodity than it does to term profit as the price of capital. The same considerations apply to interest, which might be termed the price of (loanable money) capital. Again, there are money markets in which interest is paid but there is also dealing in any number of paper claims to property (as in shares). None of these traded assets constitutes ordinary commodities.

Complicating things further, the money form can also be assumed where there are no underlying systematic economic relations at all or, at least, where they are marginal or incidental. The most obvious example is provided by bribery. The same (the assumption of a market) applies to payments that are not systematically related to the economy: the price of a parking ticket does not reflect a market any more than a sales tax reflects the price of being able to purchase or an income tax the price of receiving income. That is not to say that the levels of taxation or the 'price' of bribery and corruption are not subject to systematic analysis at all, only that it is erroneous and misleading to bundle them together with other markets. Separating them out for their specific social and cultural content is not sufficient: they are different from an economic perspective quite apart from their social and cultural differences.

Interestingly, with the possible exception of the last set of examples, neoclassical economics would not distinguish such markets from others and would simply treat them, and their prices, in terms of the conditions of supply and demand.[14] Zelizer's position is similar in the limited sense of treating them all as markets in general, but also different since it distinguishes among them according to the social and cultural elements that they incorporate. However, from a Marxist perspective, they are different markets altogether, exceptional in not involving ordinary commodities at all. In short, they are distinguished by their economic content. The distinction goes beyond a mere categorization: what set these markets apart are features that lie outside the standard requirements of commodity markets, even if apparently assuming some of their trappings.

This is not a mere formality, since the choice of what constitutes an ordinary commodity market is dictated by addressing the issue of commensuration of diverse concrete labours, namely the social relations of capitalist production. Other markets are not simply defined relative to capitalist commodity markets, they are also heavily influenced by them. In the term coined by Cannadine (1983) for a system of royalty surviving into the era of political democracy, they are 'marooned': they are markets dependent upon productive capital, and even

appearing like it to a greater or lesser extent, but also entirely distinct from it. Analytically, 'marooned' markets need to be understood as *sui generis*, although an important investigative starting point is to consider why they have not been subordinated to capitalist commodification.[15] There can be structural reasons for it: capital in exchange cannot become productive of surplus value; social reproduction, dominated by the family and schooling, cannot be reduced to economic reproduction under capitalism; the legal always defines the illegal, thereby creating the illusion of a 'market' for bribery and corruption. In addition, the obstacles to incorporation within the orbit of productive capital can be social, historical, and cultural, leading to alternative forms of organization, as in welfare provision (although these necessarily tend to be marked by their being rooted within an evolving capitalist society).

Such is the context within which two of Zelizer's case studies should be located and which renders them remarkably insightful despite the analytical weaknesses of her approach. Both the markets for insurance and for children are 'marooned' markets, the first increasingly conditioned by the financial system. Both are constructed out of historically shifting economic, social, and cultural relations, and are thus set apart from capitalist production. Each can be formally construed as generating a price (for death or for a child, dead or alive, respectively). Yet, it is to succumb to the notion of the 'boundless' market to treat these and other 'marooned' markets as simply distinguished by their particular social and cultural, rather than their economic, content.

Indeed, these two examples are clearly too favourable to Zelizer's thesis of 'multiple' markets in that each lies outside the mainstream of economic life and cannot be taken as representative of it. They might have been deliberately chosen to demonstrate that social and cultural factors condition markets. Put another way, for any alternative approach based on a core notion of market, these examples would probably be considered the exceptions that prove the rule.[16] Zelizer's intellectual integrity means that she realizes this weakness of the case studies for her general hypothesis. Consequently, for her third case study, that of money itself, she deliberately chooses to engage with the very core of the market and commodity relations to prove her point beyond dispute. She intends to examine 'the social construction of market money, confronting economists on their own turf' (1994: 34), with the intention of showing that, 'it is very hard to suppress the culture, creative power of supposedly vulnerable social relations' (1994: 35). It is argued below, however, that often opposite conclusions can be drawn from her study than the ones she draws herself. The critical points outlined above for the case of markets in general are particularly acute in the consideration of money.

Zelizer's analysis of money

Zelizer offers no definition of money at all. Instead, she considers a broad range of examples ranging over credit cards, food stamps, and payment in kind. She

even considers that monies can be created by the various uses to which money is put, as Christmas bonuses or charitable donations for example. This is all in order to demonstrate that money 'may well "corrupt" values and convert social ties into number, but values and social relations reciprocally transmute money by investing it with meaning and social patterns' (1994: 18).

Given the absence of a clear definition of money, Zelizer treats money ahistorically and asocially and offers no economic theory of money itself. On the one hand, money is understood in terms of an arbitrary and ideal division of types of monetary intervention, with no explicit reference to capital (as a social relation) and a presumed greater or lesser economic content for each type:

> We need to distinguish among three possible ways of organizing monetary payments of any kind: as *compensation* (direct exchange), as *entitlement* (the right to a share), and as *gift* (one person's voluntary bestowal on another). . . . All three forms of payment define the quality of social relations between the parties. On the whole, entitlements and gifts imply a more durable social relation between them than does compensation.
>
> (Zelizer 1996: 482)

On the other hand, Zelizer's understanding of money is garnered from a chaotic ensemble of instances, 'the proliferation of social currencies', in which some form of exchange is accompanied by the presence of something termed money. The examples deployed range over prostitution, gifts, charity, tipping, welfare, gambling, intra-household allocations and management, and funeral expenses.[17] The aim is to demonstrate how the social and cultural, the personal and the human continue to make their presence felt in these transactions despite their being mediated by the colourless presence of money.

There is, however, a notable absence of examples drawn from the world of large-scale business.[18] This leads Nelson (1995) to suggest that Zelizer should extend her approach to monies in the commercial sphere of exchange, a challenge that Zelizer (1996) appears to intend to take up by examining the sex industry and large bureaucracies such as offices, factories, schools, and prisons.[19] She expects to find that different forms of payments reflect underlying social relations such as hierarchies. This is seen as indicative of active resistance to the dissolution of social relations by the incursion of a neutral and neutralizing money.

Thus, in contrast to the 'levelling off' view associated with Simmel, Zelizer argues that 'people have reshaped their commercial transactions' (1994: 2) rather than allow themselves to become subject to objectification, dehumanization, and quantification in their personal and social lives. Again in line with her general study of markets, Zelizer analytically conflates what money is and what money represents or does: to whatever money attaches itself that continues to cling to money as a defining property. For Zelizer, the point is not that 'These (monied) areas of social life resisted commodification. On the contrary, they readily absorbed monies, transforming them to fit a variety of values and social relations' (1994: 2).

It is clear by now that Zelizer's understanding of money, and of much of the

literature on money, fails to recognize the analytical motive of extracting and identifying the common nature of money. She proceeds by gathering together instances of forms and functions of money, thus supporting her view that money is social and cultural and dismissing the approach that seeks to understand money as purely economic in the first instance. By the same token, she implicitly rejects the possibility of identifying the nature of money in its pure form and then examining the diverse variations in which it appears in practice. For Marxist analysis of money, exactly the opposite holds true, as was established in the second section of this article. It is precisely the economic nature of money, the monopolization of exchangeability in a society dominated by value, that allows it to assume the wide variety of social and cultural aspects identified by Zelizer.

As remarked earlier for Polanyi and his school, Zelizer understands money purely in terms of its functions and anything that facilitates the performance of such a function is designated as a form of money. This is most apparent in her treatment of 'earmarking', the setting aside of culturally or socially functional portions of money in principle or in practice for particular purposes such as funeral, marriage, Christmas, or holiday. Zelizer further suggests that budgeting is just a special case of 'earmarking': 'Indeed, the standard practice of budgeting constitutes a special case of earmarking: the subdivision of funds available to an organisation, government, individual, or household into distinct categories, each with its own rules of expenditure' (1994: 29). Here, the general and the particular have been reversed: contrary to what Zelizer suggests, 'earmarking', whatever its rationale and form, is a special case of budgeting. Businesses, for example, set aside an allowance for depreciation irrespective of the way in which the fund is, in practice, spent in renewing or extending fixed capital. Consequently, 'earmarking', like budgeting, follows from the pure economic function of money as a unit of account. That money can perform this particular function follows from its abstract nature as monopolist of exchangeability. The same nature allows money's applications to be so varied, including the incorporation of any amount or type of social and cultural content.

This is not to suggest that money is simply neutral in performing a budgeting function or that it sweeps aside qualitative considerations in reducing them to quantitative calculation. Zelizer is quite right to reject such approaches outright. Her work is also invaluable in showing how the social and cultural content is retained and expressed despite being expressed in monetary form. But this is not the same thing as treating all such instances as examples of different types of money. On the contrary, there is one money, even though it assumes different forms which have complex and shifting relationships to one another in performing the various functions of money.

The point is crucial in examining exactly how money is not neutral, and how its representation of social relations can be subverted or strengthened. The latter is something of which Zelizer is acutely aware in her discussion of welfare payments, which are intended for specific purposes both in terms of what they are used to purchase as well as what they are to make of the recipient citizen. Nevertheless, in principle, any form of money is equivalent to any other and to any

commodity: food stamps could be exchanged for drug money, personalized gifts for their monetary equivalent. This makes it difficult to impose a particular social and cultural content on the welfare recipient or in the giving of a present from which the price tag is inevitably removed (or even 'inadvertently' retained to express the consideration of the donor). In short, money has the general property of representing – rather than being – social relations, though it undoubtedly has a real existence in and of itself and partially affects the substance of the relations it represents. This is apparent in the way in which the same monetary transaction can represent the opposite social relationship depending upon the circumstances. As Zelizer herself observes, tipping can either be appropriate or inappropriate depending on the recipient. It can be a welcome token of appreciation or understood as an unwelcome and even inappropriate symbol of patronage.

Similar considerations apply to gifts. There is a general presumption, not entirely shared by Zelizer, that money impersonalizes, especially when it comes to gifts.[20] Paradoxically, though, those closest within the family may give money as a present since the personal and the intimate is secure and, within capitalism, the nature of what can be purchased is appreciated. On the other hand, the extensive exchange of non-monetary gifts at Christmas can often take an impersonal and purely token nature, as the giving of the gift as such becomes more significant than what the gift is. Even money, despite or even because of being measured by quantity rather than quality, can acquire a personal quality. For Indian Parsis, it is customary to give money in round figures plus one in order to distinguish the transaction from commerce which is perceived to deal in large, whole figures.[21]

In short, when it comes to money, it is evident that it represents and embodies a variety of social relations. Zelizer is correct to emphasize this, but hers is primarily an empirically based observation.[22] It is one thing to accept the presence of a variety of monies and of what they represent and achieve, quite another to deny that a general theory of money as such can be drawn from the political economy of capitalism. A general theory of money will inevitably include a tendency to transform social relations by expressing them more or less directly in commercial forms but without dissolving them – any more than a waged police force, for example, undermines an associated state monopoly of legalized violence. The strength of monetization is indicated by the lengths to which those who fall within its orbit must go in order to resist or amend its incursions, as has been so admirably demonstrated by Zelizer's case studies.[23]

Concluding remarks

We have offered a critical assessment of Zelizer's work in this paper, but only because it has much to commend it and vividly exemplifies the difficulties and dilemmas of interdisciplinary analysis of markets and money. Her notion of 'multiple' markets and monies is an explicit recognition that these are representations

of highly diverse underlying economic, social, and cultural relations. The presence of such monies and markets indicates that the underlying relations are neither neutral nor homogeneous. Moreover, the relations represented incorporate underlying tensions that result in shifting and complex resolutions, as in the definition of the boundaries between domestic and commercial provision, the conditions and outcomes attached to growing participation of women in the labour market, and the conflict between the welfare and the work ethic. It is important that Zelizer demonstrates such results empirically and historically through detailed and sophisticated case studies.

Nevertheless, an alternative perspective on these factors has been offered here, based on Marx's analysis of markets and money. The multiplicity of markets and monies is problematic as analytical starting point of departure from mainstream economic theory. Rather, that multiplicity is itself a consequence of the common content of markets and money, which has to be identified and understood at the outset. In different but related terms, it is misleading to postulate opposition between economic and non-economic factors, then assume that the latter have been unduly neglected and subsequently attempt to bring them into prominence in order to correct, even transform, the economic. In contrast, economic factors have to be understood prior to, and precisely in order to facilitate analysis of, broadly defined and scattered social, cultural, and historical factors.

Zelizer's work is also notable for the absence of economic theory, or political economy, except as point of departure. Mainstream neoclassical theory is taken as evidence of inherent shortcomings (and hence impossibility) of any general theory of money and markets, in spite of the work of classical political economy and Marx. This is potentially reinforced by the lingering, and largely incorrect, proposition that Marxist political economy has been too irredeemably production-oriented and is precluded from appropriately considering social and cultural factors, especially when it comes to consumption.[24] In short, and at the most general level, Zelizer observes the growing confrontation between economics and sociology with justifiable alarm and seeks to bring an appropriate sociology to an inappropriate economics rather than vice versa. It is arguable that such a strategy to defend sociology against the incursions of mainstream economics is already proving ineffectual.[25] In any case, the prior task is not to eschew economics but to reconstruct it on sound foundations, reproducing in thought the system of capitalist production, distribution, and exchange that forms its object of study.

Notes

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1 See especially Becker (1996).

2 For an account of what is taken to be a revolution in economics as it seeks to colonize the other social sciences, see Fine (1999a). See also Fine (1999b) in debate with Thompson (1999).

3 For discussion of the controversial issue of the rationale for Marx's starting point, see especially Oakley (1984, 1985).

4 This is apparent in the notion of exchange as a system of signs and communication, as in Eco (1976), for example.

5 See, for instance, Smith (1776: bk. 1, ch. 4) and Mill (1848: bk. 3, ch. 7).

6 An influential example of contemporary thinking in this regard can be found in Kiyotaki and Wright (1989).

7 That is not to imply that Marx's analysis of the origin of money is entirely consistent and free of tensions. For example, in *Capital* (1867: ch. 1, sec. 1; ch. 2) and in *Contribution to the Critique of Political Economy* (1859: 37–52), Marx also posited money as a resolution for the problems of direct exchange, thus exhibiting the heavy influence of classical political economy. For Marx, the problems of barter had their origin in the opposition between the commodity's value (the general) and use value (the particular). Direct exchange breaks down because the commodity attempts to be both general and particular at once. The problem could be resolved if one commodity represented value generally for all others. Commodities could then 'double up': they could be use values in themselves and values relative to other commodities. Money, the representative of value, plays this role.

If one adopts this argument, however, it is impossible to find a logical basis for Marx's own argument that the 'expanded' form of value becomes the 'general' form of value. The opposition between use value and value cannot explain why one commodity comes to represent value more generally, emerging as a general equivalent and paving the way towards the universal equivalent. In contrast, the analysis of the relative and the equivalent forms of value identifies the temporary possession of an additional use value (general exchangeability) as the catalyst for the emergence of the universal equivalent.

8 This observation is fundamental to the work of Uno (1980), and forms the cornerstone of the Uno school of Marxism.

9 Probably incorrectly, see Dorward (1976).

10 For a full exposition, see Lapavitsas (1991) and Itoh and Lapavitsas (1999: ch. 2).

11 Itoh and Lapavitsas (1999: chs 3, 4) discuss in more detail the analytical strands present in Marx's work on this issue.

12 Dodd (1994) construes Simmel as offering a theory of the idea of money, not of money itself. This would, then, appear to conform to Zelizer's own idea of a belief in the incursive and homogenizing understanding of money that has characterized economic and even social theory.

13 Ganssman puts it in neat dialectical terms:

> Is money along with other media . . . a sort of catalyst in the process of societal differentiation into more or less autonomous sub-systems? Or is it rather . . . a means of social de-differentiation in the sense of expressing in concentrated form all sorts of relations of social dependence and coercion? I think it is both.
>
> (Ganssman 1988: 312)

14 Although the economics of crime does treat fines and other penalties as the price of being caught. More generally, other payments would tend to be incorporated into the general framework of maximizing profit and utility.

15 The notion of 'marooning' is also used to examine certain consumption and certain labour markets in Fine *et al.* (1996: ch. 4) and Fine (1998: ch. 7), respectively, where each needs to be assessed in terms of being exceptional.

16 Even within Marxist value theory there is dispute over what constitutes the core. It might, for example, be argued that all labour that is exploited should be counted as commodity producing. This would still 'maroon' markets in which no labour is performed.

17 See Singh (1997) for an attempt to apply Zelizer's approach to money in marriage and, implicitly, Lamont's (1992) study of contrasting US and French attitudes to money.
18 This is perhaps what allows Zelizer to err on the side of exaggeration in suggesting that 'The earmarking of informal monies is a phenomenon as powerful as the official creation of legal tender' (1994: 21).
19 Nelson's challenge has been implicitly taken up more appropriately, if erroneously from our perspective, by Leyshorn and Thrift (1997), who reject a general theory of money for one based on social networks, trust, coercion, and the like.
20 See Carrier (1995) for an excellent discussion of gifts under capitalism in the tradition of Mauss.
21 The opposite practice is to be found to some extent in the principle of commercial pricing at marginally below a round figure.
22 As is indicated in more mundane fashion, for example, by Furnham and Argyle (1998), who can cite over one hundred names and six pages of metaphors for money, reflecting its sociability.
23 James Carrier suggested this point to us in a personal communication.
24 As has been shown elsewhere, Fine and Leopold (1993: part 4), this is simply fallacious. Indeed, in a way that conforms to Zelizer's investigative approach to particular markets and monies, Fine and Leopold argue that it is essential to examine commodity-specific chains of activities from production through to consumption, termed systems of provision, even if on the basis of general and abstract propositions concerning the economic and its relationship to the social and cultural. See also Fine *et al.* (1996).
25 See Fine (1999a, 1999b).

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Fundamentals of a theory of money: untangling Fine, Lapavitsas and Zelizer

Geoffrey Ingham

Abstract

This article criticizes both the 'Marxist' and 'sociological' conceptualizations of money to be found in the recent debate between Fine, Lapavitsas and Zelizer in *Economy and Society*. They neglect important contributions to the theory of money, especially the 'credit' and 'state' theories of money in the social sciences. These emphasize, as did Keynes, the central theoretical importance of *money of account*. These approaches were banished from orthodox economics and lost to sociology in the post-*Methodenstreit* division of intellectual labour in the social sciences. Marxist economics has never properly addressed this monetary analysis. Although neglected, it is not obscure and informs the more widely known post-Keynesian theory of money. This article argues that these heterodox theories of money are essentially sociological in that they involve the conceptualization of money as abstract value constituted by the social relation of the 'promise to pay'.

Keywords: theories of money; orthodox and heterodox economics; Marxist political economy; sociology.

Introduction

It is most paradoxical that the fundamental 'social technology' of modern capitalism and pervasive feature of its everyday life is so poorly understood. But money, it would seem, has always been a puzzle (see Ingham 1996: 507, n. 1). The recent debate in this journal between Fine, Lapavitsas and Zelizer (Fine and Lapavitsas 2000; Zelizer 2000) is testimony to a healthy revival of interest

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in the subject in the 'non-economic' social sciences.[1] However, I have to conclude that the exchange of views exposes many of the common confusions regarding the fundamental conceptual and theoretical elements of a theory of money.

Over the years, I have reached a number of general conclusions regarding the 'pure' theory of money (Ingham 1984, 1994, 1996, 1998, 1999, 2000a, 2000b). Here I shall present briefly those that have a direct bearing on the Fine, Lapavitsas, Zelizer debate. First, and most importantly, I agree with the disputants – but not for the reasons they adduce – that orthodox economics does not provide an adequate theory of money. Second, I generally endorse Fine and Lapavitsas's criticism that Zelizer's sociological theory of money does not constitute a theory of 'money in general'. I also strongly agree with their assertion – which Zelizer questions – that such a theory is needed to fill the void left by orthodox economics' shortcomings. However, my third point is an equally strong disagreement with Fine and Lapavitsas's view that Marx's analysis of money can fill this lacuna. I believe that Marx's understanding of money was disabled by his attachment to the labour theory of value. But, there is an additional complication here insofar as I also find myself at odds with Fine and Lapavitsas's interpretation of Marx's conception of money.

Throughout this critique I shall make use of a broad heterodox tradition in economic monetary analysis that I have found to be most useful in my own efforts to unravel the mysteries of money. This literature is not referred to by Fine, Lapavitsas and Zelizer. This heterodox monetary analysis originated, on the one hand, in the early intellectual efforts to comprehend new forms of credit-*money* that appeared in Western Europe from the sixteenth century onwards. It is extremely important for the general analysis of money that the distinction between credit and credit-money is made clear from the outset. The new forms of money in question were not simple *credit* in the sense of *deferred payment*. Nor could they be adequately understood as *direct* symbolic 'paper' representations of precious metal, whether or not this was in coin or bullion form. Rather, these first forms of credit-money were 'money' in the sense that mere 'promises to pay' circulated as *means of settlement* (*payment*). It was only later that they were backed by gold. I shall also contend that this *negotiable* (or transferable) debt – that is, 'depersonalized' debt that can be used as means of payment to a third party – is a form of money which is specific to capitalism (see Ingham 1999). After over two thousand years during which coin and money were synonymous, this new money-form posed intellectual puzzles that gave rise to an analysis of money which departed from the Aristotelian theories of commodity money to which all orthodox economic and Marxist theories may be traced. But, most importantly, credit-money in its pure form laid bare the essential property of money in general as constituted by *social relations* (Ingham 2000a: 23).

A second important source of heterodoxy emerged during the construction of the unified German state during the nineteenth century. Theories of money in German political economy and economic history emphasized its role in non-market processes such as taxation and as the expression of national integrity and

power (see Schumpeter 1994[1954]; Barkai 1989). Here, money is not essentially seen as a commodity (or its *direct* symbol) as it is in all 'economic' accounts; it is rather conceptualized as a token *claim* against goods. Second, emphasis is placed on money's function as the means for the final – that is, unilateral – payment or settlement of debts, the most important of which are tax debts to the state. Both these standpoints were utterly incompatible with the development of the 'pure' economic theory of market exchange ('catallaxy') in the late nineteenth century and, consequently, the dispute over the 'logical' and 'historical' origins of money was at the very core of the *Methodenstreit*.[2]

The most comprehensive and incisive, treatment of these fundamentally opposed traditions in monetary thought – that is to say, the commodity and claim theories – remains Schumpeter's *History of Economic Analysis* (1994[1954]; see also Ellis 1934). Here, he distinguishes between the 'credit theory of money' and the 'monetary theory of credit' (ibid.: 717). The former theory argues that *all* money, regardless of its phenomenal form, is credit in that it represents a claim on goods (see also Simmel 1978[1907]: 174–9). The holder of these claims is 'owed' goods.[3] In contrast, the orthodox economic theory of credit maintains that credit is distinct from money and that forms of 'credit' must directly represent or, at least, need to be backed by 'real money' – whatever that is taken to mean! Fine, Lapavitsas and Zelizer make no reference to this absolutely central and persistent dispute on the general theory of money, which resurfaced most recently in an attenuated form in the opposition between Keynesians and Monetarists. In the wake of the neoclassical theory's hegemony, this general theory of money has been relegated to the margins of economics and virtually lost to sociology.[4]

However, in early work such as *A Treatise on Money*, Keynes was strongly influenced by German 'state theorists' such as Knapp and also the theory of bank credit-money.[5] Some of the insights live on in heterodox economics, particularly in the flourishing and widely debated post-Keynesian theory of 'endogenous money' (for surveys, see Wray 1990; Smithin 1994; Nell and Deleplace 1996). The continental European analysis of the 'monetary circuit' also has Keynesian roots (for a concise survey, see Parguez and Seccareccia 2000; Rochon 1999). The idea that all money is debt is also to be found in the work of French interdisciplinary social scientists such as Orlean (Aglietta and Orlean 1998). Our disputants similarly neglect these important contributions. It is true to say that they have been pushed off centre-stage by economic orthodoxy; but theories of 'endogenous money' and the 'monetary circuit' are far from obscure.

I have argued that these heterodox economic approaches imply, but do not elaborate, a fundamentally sociological theory of money (see Ingham 1996, 2000a). Holding that money consists in claims directs attention to the fact that money is *constituted by social relations and cannot be understood outside them*.[6] And it must be stressed that *all* forms, or 'species', of money – both precious and base metal coin, convertible and unconvertible notes, cheques, plastic cards, book and electronic balances, etc. – generically consist in the promise to pay. As Keynes put it, for example, the rupee was 'a note printed on silver' (Keynes 1913: 26).

As we shall see, the analysis of money has been dogged by a basic category error in which the *specific* form taken by money is confused with the *generic* social relations of the system of promises to pay. This conceptual confusion is most obvious in the discussions of the 'end of money' brought about by the recent rapid advances in the electronic settlement of debt (see, for example, Solomon 1997). More specifically, I maintain that these *promises* are constituted by *the means of accounting for value (money of account)* and the *various means or forms of the representation of abstract value* (abstract purchasing power that is accepted as means of payment/settlement of debt).[7]

Money in orthodox economic analysis: a critique

The inadequacy of conventional economics' conception of money is hardly surprising. Money – as an economic phenomenon *sui generis* – does not command a significant analytical status in the dominant traditions of economic orthodoxy. Here, money is merely a 'neutral veil' that does no more than symbolize the exchange ratios of the 'real' economy. Indeed, there is no analytical place for money at all in the most refined and extreme formulation of this model of Walrasian general equilibrium analysis (see Hahn 1982: 1).[8]

In fact, orthodox economics *cannot* develop an adequate theory of money because it seeks one in its methodological 'micro-foundations' (Ingham 1996, 2000a). The fundamentals of orthodox economic theory are based upon what has been referred to as 'real' analysis which describes the ideal type operation of a simple 'natural' barter (i.e. moneyless) economy of producers and traders (Schumpeter 1994[1954]: 277; Rogers 1989). It is assumed in this model that all the essentials of economic activity can be described in terms of the relations and exchange ratios between goods and services as these are determined by individual calculations of their utilities. Exchange ratios are formed by 'higgling and haggling' in dyadic barter exchanges. It is essential to be clear that, at this stage of the analysis, 'exchange ratios' are not 'prices' as such, but rather the 'terms of trade' specific to each dyadic exchange. Money is viewed as a technical device – that is, only as a medium of exchange. Its addition to the basic model does no more than facilitate the more efficient conduct of transactions. It is in this sense that money is a 'neutral veil' or 'vehicle' that has no efficacy other than to overcome the 'inconveniences of barter' which, in Jevons's famous late nineteenth-century formulation, result from the absence of a 'double coincidence of wants'.[9] Both analytically ('logically') and empirically ('historically'), the market with money is seen as the natural outcome of 'truck and barter'. Moreover, market exchange is not considered to be structurally different from barter-exchange. Following the nineteenth-century economic historians and Keynes, I shall argue that they are distinct and that the use of a *money of account* makes the difference.

Menger's (1892) rational choice analysis of the evolution of monetary systems remains the basis for all neoclassical explanations of money's existence (for recent reworking of the basic ideas, see Dowd 2000; Klein and Selgin 2000). It

is the unintended consequence of acts of individual economic rationality. In order to maximize their barter options, it is argued, astute traders will hold stocks of the most tradable commodities which, consequently, emerge as media of exchange. With the further conjecture that precious metals have further advantageous properties – such as durability, divisibility, portability, etc. – then money, in its coinage form, is explained. In short, orthodox economic accounts of money are essentially commodity-exchange theories: both money's 'historical' origins and 'logical' conditions of existence are explained as the outcome of a natural process of exchange. However, the gradual 'dematerialization' of money broke this explanatory link between individual rationality and collective, or system, benefits. Hence Menger's paradox that 'institutions such as money make for the common interest, and yet ... conflict with the nearest and immediate interests of contracting individuals' in that an 'individual should be ready to exchange his goods for little metal disks apparently useless as such, or for documents representing the latter' (quoted in Jones 1976: 757).[10]

Taking up this problem, the modern theorist Hahn clearly recognized that economic theory had to be able to account for money deductively with its avowed methodology of the rational maximizing agent (Hahn 1987). Economic theory must be able to demonstrate the *rationality* of holding money. His failure is instructive as it serves to illustrate the theoretical impasse and slightly absurd circularities that neo-classical economic methodology inevitably produces. Apart from being unable to distinguish a money economy from barter exchange by this method, Hahn could also only conclude that it is 'advantageous for any given agent to mediate his transactions by money *provided that all other agents do likewise*' (Hahn 1987: 26). However, it is not so much a question of whether it is advantageous to use money if others do, but rather that agents *cannot* use money *unless* others do likewise. To state the sociologically obvious: the advantage of money presupposes monetary institutions. Modern neo-classical economics has been entirely unsuccessful in its attempt to explain these from their spare 'micro' assumptions.

Apart from these internal logical problems with the neo-classical theory of money, there are other equally serious flaws. First, the 'barter→commodity→money' transition is not supported by the historical record (see, for example, Wray's (1998, 2000) references to Innes (1913)). I shall refer to this briefly from time to time; but the most fundamental problem with orthodox theory is its neglect of significance of *money of account*. (Almost all sociological and Marxist analyses of money, including those of our disputants, make the same mistake.) Since the late nineteenth century, conventional economic textbooks have asserted that 'money is what money does' and listed three functions. These are usually: medium of exchange/means of payment; store of value; unit (or money) of account. The issue is not as straightforward as is generally assumed.[11] Do *all* the functions need to be performed by a single instrument for it to be money? If not, which are the definitive ones that might uniquely specify money? Economic orthodoxy, as we have seen, focuses on the medium of exchange function. But not all media of exchange are money – for example, and *contra* Zelizer,

food stamps, frequent-flier credits, telephone cards, etc. (Zelizer 1994, 2000). And, most obviously, money is a comparatively poor store of value. These conceptual problems need not concern us here, beyond stressing that economic orthodoxy continues to assume that the medium of exchange is the central function and that all the others follow from it.

In opposition to the economic orthodoxy of the early twentieth century, which continues to inform today's conventional view of money, Keynes argued that there is a qualitative structural difference between barter exchange and market exchange. Strictly speaking, barter must remain *bilateral*, but the use of an abstract money of account makes possible the use of price lists in an *extensive multilateral decentralized market*. Possibly because of his familiarity with the work of the German historical school of economics, Keynes spent a great deal of time in the 1920s studying the monetary systems of the ancient Near East. What he referred to as his 'Babylonian madness' led Keynes to conclude that the economic relations in this empire during the third and second millennia BC were structured by a money of account and that payment was made in commodities, labour services, or in silver by weight (see Ingham 2000a). That is to say, he argued that 'money' in this abstract sense existed for several thousand years before the first use of coinage around 700 BC. 'Money of Account, namely that in which Debts and Prices and General Purchasing Power are expressed is the primary concept of a Theory of Money' (Keynes 1930: 3). In what was almost certainly intended as a brusque rebuff to Menger's dogmatic insistence that money had only one function, Keynes continued: 'Something which is merely used as a convenient medium of exchange on the spot may approach being Money. But if this is all, we have scarcely emerged from the state of Barter' (Keynes 1930: 3).

Money of account is taken for granted in mainstream economics, which has assumed that it evolves as the natural consequence of the use of a commodity as a medium of exchange. The primeval market produces a transactions-cost efficient medium of exchange that becomes the standard of value and money of account. In this theory, coins evolved from *weighing* pieces of precious metal that were cut from bars and only later, after standardization, *counted*. However, there are both *a priori* and empirical grounds for reversing the causal direction. Money of account is logically anterior and historically prior to the market (in addition to Ingham 1996, 2000a, see Hoover 1996; Hicks 1989; Orlean 1998).

In the first place, without making a number of implausible assumptions, it is difficult to envisage that a universally agreed money of account could emerge from myriad bilateral barter exchange ratios based upon subjective preferences. One hundred goods, it should be noted, could yield 4,950 exchange rates (Davies 1994: 15). How could discrete barter exchange ratios of, say, three chickens to one duck, or six ducks to one chicken, and so on, produce a universally recognized unit of account? The conventional economic answer that a 'duck standard' would emerge 'spontaneously' involves a familiar circularity of argument. A *single* 'duck standard' cannot be the equilibrium price of ducks established by supply and demand because, in the absence of a money of account, ducks would

continue to have a range of unstable exchange ratios. A true market, as opposed to discrete truck and barter, which produces a price for ducks requires first and foremost a stable unit of account.[12] As opposed to the *commodity duck*, the *monetary duck* in any duck standard, would be an *abstract duck*. Walras, the founder of modern economics' general equilibrium analysis, identified the theoretical problem over a century ago and introduced the 'auctioneer' and a '*numeraire*' to get the trading started in his mathematical model of the market. Market exchange requires *only* a money of account. As the ancient Babylonians, eighteenth-century AD Bostonians and countless others knew, money is essentially money accounting which can be accompanied by payment in kind and/or myriad media of exchange and payment (on eighteenth-century Boston, see Baxter 1945).

The history of money provides ample evidence of the existence of what the sixteenth-century Italians referred to as *moneta immaginera* – that is to say, abstract units of account that were never minted (*moneta reale*). Indeed, one of the best known – pounds, shillings and pence in the ratios 20:12:240 – was an abstraction imposed by Charlemagne in order to bring coherence to the monetary anarchy of post-Roman Europe (Einaudi 1953[1934]). Only later were coins minted that, in Keynes's phrase, 'answered the description' provided by the abstract money of account (Keynes 1930: 3–4). But the continuous stability of the abstract ratios over very long periods of time and the existence of abstract purchasing power, *regardless of the precious metal content of any coinage*, is the most telling evidence for the fact that, in the first instance, money is a 'token' value established by an abstract money of account (Einaudi 1953[1936]; Innes 1913). Medieval European princes altered the value of their coinage by the modification of the money of account – 'crying up' and 'crying down' the money (Innes 1913; Wray 2000; Boyer-Xambeu *et al.* 1994) Altering the precious metallic content might have increased the profits of *seignorage*, but did not – as is commonly thought – alter the purchasing power of the money.

If it is extremely implausible that market exchange, in itself, could produce the abstraction of a money of account, what is its origin? The nineteenth-century German historical school argued that the *idea* of money is to be found in the scale of tariffs for the precise measurement of debts to be paid in compensation for injuries and damages laid down in institutions such as *wergeld* ('worthpayment') (for an accessible survey in English, see Einzig 1966). The evidence from Germanic tribal societies post-dates Babylonian money of account and early coinage; but it is argued that *wergeld* was a basic institution of elementary society. The numismatist Grierson (1977) has provided the most thorough analytical reworking of this conjecture. First, he draws a clear distinction, as I have done, between barter and money exchange. 'The parties in barter-exchange are comparing their individual and immediate needs, not values in the abstract' (Grierson 1977: 19). Second, Grierson distinguishes between what I would refer to as money in general and its specific forms. 'Behind the phenomenon of coin there is the phenomenon of money, the origins of which are not to be sought in market but in a much earlier stage of communal development, when worth and wergeld were

interchangeable terms' (Grierson 1977: 33). He concedes that there is no direct evidence that *wergeld* institutions predated the appearance of markets; but argues that the *concept of moneysworth* could not have been produce by the market.

> The conditions under which these laws were put together would appear to satisfy much better than the market mechanism, the prerequisites for the establishment of a monetary system. The tariffs for damages were established in public assemblies, and.... Since what is laid down consists of evaluations of injuries, not evaluations of commodities, the conceptual difficulty of devising a common measure for appraising unrelated objects is avoided.
>
> (Grierson 1977: 20–1)

I have suggested elsewhere that Grierson's hypothesis may be interpreted in a Durkheimian framework in which money of account is a 'collective representation' for which the analogue is society itself (Ingham 1996: 519–21).[13] *Wergeld* expressed two fundamental elements of social structure: the utilitarian and the moral evaluation of social roles and positions. The indemnity schemes of the *wergeld* aimed to compensate for functional impairment, but also expressed society's normative order. The scales of fines and tariffs were related to *both injuries and insults*.[14]

Money is fundamentally an abstraction to which myriad forms of money-stuff might correspond. The almost universal tendency to identify money exclusively with money-stuff is the source of much confusion. This elementary category error would appear to have been sustained by the persistent equation of 'money' and 'coin' in common sense and a closely related anachronistic and mistaken economic theory of commodity money. In this regard, it should be remembered that it is not quite twenty years since the underlying structure of the archaic commodity theory of money provided the basis for the application of a recrudescence of the late nineteenth-century quantity theory of money in the 'monetarist' experiment. With forms of credit-money as the typical means of monetary transaction in capitalism, Fisher's 'quantity theory' was outmoded at the time of its publication in 1907. Its revitalization by Friedman to form the intellectual basis for such influential policy making now appears truly remarkable.[15]

The second major defect of the orthodox conception of money has been, as post-Keyenesians stress, the chronic inability adequately to conceptualize capitalist credit-money (Nell and Deleplace 1996; Parguez and Seccareccia 2000). The source of this failure again lies in the category error and consequent inability to grasp that this transformation was constituted not by a simple change in the *form* of money-stuff – that is, metal to paper. Rather, capitalist credit-money was produced by a qualitative transformation in the *social relations of the mode of monetary production* (Ingham 1999). As I have outlined, the underlying conception of money in orthodox theory of commodity-exchange has its origins in the stylized model of the pre-capitalist *trading* economy – that is, in Minsky's scornful attribution, the 'village fair' (1982).[16]

Unless one dismisses – in the manner of orthodox neoclassical economics – all institutional variation in economic systems as 'tosh' (Williamson 1994: 97),

it is clear that the simple model of the barter-trading economy is quite inadequate for grasping the complexities of the capitalist system. But, given its assumptions, orthodox economics has been compelled to attempt to explain the emergence of the capitalist credit-money form (notes, bills, bank deposits, etc.) as the *direct representation* of 'real' commodities – as in, for example, the orthodox theory of the gold standard and the 'real bills doctrine' (see Smithin 1994; Ingham 1996).[17] Gradually, however, over the twentieth century, precious metals coinage standards were abandoned and the monetary reserves that form the bases for the issue of further credit-money are now themselves *exclusively* other authorities' promises to pay.[18] Capitalist credit-money is nothing more than a network of claims backed by banks' and states' promises to pay that are fabricated into a hierarchy of credibility by foreign exchange markets and global credit-rating agencies. But this of course is not new. In terms of the basic social structure for the production of money, only the disappearance of the useful ideological fiction of a gold standard and the formal processes of credit rating separates the twenty-first from the seventeenth century.[19]

Actually existing capitalism, as opposed to the 'village fair', was *constituted* by a new form of 'dematerialized' credit-money. From the early beginnings in late medieval Italy, state and bank debts – that is, their promises to pay – became accepted means of payment. In other words, debts could be discharged with a higher 'quality' form of debt that was trusted and/or enforced. This transformation in the form of money required the significant social structural change of the depersonalization and transferability of debt. It involved the transformation of a personalized bilateral debt relation (for example, an IOU) into the means of paying a third-party creditor (see Ingham 1999; Rowlinson 1999). A debt could be paid with another debt.[20] It is precisely this fact – that money is constituted by a social relation of credit–debt – which mainstream economics, in its unremitting materialist preoccupation with the individual calculation of the utility of commodities, has found difficult to comprehend.

This use of transferable 'depersonalized' debt as a general means of payment is arguably one of the most important developments in humanity's organizational or 'infrastructural' powers. It freed the production of money from the natural constraints of territory and geology and brought about the possibility of a managed elasticity of the supply of money. At this time it became an autonomous force of production (Keynes in Smithin 1994: 2; Schumpeter 1994[1954]: 318). However, as I have argued elsewhere, modern credit-money cannot be explained simply as the direct result of the need for more efficient money in an economy whose dynamic lay elsewhere, in 'real' factors such as technology, the division of labour or even capital–labour 'social relations of production'. The credit-money form was the result of particular geopolitical conditions and social structural changes that occurred in the reawakening of Europe after the collapse of the Roman Empire and its coinage system (Ingham 1999).

We must now turn our attention to the debate between Fine, Lapavitsas and Zelizer and its relation to this critique of the mainstream economic conception of money; and then to a brief sketch of a more adequate sociological alternative.

The social meaning of money

Zelizer quotes Randall Collins's telling remark that money is ignored by sociologists 'as if it were not sociological enough' and also bemoans the fact that the *International Encyclopaedia of the Social Sciences*'s thirty pages on money do not include any reference to its 'social characteristics'. Here, she indignantly observes, one finds essays on 'the economic effect of money, on quantity theory, on velocity of circulation, and on monetary reform, but nothing on money as *realité sociale,* in Simiand's apt term' (Zelizer 1994: 4). But I would argue that this is not so much a critique of the economics of money as it is an implicit expression of the terms of the settlement of the post-*Methodenstreit* division of intellectual labour in the social sciences. Economics deals with money's instrumental functions and sociology with its cultural and social meanings and effects (Ingham 1998; see also Ganssman 1988). So much is obvious. But instead of mounting an attack on economics' imperialistic monopolization of the study of money's pivotal importance in the economy, Zelizer uses the sociological 'embeddedness' approach to argue that economics holds an untenable theory of 'money in general'.[21] Furthermore, she argues that classical sociology's acceptance of this economic conception of money led to its exaggerated and unduly pessimistic view of money's homogenizing, depersonalizing and alienating effects (Zelizer 1994: 4–6).

I would suggest, however, that in rejecting the supposedly economic conception of money so completely Zelizer tacitly endorses the intellectual divisions between the disciplines that I have found unhelpful. Her account of the American state's creation of a 'standardized national money' implies an unwitting obeisance to economics' hegemony (1994: 13–18). This is somewhat misleadingly entitled 'Creating *Market* Money' (emphasis added) and misses an opportunity to reclaim the creation of 'money in general' as a sociological problem. To be sure, standardized currencies are involved in the creation of *market* boundaries and this was probably in some American minds in the nineteenth century. However, for at least four thousand years states have created uniform money (both money of account and money-stuff) in order to collect taxes more efficiently and not primarily to produce a 'public good' for the more efficient functioning of the market (Knapp 1973[1924]; Weber 1978). States produce money in order that they can then collect it from their citizens (Wray 1998). Moreover, '[t]he need to pay taxes means that people work and produce in order to get that in which taxes can be paid' (Minsky 1986, quoted in Wray 1998: 35).[22] To argue that '[t]here is no single, uniform, generalized money, but multiple monies; people earmark different currencies for many or perhaps for all types of interactions, different social interactions, much as they create distinctive languages for different social contexts' is an exaggeration. Indeed, the social *earmarking* of money for specific purposes – that Zelizer so carefully documents – could not occur unless uniform money existed.

Furthermore, Zelizer's studied avoidance of a general theory of money leads to confusions within her avowed framework. First, *The Social Meaning of Money* is replete with the type of category errors that I referred to earlier. Aside from the common misidentification of 'money' with 'money-stuff', Zelizer, as I have

noted, looks upon highly specific and restricted media of exchange, such as food stamps and chips for gamblers, etc., as money (1994: 4). However, any quality of 'moneyness' that these tokens possess is determined by the money of account in which they are denominated or to which they relate. Moreover, such tokens and other restricted media of exchange, in addition to genuine local currencies, and the different social *meanings* given to 'money in general' are all classified together as examples of 'multiple money'. Second, I cannot see how Zelizer's analysis requires that she should question money's property of *fungibility* (1994: 5). To pursue one of her own examples: it would seem to me that a centrally important quality of money is that it *can* be 'laundered' and that the state does not enquire into the meaning of money or differentiate between 'dirty' or 'clean' money in payment of taxes. The fact that 'dirty money' 'burns a hole in your pocket and has to be used quickly' (1994: 5) is precisely because it is likely to have been the result of a transaction not registered for tax purposes and has to be disposed of before detection.

Sociology has a good deal more to say about money than the analysis of its contextualized social meanings. Indeed, one is tempted to agree with the economist Williamson that the sociological 'embeddedness' approach to the understanding of the economic realm runs the danger of becoming restricted to the 'thick descriptions' of contextual 'tosh' (Williamson 1994). Money is 'essentially a social fact' (Mauss 1914, quoted in Zelizer 1994: 25) primarily because it is the product of the social relations of states and banks, not primarily because its use is given multiple social meanings. *The Social Meaning of Money* provides an interesting and valuable ethnographic analysis of the multiple meanings given to the use of money. It is also a useful corrective to the more extreme diagnoses of money's depersonalization of social life. But the case is overstated and at times it is almost as if Zelizer has to remind herself that '[i]t is not entirely utterly foolish to suppose that the monetization of social life spreads uniformity, precision, and calculation. After all, a money economy made a significant difference to social organisation' (Zelizer 1994: 12).

Marx to the rescue?

Some time ago, I argued that Marx underestimated the extent to which monetary and financial transactions were autonomous from the process of commodity production (Ingham 1984). More recently, as I have already indicated, I have reached the conclusion that Marx's theory of money is flawed – like those of other classical economists – because it is grounded in the labour theory of value (Ingham 1998: 6–8). As I shall briefly outline in the final section of this critique, the relatively autonomous production of money is connected to the production of commodities by a fragile socially enacted process. There is no determinate link between money and commodities. A general theory of money is needed, but it will not be found in Marx or in the revision of his analysis used by Fine and Lapavitsas.

'Throughout this work', Marx tells us on the first line of Chapter 3 of *Capital* Volume 1, 'I assume gold as the commodity-money'. On this level, his analysis was thoroughly conventional for its time. 'Money as a measure of value, is the phenomenal form that must of necessity be assumed by that measure of value which is immanent in commodities, labour time' (Marx 1970: 97). In other words, '[g]old can serve as a measure of value only because it is itself a product of labour' (Marx 1970: 192). Marx considered other forms of symbolic value – such as bank notes, trade credit and bills of exchange – to be money only insofar as they represented commodities. On the one hand, for example, convertible bank notes stood for precious metals and, on the other, bills of exchange represented the exchange of actual commodities in production and circulation.

However, at times, Marx seems to understand that credit-money can be created and sustained in a manner that is quite independent of the production and/or circulation of commodities (see Volume 1 of *Capital*, Chapter 36, Marx 1959). But, it is significant that this chapter is entitled 'Pre-capitalist social relationships'. Although credit-money, he argues, 'develops as a reaction against usury' (3: 600) it plays an essentially similar dysfunctional role in capitalism itself. Because of their autonomy, 'banking and credit thus become the most potent means of driving capitalist production *beyond its own limits*, and one of the most effective vehicles of crises and swindle' (3: 607). This is because credit has expanded from its 'necessary proportions' in relation to labour and its products. Marx was quite conventional in this view that credit instruments (bills of exchange, promissory notes, etc.) were – or rather *should* be in a rationally organized system – no more than *substitutes* for hard cash. Also, in sketchy passages at the end of Volume 3 of *Capital*, Marx grasps the way in which the national debts of the Italian city states, Holland and England in the early modern period created money in the form of circulating negotiable debt, or claims against the state. 'The public debt ... with the stroke of an enchanter's wand ... endows barren money with the power of breeding' (3: 706). But he goes on to *deplore* the way in which these developments, whereby money appeared to be created *ex nihilo*, had created a parasitic 'bankocracy' that had to be serviced out of the 'value' produced by the creators of 'real' capital. In short, money can be *a* universal equivalent because it is the embodiment of *the* universal equivalent – labour. But, as Ganssman has recently, and perhaps reluctantly, concluded, 'The Marxian starting point of the theory of money and credit [the law of value] has to be left behind, as do all starting points' (Ganssman 1998: 153).

However, in Fine and Lapavitsas's interpretation of Marx, we are not offered the classical labour theory of value nor a reference to any of the recent efforts to reconcile classic Marxism with the reality of credit-money (see Kennedy 2000; Ganssman 1998; Bellofiore 1998).[23] Rather, they present an essentially Hegelian formulation on the origins of money: 'Marx's derivation of the common character of money', they stress, 'amounts to a process of *logical becoming*, which inevitably appears whenever commodities come into contact with each other' (Fine and Lapavitsas 2000: 369, emphasis added). 'The forms of value, including the money form and hence price', they assert, 'emerge spontaneously from

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the *anarchical relations* among commodities in the process of exchange, *capitalist or otherwise*' (ibid.: 366, emphasis added). I find it difficult see how this conception enables us to break 'free from the self-imposed constraints of neoclassical theory with its focus on money as a means of exchange' (ibid.: 366). Fine and Lapavitsas quite correctly see that the medium of exchange, as conceptualized in economic neoclassicism, does not explain the existence of the universal equivalent. But there is no logical nor historical reason for arguing that this could spring from 'anarchical relations among commodities' or even 'the *material* in which commodity values are expressed' (ibid.: 366, emphasis added). In the first place, like all theories that try to ground the essential properties of money in the commodity, this formulation does not appreciate the significance of the concept of money of account. Indeed, it is precisely 'anarchical relations' of this kind that I had in mind earlier in arguing that the concept of a money of account could not emerge 'spontaneously'.

Fine and Lapavitsas's stress on the inability of neoclassicism's medium of exchange conception to grasp the complexities of capitalist money is well taken.[24] But, in their restriction of the historical account of money to Smith and Marx, they offer a confused account of its evolution, which endorses two mistaken orthodoxies.[25] First, in exactly the same manner as the neoclassical economic approach to history, Fine and Lapavitsas seem to believe that 'markets, commodities, and money (not to mention banking, insurance, and commercial trading are economic phenomena that long pre-date capitalism' (ibid.: 366).[26] Second, following Marx, they imply that the historical specificity of capitalism is to be found *exclusively* in capital–labour social relations of *production*. These issues cannot be pursued here, but it should be noted that both Marxism and orthodox economic theory have tended to ignore the distinctiveness of capitalist banking's creation of money through the act of bank lending. On the basis of late nineteenth-century German historical studies of the ancient and classical economies, Weber warned: 'one must guard against thinking in terms too modern. Pre-capitalist banks were simple intermediaries whose "notes" were only a means of transmitting payments between the network of depositor-customers'; whereas, 'the modern bank note circulates independently of any particular individual' (Weber 1981[1927]: 255). Credit-money is a *constitutive* element of capitalism (Schumpeter 1994[1954]; Ingham 1999).[27]

More fundamentally, Fine and Lapavitsas persist with the theoretically and historically inaccurate view that money originates in trade because it is itself a commodity. Their contrast between Smith's account of the origins of money in truck and barter and Marx's argument that it was needed only for intersocietal trade is based on long since superseded history. As I have stressed, it is well established – but largely ignored – that abstract money accounting was a fundamentally important technique for the economic organization of the command economies of the ancient Near East. Moreover, money of account was an essential means of accounting for both debtor–creditor relations and the allocation of resources in these pre-market, pre-capitalist economies (Wray 1998).

Agreement with Keynes, that money of account is 'primary' also helps to resolve another problematic effect of neoclassical economics' claim for hegemony in the social sciences – to which Fine and Lapavitsas also refer. The sterile debate in social anthropology on question of 'primitive money' was triggered, we should remind ourselves, by the economic theorists' *non sequitur* that, if 'primitive' societies did not have markets, then they could not have money. Value, which money possessed along with other commodities, could be established, they insisted, only in market exchange. The category error in identifying money by its forms is particularly in evidence here in the distinction between the 'general purpose' money of the modern market economy and the 'limited purpose' of 'primitive' money. Leaving aside all other aspects of this hoary debate, its sterility is exposed if the identification of money with 'money-stuff' is abandoned. Money is *abstract* value that has many *forms* – in *both* primitive and modern economies. We need only think for a moment about today's myriad *media of exchange* – notes, coins, cheques, electronic transfers, plastic cards and so on, which are to some extent as 'limited purpose' as their so-called 'primitive' counterparts. Rowlinson has recently expressed the quintessential theoretical point with great clarity in his study of money and national identity in early capitalism.

> By the 1830s, then, Britons could at different times and places have understood gold sovereigns, banknotes, or bills of exchange as the privileged local representatives of the pound...the pound as an abstraction was constituted precisely its capacity to assume these heterogeneous forms, since its existence as a national currency was determined by the mediations between them.
>
> (Rowlinson 1999: 64–5)

Conclusions[28]

The conceptual apparatus of almost all the general theories of money in the social sciences derives in some way or other from a commodity theory of money in which money is essentially a 'thing' or a direct symbol of a 'thing'. There are fundamental differences in the way the various theories explain how the value of the 'thing' is determined – for example, as an expression of relations between commodities, as an expression of labour time, or in exchange, or as a symbol of commodities, etc. However, none of the theories is able uniquely to specify money – that is to say, mainstream economic approaches cannot, within their own analytical framework, account for the difference between money and other commodities. To be sure money is a commodity, but it only becomes one *after* its 'moneyness' has been ascribed *outside the market*. Here we have a further, and arguably most fundamental, category error to contend with. There is a general tendency to conflate the two distinct questions of the *quality* of 'moneyness', on the one hand, and the *value* of money, on the other. A moment's reflection will reveal that the one cannot be reduced to the other. This distinction was made clearly by Knapp in his *State Theory of Money* where he argued that the state (or monetary authority) confers the quality of 'valuableness' according to a

money of account, but cannot directly determine the actual value of money, as purchasing power (see Knapp 1973[1924]).

Money is a socially constructed abstract claim on goods that is constituted by its own 'social relations and means of production'. 'Social meanings' of money are involved, but here we must not lose sight of the obvious fact that, in this respect, 'money in general' results from the *power* to impose a hegemonic meaning. More precisely, the production of forms of money in capitalism is characterized by a power struggle. On the one hand, there are the various agencies for producing money – mints, central banks, ministries of finance, private banks and a growing number of 'informal' local monetary systems; on the other, there are the producers of commodities – capital and labour. The value of money – or what Weber referred to as its 'substantive validity' – is 'socially enacted' by the owners, controllers and producers of *both* money and commodities. The two sides – money and goods – are, from a sociological standpoint, distinct and relatively autonomous. Agents attempt to monetize their market power either by bidding up prices in money of account or by the expansion of value through borrowing and the creation of money.[29] On the money side, agents attempt to preserve and store value in money form and to control its supply to exact interest. Or, they might forge new social relations of credit (monetary innovations), which they hope will be validated by the monetary authorities as a liquid asset (see Goodhart 1989). States and their central banks have their own particular interests and constitute the third corner of this triadic power struggle (Weber 1978; Ingham 2000; Graziani 1990).

In short, capitalism is based on a complex structure of institutionalized debtor–creditor relations; it is, as the French historian Marc Bloch remarked (1954: 77), a regime that would collapse if everyone paid his or her debts. The supply of money is the outcome of the conflict between those wishing to expand value through the creation of credit-money and those concerned to limit this through fear of inflationary consequences (see Mirowski 1991). This trade off and tension between the expansion of value through the elasticity of supply of credit-money supply and the breakdown of monetary stability is arguably the central dynamic of the modern capitalist system (see Minsky 1986). Money, then, is not the 'neutral' medium of exchange of orthodox economics, nor is it the direct symbolic representation of the commodity form, nor is it constituted merely by 'social meanings'. Rather, as Weber explained in his sociological interpretation of Austrian economics, money is itself 'primarily a weapon in the struggle for economic existence'. Money supply and money prices are 'instruments of calculation only as estimated quantifications of relative chances in this struggle' (Weber 1978: 107).

Notes

1 Fine and Lapavitsas's critique of Zelizer deals with both markets and money; but here I shall restrict my attention to money. In the first place, to deal adequately with both would require much more space. Second, although the institutions of money and markets

are obviously closely interconnected, I shall argue – contrary to economic orthodoxy and the strong implications of Fine and Lapavitsas – that money is logically anterior and, as far as we can establish, historically prior to extensive markets. This is not to say, however, that the concept of the market does not need the same kind of conceptual clarification that I undertake here for money.

2 The conflict over methods (*Methodenstreit*) was most prevalent in the German social sciences during the late nineteenth and early twentieth centuries (Swedberg 1987; Machlup 1978). Very generally speaking, it was a dispute between the advocates of the application of the methods and aims of the natural sciences to the social world and their opponents in the historical, social and cultural sciences. The economic 'theorists' of the former camp wished to establish the 'logical' origins of money – that is, to deduce its existence from the first principles of their 'universal law' of exchange. The 'historians' produced evidence to suggest that money did not originate in the market, but rather in the 'state'. The arch-theorist Menger, for example, steadfastly refused to acknowledge that money had any functions other than as a medium of exchange in market transactions. Money could have value only because it was a commodity whose value was determined by the only means possible – that is, in exchange (Menger 1892).

3 'This is the core of the truth that money is only a claim upon society. Money appears, so to speak, as a bill of exchange from which the drawee is lacking' (Simmel 1978[1907]: 177). Note that these parts of *The Philosophy of Money* that deal with the *social production* of money have been neglected, following the post-*Methodenstreit* division of intellectual labour, in favour of Simmel's treatment of the *social effects* of money (Ingham 1998).

4 Simmel was influenced by the German historical school; but this is not obvious to later generations of scholars, as he was rather shy to acknowledge his sources.

5 By the time of the publication of *The General Theory*, Keynes's theory of money and banking had become much more orthodox (see Rogers and Rymes 2000).

6 Marxist economists sometimes contend that money is a 'social relation', by which they mean that economic relations are really social relations of production and exchange that are masked or mediated by money. I am arguing that, as credit/debt, money is actually constituted by social relations (Ingham 1996, 2000a).

7 Despite my rejection of Marx's underlying theory of money, and especially Fine and Lapavitsas's interpretation, the general analytical scheme of 'means and social relations' is a useful starting point for the analysis of the production of money as a 'social technology' for performing these two basic functions.

8 This analytical position is the source of potential contradictions in economic orthodoxy. Most notably, economic orthodoxy has argued for the control of the supply of money to reduce inflation and, at the same time, denied that the supply of money can have an effect on activity in the 'real' economy. The difficulty has been evaded by the familiar long run/short run distinction. In the long run, after the 'rational expectations' adjustment of short run 'money illusions', money is 'neutral' with regard to economy activity.

9 Efficient barter requires that, for example, A wants chickens but has ducks to trade *at the same time* that B has ducks but wants chickens.

10 Modern economic neoclassicism has attempted to update Menger by arguing that money reduces transaction costs for the rational maximizing agent (Klein and Selgin 2000).

11 A useful distinction may be made between medium of exchange and means of *final* payment (settlement), as expressed in the different forms of money; for example, the credit card and the cheque or standing order. Sometimes other functions such as standard of deferred payment are included, but they would seem to be subsumed under the others.

12 See White (1981) for a clear distinction between the economic theory of pure exchange and the structural properties of markets.

13 Nineteenth-century positivism sought an answer to the origins of money in nature

– hence the commodity. It was argued that other measures such as length had natural analogues – such as yards and cubits. There is of course no natural analogue for value.

14 For example, it 'cost four times as much to deprive a Russian of his moustache or beard as to cut off one of his fingers' (Grierson 1977: 20).

15 Part of the gold standard's appeal lay in its ideological 'naturalization' of the social relation that is money (see Ingham 2000a).

16 In contrast to the C-M-C_1 of the village fair, Marx's M-C-M_1 formula points to the typical capitalist circuit, and Keynes's concept of a 'monetary production economy' refers to a system that is founded upon the elastic production of credit-money by banks – that is to say, capitalism (Keynes, quoted in Smithin 1994: 12).

17 In this respect, the quite erroneous explanation of the development of bank notes from the receipts issued by goldsmiths for bullion left in their safekeeping is still to be found in mainstream textbooks (Begg *et al.* 1991: 404–7). Bills of exchange and national debts played a far more important role in the development of capitalist credit-money (see Ingham 1999).

18 Some capitalist states recently began to dispose of their gold reserves, but had to at least slow down the process because of the disruption it caused to the gold market.

19 In important respects, today's global monetary system is comparable to the 'anarchy' of sixteenth-century Europe with its competing moneys of account and pure credit instruments (see Boyer-Xambeu *et al.* 1994).

20 This is perhaps the most important dimension of the shift from particularistic to universalistic and impersonal social relations of the so-called 'modern world'. It was conspicuously absent from the classical economies of Greece and Rome (Weber 1978; Ingham 1999).

21 Zelizer does not explicitly follow Granovetter's influential article (1985), but her book may be taken as an example of this sociological genre.

22 One should also note, in relation to the discussion in the Conclusion, that this taxation relation is one of the ways in which money become 'valuable'.

23 I am reluctant to enter into an exegetical debate of *Capital*. In short, I am arguing that Marx's analysis of money cannot be understood without reference to Chapter 3 – entitled 'Money, or the Circulation of Commodities' – or to Section D of Chapter I, 'The Money Form'. As Fine and Lapavitsas explain, they are following the Uno school of Marxism in this regard.

24 Fine and Lapavitsas's vestigial and, from their own standpoint, contradictory adherence to the classical commodity theory of money is clearly apparent in their brief account of money's role in modern capitalism. '[T]he bulk of monetary transactions in value terms . . . are no longer mediated by money but by credit' (2000: 370). But what is the difference? Using Fine and Lapavitsas's concepts, can one distinguish the one from the other?

25 This is also where the long disregarded German historical school's work is important in exposing the serious inadequacies of Smith and Marx's reliance on classical Greek analyses, such as that of Aristotle.

26 The question of the historical specificity of capitalism as a 'modern' and 'Western' phenomenon was a defining question in the *Methodenstreit*. The economic theorists of the time, like their modern successors, argued that the laws of economics applied universally across time and space and that ideographic analysis – that is, history – provided 'thick' description, but not explanation. For a recent attempt to argue for the modern 'capitalistic' character of classical Greek banking, see Cohen (1992).

27 In fact, somewhat contradictorily, Weber does not go so far as to include this kind of banking in his ideal type of capitalism which, like Marx, emphasizes the social relations of production (see Weber 1981[1927]: ch. 22).

28 There is insufficient space to elaborate and illustrate these very general arguments. A little more detail will be found in Ingham (1996, 1998, 1999, 2000a, 2000b). A thorough treatment will be provided in *A Sociological Treatise on Money* (in preparation).

29 Keynes succinctly captured the social production of bank credit-money in *A Treatise on Money*:

> [I]t is evident that there is no limit to the amount of bank-money which the banks can safely create *provided that they move forward in step*. The words italicised are the clue to the behaviour of the system.... Each Bank Chairman sitting in his parlour may regard himself as the passive instrument of 'outside forces' over which he has no control; yet the 'outside forces' may be nothing but himself and his fellow-chairmen, and certainly not his depositors.
>
> (Keynes 1930: 26–7)

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[9]

Money – a symbolically generalized medium of communication? On the concept of money in recent sociology*

Heiner Ganßmann

It was not Gladstone, as Marx asserted, who had warned the British parliament that 'even love has not turned more men into fools than has meditation upon the nature of money' (Marx 1970:64). But its obscure origin has not prevented sociologists from taking this warning seriously for quite some time. After Simmel and Weber, sociological theory did not have much to say on money. Parsons' (1967) attempt to understand money as the prototype of 'symbolically generalized media of communication' changed this situation somewhat. After that, post-Parsonians with ambitions to design 'grand theory' (I will refer to Habermas and Luhmann as the two most prominent in West Germany) were obliged to include in their designs a sub-theory of social media, in which money regularly figures as the exemplary case for demonstrating the functioning of these media.

This inclusion of the money-problem as part of a theory of media of communication ensures that it remains marginal in the overall theoretical design. Nonetheless, it is interesting to examine – in an exemplary fashion – recent sociological efforts to understand money, largely for the three following reasons:

(1) I think that an understanding of the relations of social domination and integration typical of 'modern' society still presupposes an understanding of capital as a social relation, which in turn presupposes an understanding of money. Ignoring the problem of money potentially implies ignoring capital, and with it the most important and characteristic form of domination in

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capitalist societies. If the money-problem is not ignored, the way in which the problem is posed precludes the way in which the capitalist form of domination is (mis-)understood. The marginality of the problem of money in modern sociology indicates a lack of concern with domination as a social problem, with consequences for the underlying vision of society.

(2) While the problem of money clearly belongs to the domain of economists, they apparently need help. Economists have notorious theoretical difficulties with money. Nonetheless, the majority of economists are inclined to rely on the traditional explanatory strategies which have led to such difficulties. So it is worthwhile to examine sociology for a possible contribution.

(3) On a quite fundamental level of theory construction, the issue of money is connected to contrary, but complementary problems in modern sociology and modern economic theory. While sociologists conceptually tend to ignore the role of *things* in social (interaction) processes, economists conceptually tend to reduce social relations to relations between individuals and things. Both tendencies seem to block an *adequate* understanding of money, so the *actual* understanding of money can – in a way – be used as a test for the adequacy of basic theory design in both sociology and economics.

In what follows, I will only marginally touch on the issues (2) and (3) and only partly deal with issue (1). This restriction has less to do with my theoretical interests than with the texts examined. In them, money is not seen in its role as potential (or actual) money capital, so all questions concerning the role of money as a means of domination in the capitalist process appear misplaced. Let me start with a few remarks on issues (3) and (2), to illuminate the background of the following discussion.

I Von Wiese's curse

Both sociology and economics seem to be frozen under the spell of – what one could label – von Wiese's curse. Leopold von Wiese (1965:248) – a so-called nestor of German sociology – had come up with a distinction between economics and sociology so simple that it appears to be irresistable. Economics is to deal with man-matter-, sociology with man-man-relations. Of course, nowadays any enlightened economist or sociologist knows that matters are not so simple – a curse it would be, however, if in spite of this knowledge nothing more would result from the two sciences than material for filling the boxes prepared by von Wiese.

A little meditation about money – below the Gladstone-threshold (but it was not Gladstone!) – shows that economics and sociology

must indeed fail in the explanation of money if von Wiese's curse were inescapable. Money as a 'social function turned substance' (Simmel 1907:159) can neither be explained with the neoclassical scheme of reducing all economic phenomena to simple relations between the individual and (non-human) objects; nor does it seem at all promising, if money is indeed 'a machine' (Mill 1900:11), to explain it by dissolving it into a pure, unmediated relation between man and man.

Thus, the approach to the problem of money can serve as a test. To what extent does von Wiese's curse really maintain a hold over economics and sociology? Can thinking about money – Gladstone or not – serve as a ladder to climb out of the little disciplinary boxes? Exerting a little utopian energy, one could imagine, after all, that economics and sociology could meet in the exploration of a new paradigm of objectively mediated interaction: the concern would be neither with pure man-matter- nor with pure man-man-relations but with a *mélange* of the two. In this way, economists could find the key to the social dimension and sociologists that to the material dimension of their respective objects of inquiry. However, before that could happen, economists and sociologists would have to be convinced that they are missing something. With respect to the problems resulting for economics from the neglect of the social dimension of economic action the trouble is that they are well known, but they are normally not attributed to that neglect.[1] With respect to the problems resulting for sociology from the neglect of the objective dimension, the role of things in interaction, I hope that the following discussion of the problem of money, solely as it appears in recent sociology, will convince at least some readers that part of the failure to understand even basic features of money is attributable to that neglect.

Certainly, if money were a mere thing, considering the ways in which money structures social relations would be the most obvious way to start reflecting on the general problem of the role of things in interaction. But it will become clear in what follows that it takes a whole theory of money to clarify whether money is a thing or a symbol, or to what extent it may be both. Lacking such a theory (but perhaps generating some motivation for its construction), my focus will be on how, in recent sociology, the problem of domination is hidden underneath the problem of money. Or, as O'Neill (1982:114) put it, 'how the behaviour of money is nothing but the algebra of the system of stratification and exploitation.'

With respect to this algebra, recent sociological theories not only demonstrate the refusal to simply add two and two. They also substitute abrakadabra for algebra. The various elaborate ways of understanding money as a 'symbolically generalized medium of

communication' lead through conceptual mazes of astonishing intricacy to end with the (implicit) declaration that money is a complex, but harmless social device. Apart from some natural shyness in dealing with the issue of domination, perhaps this underestimation of money has to do – and here we would find the link to von Wiese's curse – with neglecting its original, primitive quality as a thing; a material object which was a part of social wealth. In the sociological theories considered, money is taken to be a symbol (of social wealth) to start with, without any intelligible clarification of the relations of this symbol to whatever it is held to symbolize and without much thought given to the question of whether money is more than a symbol. Money is seen as one of a manifold of symbolically generalized media of communication. Interestingly enough, all the other 'media' – for example, power, confidence, truth, love – simply consist of an invocation of concepts which describe agent's attitudes towards each other or towards norms. Concepts are reified as media by theoretical decision. For money, this seems to work the other way around. Historically, it appears to have started its social role in the form of palpable pieces of precious metal. In a long process of social evolution, symbolic representations were introduced as substitutes for precious metal (coins) in one or the other function of money. The medium, with its rather obvious (but hard to understand) roots in the physical world, turned into something more and more concept-like, of merely ideal existence, like the numbers on computer screens which today signal the possible access to social wealth.

Thus, money is obviously unique among the media of communication in terms of its history and the direction of its evolution. What, then, is the function of (or the motive for) theoretically treating money on a par with other such media? To answer this question, let us follow sociologists on their path away from the obvious.

First, referring to Parsons' theory, I will attempt to clarify the fundamental concepts of the media theory of money. What is the meaning of the terms symbol, generalization, medium? Despite his innovative terminology, Parsons still relies heavily on the economic tradition in his view of money. Furthermore, his construction of other media (to start with: power, influence, commitment) proceeds by extrapolating properties of money into other social contexts, such that the other media are understood in analogy to money (see section II). This construction by analogy has been criticized. I will present this critique by showing how Habermas attempts to limit the extension of the media concept to the systems of the economy and the polity. For Habermas, only money and power are to be media, whereas influence and commitment are to be categories

belonging to the 'life-world'. But Habermas' objections to Parsons' media theory are not sufficiently radical. He leaves Parsons' concept of money and its extrapolation to the concept of power intact (see section III). By contrast, Luhmann has attempted to dissociate the media concept completely from any analogy to money, formulating it strictly in terms of communication theory. With some help from the new systems-theoretical wonder-weapon, the concept of autopoiesis, Luhmann creates the grounds for building a highly elaborate theory of money, which he explicitly contrasts to any understanding of the economy organized around the concept of labour (see section IV). This is why Luhmann's concept of money is suited for a confrontation with that of Marx, which can be seen as the attempt to understand money as an objectivization of social relations conditioned by a specific form of social labour. I will conclude with, at least, the sketch of such a confrontation (see section V).

II Parsons: all dollars are 'created free and equal'[2]

Parsons developed the concept of symbolically generalized media of interaction (or communication), first by taking money to be such a medium, then by constructing other media in analogy to money. In this, he followed his general concept of social systems, according to which any social system has to solve four functional problems to ensure its continued existence: adaptation, goal attainment, integration, and latent pattern maintenance. The resulting so-called AGIL-scheme is extended – in the context of interest here – by taking four social sub-systems to correspond to the four functional problems, each of the subsystems being specialized to deal with one of the problems: the economy takes care of the adaptation of society to its environment; the polity sees to it that social goals are attained; integration is achieved by law and social control; the latent-pattern-maintenance subsystem is the locus of establishing cultural and motivational commitments to social values. This construction is complemented by the theory of media, insofar as a medium is ascribed to each subsystem to form and govern intra- and inter-systemic exchange processes.[3]

The mode of operation of such a medium is observable with money, which is associated with the economic subsystem, of course. The other media, power for the polity, influence for the integrative, and commitment to values for the latency subsystem, are then constructed by Parsons in pursuit of his obsession with four-field cross-tabulation.[4]

Filling those empty theoretical boxes by relying on a money-analogy is made convenient by a specific view of money which, of

course, is the point of interest here: for Parsons, money is 'essentially a "symbolic" phenomenon and hence . . . its analysis required a frame of reference closer to that of linguistics than of technology' (Parsons 1967:345f.).

The possibility of understanding money on the same level as the other media is tied to its quality as a symbol. As the reference to linguistics indicates, all media are to be understood in terms of symbol formation in language. What, then, is a symbol for Parsons? How does he arrive at the strange term 'symbolically generalized medium'?

For Parsons, drawing originally on behaviouristic theories of learning, symbolization and generalization are closely connected.[5] Symbols are signs evolving in the context of human action, which – therein lies their generalization – can be used independently of specific situations. It is arguable whether symbols are not always 'generalized', whether generalization is not always tied to symbolization, in short, whether Parsons' terminology is not pleonastic. But be that as it may, for Parsons symbolization and generalization are presuppositions of human communication which somehow consists in the ability to abstract 'meaning' from particular situations and to transport it into other situations. Symbols are thus something like means of transport of meaning. While this is not very clear, it is even more difficult to clarify what Parsons means by a medium. He asserts that a certain co-ordination is always required between subsystems. It is achieved by media whose most important property is the capacity to cross system boundaries, thus accomplishing 'interchanges' (cf. Parsons 1978:394f.). However, it remains unclear what qualities of the media enable them to perform this co-ordination-function.

Back to money. In what sense is it symbolically generalized, in what ways is it a medium? For Parsons, money 'is symbolic in that, though measuring and thus "standing for" economic value or utility, it does not itself possess utility in the primary consumption sense – it has no "value in use" but only "in exchange", that is for possession of things having utility' (Parsons 1967:306). That money is generalized (in the sense explained above) is evident: money functions in a manifold of different situations. (One could even nurture the idea that money has definitional power for almost any social situation: given a sufficient offer of money, one does succeed to settle the most unlikely problems or structure the most unlikely situations). That money is a medium, is common knowledge in the economic tradition.[6]

Let us further interrogate the Parsonian position. Money is taken to be a symbol, because it is not itself useful. Nonetheless, it can be used as 'measuring and standing for' utility (= value). It also serves

as a means to acquire useful things in exchange. Apart from the idiosyncratic notion of value used by Parsons, which amounts to falling back[7] even behind the insights of the early theory of marginal utility, it is remarkable that Parsons argues for money being a symbol not merely by referring to its capacity of 'standing for' useful things, but also by drawing on its quite different functions as a measure of value and a means of exchange. It is not controversial that money as a symbol 'stands for' something, some properties of objects of exchange or some social relations between agents of exchange. In this sense, money as a symbol can be thought of in the same way as, for example, a king's crown which 'stands for' certain relations of domination. However, it is arguable whether money is a symbol of value, if value is identified with utility. Furthermore, it seems inappropriate to lump together the property of money as a symbol with functions of money which, on closer look, appear to be inconsistent with that property. Can a symbol measure that which it symbolizes? Can a symbol be a means of acquisition for that which it symbolizes? If these questions are answered negatively, the measure of value and means of exchange functions would distinguish money from other symbols to an extent which renders the term 'symbol' quite inadequate for characterizing money.

To illustrate my doubts: for example, in what sense would a wooden yardstick, an instrument to measure the quality 'length', be a symbol of length? An instrument of measurement either shares or allows one to reconstruct the quality which it is to measure. If we apply this consideration to the function of money as a measure of value, we see that, in such a function, money has to share (or allow for the reconstruction of) the value-property of exchange objects. According to Parsons' notion of value, money would have to be useful (or somehow allow for the reconstruction of utility). This requirement contradicts the property of money as a symbol, as defined by Parsons. A similar consideration holds as to the possibility of a symbol functioning as a means of acquiring that which it symbolizes: it is as if the possessor of the crown, to stick with the example from above, automatically were the king. In general, we are inclined to categorize such social practices – they do exist, without doubt – under the heading of fetishism. Of course, anybody is free to say, when considering such social practices, that the crown is still nothing but a symbol. But, at least, it is noticeably a symbol of a very specific type: it conveys a social position to its holder which normally – that is, without the support of a specific – and somewhat archaic – belief system – can be held only if a whole set of institutional requirements are satisfied. For example, someone becomes the king only if questions of legitimacy are

settled, not just because he snatched the crown. But if money were merely a symbol but nevertheless functioned as a means of exchange, that is, as a means to acquire objects of value, its use would amount to something quite similar to becoming king by snatching the crown. It seems remarkable that Parsons does not even notice the peculiarity of such social practices. His simple designation of money as a 'symbol' is apt to obscure the specific properties of money which distinguish it from other symbols in quite radical ways.

Parsons' assertions that money symbolizes value (in exchange) and that value is utility are remarkable in yet another way. By lumping together money, value, and utility in this manner, he is prone to neglect the social phenomenon of the 'orientation to pecuniary acquisition for its own sake' (Weber 1947:159). To explain its conditions and consequences has traditionally been a focal point for sociological theories of capitalism. By tying money, as a symbol, to value and value to utility, Parsons systematically obscures the historically all-important fact that 'pecuniary acquisition for its own sake' came to dominate over orientation towards use values. In Marx's terms, the chain of actions 'selling in order to buy' (C-M-C) is the precondition, but not a restriction for its inversion, 'buying in order to sell' (M-C-M). The inversion implies, and here Marx and Weber would agree, that its motive is 'the limitless addiction to enrich oneself' (Marx). This 'addiction' is not reducible to a prolongation of a chain of means and ends which can ultimately still be bounded by motives of utility.

Thus, Parsons' assertion that money is a symbol because it stands for value without having value, value being but another name for utility, leads him to a view of money as a harmless social device,[8] to an underestimation of the dynamics of profit making. But even granted that much, grave explanatory difficulties remain.

The question is how to make the use of money understandable at all. Goods have their value because of their usefulness. By contrast, money is qua symbol not useful (in relation to subjective-individual needs). Why, then, would any half-way rational *homo oeconomicus* accept money in exchange for goods? Parsons suggests that the absence of utility in money is balanced by the fact that it 'gives the recipient four important degrees of freedom in his participation in the total exchange system': first, he is free in what he wants to buy; second he is free to choose from whom to buy; third, he is free to choose the time when to buy; fourth, he is free to accept or reject the condition under which to buy (cf. Parsons 1967:307).

As is so often the case, this type of argument serves only to circumvent the problem: these so-called degrees of freedom for the recipient of money exist only if he can be reasonably certain that a

sufficient number of others will accept money, too. The acceptance of valueless money is not explained by generalizing the expectation that others will accept it. That each accepts because he counts on the others to accept, too, is not an explanation. It looks more like a description of a sort of collective madness.[9]

The recipient of money can take his time, choose objects, partners, and conditions only if an asymmetry between money and commodities exists which privileges money. It is this asymmetry which has to be explained. Evidently, this is one of the main difficulties in monetary theory.[10] It is all the more formidable if one holds, with Parsons, that money is only a symbol of value, thus in itself valueless. By contrast, if one starts from an assumed equivalence of commodities and money, there is less of a problem of explaining the acceptance of money, but still a problem of explaining the asymmetry between money and commodities (for example, in terms of agents' liquidity preference à la Keynes).

However that may be, Parsons mentions the problem of the acceptance of money only as the other side of the agents' gain of additional degrees of freedom, forgetting that this gain already was taken to compensate (in the minds of our halfway rational *homines oeconomici*) for the valuelessness of money: 'The other side of the gain in degrees of freedom is of course the risk involved in the probabilities of the acceptance of money by others and of the stability of its value' (ibid.).[11] The best one can say, therefore, is that Parsons postulates a kind of balance between the risks and the gains involved in the use of money. But beyond such a postulate, Parsons offers no explanation of the functioning of money, especially none in terms of the perspectives of agents. As usual, the last resort for making plausible the acceptance of valueless money consists in referring to 'a certain institutionalized confidence in the monetary system' (Parsons, 1967:307). This appeal to confidence has as much explanatory value as saying that credit comes from *credere*. That Parsons invokes the political system for maintaining such confidence (cf. Parsons/Smelser 1956:56) merely shifts the problem from economics to politics.

The reference to confidence as a prerequisite for the functioning of the symbol 'money' is, systematically, the final point of Parsons' argument on money. Apart from making use of the economic tradition in determining the functions of money (measure of value, medium of exchange), Parsons appears to be concerned more with listing the desiderata of a well-functioning money than with explaining how money as a symbol developed, how its use was institutionalized, how confidence in it can be maintained, etc. Considering that Parsons would rely on a linguistic frame of reference when devizing such explanations,[12] it is tempting to infer

that Parsons is looking for an analogy between language and money.

Both Habermas and Luhmann rely explicitly on such an analogy. However, it is an open question, whether this is really fruitful. Can the emergence of the symbolically generalized medium of money be understood in analogy to the emergence of words as linguistic symbols? Does it help our understanding of money to look for parallels to the development and formation of signs in patterns of signifying action, their objectivization in writing?[13] Everybody seems to think in terms of such an analogy, but for some it is less comforting than for others. Habermas has argued against the assumption that 'arbitrary regulative media could be differentiated out of language', since 'the structure of language itself (subjects) this process to constraints' (Habermas 1981:S.391).

III Habermas: money vs the life-world

In his critical appraisal of Parsons' theory of media, Habermas does not go so far as to reject the language-analogy completely.[14] Rather, Habermas wants to both use and limit the Parsonian concept of symbolically generalized media. Eliminating confidence and value commitment (because they belong to the domain of the 'life-world') Habermas considers only money and power as media. Money and power belong to and stand for the societal subsystems of the economy and the polity. These systems produce social-pathological consequences by expanding into the domains of the life-world in a process of 'colonization'.

According to Habermas, the real process of colonization of the life-world is replicated in the realm of theory. He accuses Parsons and social-systems-theory in toto of an imperialism which neglects the difference between social integration and system integration, thus reducing 'intersubjectivity . . . to mechanisms such as exchange and organization' (Habermas 1981:384). Systems-theory is blamed for illegitimately 'intruding into the inner domains of the theory of communicative action' (ibid.). It bothers Habermas that 'Parsons wants to reduce the integrative effects of language communication itself to exchange mechanisms' (ibid.). Thus, with respect to the relation between language and money the objection seems to be not so much that Parsons sees in money an analogy to language, but rather that he implicitly sees in language an analogy to money.

For our present purposes, Habermas' restaging of the romance 'Gemeinschaft vs Gesellschaft' under the new title 'life-world vs system' is only interesting for the way in which he uses and modifies Parsons' theory of media, and more specifically, that of

money in his representation of the system-world. Overall, Habermas seems to accept Parsons' formulation of requirements for the functioning of money not as just that, but rather as a valid description of the way money really works. This allows Habermas to dramatize the conflict between the Don Quixote of the life-world and the windmills of the system all the more effectively: it is money which makes the windmills turn with the frictionless mercilessness which can only increase our sympathy for the poor, brave knight. At the same time, Habermas wants to reduce the scope of the media concept by demonstrating 'that only the functional realms of material reproduction can be differentiated out of the life-world by means of regulative media' (Habermas 1981:391). Beyond those realms, in those 'domains of life, in which primarily functions of cultural reproduction, of social integration and socialization are performed', Habermas holds 'that consensuality (Verständigung) as the mechanism of action coordination may well be expanded by communication technology, mediated and rationalized organizationally, but cannot be replaced by media and thus turned into a technical issue' (Habermas 1981:400).

Habermas' real motive is best understood if one reads 'should not' instead of 'cannot' in the above sentence. But since he wants to be a good value-free social scientist and not a moralist, he holds that money and power 'cannot' replace consensuality in certain domains of human life. This requires some demonstration that there are indeed limits to the use of media as means of action coordination and that these limits coincide with those of the realms of material reproduction. In simpler words, the contention is that money can buy bread, butter and shot-guns, but not love, grace and honour. This type of argument has always been a consolation for those who could not even buy bread, butter, let alone shot-guns. But it is hard to believe, unless you are the proverbial poor little rich girl.

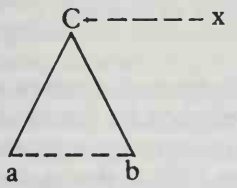
Habermas increases the difficulties involved in his intended demonstration by sharing some Parsonian presuppositions: 'The exchange between systems and their environment as well as the exchange between functionally specified units within a system must . . . take place via some kind of media' (Habermas 1981:388). The use of media thus appears as a sort of natural law. Furthermore, Habermas holds it to be obvious 'that, for action systems, language communication represents such a medium, from which special languages like money or power borrow their structure' (ibid.). In other words: language is a medium. Since money and power are media, money and power are special languages.

Whatever one may think of such arguments, given Habermas' distinction between system and life-world, it would be much easier for his purposes to reserve language (not communication) as a

'medium' for the life-world and obtain a sharper contrast to money by simply not taking it to be a 'special language'. The way Habermas has laid out things for himself damages the plausibility of his argument. On the one hand, he asserts that the 'money-medium replaces language communication in specific situations and specific respects; this substitution decreases the amount of interpretational effort as well as the risk of not achieving consensuality' (Habermas 1981:391f.). On the other hand, 'language also serves as a model for the media . . . Some characteristics are imitated by the regulative media, for example, the symbolic embodiment of semantic contents or the structure of claim and fulfilment' (Habermas 1981:392f.). Nonetheless, 'regulative media are not to be understood as a functional specification of language' (ibid.), since the 'switch in action coordination from language to regulative media implies a dissociation of interaction from life-world contexts as such' (Habermas 1981:394). Thus, money is to be a 'special language', but not a 'functional specification of language'? Conceptual dismay seems to be the inevitable result of reifying the system-life-world distinction on the one hand, and of asserting the money-language-analogy on the other.

However that may be, let us proceed to examine the content of Habermas' concept of money. In a way, Habermas tries to concretize the language-analogy as proposed by Parsons. Money is to have 'the properties of a code with the help of which informations can be transferred from sender to receiver' (Habermas 1981:395). On first sight, drawing on the 'code–message', 'sender–receiver' terminology appears to be quite plausible. To see this, we have to give a little more flesh to the idea than we can find in Habermas.

Minimally, a code can be understood as a set of constraints and a set of rules, subject to which 'messages' may be constructed. The following is a simple diagram of a simple communication system (cf. Wilden 1980:496):



C – locus of the code
a,b – senders – receivers as mediated by the code
a–b – message-channel
C–a, C–b – coding channels
x – reference object in an environment.

If C is money, C–a and C–b mean that a and b express their messages (a–b) in money. It is contingent what they will express in this way (for example: 'Give me a tax reduction and I will give you

500 . . . marks for your next election campaign'), because the code is used to express references to the open environment of the communication system, to needs, utilities, production requirements, other agents, etc.

Without going into further details, the simple model of mediation by coding in a communication system should suffice to indicate one point, namely, that it is undercomplex with regard to the factual uses of money. The point is not that the model is too simple. There is no harm in starting with a simple model. The point is that the model depicts solely the communication aspect of monetary transactions. However, the latter as a rule involve more than communication. Selling and buying, the standard uses of money, consist not only of formulating offer and demand messages by referring to the money code. Selling and buying involve effective transfers of goods, changes of possession of goods on the one hand, and money (–'tokens') on the other. When 'a' buys a cow from 'b' for the price of $200, there is something quite different and more complex going on than when 'a' sends 'b' the message: what a nice cow you have. So the best one can say for Habermas' attempt to concretize the language-analogy as applied to money by referring to code-message-, sender-receiver-models is that such models may help clarify the communication aspect of the use of money. But to achieve such clarification, someone would have to really work out a model of monetary communication. Perhaps such an exercise is too trivial for grand theorists?

At least, the exercise could have helped to avoid some obscurities and confusions like the following one.

> [The] money-medium allows for the generation and mediation of symbolic expressions with a built in preference structure. They can inform the receiver of an offer and move him to accept the offer. However, since this acceptance must not rest on an affirmative response to a criticizable claim to validity, but rather comes about according to an automatism independent of processes of consensus formation, the media code is applicable only . . . in a well delimited class of standard situations. (Habermas 1981:395)

Evidently, this argument is motivated by Habermas' attempt to establish a difference between consensuality reached by the use of money and consensuality reached by the use of language pure and simple. Certainly, such a difference exists, but I think that it does not exist in the way Habermas indicates. To start with: what in the world are 'symbolic expressions with a built in preference structure'? Apparently, what Habermas tries to say is that (cet.par.) for the spender less money is better than more money, and vice

versa for the receiver. But if that is so, why should the offer and acceptance of a monetary payment come about according 'to an automatism independent of processes of consensus formation'? If to have more money is better than to have less for everybody, then any monetary exchange involves a conflict of interests which has to be settled before it can be completed. Obviously, hardly anybody would try to bargain when buying the newspaper in the morning. But is this economizing of communicative effort in everyday routine small-scale transactions really the important, specific function of money; the one in need of explanation? It is easy to think of other aspects of the use of money which are less trivial. How come things have a price? How come that the giving of some rather elaborately imprinted pieces of paper can induce the change of ownership of almost anything? And that this change of ownership does not only imply a change of legal claims, but entails effective use and consumption?[15]

Habermas is not interested in this aspect of the 'media-code'. He is preoccupied by the task of distinguishing it from language in order to reinforce the system/lifeworld-distinction. He asserts that money can only be used in standard situations involving the exchange of goods, where agents pursue their economic interests, operating in terms of utility and maintaining an 'objectifying attitude' towards the respective situation (cf. Habermas 1981:395f.). Now, while it is an old and familiar observation that market behaviour is characterized by an objective, depersonalized orientation, it is something quite different to assert that the use of money is restricted to such a context. If that were true, preachers could no longer pass around the money bag in church and prostitution would be non-existent, at least as long as participants could not on request produce an optimization calculus with reference to utility as a 'generalized value'.

Such examples of situations in which the 'money code' is used show that its applicability is not at all restricted in the way Habermas wants us to believe. Whether one finds this to be good or bad, there are hardly any social relations which are protected against the subsumption under this code. Observing this is not the same as asserting that this subsumption may not generate 'social-pathological consequences' – a point which Habermas stresses *uni sono* with centuries of literature on money. But Habermas is unable to articulate this point in a consistent way. One cannot use a 'catch-all'-category like utility[16] as well as limit its applicability. Only in Habermas' nicely divided world are there social realms (standard situations) in which money is used and the orientation towards utility as a generalized 'value' is dominant, and other social realms (or situations), in which money is not only absent, but where it

cannot replace spoken language as a way of consensus formation.

To pursue Habermas' intention it seems to be more promising to demonstrate the restrictedness of the money-code by resorting to the traditional critiques of utilitarianism. As Parsons (1937) has argued, even the most rational, most instrumental action cannot be sufficiently described without reference to social norms which, in turn, cannot be based on the utilitarian calculus. Pursuing such a theoretical strategy would have protected Habermas from reifying analytical distinctions, most prominently the distinction between system and life-world. It makes no sense to view them as if they were separate social realms. Rather, these categories designate different approaches to analyse action situations, aspects of one and the same 'Realobjekt': if somebody donates money in church, this is hardly explicable without reference to the life-world context, whereas in a system-context it may be of interest to ask how the manifestation of religious belief can be associated with the operation of the money-code.

However, Habermas' attempt to limit the applicability of the money-code, using implicitly normative criteria to describe what is to be meant by 'utility', is interesting in one further respect: as with Parsons, money is reduced to a harmless social device. Habermas, too, does not take seriously the phenomenon of the 'pecuniary acquisition for its own sake', inasfar as he repeats Parsons' assertion that the use of money implies an orientation towards utility as a 'generalized value'. Consequently, the dominant action pattern founded on the institution of money, enrichment for enrichment's sake, disappears. Along with it, the core dynamic force of capitalism vanishes from the stage of Habermas' world. Behind the scene, the vulgar-neoclassical doctrine of consumers' sovereignty is lurking as the last word on the specificity of 'modern' economies.[17]

To conclude the discussion of Habermas' concept of money, let us take up one more issue. Just like Parsons and Luhmann (cf. 1981:154), Habermas puts great weight on the statement that money has no value: 'Money is neither a commodity, nor a factor of production; it symbolizes value quantities, but, as a medium, it has no intrinsic value' (Habermas 1981:397). Descriptively, insofar as one refers to the money-'tokens' normally circulating in modern societies, this is correct. Nonetheless, such a view of money is too simple.

In criticizing Parsons' for 'over-generalizing' the media-concept, Habermas himself points out that a symbolically generalized medium has to be of a nature which allows it 'to be measured, . . . alienated in arbitrary quantities, and . . . stored' (Habermas 1981:S.396). Media must be able to circulate and 'to embody measurable value quantities to which all participants can –

independently of special contexts – refer as an objective quantity' (Habermas 1981:397). In designating these properties, Habermas prepares his conclusion that 'influence' and 'commitment', constructed as media by Parsons, cannot really be considered as media since they do not possess the requisite properties.[18] But let us leave this issue aside. Are these requirements for the functioning of money as a medium reconcilable with Habermas' assertion that money as a symbol has no value, an assertion which in turn provides the rationale for interpreting money as a 'special language'? How can something have no value, but nonetheless 'embody value-quantities symbolically', which can be measured and can circulate?

In answering this question, it is not sufficient to resort to the analogy between language and money. To be sure, one may say that spoken words or sentences find a 'symbolic embodiment' in writing. As the German proverb has it: *was man schwarz auf weiß besitzt, kann man getrost nach Hause tragen*. But is anything 'measured' by the secondary coding of the language-code in writing? Or, to top that, is the semantic content of the spoken sentence reduced to a one-dimensional mapping when it is written down? Or would anybody dream of exchanging such semantic content against its mapping as a number, printed on a piece of paper?

In short, things are happening when money is used which do not happen when language is used, but in quite different ways than those proposed by Habermas. His ambiguous language-analogy is ill-chosen, because on its grounds the excess properties of the money-medium over the language-medium cannot be explained. More so, they even remain invisible, despite their manifest social relevance. The most decisive of these properties is that disposition over money is the precondition for access to social wealth. Whether one has money, depends in turn on property relations, etc. Those who don't have money or property which can be turned into money, must either work (which, if they have no means to work with, means work for others) or turn criminal[19]. By contrast, one cannot in a like manner be excluded from participation in the semantic wealth of language. Communication by speech cannot be made contingent on the fulfilment of imposed conditions.

As soon as money is seen as a means to control the access to social wealth, it is implicitly related to the activities of producing such social wealth. The relations are quite intricate, however. On a first level, it is easy to imagine a simple world without money, where access to wealth depends on labour, on the activities to bring forth wealth in a direct way. On a second level, one can imagine a complex world by introducing a social division of labour and money to allow for more differentiated, more productive activities while

easing problems of co-ordination. Money mediates the exchange between the diverse products of privately operating producers. On a third level, one can imagine a world (looking much like the one we live in) where money is used not just as a means to control the access to wealth but as a means to control the activities to bring forth wealth, to control labour. Given such a world, which seems to lie beyond the horizons of the sociological imagination, the members of society divide into two classes: one class for whose members their own labour becomes a means to acquire money to gain access to a share of social wealth, and the other class for whose members their own money becomes a means to control the labour of others to gain more money.

Parsons and Habermas do not see or prefer not to spell out this simple consequence of the use of money. Luhmann comes at least close to recognizing the function of money to control labour. But Luhmann's analysis, too, is placed in the frame of reference of language and action-co-ordination. My contention – obviously resting on an all too close involvement with Marxian thoughts – is that (a) the insufficiency of the analogy between language and money is rooted in the fact that it prevents the recognition of money as a thing, a token, at least, and that (b) the significance of this quality can be more adequately clarified referring to a context of work and production of social wealth rather than to a context of language and action-coordination. Let us see whether the discussion of Luhmann's concept of money can strengthen this contention.

IV Luhmann: payment for autopoiesis

In his recent writings on money and economic sociology, Luhmann (cf. 1983, 1984) has moved further away from the Parsonian framework than has Habermas, both with respect to his system- as well as to his media-concept. Earlier, Luhmann (cf. 1972:196f.) had already tried to dissociate the media-concept from the analogy to money. Now, he also proposes to switch the framework of the theory of social systems from the input-output orientation dominant in Parsons to one which focuses on the concept of autopoiesis:

> Autopoietical systems are closed systems insofar as they cannot take out of their environment whatever they use as units for their own reproduction (that is, their elements, their processes, themselves). They are, nonetheless, open systems insofar as they can accomplish this self-reproduction only in an environment and in difference to an environment. (Luhmann 1984:311)[20]

In contrast to the input-output-approach which focuses on the boundary-crossing processes (and where the media have one, if not

their most important function in mediating 'boundary interchanges'), Luhmann stresses the aspect of self-referential closedness in his systems-analysis. Considering societal reproduction in traditional terms, this approach appears to be rather implausible (cf. Ganßmann 1986). However, it gains plausibility to the extent that it makes sense to consider social systems as pure communication systems, as Luhmann proposes.

With regard to the economy, this means: 'Neither the resources in question nor the psychic states of the persons involved are elements or components of the system . . . system formation takes place exclusively on the level of communicative events' (Luhmann 1983:153). An immediate consequence of this conceptualization is that the economy and economic actions are not primarily identifiable via specific action patterns, especially not those which would result in the material reproduction of society. Rather, the distinction of the economy as a subsystem of society must be accomplished in Luhmann's framework by designating a specific theme of communication, which is problematic and stable enough to form the basis for the differentiation of a subsystem. In specifying such a theme, Luhmann, too, draws on the source of neoclassical thought by referring to the axiom of scarcity: people must 'reach an understanding about the access to scarce goods' (Luhmann 1983:154).[21]

However, in contrast to the naturalism and the suppression of money in the neoclassical mainstream, Luhmann seeks to complement the scarcity-postulate in two respects. First, he does not hold that scarcity is a natural condition of human existence. 'The social problem of the present suffering under the scarcity which others cause is the reference problem of the economy' (Luhmann 1984:317). In other words, scarcity emerges in a social context.[22] Secondly, Luhmann immediately links scarcity as the theme of communication in the economic system to a specific form of communication, the use of money: 'The differentiation of a specific functional subsystem is only initiated, however, by the communication-medium of money due to the fact that a distinct kind of communicative action can be systemized with the help of money, namely, payments' (Luhmann 1983:154).

Given the installation of the money-code – however it came about – the economy can be characterized as a communication-system based on two 'scarcity-languages: that of goods and that of money'. (Luhmann 1984:310) Both languages articulate with each other when 'efforts' are paid for. 'The structure of the economy consists of the conditioning of this operative constellation. The scarcity of goods can only be decreased, because a second scarcity, a buffer-scarcity so to speak, has been set up beside it' (ibid).

In other words, the access to scarce goods is feasible for participants in the economic system, because in paying their price they deposit a sum of money at the place left empty by the goods. The money paid is equally scarce, being part of a limited total. A 'duplication of scarcity' is in this way generated artificially, so to speak (by the state or by the banking system?). For this communication-system with two 'scarcity-languages', it follows that 'payment is the "unit act" of the economy' (Luhmann 1984:312). A payment is always made with something that is scarce for something that is scarce.

Obviously, pointing out that money is scarce is neither sufficient to explain why a money-payment induces people to tolerate the appropriation of wealth by others, nor to explain the acceptability of money, since the mapping of the socially generated scarcity of goods into an equally scarce medium does not explain why agents will want to hold the medium rather than the goods. But while Luhmann shares this problem with Parsons and Habermas, his approach of concentrating on 'payments' has several advantages.

First, the idea of money as a code on which Luhmann relies, too, is more plausible: payment as the 'unit-act' actualizes money as the 'code'. The code maps the scarcity of goods in its own scarcity via prices. In this way, Luhmann can distinguish one type of action as specifically economic, without bothering with the 'other-reference' of payments (the questions of who pays and for what). Whenever money is used, payments are made, economic action takes place. Thus, Luhmann can spare himself the exercise of singling out a 'standard situation' to which the use of the money-code is restricted.

Secondly, Luhmann can deal with the problem of the information deficits occurring in the use of money because of its one-dimensionality.[23] The money-code maps a multidimensional 'space' of commodities into one dimension. This raises the problem of how the implied loss of information can be handled, how the economy can function solely by using the 'language of prices' (Luhmann 1983:165). With this question, Luhmann gains a critical perspective, in which he can discuss the blindness of the economic system for the negative effects it produces in its environment. Only what can be expressed in the 'language of prices' will appear on the 'monitoring screens' of the system, and that is not enough, for example given non-renewable resources (Luhmann 1983:167f.).

Thirdly, Luhmann has no problems to integrate the phenomenon of the 'orientation to pecuniary acquisition for its own sake' into his framework, in contrast to Parsons and Habermas. With Luhmann, the unlimited drive to enrich oneself appears as a quite 'natural' evolutionary result of the use of money, once payments are

regarded as the autopoietical elements of the economic system. 'Payments have all the properties of an autopoietical element: They are possible only because of payments and, in the recursive context of the autopoiesis of the economy, they have no other meaning than to allow for payments' (Luhmann 1984:312). Agents will act on a par with such a system only if they incorporate making profits into their action repertoire: once he 'who pays gains payment-possibilities' (Luhmann 1984:314), the system meaning of payments for payments has been reflexively expanded and adopted by agents.

Fourthly and finally, Luhmann at least indicates, if only vaguely, that there is a function of money, which one may call its exclusion function, namely, that money is the sole key for the access to social wealth: 'Prices prevent buying', says Luhmann (1983:157), meaning that any price fixes the difference between those who hold enough money to buy and those who cannot buy.

It would be possible to link this function of prices, their blocking the access to wealth, to the ordering capacities of payments which Luhmann mentions: an economic system differentiated by means of the communication-medium of money will order 'non-paying behaviour, for example, work . . . via payments' (Luhmann 1983:154). Here, only a thin layer separates Luhmann from the trivial but neglected insight that those who cannot pay must acquire money, and that the standard way to acquire money is to work for those who already have it.[24] But this thin layer, under which money (as money-capital) would become recognizable as a means of domination, is not penetrated by Luhmann,[25] who remains as agnostic in this respect as did Parsons and the new champion of 'critical theory', Habermas.

Let's ask why this is so. I think that the blindness of the recent sociological teachings on money to the function of money as a means of domination has its roots – remember von Wiese's curse – in a specific conception of its object of inquiry, and in a particular perspective in which the realm of the social is viewed. The perspective can be best characterized by referring to Parsons' notion of a hierarchy of cybernetic control. The specific object-constitution can be, polemically, characterized as follows: in the sociological theories considered the term 'to act' is merely a metaphor for 'to speak'.[26]

In his writings of the 60s and 70s, Parsons dissolved the symmetry of the four system functions of the AGIL-scheme by introducing the idea of a hierarchy of cybernetical control. It means that systems using more information and less energy control those systems which use less information and more energy (like the electronic control system of a modern washing machine regulates the water flow, energy input, motor, etc.). The AGIL-scheme thus

turns into the LIGA-scheme, meaning for the primary social subsystems: the latent-pattern-maintenance-system (L), in which cultural values are actualized, controls the integration-system (I), which, in turn, controls the polity (P), which, in turn, controls the economy (A). In the opposite direction, there is a hierarchy of 'conditions', which is conceived, in connection with the doctrine of 'emergence', such that 'high-information'-systems rest evolutionarily on 'high-energy'-systems as their necessary, but not sufficient conditions (Parsons 1966:28f.). According to Parsons, the hierarchy of cybernetic control works in such a way that, 'in moving downward, the control of more and more necessary conditions allows for the implementation of patterns, plans or programs' (ibid.).

This idea of cybernetic control, like the four-function-scheme itself, can be applied to all system levels and is associated with an explanatory objective which, stated briefly, is contained in the formula: if I know the mode of control, I also have sufficient knowledge of whatever is happening on the level of the controlled system (or unit, or element). In short, the explanatory perspective is one which takes the view from the top, looking down on lower levels. Applied to the theory of media, insofar as they are conceived as codes of control, this implies: if I know the modus operandi of the respective code, I also have sufficient knowledge of whatever is happening in the controlled subsystem.

Let us leave Parsons and return to Luhmann and the problem of money. With the idea of the cybernetic hierarchy of control in the back of our minds, it becomes evident why Luhmann tries to show that the money-code is constitutive for the economic system. Codification in money terms is the way in which order is produced. To be sure, Luhmann does not conceive of media in a way which would allow them to be identified simply and directly as codes of control. In his framework, their main task is rather to defuse the problem of the improbability of communication[27] by motivating communicative response. But, as already quoted above, Luhmann (1983:154) holds that the economic system 'orders non-paying behaviour, for example, work, the transfer of goods, exclusive use of possession, etc. via payments'. Thus, the use of money can be understood as the mode of operation of a code of control. Descriptively, this is not at all wrong.

Nonetheless, this is where Luhmann's theory has its weak spot. As a theory which finds its object purely in communication,[28] it can no longer explain any 'ordering' which reaches beyond communicative events, beyond 'speaking', into action (where I take the concept of action to be broader than that of communication to include physically identifiable agents involved in some significant

form of external object manipulation). The explanation of action would require, at least, to specify the rules of translation according to which a communication system can bring other systems in its environment to follow the goals specified in communication. For example, how are we to explain that the promise of a payment, as a purely communicative event, induces a psychic system to move the organic system associated with it into a sweat shop to operate a sewing machine for twelve hours a day?

To put it plainly, the activities of human beings are not restricted to communications. People eat, sleep, love, work, die and what not. Of course, Luhmann knows this, too.[29] But he is apparently convinced that all these activities can be sufficiently understood relying solely on their 'coding' in (or as) communication. If, as is the case with Luhmann, the mode of transforming communication into action is not specified, this implies the conviction that actions are all controlled and controllable by communication. There is no reason why this conviction must be shared. Rather, it seems to be an implication of von Wiese's curse. It is one thing to maintain that it is only through communication that we have cognitive access to what happens in society or in the economy. But it is another thing to maintain that all that happens there, as far as social science is concerned, is communication.

V Lost insights

To conclude, let us turn to an aspect of Luhmann's theory of money not mentioned so far, namely, that he connects it to an 'ongoing other-reference' to Marxism. He argues against the centrality of the concept of labour in classical political economy and in the 'theory of dialectical materialism', the latter 'being seductive in raising expectations of synthesis and corresponding efforts, without having clarified the function of money in the context of economy and society' (Luhmann 1984:309). By contrast, Luhmann's 'deliberations are directed toward substituting . . . the concept of the coding of communication for the factor of labour' (Luhmann 1984:310). The modern economy must be understood starting from money; labour can be 'taken into account only as co-operation in the (money-oriented) production of commodities' (Luhmann 1984:309).

This argument is not precise enough. Whatever one may think of Marx's theory of money — there are problems there — Luhmann should have given Marx credit at least for the attempt to clarify 'the function of money in the context of economy and society'. Luhmann's real objection against Marx is that Marx attempted such a clarification starting from labour. The Marxian use of the

labour concept as the basic category of social theory is completely unacceptable for Luhmann (as well as for Habermas and Parsons). In Luhmann's framework, an analogous role is played by the concept of communication. Consequently, money is seen in the frame of reference of communication in one, in the frame of reference of social labour in the other theory. The question with regard to both theoretical approaches should not be whether one is right and the other wrong, but what are the blind-spots resulting in the alternative frames of reference?

In that respect, and in conclusion, comparing Marx on the one hand, Parsons, Habermas and Luhmann on the other hand, I want to discuss three issues. The first issue concerns Luhmann's claim that Marx systematically overlooks the symbolic quality and communicative aspects of money because he sticks too tightly to the 'social labour'-frame-of-reference. The second issue concerns the link between money and domination. Why do Parsons, Habermas and Luhmann more or less try to 'explain away' the role of money in relations of domination when that role is so plain to see, with or without Marx? The third issue concerns the social importance of money in general. The marginality of the money problem in the sociological theories discussed seems to be the outcome of a conceptual allocation of the respective symbolically generalized media of communication on a level of equal importance such that they correspond to societal subsystems of (roughly) parallel significance for the functioning of the social system as a whole. By contrast, Marx critically emphasized the dominating role of money, its emergence as a substitute for all sorts of traditional links between individuals. Since all three issues are closely interconnected, I will not deal with them one by one.

Marx' blind-spot certainly is not, as Luhmann holds, that money is neglected because of a preoccupation with labour. With his concept of value based on labour, Marx wanted to show that money is a specific expression of the social form of labour characteristic for capitalism. For Marx, money is 'derived' from the value form of labour products; it is, to start with, itself a commodity, albeit a specific one, insofar as it serves other commodities as the means of externally presenting their values. Money is the universal equivalent of all commodities and, as such, its natural form (assumed for simplicity to be gold) is the form of appearance of value, whose substance, in turn, is abstract human labour. That Marx establishes this connection between money and (abstract) labour does not prevent him in any way to fully take into account the role of money in a capitalist economy. Quite the contrary. Money, as the primary form of capital, takes centre stage in large parts of Marx's theory. As capital, the role of money as a means of domination is

established without much theoretical ado. All those who have nothing else to sell can sell the disposition over their capacity to work to a money-owner. For the money acquired as wages, workers gain access to a share of social wealth, but they loose disposition over their labour-power for specified times. They have to obey orders or face the chance of being fired – normally with a subsequent radical decrease in consumption possibilities impending.

Thus, Marx – with his reference to social labour – does not have the difficulties which Parsons, Habermas and Luhmann[30] seem to have in underlining the simple role of money in a quite transparent relation of domination. Nonetheless, the problems concerning Marx's concept of money seem to have to do precisely with the way in which the link from money to social labour is established.

For Marx, money, at least in its basic simple form as a commodity, is a product of labour. This notion, at odds with everyday experience already in Marx' times, appears to be obsolete nowadays. After the official abolishment of dollar convertibility in 1973, all ties of the modern international monetary system to gold as the money commodity appear to be cut. And obviously, the coins and notes we use as money do not have any intrinsic value. They are useless outside the specific social context in which they are recognized as money. So why not free the Marxian theory of the unnecessary burden of a concept of commodity-money which is in turn due to the need to establish a link between social labour and money? It would be far beyond the scope of this paper to discuss this question adequately in terms of the overall lay-out of Marx's theory of money (including the sketches of a theory of credit money in vol. 3 of 'Capital') as well as in terms of the centrality of the concept of social labour for the whole theory and the repercussions of dropping it, if only for a part of the theory.

For the sake of brevity, I would rather argue that what appears to be a blind-spot in Marx may be regarded as an advantage in terms of the blind-spots specific to the sociological theories of money discussed above. While the latter accentuate the classification of money as a symbol, they do not offer a theory of symbolic representation with respect to money.[31] When Parsons and Habermas take it for granted that money is symbolizing value, they can indeed refer to the everyday experience that we use money without value to acquire things which have value (whatever value is held to be). But neither they nor Luhmann[32] do explain why it is possible, given the social contexts in which money is used, to use symbols with such far-reaching social consequences.

As I have attempted to show, saying that money symbolizes value does not explain much. If one wants to know how money comes to play the role it plays in modern society, how it can effectively

function in its merely symbolic form, Parsons, Habermas and Luhmann do not have much to offer, because they do not see a problem in assuming that symbolic representations function in processes of communication. In these processes, symbols seem to occupy a sort of consensual domain of shared meaning. Thus, as long as no conflicting interests focus on these symbols, there does not seem to be much of a problem in assuming their acceptance, or the internalization, or even cathexis of such shared meaning.

While this location in a consensual domain may be a plausible assumption for language and the functioning of words as signs and symbols, for example, it does not make sense for money. Money, in whatever form, is the object of conflicting interests, because it guarantees the access to social wealth and because it is, on the grounds of that function, effectively used as a means of domination.

It seems that Parsons, Habermas and Luhmann have to ignore these characteristics of money if they want to maintain the idea of money as (nothing but) a symbolically generalized medium of communication.[33] In terms of theory construction (not in terms of ideological preferences), pushing money into the consensual domain occupied by symbols has the advantage of reducing the pressure to explain how these symbols can function in social conflicts, when individual, group or class interests clash.

By contrast, one can recognize the theoretical opportunity costs of maintaining that money is *more* than a symbolically generalized medium of communication. If in modern society money is primarily a means of domination, it becomes all the more necessary to explain how it can function as such in the form of symbolic representations (of itself). Such an explanation is simplified, and this I take to be the rationale of Marx's start with the proposition that money is a commodity and his assumption of gold as the money commodity, if one starts explaining the functions of money and of money-capital by referring to money as having value, not as merely a symbol of value. The various functions of money (especially the measure and store of value functions) are much easier to explain if one assumes that money shares the property of having value with the commodities against which it is exchanged. However, once one has accomplished a basic understanding of money in a simple social context, one can and must go on to explain how money can be replaced by symbols of itself.

So the problem with Marx's concept of money is not, as one could believe on first sight, that it is outdated in referring to an obsolete form of money (gold as money was obsolete in most of its uses already in Marx's time). The problem is to complete the explanation by using this simple concept as a foundation for the understanding of the functioning of modern symbolic representations of money in

a society of divided interests. One advantage of this foundation is that it serves to make the present monetary systems appear as something quite improbable and fragile. One wonders how monetary systems, which by all appearances are based largely on trust (mostly in the state and the central bank as the 'lender of last resort') can be as stable as they are. If – as experience would suggest – little occasion exists in market transactions for individuals, groups, or social classes to cooperate or trust each other, there have to be quite elaborate institutional safeguards if promises (to pay) are to be as good as gold. One disadvantage of this foundation is that the status of simple concept of money vis-à-vis its developed forms in a credit system has remained quite unclear. Many Marxists would still hold that gold money is the real thing, whereas credit institutions and the corresponding forms of money belong to the superficial world of appearances. By contrast, I would suggest that it does not make much sense to mix up a relation of conceptual derivation (even if it would resemble the historical evolution of monetary systems) with a real, actual dependence, and that it may be fruitful to think of the development of the modern monetary system in terms of an irreversible process of emergence.

But back to Parsons, Habermas and Luhmann. Underlying the differences between their concept of money as a medium of communication and the Marxian concept is a different theoretical perspective on the social world. The difference can be characterized with regard to the idea of the cybernetic hierarchy of control. In terms of this hierarchy, Marx's perspective is one from the underworlds, from a system level on which apparently more energy in the form of labour and less information is subsumed under another system level, that of capital, which involves playing on the keyboards of the 'control-code'. What, in the language of control, is dubbed 'labor as a factor of production', symmetrical to other such factors, and 'obviously included in the coding' (Luhmann 1984: 310), can be expressed quite differently in another language: here are human beings who work for others, under the command of others. Of course, the money-code does not depict them as such. Luhmann is completely correct to insist on that fact. Also, it is rather useless to protest against this subsumption of individuals under a code in the name of humanism. But what is the function of a theory of money which shows us how money is used as a symbolically generalized medium of communication, but does no longer show us that the rationale of such usage lies beyond communication in controlling the production of social wealth as a human activity? Looking at the capital-labour-relation with such a theory, one would be quite surprised by the eventuality of opposition and resistance of those who are mapped in the money-

code as the price of the 'factor' labour against their subsumption under a relation of domination.

For a theory of money which, to require the least, is open enough to include the perspective of those who work, more can be learned from Marx (and from Weber and Simmel) than from the modern sociological theories considered. However, there is the question of whether Marx's critique of money (as part of a critique of capitalist social relations), whatever its merits in terms of articulating the perspective of workers and raising the issue of social domination, isn't obsolete when this critique goes as far as demanding the abolition of money. Against such a demand, one could argue in terms of the theory of social systems, whether in Parsons' or Luhmann's version, that it is counterproductive even with respect to the goal of reducing social domination. Marx's critique is seen as simply neglecting the fact that money, as an 'evolutionary achievement', supports the differentiation of the economy as a societal subsystem. Abolishing that differentiation would imply a return to those stratificatory, hierarchical social structures of domination which, in modern societies, have largely been replaced by functionally differentiated structures.

However, along with Marx, the view of modern societies underlying this argument can be questioned. Isn't it exactly the operation of the money-code which allows for the insight that domination has merely changed form? While it seems as if post-Weberian sociology has, more or less in toto, accepted the view that hierarchical relations of domination, where they still exist, have been practically neutralized by the freedom one takes to be implied in functional differentiation, Marx, reflecting on pre-modern social relations, held that domination in 'civil society' has taken on an objective form, but is neither neutralized nor diminished.

To be sure, money is seen to offer the possibility of formal freedom, of individual emancipation by Marx, too: 'What each single individual possesses in money is the universal exchangeability, with which he himself can determine his share of social products according to his whims.' But, as Marx goes on to argue, money is power which has taken on a new form:

> Each individual holds social power in his pocket in the form of a thing. Rob the thing of its social power, and you must give this power back immediately to the person over the person . . . The ties must be organized as political, religious, etc., ones as long as the money-power is not yet the *nexus rerum et hominum*. (Marx 1953:986f.)

Thus, the question is: what happens to political, religious and other ties between individuals, once money has become the *nexus*

rerum et hominum? Is money along with other media, as Luhmann would hold, a sort of catalyst in the process of societal differentiation into more or less autonomous sub-systems? Or is it rather, as I would understand Marx, a means of social de-differentiation in the sense of expressing in concentrated form all sorts of relations of social dependence and coercion? I think it is both. The problem of many, if not most, modern sociologists appears to be that they cannot recognize the full extent in which 'the money-power' has become the '*nexus rerum et hominum*'. Maybe this has something to do with the fear that their science would be endangered by an economic theory specialized on money? But an economic theory which could render sociology redundant does not exist, or, if so, it exists only in the sociologists' definition of their situation. Nonetheless, that fear would explain the attempt to construct a theory which not only revitalizes as media the political, religious, etc., ties Marx spoke of, but also places them alongside the 'money-power' in an order of, at least, equal importance. By constrast, I find it more plausible to follow Marx in the opinion that, to a decisive extent, money has turned into or is available as a substitute for power, influence, commitment, etc.: '(I)n place of brightly coloured cohesive means of humanity' (Marx 1953:874), we now find the 'silent force of economic relations'. It is expressed with money. Ask those who don't have any.

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Notes

1 Cf. Ganßmann (1979) for an examination of neoclassical thought under the aspect of suppressing the social dimension of economic action.

2 Parsons, 1967:S.317.

3 'The primary interchange processes through which these subsystems are integrated with each other operate through generalized symbolic media' (Parsons, 1967:S.349).

4 With the older Parsons, this obsession carried him as far as placing his dear Lord (under the name of the 'telic system') as well as erogenous zones into cross-tables according to the AGIL-scheme. Cf. Parsons, 1978:382, 414.

5 'Even the most elementary orientation of action on animal levels involves signs which are at least the beginning of symbolization. This is inherent in the concept of expectation which involves some sort of "generalization" from the particularities of an immediately current stimulus-situation' (Parsons, 1951:10f.).

6 This common knowledge ends as soon as one wants to know what a medium is: it mediates, but how and between what?

7 Among economists, whatever else their differences on value theory, it is a

commonplace that value cannot be immediately identified with utility. A value theory based on the concept of utility must link the latter to that of scarcity.

8 Money, as Weber (1947:178) put it (in Parsons' translation), 'can never be merely a harmless unit of accounting or of calculation', or, more clearly, in a translation closer to the original text: Money 'is not a harmless "voucher" for unspecified use values'. That this reminder is necessary is all the more astonishing since Parsons seemed to have shared the Weberian interpretation of money and the role of profits in the 20s and 30s. Cf. Parsons, 1937:515.

9 This is exactly the explanation given by a Babylonian god banned to live on Earth in modern times, in Döblin (1984:S.316).

10 If it is a consolation for sociologists, here is what a leading economist has to say about the problem: 'There is an oddly circular characteristic in the value of fiat money – sellers are willing to accept it because other sellers are willing to accept it. However that may be, and several hundred years of speculation and empirical study have not removed the perplexity, we can take the acceptability of money for granted' (Arrow, 1981:148).

11 It is quite typical that Parsons speaks of 'the stability of its value' here. Like many other theorists of money, Parsons starts with the assertion that money has no value, but only symbolizes value; nonetheless, this distinction is not maintained consistently, since the symbol functions as if it had the properties of that which it symbolizes. But instead of an explanation of how this can be, we find the relapse into a language which lumps everything together.

12 However, Parsons is rather ambiguous on the issue of whether language is to serve as the reference to understand money. Sometimes he argues the other way around: 'Symbolic meanings exhibit all the features that classical economists attributed to money' (Parsons, 1978:396).

13 Cf. for example Kamlah (1967:434) for a clarification of the connection between action patterns, signs, and language.

14 For the following cf. Habermas (1980), used again in Habermas (1981, vol.2:384–419).

15 The difference between change of ownership of things which continue to exist and effective use or consumption is important. In terms of mere legal claims, the distribution of possessions remains revisable. Goods which are consumed disappear.

16 In the hands of neoclassical economists looking for something original to do, the utility-'code' is applicable to all action situations.

17 Why Habermas neglects the distinction between orientation to utility and orientation to 'pecuniary acquisition for its own sake' is an open question, but my guess would be that, for him, an instrumental orientation of action according to the utilitarian calculus is something akin to primordial sin already, so that an even more excessive sin is not conceivable.

18 I think this criticism is entirely justified. But Habermas is inconsistent when he stops short of extending this criticism to the notion of power as a medium (cf. Habermas, 1981:403). It is 'hopelessly metaphoric' to impute to power 'measurability, the capacity to circulate, and thesaurability'.

19 Turning criminal is what Döblin's Babylonian gods banned onto earth do when they are confronted with the insinuation to work for money.

20 Here, reproduction is explicitly viewed by Luhmann as an accomplishment of the systems itself, but not in such a way that the system would build its elements

out of material available in its environment (like a beetle eating leaves). Thus, closedness of the system looks much like autarchy.

21 Note that Luhmann at this point implicitly discards the 'Hobbesian problem of order' so prominent in Parsons. Why can one not simply take the goods, even if they are scarce? An understanding must be reached only if *bellum omnium contra omnes* is to be avoided.

22 At one point, it even appears as if scarcity were constitutive of society: 'Society means that men are not alone and do not operate independently from each other in the determination and the satisfaction of that which they experience as needs. Each stimulates and disturbs the others. It is this, and not the non-reliability of nature which implies a need for predisposition' (Luhmann, 1984:317).

23 Parsons (1951:124) had registered the phenomenon, but had not explained it. 'Economic power, particularly as culturally defined and shaped by the institutionalization of money, has remarkable properties not shared by any other phenomenon of the whole system of social interaction. The most interesting of these properties . . . is the fact that it can . . . be treated as a lineally quantitative element or variable in the total equilibrium of social systems.'

24 Again, there is the alternative option of criminality, apparently more and more preferred by those who understand how money 'works'.

25 When Luhmann deals explicitly with the opposition of capital and labour, he concedes a certain ambivalence, at least: 'One can either say: The difference between rich and poor generates labor – and therewith wealth. Or one can say: It generates power – and therewith exploitation' (Luhmann 1986:62). Even if one accepts that a 'difference' should 'generate' anything, the question is: why does Luhmann see an alternative where those who benefit from this ambivalence would see a happy coincidence (of wealth and power!).

26 I am inverting the title of an article by Frese (1967): Speaking as a metaphor for acting.

27 Due to the problem of double contingency of interaction which, compared to Parsons, is radicalized by Luhmann.

28 'Society is an autopoietical system on the basis of meaningful communication. It consists of communications, it consists solely of communications, it consists of all communications. It reproduces communication by communication' (Luhmann, 1984:311).

29 Although he sometimes leaps over the problem of translating communication into action: 'The economic system, when making use of resources, . . . is guided solely by its own language of prices . . . Communication thus systemized . . . exhausts non-reproducable resources, as is well known, and does so very rapidly' (Luhmann, 1983:167). How can pure communication exhaust resources ('The last drop of oil', ibid.)? Doesn't one also need drills, pipelines, human beings to operate them?

30 In a recent effort to demonstrate that the production-related 'capital-labor-dichotomy' is outdated and false, Luhmann (1986:65) asserts that 'the economic worries of a worker are mainly the worries of a consumer'. But in referring to the 'problems of everyday economic life', he forgets to mention not only that workers have to work, but that they do so under the command of somebody else.

31 For Luhmann, the term 'symbol' is not meant to refer to 'a copy or a sign of something else, as if money would merely designate the scarcity of that which is

really of interest. Rather, the property as a symbol rests (as always with symbolically generalized media) in the unity of the difference (here the one between to have/to have not) which allows for follow-up operations' (Luhmann 1986:74). Despite this attempted clarification, which marks a difference between Luhmann on the one, Parsons and Habermas on the other hand, the 'unity of the difference' among the three remains in the open question: What does money symbolize and how?

32 'The symbolically generalized medium functions by using the unity of a difference as its operational foundation' (Luhmann 1986:75). From that, Luhmann goes on to suggest that one should speak of money as a 'diabolically generalized medium of communication' (ibid.) insofar as it accentuates differences and leads to a condensation of negative experiences. At the same time, money 'abolishes numberless differences only to turn them into the one competing interest for money' (Luhmann, 1986:76; 'abolish' and 'turn into' stand for the one German verb 'aufheben'). As one can see, Luhmann does not ignore the conflict-generating character of money. But his theory building technique consists of tossing up a lot of questions and an equal lot of ideas and worrying about their articulation later.

33 As noted in the previous footnote, Luhmann's belated recognition of the conflict generating properties of money leads him to introduce the designation 'diabolically generalized medium' for money in an ad hoc manner. Let's wait for Luhmann's forthcoming output to see whether this is more than a temporary concession to the Pope's recent claim that the devil is alive and kicking.

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Part III
Money as Money of Account

[10]

SOME SUGGESTIONS FOR COMPLICATING THE THEORY OF MONEY

Kevin D. Hoover

> It is very funny about money. The thing that differentiates man from the animals is money. All animals have the same emotions and the same ways as men. Anybody who has lots of animals around knows that. But the thing no animal can do is count, and the thing no animal can know is money.
>
> Men can count, and they do, and that is what makes them have money.
>
> Gertrude Stein, 'All About Money'

HICKS'S PROGRAMME

The title of this chapter intentionally echoes the title of John Hicks's (1935) famous paper 'A Suggestion for Simplifying the Theory of Money'. Like that paper it is intended to be a prolegomenon to an as yet unwritten monetary theory. However, the monetary theory it foreshadows is to be constructed differently.

For centuries the central problems of monetary theory have been to articulate the relationship between money and prices and between money and real quantities. The oldest monetary theory, the quantity theory of money, starts from the well-established empirical generalization that (for some definitions of money at least) there is a rough proportionality between changes in the quantity of money and changes in the price level. The quantity theory attributes that correlation to the causal efficacy of money over prices. If changes in the stock of money cause proportional changes in all prices, then money is 'a veil' without real effects. One irony of the modern quantity theory is that its adherents usually believe that control of the money supply is essential, even though money is a veil. This is usually justified by distinguishing between long-run neutrality and short-run non-neutrality, but inevitably some hand-waving is involved.

Going back at least to Hume (1742a, 1742b), quantity theorists recognized that prices cannot adjust instantaneously to increases in the stock of money. To the degree that they do not, real quantities must be affected. But the argument that money affects prices and output is more elliptical than is usually

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appreciated. Indeed, in the hands of Milton Friedman, the most prominent modern advocate of the quantity theory, it presents a genuine puzzle. According to Friedman (1956), the essence of the quantity theory is the stability of the demand function for money. At first blush, this seems an odd formulation, because the demand function is usually written to indicate the amount of money that economic agents would choose to hold conditional on prices, interest rates and income. The implicit causal direction is thus from these various factors to money. Yet the quantity theory asserts just the opposite causality – money determines prices and income. Friedman presumes that the supply of money is exogenously determined and that agents consult their demand functions; if they find excess supply, they try to rebalance their portfolios by purchasing goods or financial or real assets, putting pressure on prices and rates of return.

This seems plausible, but is in fact puzzling. A 1 per cent increase in the stock of, say, M1 is a very tiny percentage increase in total social wealth. Friedman's (1957) own permanent-income hypothesis holds that only the yield from additions to wealth should go toward consumption, so the pressure on prices would appear to be infinitesimally small. Friedman (Friedman and Schwartz 1982: 29–31) would concede that the first-round effect is indeed small, but that the process continues as money flows from agent to agent, each trying to rebalance his portfolio. That the 1 per cent increase in M1 must ultimately increase prices by 1 per cent is then not a conclusion drawn from any detailed description of the mechanism through which prices rise. Instead, it comes from the assumption that changes in the stock of money do not increase real output in the long run, and that money supply must ultimately equal money demand. Not only does this appear to be question-begging, but it places an almost metaphysical faith in the tendency of an economy to converge to market-by-market static equilibrium.

This account of the transmission mechanism explains why the question of how to define money has loomed so large and proved so slippery. For Friedman's account to be plausible money must be the transactions medium, the asset that agents typically acquire as a byproduct of spending on real goods and services.[1] Historically, however, the assets that play this role keep changing – from coins, to banknotes, to cheques against bank accounts, to cheques against money-market mutual funds – so the quantity theory must be constantly reoriented to new primary causal agents. In Hume's day the claim was that changes in the amount of precious metals caused changes in prices and income. In Friedman's youth, changes in notes, coins and cheque deposits were claimed to be the causal agents. With every financial innovation there is a proposal to reorient the quantity theory. The definition of money also affects the very facts that the quantity theory is meant to explain: the proportionality of money and prices depends on the judicious definition of money. Indeed, Friedman (Friedman and Schwartz 1963: 649–50, *passim*; 1970) explicitly advocates defining money as

the financial asset most closely correlated with nominal GNP. Once again, questions are begged.

Hicks wrote his essay on money twenty years before Friedman's restatement of the quantity theory. The main points of this essay are easily summarized.

First, Hicks castigates monetary theory for not analysing money using the same microeconomic tools (value theory) that economists use for other problems. Instead, quantity equations are tacked on to models of barter. But Hicks notes that since people choose to hold money, money must have marginal utility, and should be subject to the same theoretical analysis as the holding of real assets or the consumption of real goods.

Second, Hicks notes that the central puzzle of monetary theory is that people hold money despite the fact that other assets have higher rates of return. He writes (1935: 66):

> This, as I see it, is really the central issue in the theory of money. Either we have to give an explanation of the fact that people do hold money when rates of interest are positive, or we have to evade the difficulty somehow. It is the great traditional evasions, which have led to Velocities of Circulation, Natural Rates of Interest, *et id genus omne*.

Third, to explain the puzzle of rate-of-return dominance Hicks appeals to frictions that money helps to overcome, such as risk and transactions costs.

Hicks's programme for monetary theory follows immediately from his critical position. A successful monetary theory had to be based on the analysis of individual choice; in more recent language, he advocates establishing microfoundations for monetary theory. A successful monetary theory also needs to be a general equilibrium theory – one that accounts for why individuals hold money and how their choices help to determine prices and/or real allocations for the whole economy. Furthermore, a successful monetary theory will recognize that asset choice is about the future and therefore will take expectations seriously. Finally, a successful monetary theory must recognize that money is a stock, which both influences and is influenced by real flows; it will therefore treat the stock/flow distinction carefully. This programme for monetary theory is remarkably fresh. We recognize the central concerns of contemporary monetary theorists in the issues that he outlines.

GENERAL EQUILIBRIUM MICROFOUNDATIONS

Despite this freshness, I want to argue that the programme that Hicks advocated for monetary theory has been a failure – a heroic failure, but a failure none the less. To heterodox economists, declaring the general equilibrium programme for monetary theory a failure may seem uncontroversial; declaring the attempt heroic might appear to concede too much.

The general equilibrium approach requires some justification and defence. Mark Blaug (1990: 228) observes that general equilibrium theory changed

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from the 1930s, when models were viewed as potential analytical tools for empirical economies, to the 1980s, when they were regarded as ideal, non-empirical models used to demonstrate principles. Frank Hahn (1984: 45–6, 135–7) argues that general equilibrium models are useful not because they model Adam Smith's invisible hand, but because they show just how stringent the conditions are under which Smith's results can be proven; they thereby adumbrate the features of the actual economy that prevent it from operating like a general equilibrium model.

While Blaug is deeply suspicious of this argument, I think there is good reason to accept the general point with respect to monetary theory. Monetary theory would advance enormously if we could provide an idealized model of the behaviour of money in an economy-wide context. The failure of money to find a suitable place in general equilibrium models is a clear indication of the wide lacuna in our understanding of the operation of money. If we cannot capture its operation in an idealized context, what hope have we of capturing it in more realistic contexts?

The difficulty of embedding money in a general equilibrium model concerns how to connect holding money to the real choices of individual agents. Patinkin (1956) attempts to connect the monetary and the real by assuming that real money balances (M/p) give consumers utility because they provide services by permitting uncoordinated fluctuations in expenditure and receipt flows. Once money enters into consumer decision-making in this way, Patinkin argues, the ordinary mechanisms of the Walrasian model establish of the price of money ($1/p$) along with all other prices.

It turns out that Patinkin's model works only in highly restricted circumstances. If utility functions are restricted in such a way that there are no distribution effects, then relative prices are fixed by the conditions of barter equilibrium and any arbitrary price can stand in for the general price level p, since every price is a scalar multiple of every other. Hahn (1965) showed that, absent such restrictions, if there is an equilibrium in which money has a well-defined value, then there is necessarily another equilibrium in which its value is zero (i.e. there is a barter equilibrium), and also that a monetary equilibrium may not exist at all. That for every monetary equilibrium there is a barter equilibrium is a consequence of Patinkin's failure to assign any *essential* role to money: no economic possibilities are foreclosed in the absence of money. That monetary equilibrium may not exist at all is a consequence of the peculiar feature that the real value of money (i.e. its characteristic that is analogous to the *quantity* of any other good) depends on the prices of other goods. As prices are adjusted to find the market-clearing price vector, the quantity of money, unlike the quantities of any other goods, changes and may change in ways that drive the system further into disequilibrium.

In response to these difficulties Hahn (1973) argues that the mechanism of monetary exchange must be more fully specified so that it becomes evident how money expands the opportunity set of the economy. Hahn is surely right here,

but there are other lessons to be learned from Patinkin. The Walrasian model solves two economic problems – it establishes relative prices, and it assures that the economic system is consistent and feasible at those prices. Expositions of the Walrasian model typically focus on the first problem. They sometimes even glory in demonstrating that a decentralized economy is feasible and that each agent need only consult prices (and not the actions of other agents) in order to give the 'correct' quantity response. This 'invisible hand' result is, however, parasitic on the highly centralized information processing of the Walrasian auctioneer (or the mathematical equivalent, the mapping rule of prices into prices to which a fixed-point theorem is applied to prove the existence of equilibrium). The Walrasian model works only because there is, implicitly at least, somebody in the model whose business it is to know everyone else's business.

Money is redundant in a true Walrasian economy. The most important function of money in reality is as a means of accounting for relative values and settling imbalances that arise in trading at those relative values. Such functions are unnecessary in a Walrasian world because the auctioneer knows enough to set relative prices in such a way that imbalances never arise. A programme to create a successful monetary theory is, therefore, unlikely to find the Walrasian model a happy starting point.

THE MAIN ALTERNATIVE MONETARY MECHANISMS

As a result, monetary theorists have, by and large, attempted to explain frictions and describe the mechanisms through which money overcomes them. But they have attempted to maintain the Walrasian framework, and this has created problems for these alternative approaches. Let us now look at four of the principal mechanisms in the current literature.

The overlapping-generations model

While most monetary theories concentrate on the role of money as a means of conducting transactions, the overlapping-generations model stresses the fact that money is a store of value, a means of moving wealth from one period to another.[2] The central idea of the overlapping-generations model is that individuals want to shift resources from earlier parts of their lives to later parts, but they cannot do so directly since resources do not store well (e.g. strawberries spoil). A solution is to trade for real resources in the future with people who want real resources today. Unfortunately, if the young want to give up resources in their youth and the old want to consume more than they have, such trades would be infeasible – for the old will die before the young can be repaid. Money overcomes this friction. The young sell to the old, carry the money into their own old age, and buy from a new generation of young people.

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The overlapping-generations model, however, fails to solve the central problems of monetary modelling. Its principal difficulty is that it does not explain the fact, noted by Hicks, that money is held despite its low rate of return. Simple versions of the model rely on there being no means of shifting resources forward in time except money. If there were time-using productive processes (the analogy would be wheat growing rather than strawberries spoiling), they would provide a better means of shifting resources through time. Since money is held *only* for its ability to store value, no one would choose to hold money when better stores of value were available.

Many attempts have been made to explain rate-of-return dominance in an overlapping-generations framework. None has been successful. If real returns are stochastic, risk-averse agents will sometimes hold money as a way of reducing risk even though real returns on assets are positive on average (Wallace 1981). While this is true, the range of stochastic yields is far too narrow to explain commonly observed differences of five or ten percentage points between the yields of money and other assets. Intermediation costs could explain a premium (interest foregone) on money (Bryant and Wallace 1979). But actual intermediation costs in the real world (think of the service fees on money-market mutual funds) are simply too small to account for observed differential yields. If certain people (the relatively poor) cannot hold assets because of legal restrictions on intermediation (e.g. banks are forbidden to issue one-dollar bearer bonds at interest) then money might be dominated in rate of return but still held by the poor (Wallace 1983). Again, this is true in principle, but does violence to the facts. A wide range of interest-bearing assets can be purchased by the poor in small denominations. Furthermore, the rich as well as the poor hold money. The puzzle about why people hold money remains.

The cash-in-advance model

Cash-in-advance models focus on the role of money as a means of exchange.[3] As Clower (1967: 5) puts it: 'money buys goods, and goods buy money, but goods do not buy goods'. In the cash-in-advance model, people may have real resources, but they cannot barter them for other goods. Instead they must sell them for money. Only with money can people purchase goods.

Clearly, a comprehensive cash-in-advance requirement is too strict; some goods are in fact bartered directly. Lucas (1984) and others have investigated models in which there are both cash goods, which are subject to the constraint, and credit goods which are not.

But the principal difficulty with the cash-in-advance model is that it is not a good description of the economy. While it is true that one must have coins in hand to use vending machines, the largest transactions by value are made on credit, with settlement coming some time later. As credit-card use advances, this point becomes more obvious. What is less obvious is that the cash-in-advance constraint has never been pervasive. For hundreds of years many, and

perhaps most, transactions have been carried out on credit – personal accounts with grocers or tailors, trade credit and wages paid in arrears. Money seems central to the economic system, yet it does not seem essential to possess money in advance of purchase.

Liquidity-cost models

Another way to model money is to assume that the possession of money reduces the real cost of obtaining consumption or production goods. Holding money is consumption foregone, but failing to hold money raises the costs of obtaining consumption goods. The demand for money is determined by balancing these opposing costs.

The principal objection to this approach is that it is question-begging. The nature and size of the liquidity costs, and the exact mechanism through which money is supposed to reduce them, are never clearly specified.

Liquidity-cost models have been used to justify the model of money in the utility function, in spite of Hahn's criticisms of Patinkin for using this technique. Feenstra (1986) demonstrates that for any particular specification of liquidity costs there is a model with money in the utility function that delivers the same equilibrium. Suppose that agents optimize a utility function $U(C_t, C_{t+1}, C_{t+2}, \ldots)$, where C is real consumption and the subscripts indicate current and future periods, subject to a budget constraint in which money enters as a liquidity cost measured in terms of reduced consumption. Feenstra demonstrates that the problem can be recast as one in which agents optimize a different utility function $U^*(M_t, X_t, X_{t+1}, X_{t+2} \ldots)$, where M is real money balances and X is consumption plus liquidity costs. The solution to each optimization problem generates exactly the same paths for consumption and money holdings. This result follows from the duality relationship between direct and indirect utility functions. It would appear, then, that if the liquidity-cost model could be justified, so could the money-in-the-utility-function model. Feenstra's result, however, is only valid, as he himself observes, for an economy with a single commodity. In such an economy there are no relative prices to induce the distribution effects that threaten the existence of equilibrium.

Beyond that, even in the restricted range of its validity, Feenstra's result says that for a particular utility function, U, and a particular specification of liquidity costs, there exists a particular isomorphic utility function, U^*. This function, U^*, however, is unlikely to belong to the class of utility functions commonly used in monetary models. Indeed, the form of U^* is dictated by the form of U and of the liquidity-cost function, and is likely in practice to be quite peculiar. Thus, Feenstra's result is highly limited: even if we were happy to model only a single-good economy, and even if we were happy with the specification of liquidity costs – assumptions unlikely to be fulfilled – there is no general support in Feenstra's analysis for choosing some particularly

tractable utility function that includes money and using it as the basis for monetary analysis.

Search models

Search models are perhaps the most radical attempt to view money as a response to particular frictions.[4] Their central notion is that people have goods to trade and limited preferences over which goods to consume, so the process of finding suitable trading partners can be arduous. With direct barter, agents must find another agent who both has a good they want and who wants the good they have (Jevons's famed 'double coincidence of wants'). If agents believe that some undesired goods may be used to purchase desired goods, indirect barter is possible: I trade oranges for cigarettes, even though I do not smoke, because I believe that I can trade cigarettes for coffee at a later stage. If any commodity comes to be universally regarded as the preferred intermediary in trades, then that good is essentially money. Most work in search models has concentrated on detailing the conditions under which particular goods take on the role of money and on the efficiency improvements from monetization.

Search models may give some insights into how particular objects historically became money, but they do not help to understand a developed monetary system. The problem here stems from the fact that the friction that money overcomes is ignorance of where to find the goods that we wish to purchase. Money is valuable because the average time involved in locating preferred consumption goods is lower in a monetary economy than in a barter economy. But is this really a problem? I do not need to search randomly for groceries; I go to the same grocer each week. If I want a bolt I go to the hardware store; if I want aspirin I go to the pharmacy. Even when I do not know immediately where to find a good, my search is directed through informational resources such as the *Yellow Pages* or the advice of my neighbour. Holding intermediate goods is not a relevant part of finding my preferred consumption good, although there is undoubtedly a monetary aspect to the transactions involved in securing it.

In search models people can trade only when they find someone to trade with. Money improves consumption possibilities because it increases the probability of finding a willing trader. The average time to find two trades (what I have got for money and money for what I want) is lower (and therefore the consumption loss is lower) than the time to find one trade without money. The search metaphor is one of undirected trade and random mixing. The point about knowing where to find the grocer is that in any developed economy trade is directed, not random, and the fundamental friction is not search (finding the appropriate trade), but the difficulty of arranging the trade in a suitable way: valuing it appropriately (one function of a unit of account), and keeping it fair and honest. The issue is not just that I know where the grocer is, but that I know where the university (my employer) is, and that the grocer

knows where the university (that his child attends) is. Search is not the issue; coordination is.

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Search models are on the right track in that they reject the Walrasian model as a basis for monetary theory. They go wrong because they are mesmerized by the task of isolating why some particular good (gold, silver, fiat paper) becomes the preferred intermediary in transactions, and because they wrongly characterize the informational constraint that we face. Like some attempts to understand money in a Walrasian framework, search models overemphasize the role of money in transactions as an intermediary good. Money is in part a response to information failures; however, the principal failure is not ignorance of where to find goods but the ignorance of what goods we will in fact buy or sell. This latter information failure is the one stressed by Patinkin. And this friction can be overcome by any number of credit arrangements, not just through holding a specialized money good. In any developed economy, the credit system is essential. Money is an essential part of the credit system. But the important thing about money in a credit system is neither its quantity nor the number or value of the transactions in which it mediates.

Rather, the principal modern function of money is the one traditionally regarded as the weak sister of the famous triad (means of exchange, store of value, unit of account). Money is most importantly a unit of account, and the efficiencies of a monetary economy arise not from the services of the particular asset called 'money', but instead from the whole complex of transactions and financial services that use the monetary unit as their principal means of keeping score: 'Men can count, and they do, and that is what makes them have money.'

I have argued in detail elsewhere (Hoover 1988a, 1988b) that a financial system involving nominal paper assets can function only if these are convertible through *direct* or *indirect* chains to a real asset. For these purposes, fiat currency or central bank reserves can be thought of as real assets in the sense that they provide no entitlements to further conversion (unlike, say, a cheque which is an entitlement to receive cash or central bank reserves) and that they are the stipulated means of meeting certain obligations (e.g. payment of taxes or settlement of reserve positions). In practice, most financial assets are ultimately convertible into a narrow class of real assets. This class could be thought of as defining 'money', although that is a narrower definition than common usage. In practice such narrow money is the typical unit of account, although accounts could be specified in units other than the natural units of this class provided that they were related to goods in the class in well-defined ways (e.g. in gold guineas, coins that no longer exist but whose value is defined to be £1.05, or SDRs, which are defined as weighted averages of the values of national moneys).

Stressing the centrality of an accounting system using a unit that is the

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ultimate good of conversion (or settlement) diminishes the importance of money as a store of value or a means of payment. Narrowly defined money is a very small player in the whole system of credit and finance. When I obtain goods without surrendering a real equivalent, accounts must be kept of what I owe. Some manner of discharging my debt must be, implicitly at least, agreed upon. Narrow money is not important because it is intermediary in most of my transactions: indeed it does not even settle most of my debts, since I mostly pay my bills by cheque, reducing my own demand deposits and raising my creditors' demand deposits with banks transferring but a small proportion of their total clearings of all such exchanges in the form of central bank reserves. Rather, narrow money is important because it defines the unit in which my debts are recorded, and because it provides the ultimate anchor for the convertibility of assets with which I typically discharge my debt.

It is this pervasive engagement with the financial system at every level that explains the peculiar robustness of money. Who has not heard stories of Germans in 1923 paying for bread with wheelbarrows full of money? The story is usually told to illustrate how depreciated the Reichsmark had become during the hyperinflation. I think that it illustrates a much more astonishing point: despite its vast depreciation, despite its high negative real rate of return, despite the vastly increased shoe-leather costs (after all, a wheelbarrow load of paper is heavy) and despite the substitution possibilities into foreign currency or physical assets, the Reichsmark continued to be used.

My first proposal for an alternative monetary theory then is to place the emphasis on the accounting and settlement functions of money. Since these functions have no role in a Walrasian system, it follows immediately that we must seek a non-Walrasian model. We obviously have to give up the auctioneer as a guarantor of the feasibility of trading. Without an auctioneer, the model lacks a price-setting mechanism. The alternative model must therefore supply the gap. The natural alternative is a model of price-setting agents.

My second proposal is to extrapolate from current trends in transactions technology (e.g. credit cards, electronic fund transfers or debit cards), and make the extreme idealizing assumption that no narrow money is needed in advance of purchase. All purchase is on credit, but from time to time uncleared balances have to be settled either at the level of the individual, or at the level of banks or other financial intermediaries, with narrow money. This is to replace the cash-in-advance constraint with a *cash-in-arrears* constraint.

My third proposal is to take the fact that money is dominated in rate of return as a primitive fact about the economy. Monetary theory after Hicks has attempted to explain why that could be an equilibrium result – either by finding some service that makes up the rate-of-return deficit or by introducing some constraint that forces money to be held as the corner solution to an optimization problem. Either way, the goal is to explain why money is held voluntarily. In keeping with the idealized assumption of the cash-in-arrears constraint, I suggest a further idealization. Let us suppose that money is not

held voluntarily. Money holdings arise in the process of settlement, and people dispose of their money by purchasing better-yielding financial assets as fast as possible. Clearly all the money in existence must be held by someone, but they need not hold it as part of an optimal portfolio.[5] In taking this view we give up the ideal of static equilibrium. There may, none the less, be something akin to equilibrium in our model, what von Mises (1963: 224–50) has called the 'evenly rotating economy' – an economy in motion, not at rest, but whose rotation is recurring and routine.

One great appeal of the Walrasian model is that it yields nice analytic results. My suggestions force us to give up these results. One might nevertheless answer the main questions of monetary theory in a computer simulation that is founded on the three proposals that I have sketched. Such a model would involve a large number of heterogeneous agents – producers and consumers or producer-consumers. These agents would set prices for the goods that they produce and choose goods for purchase on the basis of the prices advertised in the market. Their behaviour could be forward-looking and consistent with a sort of practical rational expectations. This means that, while we do not endow agents with omniscience about the price-setting structure, we could nevertheless make them efficient learners who do not persist in remediable mistakes.

Demands, supplies or both would be stochastic. This would introduce randomness into purchases and sales. Agents would formulate plans at the beginning of a period for consumption or production in a way not inconsistent with dynamic optimization (e.g. the life-cycle model of consumption), but would find at the end of the period that some expected sales had failed to materialize or that some consumption plans had been frustrated. Agents would then find themselves willy-nilly to be creditors or debtors to other particular agents. (It might be useful to model a separate banking sector, so that the settlement of net imbalances became the specialized task of the banks.)

Transactions are conducted with a higher frequency than settlements: we spend money every day, but pay our bills monthly. Therefore, after a certain number of periods, agents must settle net outstanding balances. Money is needed for this. Agents without money would have to borrow it. Agents who carried money over unwillingly (because it is dominated in rate of return) from earlier settlement periods would use it to settle their own debts and would purchase financial assets with any extra money.

Two different financial markets are presupposed in this story. One, which corresponds to our bond market, is the market for savings. Agents should not be assumed to attempt the impractical Walrasian feat of generating a good-by-good consumption plan for all future periods. Instead, they would choose real savings (and purchase the counterpart financial assets) as part of their general period-by-period consumption decision. This is more Keynesian in spirit: the decision to save is the decision to abstain from current consumption, not the decision to consume some definite thing in the future. The second market is the market for the settlement asset itself. This corresponds to the US Federal funds

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market, where one bank lends another central bank reserves in order to meet reserve requirements or settlement needs. To obtain sufficient realism it may be necessary to introduce a third financial market – a stock market, where returns are linked to the real yields of productive physical assets.

While such a simulation model would be highly stylized, it is a reasonable portrayal of the future exchange system in developed countries. Moreover, in the context of such a model one could address the classic questions of monetary economics. Does expansion of the narrow-money asset generate proportional inflation? Do changes in the money stock have real effects in the short or long run? Are supply shocks inflationary? Are monetary policies that aim to fix nominal interest rates unstable? Would this model provide different answers than those that try to remain with the Walrasian framework? We cannot know the answer to these questions without actually constructing the model. But as I noted at the beginning of this chapter, this is a prolegomenon to a monetary theory, not a monetary theory itself.[6]

NOTES

1 That Friedman and Schwartz (1963: 649–50, *passim*) characterize money as 'a temporary abode of purchasing power' rather than as a means of exchange does not affect the point here at all.
2 The classic paper on the overlapping-generations model is Samuelson (1958). Wallace (1980) has been the most persistent advocate of using overlapping-generations models to provide a foundation for monetary theory.
3 The *locus classicus* of the cash-in-advance constraint is Clower (1967). Also, see Kohn (1981).
4 The prototypical search model of money is Diamond (1984). Kiyotaki and Wright (1989, 1991, 1993) have been major proponents of this approach.
5 This is the basis of the 'buffer-stock' approach to aggregate money demand; see Laidler (1982).
6 The author thanks Clinton Greene and Steven Pressman for comments on an earlier draft of this chapter.

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[11]

THE CLASSIFICATION OF MONEY

I. MONEY AND MONEY OF ACCOUNT

Money of account, namely that in which debts and prices and general purchasing power are *expressed*, is the primary concept of a theory of money.

A money of account comes into existence along with debts, which are contracts for deferred payment, and price lists, which are offers of contracts for sale or purchase. Such debts and price lists, whether they are recorded by word of mouth or by book entry on baked bricks or paper documents, can only be expressed in terms of a money of account.

Money itself, namely that by delivery of which debt contracts and price contracts are *discharged*, and in the shape of which a store of general purchasing power is *held*, derives its character from its relationship to the money of account, since the debts and prices must first have been expressed in terms of the latter. Something which is merely used as a convenient medium of exchange on the spot may approach to being money, inasmuch as it may represent a means of holding general purchasing power. But if this is all, we have scarcely emerged from the stage of barter. Money proper in the full sense of the term can only exist in relation to a money of account.

Perhaps we may elucidate the distinction between *money* and *money of account* by saying that the money of account is the *description* or *title* and the money is the *thing* which answers to the description. Now if the same thing always answered to the same description, the distinction would have no practical interest. But if the thing can change, whilst the description remains the same, then the distinction can be highly significant. The difference

is like that between the king of England (whoever he may be) and King George. A contract to pay ten years hence a weight of gold equal to the weight of the king of England is not the same thing as a contract to pay a weight of gold equal to the weight of the individual who is now King George. It is for the State to declare, when the time comes, who the king of England is.

Now by the mention of contracts and offers, we have introduced law or custom, by which they are enforceable; that is to say, we have introduced the State or the community. Furthermore it is a peculiar characteristic of money contracts that it is the State or community not only which enforces delivery, but also which decides what it is that must be delivered as a lawful or customary discharge of a contract which has been concluded in terms of the money of account. The State, therefore, comes in first of all as the authority of law which enforces the payment of the thing which corresponds to the name or description in the contract. But it comes in doubly when, in addition, it claims the right to determine and declare *what thing* corresponds to the name, and to vary its declaration from time to time—when, that is to say, it claims the right to re-edit the dictionary. This right is claimed by all modern States and has been so claimed for some four thousand years at least. It is when this stage in the evolution of money has been reached that Knapp's chartalism—the doctrine that money is peculiarly a creation of the State—is fully realised.

Thus the age of money had succeeded to the age of barter as soon as men had adopted a money of account. And the age of chartalist or State money was reached when the State claimed the right to declare what thing should answer as money to the current money of account—when it claimed the right not only to enforce the dictionary but also to write the dictionary. To-day all civilised money is, beyond the possibility of dispute, chartalist.

It will be noticed that the money of account must be *continuous*. When the name is changed—which may or may or may not be coincident with a change in the money which answers to it—the new unit must bear a definite relation to the old. The State will,

as a rule, promulgate a formula which defines the new money of account in terms of the old. If, however, failing a decree by the State, all contracts prior to a certain date are worked out in the old currency, and all contracts subsequent to that date are made in the new, even so the market cannot help establishing for itself a parity between the two. Thus there can be no real breach in the continuity of descent in the pedigree of the money of account, except by a catastrophe in which all existing contracts are simultaneously wiped out.

II. MONEY PROPER AND BANK MONEY

We have seen that the introduction of a money of account gives rise to two derived categories—offers of contracts, contracts and acknowledgments of debt, which are in terms of it, and money proper, answering to it, delivery of which will discharge the contract or the debt. The first of these prepares the way for the next development, namely the discovery that for many purposes the acknowledgments of debt are themselves a serviceable substitute for money proper in the settlement of transactions. When acknowledgments of debt are used in this way, we may call them bank money—not forgetting, however, that they are not money proper. Bank money is simply an acknowledgment of a private debt, expressed in the money of account, which is used by passing from one hand to another, alternatively with money proper, to settle a transaction. We thus have side by side State money or money proper and bank money or acknowledgments of debt.

III. REPRESENTATIVE MONEY

This, in its turn, leads the way to a further evolution of State money itself. The bank money may represent no longer a private debt, as in the above definition, but a debt owing by the State; and the State may then use its chartalist prerogative to declare that the debt itself is an acceptable discharge of a liability.

A particular kind of bank money is then transformed into money proper—a species of money proper which we may call representative money. When, however, what was merely a debt has become money proper, it has changed its character and should no longer be reckoned as a debt, since it is of the essence of a debt to be enforceable in terms of something other than itself. To regard representative money, even when it conforms to an objective standard, as being still a debt will suggest false analogies.

At the cost of not conforming entirely with current usage, I propose to include as State money not only money which is itself compulsory legal tender but also money which the State or the central bank undertakes to accept in payments to itself or to exchange for compulsory legal-tender money.[1] Thus most present-day bank notes, and even central bank deposits, are here classified as State money, whilst bank money (or non-legal-tender money) is mainly composed, nowadays, of member bank deposits.[2] Historically a good many examples of representative State money are descended from some kind of bank money, which by being adopted by the State has subsequently passed over from the one category to the other.

IV. THE FORMS OF MONEY

We are now in a position to proceed to a further analysis having an object different from the above, namely, to classify the three *forms* which State money can take, which we may call, for short, *commodity money*, *fiat money*, and *managed money*, the last two being sub-species of *representative money*.

Commodity money is composed of actual units of a particular freely obtainable, non-monopolised commodity[3] which happens

[1] The exact legal status of various moneys is susceptible of considerable variety. For example, the Federal Reserve Bank notes in the United States are only 'optional' money. Knapp accepts as 'money'—rightly, I think—anything which the State undertakes to accept at its pay-offices, whether or not it is declared legal tender between citizens.

[2] See below (p. 9) for the explanation of this term.

[3] Or of warehouse warrants for actually existing units of the commodity. E.g. American gold certificates are best regarded as commodity money.

to have been chosen for the familiar purposes of money, but the supply of which is governed—like that of any other commodity—by scarcity and cost of production.

Fiat money is representative (or token) money (i.e. something the intrinsic value of the material substance of which is divorced from its monetary face value)—now generally made of paper except in the case of small denominations—which is created and issued by the State, but is not convertible by law into anything other than itself, and has no fixed value in terms of an objective standard.

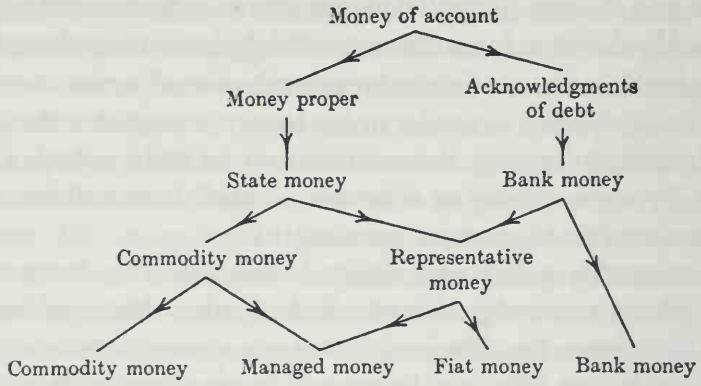
Managed money is similar to fiat money, except that the State undertakes to manage the conditions of its issue in such a way that, by convertibility or otherwise, it shall have a determinate value in terms of an objective standard.

Commodity money and managed money are alike in that they are related to an objective standard of value. Managed money and fiat money are alike in that they are representative or paper money, having relatively little or no intrinsic value apart from the law or practice of the State.

Thus managed money is in a sense a hybrid between the other two; and, perhaps for this reason, its qualities are not so easily understood. The public knows commodity money and it knows fiat money; but, readier to recognise the standard than the form, it is apt to consider a managed money which has a familiar commodity as its standard as the same thing as a commodity money, and a managed money which has an unfamiliar standard as a fiat money in disguise. In fact, however, the best typical modern moneys, whilst many of them still remain mixtures of commodity money and managed money, approximate more and more to the form of managed money. Moreover, managed money is, in a sense, the most generalised form of money—which may be considered to degenerate into commodity money on the one side when the managing authority holds against it 100 per cent of the objective standard, so that it is in effect a warehouse warrant, and into fiat money on the other side when it loses its objective standard. For these reasons the theory which will be

developed in the following chapters is expressed with primary reference to a managed money; but the formulas reached will be easily modifiable, if necessary, to suit the special conditions either of a commodity money or of a fiat money.

The scheme of conceptions and forms, set forth above, and their inter-relations, can be displayed in a diagram thus:



Thus we are left with four kinds of instruments of exchange, of which three are money proper and the fourth is not money proper but an acknowledgment of debt.

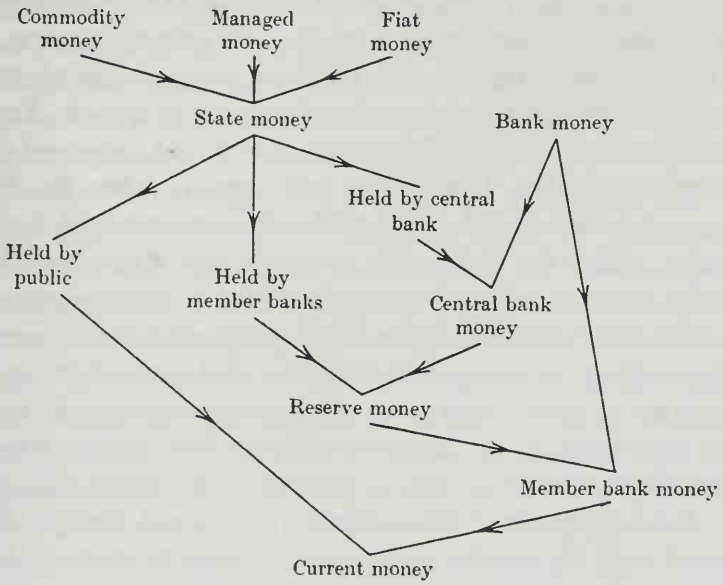
V. CURRENT MONEY

One of the fundamental elements in the theory of money is the total quantity of money of all kinds in the hands of the public; and it often makes but little difference whether the money in question is State money or bank money. The aggregate of both may be called *current money*. The relationship between current money and State money is as follows.

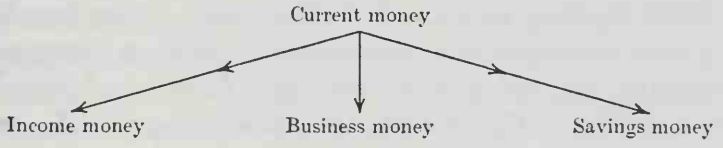
The typical modern banking system consists of a sun, namely the central bank, and planets, which, following American usage, it is convenient to call the member banks. The total stock of State money is held partly by the public, partly by the member banks, and partly by the central bank. The State money held by the central bank constitutes its 'reserve' against its deposits.

These deposits we may term *central bank money*. It is convenient to assume that all the central bank money is held by the member banks—in so far as it may be held by the public, it may be on the same footing as State money or as member bank money, according to circumstances. This central bank money *plus* the State money held by the member banks makes up the reserves of the member banks, which they, in turn, hold against their deposits. These deposits constitute the *member bank money* in the hands of the public, and make up, together with the State money (and central bank money, if any) held by the public, the aggregate of *current money*.

We can, therefore, continue our genealogical tree so as to exhibit the relationships thus:



Finally in chapter 3 we shall further analyse current money as follows:



THE PURE THEORY OF MONEY

VI. ILLUSTRATIONS FROM HISTORY

Some historical examples will serve to illustrate the argument. The beginning of money proper is often associated by historians with the first coinage, in regard to which the statement of Herodotus that it began in Lydia in the sixth or seventh century B.C. may still be credited. But I do not think that the act of coinage effected so significant a change as is commonly attributed to it. It was, perhaps, the first step towards representative money, or at any rate a step which made easier the subsequent transitions to representative money and to fiat money. But it is probable that the fundamental transition, namely the transition to chartalist or State money, long preceded it; just as the next important step, namely to representative money, was long subsequent.

For chartalism begins when the State *designates* the objective standard which shall correspond to the money of account. Representative money begins when money is no longer composed of its objective standard. Fiat money only appears when the State goes a step further and abandons the objective standard. Coined money, which the State alone can mint and which may have a value superior to that of the commodity of which it is composed, is at the most a first step in the direction of representative money. Thus coinage is not one of the three vital innovations in the evolution of money, and truly representative money was not in fact issued until many centuries after the first coinage. On the other hand, it is by no means essential to chartalism, that is to say the designation of the standard by the State, that the State should mint the standard; the essential characteristics of chartalism are already present, even when money passes by weight and not by tale, provided that it is the State which designates the commodity and the standard of weight.

When the kings of Lydia first struck coins, it may have been as a convenient certificate of fineness and weight, or a mere act of ostentation appropriate to the offspring of Croesus and the neighbours of Midas. The stamping of pieces of metal with a trade

mark was just a piece of local vanity, patriotism or advertisement with no far-reaching importance. It is a practice which has never caught on in some important commercial areas. Egypt never coined money before the Ptolemies, and China (broadly speaking) has never coined silver, which is its standard of value, until the most recent times. The Carthaginians were reluctant coiners, and perhaps never coined except for foreign activities. The Semitic races, whose instincts are keenest for the essential qualities of money, have never paid much attention to the deceptive signatures of mints, which content the financial amateurs of the North, and have cared only for the touch and weight of the metal. It was not necessary, therefore, that talents or shekels should be minted; it was sufficient that these units should be State-created in the sense that it was the State which defined (with the right to vary its definition from time to time) *what* weight and fineness of silver would, in the eyes of the law, satisfy a debt or a customary payment expressed in talents or in shekels of silver.

The first State reform of the standard of weight, of which we have definite record, was the Babylonian reform towards the end of the third millennium B.C. But this was not the beginning. Earlier standards existed. And in the primitive age, before man had attained to the conception of weight or to the technical contrivance of the scales, when he had to depend for measurement upon *counting* barleycorns or carats or cowries, it may still have been the State or the community which determined what kind or quality of unit should be a due discharge of an obligation to pay which had been expressed by the numerals one or two or ten—as when, so late as the thirteenth century, the English government defined a penny sterling to be the weight of '32 wheat corns in the midst of the ear'. A district commissioner in Uganda today, where goats are the customary native standard, tells me that it is a part of his official duties to decide, in cases of dispute, whether a given goat is or is not too old or too scraggy to constitute a standard goat for the purposes of discharging a debt.

Money, like certain other essential elements in civilisation, is

a far more ancient institution than we were taught to believe some few years ago. Its origins are lost in the mists when the ice was melting, and may well stretch back into the paradisaic intervals in human history of the interglacial periods, when the weather was delightful and the mind free to be fertile of new ideas—in the islands of the Hesperides or Atlantis or some Eden of Central Asia.

The Solonic reform of the Athenian currency in the sixth century B.C. was an exercise of the chartalist prerogative which was contemporary with, but in no way dependent upon, the existence of coined money. It was just a change of standard. Nor am I aware of any chartalist change of standard, expressly designed to benefit the State at the expense of the public, earlier than the second Punic War—Rome being the first original to add this instrument to the armoury of statecraft. From that time on chartalist changes of standard, generally in the form of debasements, sometimes for one purpose and sometimes for another, are the familiar theme of historians.

Nevertheless these changes of standard do not, so far as affects the *form* of money, carry us beyond the stage of commodity money. The *debasement* of the standard, i.e. a change of standard which abruptly diminishes the value of the money of account, does not, in itself, carry us a single step towards representative money. Commodity money does not cease to be such merely because the unit of commodity is changed in kind or diminished in quantity. There is no evidence, until long subsequently, of money which was, in any significant degree, representative or token. A coin might have a value somewhat superior to that of its metal content, because of the convenience and prestige of the coin, or because the stamp was a guarantee of fineness and acceptability, or merely because of its aesthetic qualities—as the dollar of Maria Theresa has, in modern times, commended itself to the nomadic Arabs of Africa. A seigniorage, too, might be charged for the service of mintage. There were token coins for very small denominations of currency. And clipt or worn money

might circulate amongst the vulgar at its face value. But the characteristics of these examples are not enough to constitute representative money in the proper sense of the term. The true link between commodity money and representative money is to be found, perhaps, in commodity money, the supply of which is limited by absolute scarcity rather than by cost of production, and the demand for which is wholly dependent upon the fact that it has been selected by law or convention as the material of money and not upon its intrinsic value in other uses—as, for example, in the case of the primitive stone moneys of Micronesia.

Leaving on one side the paper moneys, which are alleged to have been anciently current in China, and also those of John Law and other precursors, the historical importance of representative money dates from so recent an epoch as that of the French Revolution, the exigent consequences of which led to the adoption not merely of representative money but of fiat money for many years in what were then the leading financial centres of the world, France and England.

Nevertheless, whilst representative money is a relatively modern device, it was, as we have seen, adapted and taken over by the State from a far more ancient contrivance of private finance—namely bank money. The earliest beginnings of bank money, like those of chartalist money, are lost in antiquity. Perhaps bank money, especially in the shape of bills of exchange and letters of credit for travellers abroad, may have existed almost as long as money proper. For the use of bank money depends on nothing except the discovery that, in many cases, the transference of the debts themselves is just as serviceable for the settlement of transactions as is the transference of the money in terms of which they are expressed. A title to a debt is a title to money at one remove, and, to the extent and within the field that confidence is felt in the prompt convertibility of the debt into the money, the element of remoteness is irrelevant to the serviceability of bank money for settling transactions. Bank money in the shape of bills of exchange was not less useful and necessary in

the ancient world than today for the purpose of settling transactions at a distance, owing to the cheapness of its cost of transmission as compared with the costs and risks of transporting money proper.

VII. THE EVOLUTION OF MANAGED MONEY

That species of representative money which I have called managed money is, as the diagram shows, the most mixed form of all and, alone of the four forms, has relationships to each of the other three. It has come into existence by easy stages, and many existing monetary systems are still composite in character, made up partly of managed money and partly of commodity money.

The first important attempt to lay down scientific principles for the management of a managed money, so as to make it conform to its standard (whatever that standard may be), arose out of the controversy which culminated in the British Bank Charter Act of 1844. In the eighteenth century commodity money was still the rule; but the evolution of bank money in the shape of bank notes was showing the way towards representative money.[1] The consequences of the French Revolution swung the currencies of France and England right over into fiat money; and when in England this stage was brought to an end by the introduction of the gold standard, the uses of representative money had become so familiar and acceptable to the public, and so profitable to the Treasury and the Bank of England, that the new system was not a pure commodity money but a mixed managed system. If Ricardo had had his way with his ingot proposals, commodity money would never have been restored, and a pure managed money would have come into force in England in 1819.

But whilst a managed money came into force as from that date, the principles and methods of currency management were but

[1] By the middle of the eighteenth century the circulation of bank notes was already predominant in Scotland, the glittering economies of *not* holding metal being as characteristically attractive to North Britain as the glittering certainties of holding it to Nearer Asia.

ill understood by those responsible for its management, namely, the governors and court of the Bank of England—indeed it may be said that they were not understood at all. Twenty-five years of trouble and threatened collapse of the standard ensued, until the reformers of that day brought in a new era of management methods with the Act of 1844. This Act was compounded of one sound principle and one serious confusion. The sound principle consisted in the stress laid on the limitation of the quantity of the representative money as a means of ensuring the maintenance of the standard. The confusion lay in the futile attempt to ignore the existence of bank money and consequently the inter-relationships of money and bank credit, and to make representative money behave exactly as though it were commodity money. Indeed the confusion was so serious that it would probably have led to an actual breakdown if it had not been for a second sound principle which, whilst not actually embodied in the Act, swam into the consciousness of the best practical financiers at about the same date, namely the principle of bank rate. The efficacy of bank rate for the management of a managed money was a great discovery and also a most novel one—a few years earlier the Bank of England had not had the slightest understanding of any connection between bank-rate policy and the maintenance of the standard.

The gradual evolution of bank-rate policy under conditions, in London, peculiarly well adapted to it, coupled with a prodigious growth of bank money, characterised British monetary developments for the next seventy years. But, whilst the practical efficacy of bank rate became not merely familiar but an article of faith and dogma, its precise *modus operandi* and the varying results to be expected from its application in varying conditions were not clearly understood—and have not been clearly understood, in my opinion, down to this day.

Meanwhile other variants of managed money were coming into vogue, particularly those which have been discussed under the generic name of exchange standards, of which the Indian rupee has been the classic instance—the Indian rupee being the

subject of the leading theoretical discussions of this method of management and also of its actual operation on the largest scale. Some years ago (in my *Indian Currency and Finance*, 1913) [*JMK*, vol. 1]. I wrote at length on the subject of exchange standards. But a brief digression may be in place here, bringing up to date my views as to how this type of standard is most conveniently classified.

There is, I think, an ambiguity in some discussions of this topic between *exchange standards* and what it would be more correct to call *exchange management*. I define an *exchange standard* as a managed representative money the objective standard of which is the legal-tender money of some other country. The controversy as to whether the Indian rupee should be fixed in terms of sterling or in terms of gold was a controversy as to whether or not the rupee should be an exchange standard. One of the transitional standards in the process of stabilising the German mark was an exchange standard, whereas the mark as finally established is on a gold standard. On the other hand, where the objective standard is not a foreign money but (e.g.) gold, but where, nevertheless, the method of managing the money in question so as to conform to this standard consists, wholly or mainly, in maintaining reserves at foreign centres and in buying or selling foreign exchange at stated rates rather than in buying or selling gold on the spot at stated rates, this I should designate as *exchange management*. The objective standard at which exchange management aims may be an exchange standard; but not necessarily so. The characteristic of exchange management moneys is to be found not in their standard but in their form.

For countries which are small compared with their neighbours, or do not contain independent financial centres of international importance, an exchange standard may be ideal. But it does undoubtedly involve some measure of dependence on the country whose money is chosen as the basis of the exchange standard, which may be hurtful to the national pride. Exchange management, on the other hand, whilst partly free from this objection,

possesses great technical advantages arising from economy in the transport of bullion and from the avoidance of loss of interest. Many countries, as for example Japan, have employed it for many years with great advantage, keeping reserves at more than one foreign centre and varying the proportions at each centre in accordance with circumstances. Germany appears to fluctuate in her attitude towards exchange management, with some signs of bias against it on the part of the Reichsbank authorities. The prejudice shown against exchange management by some sections of Indian opinion has been partly due, I think, to a confusion between exchange management and an exchange standard, the element of dependence which is more characteristic of the latter being erroneously attributed to the former in an equal degree.

Sterling during the war, or rather from 1915 to 1919, was an example of exchange management. From 13 January 1916, to 19 March 1919 sterling was maintained at about the value of $\$4.76\frac{1}{2}$ in terms of U.S. dollars, by Messrs J. P. Morgan and Co., acting as agents of the British Treasury, standing ready in the New York foreign exchange market to buy any quantity of sterling offered at this rate, or, alternatively, to buy dollars for sterling at 4.77.[1]

Exchange management has been frequently adopted in the case of fiat moneys which have no fixed objective standard. The cases of 'official support' and of 'pegging' of rates of exchange, variable from time to time, during the post-war period of European currency collapse are well-known examples of this.

Finally, just before the war, there came into being the greatest managed system which the world has yet seen—the Federal Reserve System of the United States, a system which was mainly borrowed at its inception from the British system but has since been developing along new and original lines of its own—though what, precisely, these are to be is still a matter of some doubt and controversy.

[1] Exchange management began in August 1915, but the exchange was not 'pegged' until 13 January 1916, from which date the rate was kept steady between $4.76\frac{1}{2}$ and 4.77. After May 1916 the fluctuation was kept between $4.76\frac{7}{16}$ and $4.76\frac{9}{16}$.

As regards the British system, in the form in which it has emerged, by virtue of the Gold Standard Act 1925, out of several years of fiat money, it is still too soon to speak. One definite change, however, is embodied in the Act—the British currency is no longer a composite system. Pre-war commodity money, in the shape of the sovereign, has not been restored; Ricardo's proposal of a hundred years previously has been adopted; and sterling is established by law as a pure managed money.

The controversy which preceded the restoration of the gold standard in Great Britain was believed by many people to concern the question whether sterling should be henceforward a managed money or an 'automatic' money. But this was a misapprehension. Unless 'automatic' money means a money rigidly linked in quantity to the supply of 'commodity' money, it means nothing; and of this there was no likelihood or possibility. The misapprehension occurred because the public knew no third alternative between the fiat money of the post-war period and the commodity money of the pre-modern age. Nevertheless it was precisely this third form which was certain to be adopted, whatever decisions might be made on other matters—namely a representative money managed so as to conform to an objective standard.

The real subjects of the controversy were two. First, was it expedient to change the standard of sterling at such a time or in such a way that the transition would involve a significant alteration in the level of money incomes? Should not any change of standard be so made that the purchasing power of the new standard is, at the moment of transition, both equal to the purchasing power of the existing money of account and in equilibrium with money incomes, with the result that the change of standard, in itself and at the moment, does not involve any alteration, up or down, in the current level of money values? The opposition, more impressed than the official party with the objections to a deliberate lowering of money values, maintained that it was inexpedient to alter the standard in conditions which would necessitate such a lowering. But the official party attached great

importance to the *precise number* of troy ounces of gold which was to answer to the money of account. They were willing neither to adapt the number of ounces to the existing purchasing power of the money of account nor to wait until the purchasing power of the money of account was adapted to the desired number of ounces, but preferred, for a variety of reasons, to run the risks which must attend any forced or sudden disequilibrium in the existing levels of incomes and prices.

This bone of contention was quite distinct from the further subject of controversy concerning the choice of the standard itself, namely whether or not gold was the most suitable objective standard. Those who came to be known as the monetary reformers were not less anxious than others to bring to an end the period of fiat money; indeed they laid *more* stress than their opponents on the importance of a stable objective standard. But they argued that gold possesses now, even less than formerly, the qualities of a satisfactory objective standard, and they proposed to substitute for it some composite representative commodity on the general lines of the so-called tabular standard which has been long familiar in economic writings.

BANK MONEY

I. THE 'CREATION' OF BANK MONEY

We have seen in the preceding chapter how the transference of claims to money may be just as serviceable for the settlement of transactions as the transference of money itself. It follows that members of the public, when they have assured themselves that this is so, will often be content with the ownership of transferable claims without seeking to turn them into cash. Moreover there are many conveniences and incidental advantages in handling bank money over handling cash.

A modern bank is an institution which is made possible by the establishment of habits of this kind. Historically a bank may have been evolved from a business which dealt in the precious metals or in the remittance of money from one country to another, or which offered its services as an intermediary to arrange loans or for the safe custody of valuables, or which borrowed the savings of the public on the security of its reputation and then invested them at its own discretion and at its own risk.[1] But we shall be concerned in what follows with banks of the fully developed modern type existing as going concerns.

Such a bank creates claims against itself for the delivery of money, i.e. what, hereafter, we shall call deposits, in two ways. In the first place it creates them in favour of individual depositors against value received in the shape either of cash or of an order (i.e. a cheque) authorising the transfer of a deposit in some bank (either another bank or itself). A member of the public comes along with cash in his pocket or with a cheque drawn on

[1] For the actual origins in England see R. D. Richards, 'The Pioneers of Banking in England' (*Economic Journal History Supplement*, January 1929).

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a bank, which he hands in on the understanding that he is entitled in return to a claim to cash (i.e. a deposit) which he can either exercise or transfer to someone else.

But there is a second way in which a bank may create a claim against itself. It may itself purchase assets, i.e. add to its investments, and pay for them, in the first instance at least, by establishing a claim against itself. Or the bank may create a claim against itself in favour of a borrower, in return for his promise of subsequent reimbursement; i.e. it may make loans or advances.[1]

In *both* cases the bank creates the deposit; for only the bank itself can authorise the creation of a deposit in its books entitling the customer to draw cash or to transfer his claim to the order of someone else; and there is no difference between the two except in the nature of the inducement offered to the bank to create the deposit.

It follows that a bank in active business will be, on the one hand, continually creating deposits either for value received or against promises, and, on the other hand, cancelling deposits, because claims against it are being exercised in cash or transferred to other banks. Thus it is constantly receiving cash and paying out cash; and it is constantly receiving claims *against* other banks and having to meet claims *from* other banks.

Now it is evident that the bank must so conduct its business that these opposite processes can be approximately offset against one another, i.e. so that the amount of cash paid out day by day together with the amount of the claims from other banks are not very different from the amount of cash received together with the amount of the claims against other banks. The practical problem of the banker consists, therefore, in so managing his affairs that his daily accruing assets in the shape of cash and claims shall be as nearly as possible equal to his daily accruing liabilities in these forms.

It follows that the rate at which the bank can, with safety,

[1] An analogous distinction has been made by Professor C. A. Phillips (*Bank Credit*, p. 40) between what he terms 'primary' and 'derivative' deposits.

actively create deposits by lending and investing has to be in a proper relation to the rate at which it is *passively* creating them against the receipt of liquid resources from its depositors. For the latter increase the bank's reserves even if only a part of them is ultimately retained by the bank, whereas the former diminish the reserves even if only a part of them is paid away to the customers of other banks; indeed we might express our conclusion more strongly than this, since the borrowing customers generally borrow with the intention of paying away at once the deposits thus created in their favour, whereas the depositing customers often have no such intention.

Practical bankers, like Dr Walter Leaf, have drawn from this the conclusion that for the banking system as a whole the initiative lies with the depositors, and that the banks can lend no more than their depositors have previously entrusted to them. But economists cannot accept this as being the common sense which it pretends to be. I will, therefore, endeavour to make obvious a matter which need not, surely, be obscure.[1]

Even if we look at the matter from the standpoint of one bank amongst many, it is apparent that the rate at which a bank passively creates deposits partly depends on the rate at which it is actively creating them. For although the borrowing customers will probably pay away promptly the proceeds of their loans, some of those to whom they pay them may be depositor-customers of the same bank. To the extent that this occurs, so far from the actively created deposits being the offspring of the passively created deposits, it is the other way round. This illustrates in little what is happening to the banking system as a whole. For to the extent that the borrowing customers pay away their deposits to customers of other banks, these other banks find themselves strengthened by the growth of their passively created deposits to the same extent that the first bank has been weakened; and in the same way our own bank finds itself strengthened whenever

[1] See F. W. Crick, 'The Genesis of Bank Deposits', *Economica*, June 1927, for a good attempt to make the point clear. See also for an able, but somewhat prolix, discussion of the topic of this chapter, Professor C. A. Phillips's *Bank Credit*.

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the other banks are actively creating deposits. So that a part of its passively created deposits, even when they are not the offspring of its own actively created deposits, is nevertheless the offspring of the actively created deposits of the other banks.

If we suppose a closed banking system, which has no relations with the outside world, in a country where all payments are made by cheque and no cash is used, and if we assume further that the banks do not find it necessary in such circumstances to hold any cash reserves but settle inter-bank indebtedness by the transfer of other assets, it is evident that there is no limit to the amount of bank money which the banks can safely create *provided that they move forward in step*. The words italicised are the clue to the behaviour of the system. Every movement forward by an individual bank weakens it, but every such movement by one of its neighbour banks strengthens it; so that if all move forward together, no one is weakened on balance. Thus the behaviour of each bank, though it cannot afford to move more than a step in advance of the others, will be governed by the average behaviour of the banks as a whole—to which average, however, it is able to contribute its quota small or large. Each bank chairman sitting in his parlour may regard himself as the passive instrument of outside forces over which he has no control; yet the 'outside forces' may be nothing but himself and his fellow-chairmen, and certainly not his depositors.

A monetary system of this kind would possess an inherent instability; for any event which tended to influence the behaviour of the majority of the banks in the same direction whether backwards or forwards, would meet with no resistance and would be capable of setting up a violent movement of the whole system. We shall see that actual monetary systems are not generally as bad as this and that checks on their inherent instability have been devised. Nevertheless this tendency towards sympathetic movement on the part of the individual elements within a banking system is always present to a certain extent and has to be reckoned with. Moreover, where the conditions for a 'closed' system are

satisfied, as in the case of a country having an inconvertible paper currency or in the case of the world as a whole, the tendency to instability by reason of sympathetic movement is a characteristic of the utmost practical importance.

In the hypothetical case just considered, we have assumed that all payments are made by cheque and that the member banks are under no obligation or necessity to maintain cash reserves. These limitations we must now remove. If some payments are made by cash, the amount of cash so used will generally bear some proportion, more or less stable, to the amount of bank money. In this case the creation of more bank money by the banks as a whole will lead to a drain of cash out of the banks as a whole, which will set a limit to the extent that the banks can afford to create bank money unless they are in a position to obtain command of an increased quantity of cash.

But any given banker will not only require cash to meet such a contingency. Even when he is moving in step with his neighbours, there will be day-to-day differences between his claims on them and their claims on him, and the magnitude of these daily differences will partly depend on the scale of his business, which may be roughly measured by the volume of his deposits. Accordingly, in order to deal with the inevitable minor discrepancies which are bound to occur over short periods, a banker will always maintain some liquid resources in hand, partly in the form of cash and partly in the form of deposits with some other bank or banks—which resources, called his 'reserves', rise and fall with the volume of his deposits and sometimes, by law or custom, are in a rigid ratio to them. To deal with inter-bank claims, the banks have set up an office called the Clearing House, which calculates each day how much is due on balance to (or from) any bank from (or to) other banks. For the purpose of settling the eventual differences cash could, if necessary, be used; but as a matter of convenience the banks generally accept for the purpose of day-to-day settlements a claim on a single selected bank—the banker's bank as it is sometimes called—

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which is usually the central or State bank. Moreover a central bank deposit is not only available to meet Clearing House differences, but can also be encashed when the cash portion of a bank's reserves need replenishment.

A bank must, therefore, first of all decide what amount of reserves it will be prudent to aim at—or, sometimes, it has this matter decided for it by law. The figure, which we shall discuss in detail in volume 2, will depend partly on the habits of the depositors, as governed by the practices of the country and of the period and by the class of business conducted by the particular bank's clients, and partly on the scale of the bank's business, which for this purpose is generally measured by the amount of its deposits. Thus each bank fixes in its own mind on a certain proportion of its deposits (e.g. 10 per cent) which it will aim at keeping in reserve—a proportion which is not necessarily the same for different banks and which a given bank may vary at different seasons or from time to time, unless the law forces uniformity on them. Having fixed on this proportion, the bank will then be as unwilling to see its reserves rise above it, since this generally means that it is doing less profitable business than it might, as to see them fall below it. Consequently it will be actively creating deposits by lending and investing on a smaller or on a larger scale, according as its reserves, apart from day-to-day fluctuations, are showing a tendency to diminish or to increase.

We now perceive that there exists, not only the check on individual banks that they must keep step, but also a check on the banks as a whole. For if the banks as a whole are creating deposits at a rate which will cause the reserves as a whole to fall too low, some bankers will find their reserve ratios deficient and will, therefore, be compelled to take a step backwards; whilst if the aggregate deposits are below their normal ratio to reserves, some banks will find their reserve ratios excessive and will be stimulated to take a step forwards. Thus it is the aggregate of the reserve resources which determines the 'pace' which is common to the banking system as a whole.

THE PURE THEORY OF MONEY

To pursue the argument to the further point of discovering what determines the aggregate of the reserve resources of the member banks would be to anticipate subsequent chapters. But the elements of the problem may as well be stated here.

Assuming that the central bank is also the note-issuing authority, the aggregate reserve resources of the member banks will be under the control of the central bank, provided the latter can control the aggregate of its note issue and its deposits. In this case the central bank is the conductor of the orchestra and sets the tempo. It may be, however, that the amount of deposits created by the central bank itself is placed by law or custom outside its deliberate control, being regulated by some rigid rule, in which case we might describe it as an 'automatic' system. Finally, it may be that the member banks themselves have some power, perhaps within limits, of increasing at will their deposits with the central bank or the amount of the notes which they draw out of its note-issuing departments. In this case, sympathetic movements on the part of the member banks will gather strength as they go and provide their own food in the shape of increased reserve resources, with the result that it will be difficult to restrain the inherent instability of the system.

I have endeavoured to say enough to show that the familiar controversy as to how and by whom bank deposits are 'created' is a somewhat unreal one. There can be no doubt that, in the most convenient use of language, all deposits are 'created' by the bank holding them. It is certainly not the case that the banks are limited to that kind of deposit, for the creation of which it is necessary that depositors should come on their own initiative bringing cash or cheques. But it is equally clear that the rate at which an individual bank creates deposits on its own initiative is subject to certain rules and limitations;—it must keep step with the other banks and cannot raise its own deposits relatively to the total deposits out of proportion to its quota of the banking

business of the country. Finally, the 'pace' common to all the member banks is governed by the aggregate of their reserve resources.

II. CURRENT MONEY IS PREDOMINANTLY BANK MONEY

The proportionate importance of State money and of member bank money, created as above, in making up the aggregate of current money varies widely at different periods and in different countries, according to the stage which has been reached in the evolution of monetary practice. But the tendency is towards a preponderant importance for bank money—which in such countries as Great Britain and the United States constitutes perhaps nine-tenths of the aggregate of current money—and towards State money occupying a definitely subsidiary position.

It will, therefore, simplify the argument, without seriously detracting from its generality, if we assume not only that all the central bank money is held by the member banks, but also that *all the current money in the hands of the public is member bank money, i.e. bank deposits.* This simplified version does not, of course, represent the actual facts. But it will save many unnecessary words and is easily adapted to the actual facts. Moreover, the consequences of such an assumption will be nearly identical with the actual facts, in so far as the *proportions*, in which the total stock of State money is held by the public, the member banks and the central bank, tend to be constant. When the actual facts differ from this simplified scheme in a relevant way, I will do my best to bring them back again into the picture.

In the case of the United States fairly exact estimates are available as to the proportion of demand deposits, or, as I shall call them, cash deposits, to notes and coin circulating outside the banks and in the hands of the public, as follows:

UNITED STATES[1]

	Cash deposits $ million	Money $ million	Percentage of money to total
1919	18,990	3,825	17
1920	21,080	4,209	17
1921	19,630	3,840	16
1922	20,470	3,583	15
1923	22,110	3,836	15
1924	23,530	3,862	14
1925	25,980	3,810	13
1926	25,570	3,777	13

Thus, even during the eight years following the war, the proportion of actual cash to the total of cash and cash deposits in the United States fell from about one-sixth to as little as one-eighth. Since, as we shall see subsequently, cash deposits are turned over much faster than cash, the preponderance of the former in terms of the volume of payments effected would be even greater. If we include time deposits we find that State money held by the public is less than 10 per cent of current money.

In the case of Great Britain we are thrown back on more precarious guesses. But I estimate that in 1926–8 cash deposits (i.e. excluding fixed deposits) in Great Britain may have been £1,075 million and notes circulating in the hands of the public £250 million, in which case the latter were 19 per cent of the total or, say, one-fifth. Including fixed deposits, we find that, as in the United States, State money held by the public is about 10 per cent of current money.

Thus in Great Britain and the United States—and also increasingly elsewhere—the use of bank money is now so dominant that much less confusion will be caused by treating this as typical

[1] The figures for cash deposits are taken from Mitchell, *Business Cycles*, p. 126, and those for money in circulation outside the banks from *The Review of Economic Statistics*, July 1927, p. 136.

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and the use of other kinds of currency as secondary, than by treating State money as typical and bringing in bank money as a subsequent complication. The latter practice, which has outstayed the facts, leads to insufficient emphasis being placed on some of the most typical features of modern money, and to its essential characteristics being treated as anomalous or exceptional.

REVIEW OF SOCIAL ECONOMY

Money is a Social Relation

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Abstract Money continues to present theoretical and conceptual difficulties for mainstream neoclassical micro- and macroeconomics. In most treatments it is "neutral," as either: a symbolic "veil" over an underlying "real" economy; a special "commodity" with utility for the rational maximizing individual; or as part of a model of aggregate economic "variables." The methodological assumptions of these approaches cannot account for the fundamental characteristics of money as a measure of value and acceptable means of payment. Many of these diffculties are resolved if money is conceptualized as a structure of social relations.

Keywords: money, credit, methodology, economics and social theory

INTRODUCTION

> There is no denying that views on money are as difficult to describe as are shifting clouds.
>
> (Schumpeter 1994 (1954): 289)[1]

Money is a puzzle. The standard answer to the question of what is money derives from the late nineteenth-century functionalist account:

1 In general, writers on money tend to express perplexity. Marx admitted his difficulties, but apparently was mistaken in the attribution to Gladstone of the view that "even love has not turned more men into fools than has meditation on the nature of money" (see Ganssman 1988). Kindleberger begins a chapter on the nature of money with a long quote from *Dombey and Son* in which the former is defeated by the latter's question: "Papa, what's money?" (Kindleberger 1984: 19). Robertson thought it appropriate to use quotations from *Through the Looking Glass* at the head of each chapter of his *Money*. In concluding a recent book on money, the sociologist Dodd was reminded of St. Augustine's remark that "time" became more and not less elusive with close examination (Dodd 1994: 153).

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money is what money does. Conventionally, it is a measure of value (or unit of account); a medium of exchange; a standard of deferred payment; and a store of value. However, there is, in fact, wide and at times quite vigorous disagreement as to what money does and which are the most important of the functions. Does the "thing" have to perform all the functions in order to be money? Is "credit" money? And so on. Further investigation reveals a quite surprising paradox: Money is one of the most important pieces of "social technology" ever developed, but as an object of study in its own right it is neglected by the dominant or mainstream traditions not only in modern economics but also in sociology.

Surveying the economic literature on the nature and functions of money and looking at the more prominent recent disputes on the "behavior" of money, one is struck by the extent to which modern neoclassical economics remains dominated by the conceptual apparatus of the "theoretical" school of economics that triumphed in the *Methodenstreit* (conflict over methods) around the turn of the century. At this juncture, historical and sociological perspectives on the "economic" were expunged from the core of the discipline (see for example: Schumpeter 1994 (1954); Machlup 1978; Swedberg 1987). Indeed, the most mathematically sophisticated and therefore most revered theories in neoclassical economics—broadly speaking, neo-Walrasian general equilibrium theories—have had great difficulty in actually finding a place for money in their schemes. "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." (Hahn 1982: 1). In these abstract models, money can, at best, only have the role of a pregiven *numeraire*—an accounting device in what is, essentially, a simple barter economy. A closely related approach in the broad neoclassical school has been to look on money as a rather special "commodity," but one which, like all other commodities, must possess some utility for the rational maximizing *individual*. (As we shall see, this basis for money has proved difficult to demonstrate with this *methodological framework*.) In general, money in mainstream neoclassicism money is, analytically, merely a "veil" or a neutral "lubricant" in a model of the economy, which is seen as comprising "real" factors (Schumpeter1994 (1954): 227).

I shall argue that the difficulty in accounting for the existence of money and its role in actually existing economic systems is the result

of the absence of anything resembling an adequate specification of its social structural conditions of existence. In "critical realism's" terms, mainstream economics does not possess an adequate *ontological* theory of money (Lawson 1994). These comments apply mainly to neoclassical microeconomics. But modern macroeconomics fares little better, largely because it too proceeds from neoclassical rational choice assumptions, and, furthermore, conceptualizes money simply as one of the statistically related aggregate economic "variables." (See Lawson's "critical realism" perpective on economic methodology [Lawson 1995]). However, the initial partial break with economic "classicism" in the first part of the century—most notably by Keynes—was, to some extent at least, an attempt to make sense of new, or more widespread forms of bank and state credit money in which, to some at any rate, the "social" basis of money was blatantly obvious. Over the past few years, a distinctive "post-Keynesian" macroeconomic school of monetary economics has been developed which, in opposition to neoclassicism, has taken up this aspect of Keynes's work and focuses on "credit-money" (Wray 1990; Smithin 1994; Rogers 1989; Moore, 1988). This work cannot be discussed in detail here; but, although it is undoubtedly an advance on orthodox thinking, post-Keynesian monetary theory is understandably embroiled in the problematics of academic economics in which the terms of discourse are partly dictated by the neoclassical and/or "monetarist" conceptualizations it opposes. Hence, the preoccupation with "endogeneity" and debates between "horizontalists" and "verticalists" conducted in terms of the strength of statistical relations between "variables" (Cottrell 1994).[2]

Furthermore, there is a second aspect to the paradox in that although money should be seen as having "social" conditions of existence, sociology, with the notable exceptions of Weber and Simmel, has contributed very little directly to the study of the actual social production of money as a *system of social relations, sui generis*. This contentious argument will be pursued in detail elsewhere; here we may briefly note the basis for this judgment. In the division of intellectual labor between economics and sociology that developed in the first part

2 See Ingham (1996a) for a brief discussion of the distinction between the economic "aggregates" and "variables" of macroeconomics and social structure seen as an "emergent" property. I hope to address modern macroeconomic and post-Keynesian concepts of money, in more detail, in the future.

of the century money was placed under the jurisdiction of economics (Swedberg 1987; Ingham 1996a). Moreover, partly as a consequence of this division, the major schools of sociology have tacitly incorporated the orthodox conception of money from "real" neoclassical analysis. In Parsons' social theory, for example, money is taken to symbolize underlying social relations; it is a generalized *medium* of social interaction (Parsons 1937; 1951). (See the excellent discussions by Ganssman [1988] and Dodd [1994].)Although Marx stressed the fundamental monetary structure of capitalism (M-C-M), he was primarily concerned with showing that money was a "mask" (or "veil") over the underlying "real" social relations of the production of commodities.[3] Institutions for the social production of money, such as banks, are not seen as the essence of capitalism; rather, this is sought in the reality of the capital–labour *relations of production* expressed in an alienated monetary form. (To [mis]use Marx's terminology, I would suggest, rather, that money should be seen as a "force of production" which, as the post-Keynesians correctly imply, has its own particular "relations of production."[4])

Obviously, money is socially produced in the sense that it does not occur naturally, and it also mediates and symbolizes social relations—for example, capital-wage labor. However, I wish to go further and argue that money itself *is* a social relation. By this I mean that "money" can only be sensibly seen as being *constituted by* social relations. I have already hinted that this claim is most obviously sustained in the case of credit-money as "promises" to pay; but I shall argue that all forms of money *are* social relations and consequently, for example, the conventional textbook distinction between "money" and "credit" is not merely anachronistic, but is based on a conceptual confusion.

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3 For Marx there are *two* veils: behind money lie "real" economic "forces" and, in turn, behind these lie the "real" *social* relations that again, in turn, appear as monetary relations.

4 The tendency to analyze economies almost exclusively in terms of "production relations" is pervasive within sociology. See, for example, Mann's attempt to write a "total" sociological history from the standpoint of the gradual extension of "infrastructural" and "despotic" "social power." He devotes considerable attention to state finance, but nowhere is money as "social power" *sui generis* given any specific treatment. "Economic power" and "economic organisation" are conceptualized entirely in terms of *production and exchange* (Mann 1986: 25).

MONEY IN ORTHODOX "REAL" ECONOMIC ANALYSIS

Economic thought is marked by a long continuity of interrelated disputes which involve surprisingly divergent conceptions of the nature of money. The major differences have been between "metalists" and anti-metalists during the sixteenth and seventeenth centuries (Schumpeter 1994 [1954]); the "Currency" and "Banking" schools and more generally between "materialists and "nominalists" in the first half of the nineteenth century; and the seesaw battle between "monetarism" and various forms of Keynesian economics in the middle of the twentieth.

The two sides' differences with regard to the nature of money and how to "manage" it are grounded in different conceptions of the scope and method of economics, which Schumpeter has referred to as "real" and "monetary" analysis. This was referred to earlier, but we now need to examine this distinction in a little more detail.

> 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 ... 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: 277)[5]

From the present standpoint two closely related features of this "real" approach to money are most important. First, the almost exclusive concern is with money's *medium of exchange* function as a neutral

5 The term "real," as Schumpeter notes, is not very felicitous. Apart from the confusion, say, with "real" and "nominal" prices, "real" analysis is distinctly "unreal," as critical "realism" would argue, from both historical and sociological standpoints!

"lubricant" of exchanges between "real" "goods" or economic "forces" or "variables." Money as a *measure of value/unit of account* is taken as given and *means of payment* is assumed to be covered by the medium of exchange function. Second, "real" analysis is radically *a*historical and *a*social in the sense that particular forms of economic organization are deemed to be epiphenomenal or merely "contextual"; complex social structure—banks, productive enterprise, etc.—is reduced to purely abstract exchange relations between rational maximizing agents.[6] For example, one of this century's most influential economists would have us believe that:

> even the most advanced industrial economies, if we strip exchange down to its bare essentials and peel off the obscuring layer of money, we find trade between individuals and nations largely boils down to barter.
> (Samuelson 1973: 55. Quoted in Wray 1990: 3)[7]

The Search for the "Micro-foundations" of Money

"Real" monetary analysis derives from "metallist" or "commodity" theory, which argued that the function of the medium of exchange was dependent on its being a commodity with an exchange value independent of its form as currency. Thus, there could be an exchange ratio between the "real" values of precious metals (or wheat or beans) in the form of money and other commodities. With the increasing use of "worthless" token and credit-money in modern economies (i.e. non-commodity money), the basic logical structure of "real" analysis was preserved in two ways. First, paper and base-metal could stand for and be convertible into a "standard" of gold or silver. This formulation largely governed monetary policy to the early twentieth century and basically involved schemes which tried to make paper behave *as if* it were gold.

A second and more narrowly academic response in the wake of

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6 This position on the relation between the "economic" and the "social" or "historical" has recently been expressed succinctly by Oliver Williamson in a contribution to *The Handbook of Sociology* (Smelser and Swedberg, eds., 1994). He approvingly cites legal philosophy's distinction between the "essentials" of the "rational core" and the "tosh"—that is, "superfluous rituals, rules of procedure without clear purpose [and] needless precautions preserved through habit" (97–98).

7 Note also that Samuelson is not saying that it is heuristically useful to look on advanced industrial economies in this way, but that they actually "boil down" to simple barter.

"worthless" paper money argued that money was really no more than a "token" or "symbol" of "real" goods. This line of reasoning found its most brilliant expression in Walras's system in which money is reduced to pure number—the *numeraire*—which enables the multilateral exchange of goods in instantaneously clearing markets in a world of virtual barter. As has frequently been noted, the presence of money makes no difference to the logical structure of such general equilibrium models. Abstract neo-Walrasian models are intentionally "timeless" and as such do not imply or infer a history of monetary evolution. Money is not accounted for, rather it is simply introduced along with the "auctioneer" in order to render the system operational.[8]

However, neoclassical economics in the English marginalist tradition did provide a rudimentary theory of money's "origins." Money evolved to overcome the inconveniences of barter which arise from the absence of a "double coincidence of wants."[9] The crudest formulations imply a teleological functionalism which Menger, for one, tried to avoid by arguing that rational transactors in a barter economy would realize the individual advantage in holding stocks of the most saleable commodity as a medium of exchange (Menger 1892).[10] Thus, as an

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8 For example, one of Clower's early essays attempted to deal with this lacunae from within the neoclassical tradition and provide a pure theory of a money economy. However, the approach only serves to illustrate the impasse created by the neglect of history. By means of a purely formal analysis, Clower can only conclude that: "A commodity is regarded as money for our purposes if and only if it can be traded for all other commodities in the economy. Correspondingly, a money economy is one in which not all commodities are money . . . money buys goods and goods buy money; but goods do not buy goods" (Clower, 1967, in 1984: 86). In short, the approach can proceed no further than providing a purely logical description of money as an "object."

9 Ever since Jevons's account in the late nineteenth century nearly all economic textbooks point out that barter requires a double coincidence of wants—that is, A has ducks but wants chickens at the same time that B has chickens but wants ducks. Not only does this approach tend to confuse, in Schumpeter's terms, "logical" and "historical" conception of "origins"; it is also empirically suspect on two counts. First, there is considerable evidence to suggest that such barter economies never existed in the form assumed in "real" analysis. (Heinsohn and Steiger 1989). Second, barter has occupied a wider role than is implied in evolutionary-efficency model. Historically, *both* barter and monetary exchange increased with the production of "surpluses"; and, moreover, barter need not be as inefficient as is commonly thought. (Braudel 1985; Melitz 1974).

10 Functionalism is bedeviled by logical problems. Teleogy involves treating "effects" (e.g. the systemic benefit of a multilateral exchange of heterogeneous goods) as "causes" of origin; but there is also the difficulty of functional alternatives. Functionalism is unable logically to specify which items might fulfill any specific

unintended consequence of individual rationality, precious metals, which in addition possess the convenient attributes of portability, divisibility, durability etc., become money.

Unfortunately, the demise of commodity-money broke this explanatory link between individual rationality and collective or system benefits. Hence Menger's paradox that institutions such as money "make for the common interest, and yet . . . conflict with the nearest and immediate interests of contracting individuals" in that an "individual should be ready to exchange his goods for little metal disks apparently useless as such, or for documents representing the latter" (quoted in Jones 1976: 757). Modern neoclassicism's attempted resolution, which is consistent with the axiom of rational maximization, has been to update Menger and to assert that money reduces transactions costs for the individual (Jones 1976; Ostroy and Starr 1974; Clower 1984). As we shall see in a moment from the implications of Hahn's analysis, the very best that this axiomatic-deductive method can demonstrate is that, *once in existence and widely accepted*, money can be an "individual" as well as a "public" good.

"Money may slip through our fingers," Frank Hahn laments, "unless its role in transactions is made essential" (Hahn 1987: 42).[11] His approach is instructive for two reasons. In the first place, the clarity of the exposition throws a sharp light on the disabling consequences of the "primitive" terms of microeconomics. Second, the rigor of the analysis leads Hahn to consider abandoning, or at least seriously modifying, these assumptions.

By modeling a money economy as a Nash equilibrium exchange game, Hahn shows that it is indeed "advantageous for any given agent to mediate his transactions by money provided that all other agents do likewise" (Hahn 1987: 26). Hardly a startling conclusion as he acknowledges, but at least it presents a formal proof that money's liquidity exists as a social convention. Surely, however, it is not so

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function; for example, Samuelson's analysis of the "function" of money as a intergenerational store of value does not explain why money rather than another "store" or "asset" performs in this way (Samuelson 1966 [1958]). In short, the theory cannot adequately account for money's conditions of existence.

11 Hahn decisively dismisses the "theoretical history" which explains money's appearance by its superior efficiency over barter: "This Panglossian teleology lacks all merit until a process is described which brings about the superior outcome" (Hahn 1987: 24).

much a question of whether it is advantageous to use money if others do, but rather that agents *cannot* use money *unless* others do likewise. To state the obvious: the advantage of money presupposes a monetary system. We have here a typical example of the way in which the rational choice explanations of neoclassical economics soon become locked into slightly absurd circularities. Money is an advantage to the individual only if others use it; but, according to the theory, they can only rationally use it if it can be shown to be an individual advantage.

Significantly, Hahn admits that his purely deductive approach cannot identify money as such: "a barter economy might be a Nash equilibrium as well" (Hahn 1987: 29). As he acknowledges, if barter were "the accepted mode of transaction," it would be risky and therefore disadvantageous to accept a promissory note. Of course, it is simple to show that, in certain historical circumstances, the risk of accepting a promissory note that was embedded in a trustworthy network of banking families would be far less than transporting gold. But this is outside the methodological micro-foundations of economic analysis. Having pushed the spare principles to their limits, Hahn is left to ponder that "it is open to argument how far the given transactions institutions . . . are part of the basic description of the economy" (Hahn 1987: 42). Armed with the set of axioms and assumptions he employs, one could never explain why a rationally advantageous monetary system, including credit, banks, and so on had not existed for all time.

The explicit aim of neoclassical "real" analysis of money is to establish the *logical* preconditions for money's existence. However, it displays overwhelming theoretical deficiencies which, as a consequence of the methodological neglect of "historical" and "social" structure, are not remediable within the framework of its assumptions. In the first place, as I have already stressed, neoclassicism is mostly concerned with money as a cost-reducing medium of exchange for the individual. There is no attempt to account for the "concept" of money as a *measure of value* (or *unit of account*)—or even to recognize that this might constitute an intellectual problem. Second, as Hahn inadvertently shows, money's general acceptability (or its liquidity) cannot be explained in terms of *individual* rational maximizing; this form of theorizing becomes stuck and cannot proceed because it must presuppose that which it sets out to explain. Finally, the preoccupation with the medium of exchange in the hypostatic model of barter exchange *necessarily* involves the "neutrality" assertion and the neglect of those

monetary forms which are not only characteristic but also *constitutive* of capitalism's *production* of credit money.

Monetary systems are the result of the long term historical development of a complex structure of social relations and practices which cannot be grasped by of neoclassicism's methodology. In this respect, Smithin has observed that "the micro-foundations of standard monetary theory have been left extremely weak" (Smithin 1994: 14). In fact, we need to go further: money cannot have "micro-foundations" if these are sought exclusively in the formal deductive model of the individual agent's rational choice of holding a "veil" or "lubricant" as simple medium in a "real" exchange economy.

MONEY AS A STRUCTURE OF SOCIAL RELATIONS

The dominance of neoclassical deductive methodology, in which money is a neutral veil, is the direct outcome of the triumph of the "theorists" during the *Methodenstreit.* However, the ultimately vanquished "historical school" in this struggle held to a theory of money's "origins" which differed significantly from the one propounded by their opponents.[12]

The "historians" (including some sociologists) held to a *non*-market theory of the origins of money and, in addition, stressed the essential role of the "state" (or "polity') in the reproduction of monetary systems.[13] In contrast to the theoretical economists' focus on the

12 For a brief references of the work of Roscher and Knies, see Einzig (1966). Despite his methodological critique of their work, Weber's analysis of money is heavily influenced by them and also Knapp (1924). Indeed, Menger's vehement and dogmatic insistence that money had only the one function as medium of exchange was probably as much a result of the intellectual enmity during the *Methodenstreit* as it was of scholarly conviction.

13 The state has no conceptual place in the "real" analysis of money; the theoretical "primitives" of this tradition do not incorporate social structure beyond the most elemental pure abstract exchange between utility-maximizing agents. More recent neoclassically based analysis has attempted to explain the state's existence as a response to "market failures" such as "externalities," in the provision of "public" and "merit" goods, and in securing "property rights." But the state is accorded only a secondary or reactive role and older "real" theories of money are readily accomodated in this framework. In a Mengerian account, for example, the market might yeild the most saleable commodity as the medium of exchange; but the state can economize on transactions costs by being a more effective and trusted guarantor of that commodity's quality (Hodgson 1992).

medium of exchange function, they sought the origins of money as a *measure of value/money of account* and (unilateral) *means of payment* of fines, tithes, taxes, compensations—that is, *debts* between the political community and its members (See Schumpeter 1994, chapter 4; Einzig 1966; Melitz 1974).

The expression of this approach in Knapp's *State Theory of Money* influenced Keynes's study of ancient near eastern currency and the methodology of *A Treatise on Money* (Knapp 1924; Keynes 1930). Here Keynes opens with unequivocal assertion that "Money of Account, namely that in which Debts and Prices and General Purchasing Power are expressed is the primary concept of Theory of Money." In what is probably an oblique reference to Menger's insistence that money has only the one function—as a medium of exchange, Keynes dismissively observes that: "Something which is merely used as convenient medium of exchange on the spot may approach to being Money.... But if this is all, we have scarcely emerged from the stage of Barter" (Keynes 1930: 3). In this possibly unwitting endorsement of the German historical school approach, Keynes argued that the "state or community" was the source of money of account (measure of value) and means of payment (Keynes 1930: 4–5, 11–15).

A related divergence from the conception of money simply as a neutral medium of exchange is to be found in the work of those who, like Keynes, understood bank money as "book money"—that is, an abstract money of account for recording debt. As I have indicated, post-Keynesian monetary theory focuses on the supposed distinctiveness of credit money's non-neutrality; but from the present standpoint I wish to emphasize the fact that the symbolic representation, or signifiers, of these debt-*relations* eventually became accepted means of payment and media of exchange. In other words, a particular social relationship—promise to pay—became money.

Thus, I intend to follow the "historical school," Keynes (and the later Hicks) and see money primarily a measure of value and a credit relation, and, furthermore, to argue that these attributes are to be seen as the structural properties of society.[14]

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14 Given Hicks's initial reaction to Keynes, it perhaps a little ironic that he should reach exactly the same conclusion in the posthumously published *A Market Theory of Money*. After arguing that debt contract rather than spot payment was the most typical

1. The Social Bases of Money as a Measure of Value: State and Society

Although the German historical school paid more explicit attention to money as a measure of value than the "theorists," its origins were not fully explained beyond pointing to the need for the precise measurement of "debts" of fines, tithes, taxes, etc. In this respect, although we might agree with Keynes's metaphor that the state or community claims not only to enforce but also to write the monetary "dictionary" (Keynes 1930: 5), it should be pointed out that both activities presuppose the existence of a "language" (Frankel 1977).[15] Independently of any economic analysis of money, the numismatist Grierson similarly decided "on the test of money being a measure of value. Unless the commodities used for exchange bear some fixed relation to a standard, we are still dealing with barter" (Grierson 1977: 16). "The parties in barter-exchange are comparing their individual and immediate needs, *not values in the abstract*" (Grierson 1977: 19 emphasis added).

But Grierson goes further and attempts to explain the origins of the *concept* of money as a measure of value:

> Behind the specific phenomenon of coin there is the phenomenon of money, the origins of which are not to be sought in the market but in a

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economic transaction and discussing the standard functions of money, he concluded: "We seem thus to be left with two distinguishing functions of money: standard of value and medium of payment. ... [and] money as a means of payment implies money as a standard." (Hicks 1989: 43). However, even though it appears that Hicks, in his very last work, was moving to a "credit theory of money" (as opposed to a commodity-money theory of credit), he felt it necessary to take Keynes to task for defining money by its perfect "liquidity." Hicks's partial retention of the older style of theorizing is evident: "liquidity cannot be defined ... except in terms of exchangeability for money. So to define money as an asset with perfect liquidity is to argue in a circle. It is the other functions of money which are intrinsic; the liquidity property follows from them." (Hicks 1989: 42). Obviously, money performs "functions," but as we have seen their existence cannot be derived simply from their individual rationality or utility and that this applies especially to measure of value/money of account as an intersubjective, that is, social institution.

15 There is a long tradition of using a money/language analogy in economics and sociology The former is traceble to Turgot and more recently is used by Tobin and Hahn who seem to imply that to indicate that they are aware that money is "social" is all that is necessary to escape some of the restrictions of economics "methodological individualism." This analogy obscures as much as it illuminates, but the argument cannot be pursued here.

> much earlier stage in communal development, when worth and wergeld were interchangeable terms.
>
> (Grierson 1977: 33)

Wergeld ("worthpayment") was widespread in premarket societies and comprised the scales and tariffs of compensation for injuries used as an alternatives to socially and economically debilitating blood feuds and *lex talionsis* (Grierson 1977: 28).

It cannot be shown that *wergeld* actually predates the use of media of exchange in more narrowly market transactions and Grierson accepts that the "generalized application of monetary values to commodities could scarcely have come about before the appearance of market economies." But Grierson is concerned with what Schumpeter refers to as "logical origins" and argues that the *idea* of "moneysworth" could not have been produced by the "market."

> The conditions under which these laws were put together would appear to satisfy much better than the market mechanism, the prerequisites for the establishment of a monetary system. The tariffs for damages were established in public assemblies, and.... Since what is laid down consists of evaluations of injuries, not evaluation of commodities, the conceptual difficulty of devising a common measure for appraising unrelated objects is avoided.
>
> (Grierson 1977: 20–21)[16]

Grierson makes no use of sociological theory, but his argument could be expressed as a Durkheimian hypothesis that money as a measure of value is a "collective representation" for which the analogue is the structure of society. In taking this lead, we can develop our argument by noting that *wergeld* expressed two meanings of "worth" which derive from two elements of basic societal structure: the utilitarian and the moral.

It is possible, but by no means easy, to construct reasonably objective indemnity schemes for functional impairment caused by loss or injury to individuals, social groups, or society at large.[17] However, society's normative or moral order is inextricably bound up with notions of

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16 There is considerable etymological support for this theory. In addition to Grierson, see Einzig [1966]: "the word Geld is said to have originated from Vergeltung which ... implies the settling of scores or revenge." [379]; also Simmel (1978 (1907), 357) notes that shilling is derived from "skillan," meaning killing or wounding.

17 In their very important critique of neoclassical analysis of money, Heinsohn and Stieger (1989) follow Keynes in linking money of account to contracts and, thereby, argue that money has its origins in the institution of private property without which

functional "worth" and, in this respect, *wergeld* was a matter of both injury and *insult*. Payment for killing a king, for example, was set at an absurdly high level that would have involved the selling into slavery of the murderer's whole extended family. On a more trivial level, it "cost four times as much to deprive a Russian of his moustache or beard as to cut off one of his fingers" (Grierson 1977: 20). Here, loss of face was literally more important than at least some small loss of function. Moreover, it is quite clear that the expiation of the culprit was not *intended* to compensate precisely for destroyed functional "value," but also involved punishment or vengeance for the transgression of the symbolic values of the "sacred" social realm. The defense of such values might have some utilitarian or functionally instrumental consequences; but it is difficult to explain them entirely in these terms (Elster 1990: 238). Rather, the meaning of, say, insults and revenge must be sought in society's system of values which, following Durkheim, is a moral order *sui generis*. Of course, these arguments are simply a restatement the familiar sociological critique of the idea of the primordial "market"; that is, the theory of society based upon the advantaged contractual interdependence of rationally calculating maximizing individuals.[18]

This is not the place to plow this already well-worked ground, but perhaps it might be useful to illustrate the general argument, as I have applied it to the "origins" of money as a measure of value, by looking at an analysis that proceeds along identical lines in its explanation of the "logical origins" of inequality. Over thirty years ago, Dahrendorf

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there cannot be contracts (see also Wray 1990). However, as Keynes, Hicks, and Grierson argue, the measure of value is anterior to contract.

18 Sociology's development owed much to its rejection of the assumption to be found in "real" economic analysis that there exists "natural" substratum of social and economic order that is in "in the nature of things" (Parsons 1937). Much of Durkheim's writing, for example, is devoted to an elaboration of this critique. Most notably he argued that economic institutions, which of course include "money," could not be founded entirely on "contracts" which supposedly expressed these natural interests. Durkheim insisted that the very idea of a contract presupposed an anterior social or moral order: "all in the contract is not contractual...wherever a contract exists, it is dependent on regulation which is the work of society not that of individuals" (Durkheim 1964: 189, 194). Durkheim was not merely suggesting that contracts would be unworkable without norms of custom and practice and a degree of trust, but also literally unthinkable without the social construction of the idea of contract and procedure that, furthermore, could not have been generated by the immediate parties themselves.

started from Durkheim's insistence that every society is, fundamentally, a "moral community" in the sense that both social positions and the performances of their individual incumbents are evaluated in relation to systems of norms and values (Dahrendorf 1968). These are supported by both material and symbolic sanctions—that is, punishments (including "shame") for transgression; and rewards for exemplary conduct—especially "honors." The latter produces an inequality of status. Relatedly, *wergeld* symbolically represented society's two faces and involved, on the one hand, attempts to quantify the functional contribution of *social positions* by the imposition of tariffs for the impairment or loss of incumbents. On the other, such schemes, or *collective representations*, were the codification of the values and norms without which the evaluation of functional "worth" would have remained *anomic*; that is, an unresolvable contesting of claims and counterclaims backed by coercion. There are then very good reasons for believing that the very idea of money originated outside the "market," as this is conventionally construed in economics.

2. Credit money: Banks and the State

Early intellectual opposition to the commodity-theory of money was largely founded on efforts to understand the theory and practice of new forms of state money and bank money other than as the mere representation of precious-metal money.[19] Money's transformation

19 The existence of state-issued precious metal coinage struck with the image or emblem of the ruler, as quality guarantee, can quite easily be incorporate in orthodox "real" or neoclassical analysis (Hodgson 1992); but such treatments have tended to be at the expense of historical accuracy. While it is acceptable to present an *economic* analysis of the net benefits of the state's "public goods" role in the provision of commodity money, it is misleading even to imply that this provides an adequate explanation of the emergence of the state's involvement. Even a cursory glance at the history of "seignorage" and "debasement" suggests that the exploitation of political advantage was at the center of the struggle for the monopolization of issue and that the outcome was contingent and not simply determined by any "logic" of cost reduction for market transactors (Spufford 1988). Similarly, the brief references to the history of banking to be found in many economic textbooks merely perpetuates the misleading commodity-theory account of goldsmith's receipts as the origin of banknotes (see for example, Begg, Dornbusch, and Fischer 1991: 404). To be sure, precious metals were deposited for safe-keeping and the receipts were often accepted as the *direct representation* of these commodities and thereby used as money; but this was probably the one of the least important antecedents of modern capitalist banking.

from, in Simmel's terms, "substance" (commodity) to pure "function" as an acknowledgment of debt (promise to pay) expressed in a money of account and issued by states and banks involved the realization that money was *itself* a social relation.

The equivocal position of such views in economic theory is apparent in the difficulties that bank credit money has posed for orthodoxy. Insofar as the actual *activity* of banks has been the subject of "real" or narrowly neoclassical analysis, it has been seen as simple intermediation between savers and borrowers and in the reduction of transactions costs through the clearing of checks etc. However, from the fifteenth century, banking practice increasingly involved the "*manufacture*" of money *as* a social relation. Lending involved the creation of a deposit which stood in a relatively autonomous relationship to any approximate incoming "balance" of deposits from other sources. The bank "note" signified neither actual nor virtual goods and commodities, but simply a debt to the bank and promise of repayment. This difference has been expressed in a variety of ways; but perhaps most pithily in the distinction between the "real" analysis conception of banking practice in which "deposits make loans," and the converse "credit" or "monetary theory" view that "loans make deposits". The latter *act* of bank lending creates a deposit against which checks may be drawn (Schumpeter 1994: 717; also Rogers 1989; Wray 1990).

The production of state-credit money is in principle the same process as bank-credit money. Since some Italian cities decreed, in the early seventeenth century, that their promises to pay their debts were legal tender, states have used this means of borrowing and increasing the money supply (Kindleberger 1984; Arrighi 1995). The acceptability of these promises depended, among other things, on the credibility of promises to repay debt. This was achieved by the gradual extension of long-term control over state finances by the creditors through the replacement of arbitrary and relatively untrustworthy monarchical rule by bourgeois democracy and constitutionalism. In effect, the rulers of the Italian bourgeois city-states—Genoa, Florence, Venice—guaranteed each others' debts. For similar reasons, the state's promise to pay became money relatively early and successfully in the Netherlands and England, but more unevenly and hesitantly elsewhere in Europe (Dickson 1967; Kindleberger 1984).

From the present standpoint two elements in this "leap" in the social development of money are particularly important. First, the growing

international bank "giro" gave more prominence to "the idea of a money of account which was defined by quantities of metal and which existed only as a bookkeeping device for facilitating large scale trade and finance in a world of numberless and ever changing currency systems." By the early seventeenth century, distinctions such as the one between *moneta immaginaria* and *moneta reale* were being made (Schumpeter 1994: 296–297).

Second, it was the detachment of money, by banks and states, from being merely a signifier of commodities or deposits of commodity money that proved to be difficult to accomodate within "real" analysis (Schumpeter 1994: 317–322).[20] This mode of monetary production involved the creation of debt and the acceptance of "promises to pay" as media of exchange and means of payment. As promises, money is not a "commmodity" which stands in a relatively stable relationship to other commodities, nor is it *merely* a reflection, symbolic representation, or signifier of an underlying existing "reality" of economic relations. Rather, it is a social relation based upon definite and particular social structural conditions of existence involving, among other things, an institutionalized banking practice and constitutional legitimacy of the political authority in which the promises of banks and the states to pay gradually became currency (Dickson 1967; Hicks 1967, 1989; Weber 1992). The fundamental general social structural change that underpinned this critical step was the establishment, in custom and law, of the fungibility (transferability) of debt (Atiyah 1979: 135–138; Weber 1992 (1927): chapter XX). This involved a

20 Credit devices that originally facilitated trade, such as bills of exchange, also became "detached" from any actual commodities that they might have directly represented and were issued by banks to serve as autonomous media of exchange and means of payment. It should be noted, however, that "commercial-paper" as a medium of exchange that directly signifies actual goods is consistent with the idea in "real" analysis of money as a neutral "veil." The conception of a purely paper credit barter economy in which a *numeraire* represents "real" values is contained in the Walrasian model; and more recent theoretical developments, such as the "New Monetary Economics," examine the possibilty of large-scale "cashless" barter systems based on advanced computer technology which can match traders and produce the necesssary "double coincidence of wants" (Smithin 1994: 14–16). See also the "real bills doctrine" in relation to the Banking and Currency schools dispute (Smithin 1994: 4). However, in "real" analysis, the equation between signifier (bill) and object (commodity) is either assumed or considered exclusively as a logical relation. "Monetary" analysis points to the inherently problematic relationship that is the result of the relatively autonomous processes of the respective "social" production of money and goods.

second level of detachment in the transformation of social relations into "money." Not only was credit money separated from any direct relation to "real" commodities, but also from particularistic (person-to-person) debt relations. The transformation of personal into impersonal trust (legitimacy) and, thereby, of IOUs into liquid money, was a long-term historical process which, like the concept of measure of value, cannot be deduced from the axioms of orthodox theory.

Considered in this way, banking practice, including state and "central" banking, is *social practice*; that is, the social construction of credible rules of thumb that are considered prudent and legitimate by *all* concerned. It is not quite seventy years since Keynes attempted, in *A Treatise on Money*, to give a more secure theoretical foundation to the "creation" of bank money:

> [I]t is evident that there is no limit to the amount of bank-money which the banks can safely create *provided that they move forward in step*. The words italicised are the clue to the behaviour of the system.... Each Bank Chairman sitting in his parlour may regard himself as the passive instrument of "outside forces" over which he has no control; yet the "outside forces" may be nothing but himself and his fellow-chairmen, and certainly not his depositors.
>
> (Keynes 1930: 26–27)[21]

The *theoretical* resistance to this view of bank money continues in a great deal of economics and is almost as mysterious as the production of money itself.[22] This subject would make a very interesting subject for the sociology of economic knowledge. It cannot be pursued here beyond the observation that the proximate reasons for the persistence of "real" monetary analysis must lie in the dominant paradigm's conceptualization of economic relations as those between individual agents and commodities or between economic "variables." But *bank money is debt, which is a social relation*. The theoretical explication, in economics, of the social process of the *production* of money remains

21 See the debate on the proposition that the money supply curve is horizontal at a given rate of interest (Moore 1988).

22 As late as 1921, no less an economist than Cannan, writing in the *Economic Journal*, used the "real" analysis analogy that if a cloakroom attendant loaned out bags left with him this would not involve the "creation" of bags and, moreover, before the owners of the bags could use them, they would have to be recovered from the borrowers (Schumpeter 1994: 1113–1114). But as Schumpeter explains, depositors and borrowers have simultaneous use of the "same" money.

underdeveloped for the simple reason that it would have drastic consquences for economic methodology as a whole (deCecco 1987: 1–9). In this respect, it is important to note that after its rehabilitation into neoclassicism, most Keynesian monetary analysis devolved into the study of the "portfolio" selection and "liquidity preference" of rational maximizers. That is to say, mainstream macroeconomics became almost exclusively focused on money's least *specific* attribute—as a store of value.[23]

3. Is All Money "Credit"?

Despite the fact that commodity money has long since ceased to have any significance, the distinction between "money" and "credit" persists in learned journals, textbooks, and everyday usage. The obvious empirical point that most money is now some form of credit money is not the one I wish to stress; rather, I would like briefly to argue that the reasoning behind the view that credit money is a social relation be extended to all money, including its archaic "commodity" forms. This general argument has been expressed most forcefully by the sociologist Simmel in his argument that the distinction between barter and money is sociological, not simply logical as in, for example, Clower's well-known formulation that money buys goods and goods buy money, but goods do not buy goods.[24] Consequently, Alfred Marshall's school-yard barter or swaps of nuts for apples, for example, is to be seen as an

23 This most "economic" of problems—that is, the value of money—is also, in part, a socially "enacted" or "accomplished" process involving, *inter alia*, economic theories of the "causes" of inflation; financial journalism; accountancy theory and practice; central banks; ministries of finance, etc. (see Mirowski 1990). In other words, the statistical relationships between the relevant macroeconomic "variables" involved in the determination of the "value" of money are the expression of underlying social and economic processes.

24 However, Smithin reports that shortly before his death, Hicks had abandoned any distinction between "money" and "credit" and maintained that "the evolution of money is better undertsood if one starts with *credit*" (Smithin 1994: 25 , original emphasis). The evolution of Hicks's thought on money from his early orthodoxy of the 1930s. ("Mr Keynes and the Classics," *Econometrica*, 5, 1937: 147–159) to the posthumous *A Market Theory of Money* (1989) and then the above statement displays, to this reader at least, a fascinating gradual movement to an inherently historical and sociological conception. This interpretation relies on some of his substantive arguments in this book rather than its explicit conclusions, with which they are frequently at odds in their adherence to the both the logical and historical primacy of "the market." See also Schumpeter (1994: 321).

essentially private transaction based entirely on the "subjective" preferences and wants of the two individuals involved. For Simmel, however, money introduces a third factor:

> The pivotal point in the interaction of the two parties recedes from the direct line of contact between them, and moves to the relationship which each of them ... has with the economic community that accepts money .. [which] ... is only a claim upon society.
>
> (Simmel 1978: 177)

This mode of reasoning achieves two results. First, it draws attention to the fact that the "real" model of *pure* barter can only be *bi*lateral exchange and cannot accurately refer to any historically real economic system of any complexity. Any move to multilaterality with heterogeneous goods would involve money at least as a unit of account, with or without acceptable tokens. Second, the distinction between "money" and "credit" is dissolved—both are promises to pay.[25]

> [M]etallic money is also a promise to pay and ... it differs from the cheque only with respect to the size of the group which vouches for its being accepted. The common relationship that the owner of money and the seller have to a social group—the claim of the former to a service and the trust of the latter that this claim will be honoured—provides the sociological constellation in which money transactions, as distinct from barter are accomplished.
>
> (Simmel 1978: 178)

Admittedly this does not take us very far and a large number of theoretical and empirical issues remain. And, it is not being suggested that distinctions between different forms of money should not be made; for example, commodity money, fiat money, promissory notes, checks, credit cards, local exchange trading scheme (L.E.T.S.) tokens etc. Each has its own particular conditions of existence; but *all* such conditions are essentially social, and the conventional economic distinction

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25 Simmel continues: "This is the core of the truth that money is only a claim upon society. Money appears so to speak, as a bill of exchange from which the name of the drawee is lacking.... It has been argued against this theory that metallic money involves credit, that credit creates a liability, whereas metallic money payment liquidates any liability; but this argument overlooks the fact that liquidation of the individual's liability may still involve an obligation for the community. The liquidation of every private obligation by money means that the community now assumes this obligation to the creditor." (Simmel 1978: 177. See especially, 174–179). Compare Schumpeter's formulation that "money in turn is but a credit instrument" (1994: 320–321).

between "money" and "credit" can only obscure this simple but essential observation. Monetary relations are social relations and, consequently all forms of money have a *fiduciary* character (Dodd 1994).

CONCLUSION

The position taken here is similar in all important respects to the "critical realist" perpective in economics. Here it is argued that the essential methodological core, and fundamental error, of contemporary mainstream economics is its deductivist and/or empiricist methodology (Lawson 1994). This gives primary attention to the "surface" phenomena of, on the one hand, individual calculations of utility as expressed in "revealed preferences" and, on the other, to the statistical description of constant "actual" event conjunctions. In consequence, mainstream economics rarely concerns itself with, and indeed cannot easily accommodate any role for, underlying social structures including, on one level, social relations. In this approach, "social relations" or "social structure" can be said to be conceptualized, at best, as the recognition that economic agents take each others' maximizing strategies into account, as in game theory. At the same time, mainstream economists widely observe, and puzzle over, the difficulty of establishing an indispensable role for money in their theorizing. My objective has been to demonstrate that money is itself a social relation in the sense that it cannot be adequately conceptualized other than as the emergent property of a configuration (or "structure") of social relations.[26] Thus the inability of contemporary mainstream economics to accommodate money is a specific, and rather fundamental, manifestation of the sorts of failings that "critical realist" and some sociological arguments have established more generally.

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26 For a discussion of the distinction between social "relations" and social "structure" in relation to economics, see Ingham 1996(a), 1996(b).

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[13]

*The Theory of Imaginary Money from Charlemagne to the French Revolution**

By LUIGI EINAUDI

1. If one reads the books on monetary subjects that were written in the period from the sixteenth to the eighteenth century, one frequently encounters the concept of "imaginary money." Other terms used are "ideal money," "political money," *moneta numeraria,* "money of account." What these terms meant was not very clear even to contemporaries. The most authoritative writer among the historians of French monetary vicissitudes, François Le Blanc, resigned himself to defining as imaginary any kind of money which, "properly speaking, is but a collective term comprising a certain number of real moneys." The imaginary money which almost everywhere was called "pound" or an equivalent term like "livre," "lira," "pond," was, in Le Blanc's words, "never changing in value; in fact, we have used it since the time of Charlemagne, and it has always been worth 20 sous (shillings), and each sou, 12 deniers (pence)."[1] It is called "imaginary" because of the fact that

* A translation, by Giorgio Tagliacozzo, of "Teoria della moneta immaginaria nel tempo da Carlomagno alla rivoluzione francese," *Rivista di storia economica,* 1936, I, 1–35. The essay is printed here with the permission of President Einaudi, who has approved the translation. The editors acknowledge the valuable assistance of Raymond de Roover in the preparation of the manuscript.

With the approval of the author, paragraphs 31, 32, 33, and 35 were omitted from the translation. Paragraph 34 of the original is number 32 in the present version; to preserve the continuity of the argument President Einaudi has made a brief addition to this paragraph. The notes of the original article have been included and a few notes added by the translator.

[1] [TRANSLATOR'S NOTE: Up to the time of the French Revolution the pound system, which still survives in Great Britain and parts of the British Commonwealth of Nations, existed in most countries of western Europe, including France, Italy, and the Low Countries. The pound (Fr. *livre;* It. *lira;* Dut. *pond*) varied in name and value from one country to another. In England, it was called the "pound sterling"; in France, the "pound of Tours" (*livre tournois*); in the Low Countries, the "pound groat" (*livre de gros* or *pond grooten*). In Italy there was a great variety of pounds: *lire di grossi, lire di imperiali, lire di piccioli,* etc. Everywhere 12 pence (Fr. *deniers;* It. *denari*) were equal to 1 shilling, and 20 shillings (Fr. *sous;* It. *soldi*), to 1 pound. The universally used abbreviations for these three units were £, *s.*, *d.* The different pounds should not be confused any more

it has never been coined; "because we have never had a real species which has consistently been worth 20 sous or one worth 12 deniers." Although from time immemorial men have neither seen nor touched any imaginary money, nevertheless, in the remote past it was something real, "since if we go back to the time when in France people began to count in pounds, shillings, and pence, we shall find that these imaginary moneys owe their origin to a real thing." According to Le Blanc, Charlemagne really coined silver shillings, 20 of which weighed a Roman pound of 12 ounces.[2] Thus the silver shilling was a real currency, and 20 of them weighed 1 pound, while each of them was divided into 12 pennies. The pound, however, was never coined; yet from then onward people acquired the habit of counting in pounds of 20 shillings with each shilling divided into 12 pence. Later on, according to Le Blanc, the shilling, along with the penny, deteriorated more and more, so that it ceased to be the twentieth part of the pound-weight; but the public went on counting in pounds, shillings, and pence despite the fact that the pound tale, as Le Blanc observed, weighed in his time (1690)—or was supposed to weigh—only 7 pennyweights and 3 grains, less than 3 per cent of the original weight at the time of the restored Roman Empire (800).

"These changes, I [Le Blanc] admit, are surprising because if there is anything in the world which ought to be stable, it is money, the measure of everything which enters the channels of trade. What confusion would there not be in a state where weights and measures frequently changed? On what basis and with what assurance could one person deal with another, and which nations would care to deal with people who lived in such disorder? Nevertheless, this has not prevented money, which is the most precious and most important of all standards, from changing its value in France almost as often as our clothes change in fashion."

2. The practice of counting in pounds, shillings, and pence—already sanctioned by the glory of Charlemagne—became even more venerable

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than American, Canadian, and Mexican dollars are. During the period under consideration, the relation between real and imaginary money was always closer in England than on the Continent. The reader should bear in mind that the expressions "pounds, shillings, and pence" as used in this study do not refer to English money only, but to money of account in general, unless otherwise specified in the context.]

[2] [TRANSLATOR'S NOTE: The truth is that Charlemagne never coined a silver shilling but only a silver penny or *denarius*. Two hundred and forty of such pennies were cut from a pound weight. Originally, the pound weight and the pound tale were thus the same, since they both contained the same number of pennies. The shilling or solidus was uncoined and was merely a numerical expression for twelve pennies.]

when, in 1226, Saint Louis coined the groat, or *gros tournois,* which had a weight and fineness equivalent to that of the sou or shilling of the imaginary pound. For a time the sou, instead of being imaginary, became real, visible, and tangible. "This is the great epoch for the value of our sou and consequently for that of the *livre.* The people became so strongly attached to that established value that in subsequent reigns, whenever the money was debased . . . they always asked that it be restored to the same goodness as it had formerly in the time of Saint Louis." Perhaps "it was an effect of the veneration which the French had for everything this saintly monarch had done."[3]

3. The idea of a form of money which for centuries remained invisible, exerted a powerful influence on the human mind: "Two kinds of money," wrote Dutot, "are the soul and the moving force of Trade: one Real and the other Ideal. Real money is of gold and silver. It was introduced to facilitate commercial intercourse, and it caused sales to replace barter by becoming the price and measure of everything which is the object of trade. But since the shipping of specie from one country to another was so embarrassing as to constitute a serious obstacle to trade, bills of exchange were resorted to as a means of transferring funds from place to place. To facilitate the making of bargains and computations, people invented moneys of account or of exchange, such as the livre, the sou, and the écu in France; the penny, the shilling, and the pound sterling in England; the groat, the shilling groat, and the pound groat in Holland. This kind of ideal or imaginary money which, properly speaking, consists of collective terms comprising also a certain number of real moneys, will be called Political Money."[4] He speaks of a "collective term," evidently regarding ideal money as if it were some kind of compound, equivalent to a certain number of real moneys. His strange definition does not specify the kind and the number of real coins that the imaginary money is supposed to represent.

4. The Italian writers are no more helpful than the French. According to the Italian economist, Giovanni Antonio Fabbrini, "money is called imaginary in so far as it has no substance, being a mere idea or product of our imagination. It is called 'of account' because it is helpful in keeping accounts and, unlike real coins, it stands firm and cannot

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[3] François Le Blanc, *Traité historique des monnoyes de France* (Paris, 1690), pp. xxi, xxv, and *passim.*

[4] Dutot, *Réflexions politiques sur les finances et le commerce* (The Hague, 1754), Vol. II, pp. 4–5.

arbitrarily be cried up or down. Since real coins are all variable, imaginary money performs for coins the same function which money in general performs for other goods, that is, it expresses the idea of a fixed value."[5]

Although Ferdinando Galiani (1728–1787) did not believe that "in this world, one can hope for . . . perpetual stability and stagnation" and, although he was convinced that "a constant and unchangeable measure need not be desired or sought," since perpetual stability "is wholly repugnant to the ordering and genius of nature itself," still he did not deny the logical possibility of an imaginary money that would be stable. He wrote: "If imaginary money were a term for a definite number expressing an idea of price, and if this idea were fixed in our minds and so detached from everything that it would not be affected by any disturbances, then it would certainly be invariable and constant."[6]

5. An idea, a product of imagination liberated from the legislator's arbitrary action, a numerical expression, an idea detached from everything and unaffected by any disturbances—all such terms and concepts were, according to the stern verdict of the impeccable Messedaglia, "evidently the consequences of rather inaccurate and confused notions on the subject."[7] Luigi Valeriani had an easy time discrediting and denying the concept that money of account was something "impassive, independent of all human values." This absurd notion grew out of the fact that people, as they played with the words "imaginary," "ideal," "of account," "fixed," came to believe that money of account was a mere idea, whereas "it is very improperly called imaginary or ideal, there being nothing imaginary in it but its derivation, by mental division or multiplication, from moneys which are said to be real."[8]

6. No, money of account was not the mere idea of money, as Fabbrini believed. An idea cannot be a standard of value, or an invariable term of comparison for evaluating commodities, even if, as Galiani corrected, the idea is fixed in our minds. In that case we must assume not only that this idea is detached from everything and from all disturbances but also that man himself is invariable in his wants and in his tastes and that the

[5] Giovanni Antonio Fabbrini, *Dell'indole e qualità naturali e civili della moneta* (Rome, 1750), p. 93.

[6] Ferdinando Galiani, *Della moneta* (Naples, 1750), pp. 99 and 101 (ed. Niccolini, Bari, 1915, pp. 87–88).

[7] A. Messedaglia, *La moneta e il sistema monetario in generale* (Rome, 1882), Ch. 7, p. 1.

[8] Luigi Valeriani, *Ricerche critiche ed economiche . . . sulle monete di conto* (Bologna, 1819), Pt. I, pp. 150–51.

goods themselves are invariable in quantity and quality. But neither was the money of account an uncoined multiple or fraction of a coin in actual circulation, as Valeriani contended, since a double or half of a gold florin, even though it did not happen to be coined, would be real money no less than the florin itself.

7. Pompeo Neri, the clearest among the Italian monetary writers of the eighteenth century, finally identified the imaginary pound as equivalent to the result obtained by dividing or multiplying a specific current coin by a given number. In order to express a valuation, one even could use a number without specifying the unit which was used; for instance, by saying "that a philippus dollar was worth seven and a half, the sequin fourteen and a half, the dobloon twenty-five and a fourth, and so on," except that "the public was accustomed to the words" pound, shilling and penny, "and was scrupulous in preserving the identity of the word *pound* in sound rather than in value." The number in question did not remain unchanged, mainly because it was not related to a stable currency. Because of men's malice and princes' needs, the pound was at any time linked to the worst moneys in circulation. "The unit of value designated by the name of pound having steadily decreased in the estimation of the public, a forever greater number of these units became necessary to evaluate the same quantity of metal. In the same way, to ascend a tower, it is necessary to climb more steps if the steps are low than if they are steep, although the height of the tower does not increase, as some naïvely believe. They are deceived by the same illusion which misleads the eyes of anyone who, leaving the shore in a boat, thinks that the shoreline is moving rather than the boat."[9]

Even though Neri's definition, "imaginary money is the result of dividing or multiplying a real coin by a given number," comes closer to reality, it is still unsatisfactory. This definition contradicts what it is supposed to define. The pound, quotient of the division of the gold florin by a variable number, is indeed variable, but it is no less real than the florin. Why then call it imaginary and oppose it to the florin, a real currency, as if it had an entirely different nature?

8. The difficulty in finding a satisfactory definition for "money of account" results from its history. Money of account was not created by decree but grew almost spontaneously out of men's habit of keeping accounts in monetary units, some of which corresponded in the time of

[9] Pompeo Neri, "Osservazioni sopre il prezzo legale delle monete," in *Scrittori classici italiani di economica politica,* Vol. VI, Custodi, ed., pp. 109–10 and 154–56.

Charlemagne to real coins.[10] Later on it happened from time to time that the money of account was pegged to a real coin which was equivalent to a pound, shilling, or penny. Such a correspondence was accidental or, if deliberate, did not last long. Except for the penny, the name given to the real coin was different. The coexistence over long periods of time of a penny in money of account and a penny in coin, one equal to the other, does not prove, as Landry (*Essai,* p. 13) rightly observes, that the two systems, that of imaginary and that of real money, were linked or soldered together. It is not correct to say that through the penny both currency systems were based on a real coin. In addition to the money of account—the pound of 20 shillings and the shilling of 12 pence—were there not also coins like the gold *mouton,* the silver groat (*gros tournois*), and the silver penny? It was possible that at a given moment one silver penny was equivalent to one penny in money of account. But the relation between the mouton, the silver groat, and the silver penny was not so stable as that between the pound, the shilling, and the penny, since, in terms of money of account, a pound was always 20 shillings and one shilling was always 12 pence. Besides, even when the groat was rated 1 shilling, it does not follow that it contained twelve times as much silver as did the penny.[11] Little by little—and this happened during the fourteenth and fifteenth centuries—the penny in coin lost its equivalence with the penny in money of account and was coined first in vellon (that is, an alloy composed mainly of copper mixed with a little silver) and then in pure copper.

9. Sooner or later, but generally at the beginning of modern times, the different monetary systems in various European countries reached a state in which they were governed by a seemingly very odd principle, very different from our modern conception.

Today each country has only one monetary unit: the lira, franc, mark, pound sterling, or dollar. This is the system established by the French assemblies at the end of the eighteenth century. In Italy, for example, the present monetary unit is the lira, defined as a given weight of pure gold, namely (1936), 0.07919113 grams.

It is possible that a real coin containing that quantity of pure gold, and having the legal fineness of 90 per cent, is not in actual circulation.

[10] Not in all three denominations: pounds, shillings, and pence. According to Le Blanc (*Traité,* p. xxii), as we have seen, only silver shillings were coined; according to Adolphe Landry, *Essai économique sur les mutations des monnaies dans l'ancienne France de Philippe le Bel à Charles VII* (Paris, 1910), p. 11, only the penny (*denarius*) was coined.

[11] [TRANSLATOR'S NOTE: This was especially true in the Low Countries, where weight, alloy, and seigniorage varied from one denomination to another.]

If such is the case, its multiple of 20 or 50 or 100 lire will exist. If not, the fact does not change the principle. The silver coins or bank notes in circulation are representative money, convertible in gold because the owner of silver or paper money is entitled to have it exchanged for gold at the central bank, or for drafts on a foreign bank which will deliver the same quantity of gold. Furthermore, if in the country in question convertibility is temporarily suspended, such a suspension does not cause the monetary unit to lose its quality of real currency. The note of the Bank of Italy today (1936) is a promise to pay, at an indefinite time in the future, 0.07919113 grams of pure gold for each lira. Perhaps the market will cause that promise to be valued at a discount in order to transform it into present gold. The fact remains that the monetary unit is defined as a real physical quantity of gold, silver, some other metal, or perhaps even another commodity. On the basis of that monetary unit or on the basis of representative coins or notes, we make bargains, accept obligations, and settle debts. We promise to pay 100 lire and discharge this obligation by delivering a note of 100 lire. The note of 100 lire is real money.

10. Prior to the French Revolution, the monetary system of most European countries was based on altogether different principles. Contemporary authors could take these principles for granted and did not have to explain them to others. Their strange terminology causes us, who live in another world, to wander for a while in a dark forest.[12] By and by, we finally understand the tacit assumptions of their discourses. The key, needed to interpret the apparent confusion of the monetary treatises written prior to the eighteenth century, is the distinction between a monetary unit used as a standard of value and of deferred payments and another monetary unit used as a medium of exchange.

11. There was, then, a monetary unit used only as a standard of deferred payments (promises to pay) or for the purpose of keeping accounts. This was the function of a money of account, an imaginary or ideal money. The public made contracts, kept books, established mortgages, or stipulated rents in pounds, shillings, and pence. In the time of Malestroit and his "Paradoxes" (1565), an ell of velvet was valued at 10 pounds *tournois;* a measure of wine, at 12 pounds; a pair of shoes,

[12] A typical example of a tangle is Marquis Girolamo Belloni's *Lettera in riposta ad un quesito propostogli sopra la natura della moneta immaginaria* (Rome, 1727), p. 27, which the complacent editors, the Paglierini, praise as written "with such method and clarity" that it leads "the reader easily and gradually to a true understanding of imaginary money." The letter is reprinted in Vol. II of the collection, *Scrittori classici italiani di economica politica, parte moderna,* edited by Custodi.

at 15 sous; the daily wage of a laborer, at 5 sous; the annual rent of a gentleman, at 500 pounds; and a town-house or farm, at 25,000 pounds.[13]

Although it was possible to make contracts or to keep accounts in imaginary money—that is, in pounds, shillings, and pence—it was impossible to make actual payments in these monetary units, since they had not been coined for several centuries. Payment was made in real currency, that is, in gold coins, white money or silver coins, black money or low-grade silver, vellon or copper coins.

The coins in circulation had a great variety of names:

Gold: florins, ducats, sequins, angels, nobles, crowns, sovereigns, French and other écus, moutons, gold louis, doblons, guilders.
Silver: Philippus and other dollars, pieces of eight, reals of Spain, silver louis, testoons, blanks, guilders (originally gold), ducatoons, etc.
Vellon and black money: farthings, obols, Dutch stivers, French *douzains,* Tuscan *crazie,* etc.

In the time of Malestroit, a customer could pay a shopkeeper for an ell of velvet, priced £10 *tournois* in money of account, by giving him 4 écus du soleil rated at £2 10*s.* each. Similarly, the buyer of a barrel of wine, costing £12, could give in payment 20 testoons current at 12 sous per testoon. A shoemaker would be satisfied if he received 15 douzains in black money, at 12*d.* per douzain, for a pair of shoes selling at 15*s.* In the same way, a journeyman, whose wage was 5*s.* per day, would be content with 5 douzains in currency. A gentleman would collect his rent of £500 *tournois* in the form of 200 écus du soleil; and the one who had sold a house or a farm for £25,000 would give quittance to a buyer who had paid him 10,000 écus at £2½ per écu. If there was a change in the ratio between real and imaginary money—for example, if the rates of the currency in terms of money of account were doubled or reduced by half—the number of coins to be paid in discharge of a debt would vary inversely. For example, if we assumed that prices remained the same, either 2 or 8 écus, respectively, instead of 4 would be needed to pay for an ell of velvet priced at £10 *tournois.* The workman would receive either 2½ or 10 douzains instead of 5; the gentleman would collect

[13] The present study was undertaken as a result of the recent publication of a hitherto unedited memoir by the Seigneur de Malestroit, author of the paradoxes made famous by the *Response de Bodin.* For the convenience of the reader, the text of the "Paradoxes" and a second reply by Alexandre de la Tourette to the memoir of Malestroit are republished in the same volume; *Paradoxes inédits du Seigneur de Malestroit touchant les monnoyes avec la response du Président de la Tourette,* Luigi Einaudi, ed. (Turin, G. Einaudi, 1936).

either 100 or 400 écus instead of 200; and the seller of a house would receive either 5,000 or 20,000 écus, instead of 10,000.

12. The essence of the concept of imaginary money is not, therefore, the idea of a collective term (Le Blanc and Poulain), or of a fixed value (Fabbrini and Galiani), or even of a result obtained by using a variable divisor or multiplier (Neri). Early writers were correct in making a distinction between imaginary and real money, but their definitions of the former show that they were not sure of the basis of that distinction.

Imaginary money—here is my thesis—is not money at all. It is a mere instrument or technical device used to perform some monetary functions.

13. Let us assume the monetary unit to be the gold franc weighing 0.29 grams of pure gold (0.32 grams at the fineness of 90 per cent). Let us further assume that gold pieces of 10, 20, and 100 francs were coined; for medium-sized and small transactions, silver species of 5, 2, and 1 franc; nickel coins of 50 and 20 centimes, and copper coins of 10 and 5 centimes. However, the silver, nickel, and copper coins contain so little metal that, if melted, they cannot be sold at a price equal to the nominal value inscribed on the coin. Therefore, those coins circulate only as representative money, as tokens of the gold coins into which they are legally convertible. Let us further assume that only gold coins can be minted freely and are full legal tender for all debts. The other coins are minted by the state only and are legal tender up to a certain amount, which is somewhat larger for the silver coins than for the inferior nickel and copper coins.

In this system, that of the pure monometallic standard, there is no place for imaginary money, even if the monetary authorities should wish to introduce imaginary money for the purpose of stabilizing the currency. Keeping accounts and stipulating contracts in imaginary livres and at the same time making payments in real francs would not present any advantages and, besides, would necessitate the establishment of a legal ratio between the livre and the franc. If this ratio were 1 to 1, the two denominations would be identical. If another ratio were chosen, for example, 2 to 1 or 1 to 2, the livre would become either a fraction or a multiple of the franc. The introduction of an imaginary money would in this case only complicate matters and would serve no purpose, not even that of keeping the subsidiary coins in circulation. They would stay in circulation simply because melting them down is unprofitable, their value as bullion being so much less than their monetary value.

The device of an imaginary money is also unnecessary to prevent the overvalued subsidiary coins from driving the gold out of circulation.

They cannot do so as long as they are not coined in excessive quantities and are not full legal tender. If the rules are not observed, disturbances may occur, but they will be the result of the government's monetary policy, and the creation of imaginary money will not prevent their occurrence. This analysis, of course, presupposes the existence of rational rules and their rational application.

14. Now let us assume that the monetary system is that of the bimetallic standard. The monetary unit is still the franc, defined as being equivalent to either 0.29 grams of pure gold or 4.5 grams of pure silver. The denominations actually coined are gold pieces of 10, 20, and 100 francs and silver pieces of 1, 2, and 5 francs. Let us disregard for the moment the existence of token coins for the smaller denominations, since the remarks made above would apply to them. If left to themselves, the two kinds of francs—gold and silver—would be two different monetary units. There is no reason why the market should permanently consider 0.29 grams in gold, the weight of the gold franc, as the exact equivalent of 4.5 grams in silver, the weight of the silver franc. Such an equivalence, if it existed, would be merely accidental and ephemeral. As a natural consequence, a double standard is accompanied by a double price system: the same commodity may have one price in gold francs and another price in silver francs. Thus one hundred loaves of bread may conceivably sell for 40 gold francs or for 38 silver francs. This is not bimetallism, but duometallism, and it would be extremely cumbersome.

15. A duometallic standard with two monetary units and two price systems can be changed into a bimetallic standard with only one monetary unit and only one price system, if certain requirements are fulfilled. These requirements are: (1) that both gold and silver coins are full legal tender; (2) that there exists free coinage for both metals, so that anyone bringing gold or silver bullion to the mint will receive the same weight in gold or silver coins of the desired denominations (in order to avoid minor complications, let us assume that this transaction involves neither expense nor delay);[14] (3) that there exists a fixed legal ratio between gold and silver. For example, this legal ratio was 1 to 15½ in the countries adhering to the Latin Monetary Union, which means that 100 silver francs weighed 15½ times as much as 100 gold francs.

16. For the bimetallic standard to operate properly, it is further nec-

[14] In fact, today the cost of minting is very small, little more than two per thousand in those countries that still charge seigniorage. In the countries, such as the United States, that have free coinage, there is still the loss of interest for the time required by the minting. For the importance of these charges, see below, paragraph 18.

essary that the market ratio be equal to the legal ratio or, in other words, that the price ratio between gold and silver ingots or bars in the bullion market be the same as that established by the mint. As long as this requirement is fulfilled, it is indifferent to a debtor whether he effects payment in gold or silver francs, because they have the same value in bullion as in currency. For this reason, both kinds of currency will remain in circulation, and one will not have the tendency to drive the other out.

17. The accidental identity of the legal and the market ratio may last for a long time. If the mints absorb most of the gold and silver bullion offered on the market, the mint price (that is, the amount of currency supplied by the mints in exchange for a given weight of bullion) tends to dictate the market price for industrial uses, so that the bimetallic system sometimes gives the impression of lasting stability. If, however, there should be an appreciable change in the production of either one of the two metals, or in the tastes of the public for jewelry and plate, or in the preference of hoarders for gold or silver, or in the demand for gold rather than for silver coins, then the market ratio would tend to deviate from the legal ratio. While the latter remains fixed at 1 to 15½, the former may rise to 1 to 16 or drop to 1 to 15. In the first case, gold is worth more as bullion than as coin. Silver, being overvalued by the mint, will be delivered by the public to be coined. The silver coins thus obtained will be exchanged for gold at the legal ratio of 1 to 15½. This gold will then be resold at a profit on the bullion market, with the result that all the gold coins will soon disappear from circulation and their place will be taken by heavy and inconvenient silver coins. In the second case, silver instead of gold is at a premium and is worth more as bullion than as coin. Therefore, it is now silver that will be hoarded or exported or sent to the melting pot. The country will be reduced to using gold coins, beautiful, indeed, but inconvenient for petty transactions. Soon the public will complain about the lack of small change, and the officials will resort to makeshifts: they will be forced to allow the circulation of tokens or of dirty scrip, having the disadvantage of conveying contagious diseases.

Thus the bimetallic standard is bound to become an alternating monometallic standard, swinging from gold to silver and from silver to gold, to the great annoyance of the public.

18. To prevent these swings, it is possible to use two devices, while still keeping the bimetallic standard in operation. One of them is seigniorage, but it is effective to a limited extent only. The reason is that seigniorage in recent times has been very moderate. In Italy the mint

charges are only 2 per thousand to cover the expense of coinage. At any rate, seigniorage is to a certain extent a check against the practice of selling coins in circulation for their value as bullion, whenever the market price of bullion has risen above the mint price. On the other hand, let us assume that silver has fallen in price because of an increase in production. If the coinage were free of charge and not subject to delay, it would be profitable to take silver to the mint as soon as the price of the quantity of bullion contained in 100 francs dropped, even by a very small percentage, below the amount of 100 francs. If there is a coinage charge of 2 per thousand, the price of the same quantity of bullion has to fall below 99.80 francs before it becomes remunerative to bring bullion to the mint. As long as the drop in the price of bullion on the market does not exceed the seigniorage, it is unprofitable to coin more silver and to melt down the gold coins.

19. It must be admitted that today seigniorage, because it is either nonexistent or insignificant, can hardly be considered an effective check against the disruption of the bimetallic standard. This was not true of former centuries. From Charlemagne to the French Revolution, seigniorage was much higher than it is today, although it varied greatly from one country to another, from one period to another, and from one denomination to another. But in those times seigniorage did not always serve as an effective device of monetary policy, stabilizing the existent standard. The rulers considered the mint as a source of income, and in a period of financial stress increased seigniorage in the hope of thereby increasing their revenue, whether or not such a measure was called for to protect the standard at that particular time. The rulers also were reluctant to increase seigniorage on gold coins. The gold coin was a symbol of their sovereignty, and rulers rarely tampered with it; they were more inclined to make seigniorage high for the silver coinage and still higher for black money and vellon. It happened that they increased the seigniorage when they should have lowered it; they sometimes lowered it inadvisedly for the very coins which were being culled out to be sent abroad or to the melting pot. Accordingly, seigniorage cannot be used today and was not used in the past as an effective instrument of policy to prevent the breakdown of the bimetallic standard.

20. The second device available to governments to preserve the bimetallic standard is to change the legal ratio in accordance with the variations of the market ratio. Unfortunately, this device, too, is clumsy and difficult to use. If the market ratio increased from 1:15½ to 1:16, gold would disappear from circulation unless the legal ratio was also

changed and made to conform to the market ratio. This might be done in two ways, either by increasing the weight of the silver franc from 4.5 to 4.645 grams of pure silver, while the contents of the gold franc (0.29 gram) remained unaltered, or by reducing the weight of the gold franc to 0.28 gram without changing the weight of the silver franc. In both cases a recoinage, either of all the gold or of all the silver that was in circulation, would be necessary. If changes in the market ratio were frequent and appreciable, one recoinage would follow on the heels of another, and the currency would always be in a state of flux and confusion. As Ferdinando Galiano stated with reference to the disequilibrium between good and bad money, "to withdraw it [one of the two, and he was thinking of the good money rather than of the bad], to recoin it and to put it back into circulation, takes too much time" (*Della moneta,* ed. Niccolini, p. 181).

21. In past centuries the device used to remedy monetary disturbances was precisely the money of account or the imaginary pound. It was an instrument of extraordinary flexibility which had been slowly developed in the ten centuries after the reign of Charlemagne. Its full possibilities were realized neither by the Revolutionary Assemblies, which eventually abandoned it, nor by the monetary authorities, who during the ten preceding centuries had failed to take full advantage of it and had diverted it to dangerous uses. Apart from the imaginary pound or livre, divided into shillings (sous) and subdivided into pence (deniers), in which prices were set and contracts established, there were also real moneys. These real moneys could not be reduced to two types (with their several denominations), as is the case with the bimetallic system; on the contrary, there were several types, and each of them was a unit or denomination independent from all the others.

At the time of Cesare Beccaria (1738–1794), a famous economist and criminologist of the eighteenth century, the following coins were current in the Duchy of Milan:

GOLD

National Milanese: doblon (25.5.—)[15]

Foreign

Spanish: doblon (25.10.—), another doblon with two columns (25.—.—)

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[15] The figure between parentheses, after the name of each coin, indicates the current rate in Milanese *lire di imperiali.* Thus, "doblon (25.5.—)" means that the coin called doblon was rated currently, or officially, £25 5*s.* 0*d. di imperiali.* the imaginary money used in Milan.

French: the old louis (25.10.—), the doblon called *merliton* (24.12.6), another coin with the sun and two shields (31.—.—), another coin with the cross of the Holy Spirit (37.2.6), another coin with four escutcheons (26.2.6)
Venetian: sequin (14.10.—)
Genoese: doblon (25.7.6)
Florentine: doblon (25.15.—); sequin (14.10.—)
Roman: doblon of Clement XII (25.—.—)
Savoy: doblon (25.—.—); sequin (14.7.6)
Mantua: doblon (25.5.—)
Portuguese: *old lisbonina* (41.—.—), new doblon with effigy and border (110.—.—)
Viennese: *ongaro* (14.5.—)
Chemnitz: *ongaro* (14.7.6); Roman sequin (14.15.—); Genoese sequin (15.—.—)

SILVER
National Milanese: ducatoon (8.12.—); philippus dollar (7.10.—)
Foreign
Roman: ducatoon of Clement XI (8.2.6); new testoon (2.5.—); new paolo (—.15.—); half-paolo (—.7.6)
Savoy: ducatoon (8.9.—); new écu of Piedmont (7.12.—); old lira of Savoy (1.10.—)
Venetian: ducatoon (8.8.—); *giustina* (7.7.6)
Florentine: ducatoon (8.7.6); *livorina* with the tower (6.19.—); same with the rose (6.12.6)
Mantua: ducatoon (8.9.—)
Genoese: *genovina* (10.5.—)
French: old écu (6.19.—); écu with the three fleurs-de-lis (17.11.—); écu with the two L L (6.—.—); écu with three crowns (7.16.—); écu *del popone* (6.5.—)
Burgundian: ducatoon (8.7.6)
German: ducatoon (8.5.—)
Bologna: écu (6.4.—)
Spanish: piece with the arms of Castile (6.17.6); half-piece (5.8.9); another piece with column and globes (6.16.—); half-piece (3.8.—); écu of St. John the Baptist of Genoa (6.—.—)[16]

Beccaria does not list the black moneys and copper coins which circulated at the same time. Their inclusion would only have strengthened the impression that the currency of the small Milanese duchy was in a disorderly state. Disorder did reign, but not because of the multiplicity of monetary types in circulation; there circulated no less than 22 gold

[16] Cesare Beccaria, "Del disordine e de' rimedi delle monete nello stato di Milano nell' anno 1762" in *Le opere*, Vol. I (Florence, Le Monnier, 1854), pp. 470–71.

coins and 29 silver coins, most of which were foreign. What really matters, however, is that all these types, with one or two exceptions, were independent monetary units. Table 1 shows how they may be classified according to their value in money of account.

TABLE 1

RATES OF THE GOLD AND SILVER COINS CURRENT IN MILAN (1762)

GOLD

Number of Coins	Rate in Money of Account	Number of Coins	Rate in Money of Account	Number of Coins	Rate in Money of Account
	£ *s. d.*		£ *s. d.*		£ *s. d.*
1	110. 0. 0.	2	25.10. 0.	1	14.15. 0.
1	46. 2. 6.	1	25. 7. 6.	2	14.10. 0.
1	41. 0. 0.	2	25. 5. 0.	2	14. 7. 6.
1	37. 2. 6.	3	25. 0. 0.	1	14. 5. 0.
1	31. 0. 0.	1	24.12. 6.		
1	25.15. 0.	1	15. 0. 0.		

SILVER

Number of Coins	Rate in Money of Account	Number of Coins	Rate in Money of Account	Number of Coins	Rate in Money of Account
	£ *s. d.*		£ *s. d.*		£ *s. d.*
1	10. 5. 0.	1	7.11. 0.	2	6. 0. 0.
1	8.12. 0.	1	7.10. 0.	1	5. 8. 9.
2	8. 9. 0.	1	7. 7. 6.	1	3. 8. 0.
1	8. 8. 0.	2	6.19. 0.	1	2. 5. 0.
2	8. 7. 6.	1	6.17. 6.	1	1.10. 0.
1	8. 5. 0.	1	6.16. 0.	1	0.15. 0.
1	8. 2. 6.	1	6.12. 6.	1	0. 7. 6.
1	7.16. 0.	1	6. 5. 0.		
1	7.12. 0.	1	6. 4. 0.		

SOURCE: Cesare Beccaria, "Del disordine e de' rimedi delle monete nello Stato di Milano nell'anno 1762," in *Le opere*, Vol. I (Florence, 1854), pp. 470–71.

As the table shows, there was only one instance in which three coins were current at the same rate. There were only eight instances in which it happened that two pieces were rated the same. Except for these few cases, no other two coins had the same value. Moreover, none of the fifty-one coins listed by Beccaria, with one single exception, had multiples or submultiples. The exception refers to the case of the *paolo* rated 15*s.* and the half-paolo rated 7*s.* 6*d.* There are a few other instances of coins which were double the value of other coins, but this is purely accidental, since the types in question were issued by different foreign mints without any attempt being made to issue doubles or halves.

How could a coherent system be built with different monetary units? How could they be counted, and in which of the fifty units? This diffi-

cult problem was solved by using the imaginary livre. This was the abstract unit which was used to evaluate all the coins in actual circulation and to bind them into one system. By saying that the Spanish doblon "with the two columns," the Roman and the Savoyard doblons—all three of them gold coins—were worth £25 *di imperiali,* one stated simply that they were equal in value; and by saying that the sequin of Genoa, actually coined in Chemnitz, was worth only £15, one stated that this coin was worth three-fifths of the doblons mentioned above and was rated twice as high as the Milanese phillipus current at £7.10*s. di imperiali.*

22. It was possible that wrong rates were set for coins of the same metal, as, for example, when two coins having different gold or silver contents were made current at the same rate in money of account. In fact, Beccaria shows that, of the three doblons, all rated £25, the Spanish doblon contained 117$^{9}/_{16}$ grains of fine gold, the Roman doblon 117$^{13}/_{96}$ grains, and the Savoyard doblon only 112$^{6}/_{16}$ grains. The Savoyard doblon, being much lighter than the other two, was consequently overrated to that extent. Such errors in rating, once they were ascertained by assaying, could easily be adjusted when the coins in question were all of the same metal, be it gold or silver.

23. The problem of setting accurate rates and of establishing a workable monetary system was much more difficult and complex when the coins in circulation were of two or more different metals. In this case, the setting of proper rates in money of account for all the current coins depended not only on the skill of the assayer but also on the ability of the mint officials to keep in touch with the conditions prevailing in the bullion market and to follow closely any changes in the price ratio between the metals that had monetary uses.

24. In order to simplify matters, let us assume that there are only two coins—gold florins and silver scudos—which are full legal tender and to which the mint extends the privilege of free coinage. Let us further assume that the market ratio between gold and silver is 1 to 12, which was actually the ratio in the second half of the sixteenth century, a fact recognized by both contenders in the famous Malestroit-Bodin controversy. With these assumptions in mind, let us suppose that the gold florin, weighing 120 grains of fine gold, is current at the rate of £24 in money of account. What, then, should be the rate of the silver scudo having the same weight of fine silver? Evidently, £2, or one-twelfth of the rate given to the florin. For our monetary system of florins and scudos to be in equilibrium, the proportion between the rates, £2

and £24, set by royal proclamation, has to be the same as the ratio, 1 to 12, existing in the bullion market between the price of a silver ingot and that of a gold ingot of equal weight.

Now let us suppose that the market ratio changes from 1:12 to 1:11½. In the case of the bimetallic system, as it existed during the nineteenth century in the United States and in Europe, adjustment would have been difficult to achieve unless all the gold or all the silver in circulation were recoined. Before the officials of the mint had even begun to make the necessary arrangements, all the undervalued coins would most likely already have been sent abroad or to the melting pot. In former centuries, however, an adjustment could have been made very promptly. It would have sufficed to issue a royal proclamation crying up the silver scudo from £2 to £2. 1*s.* 9*d.*, that is, to a number obtained by dividing £24, the rate of the florin, by 11½ instead of by 12.

And what if the market ratio changed from 1:12 to 1:12½? In such a case, the normal procedure would have been to cry down the silver scudo from £2 to £1 18*s.* 5*d.*, that is, to a figure obtained by dividing £24 by 12½.[17, 18]

25. The function of imaginary money in a country that had adopted the bimetallic standard was consequently that of keeping the monetary system in equilibrium. This objective was achieved by the simple process of crying the currency up or down, that is, by increasing or decreasing the current rates in money of account of the real coins. If this were done carefully, the legal rates would at all times be in accordance with the ratio between the prices of gold and silver, as determined by market conditions.

The instrument called "imaginary money" has the following connotations:

(*a*) Expressions in "imaginary money" are abstract numbers, notwithstanding the denomination in terms of pounds, shillings, and pence. People used these terms in their enumerations in remembrance of the historical fact that, in the past, pounds, shillings, and pence had actually existed in concrete form.

(*b*) Expressions in "imaginary money" are not absolute numbers.

[17] In decimal fractions, those new values corresponded, respectively, to £2.087 and £1.92. The old system of counting in pounds, shillings, and pence allowed the use of figures which corresponded more closely to currencies in actual circulation.

[18] [TRANSLATOR'S NOTE: These adjustments are based on the assumption that the monetary authorities did not wish to alter the rate of the florin. Otherwise, the same result might have been obtained by crying down the florin from £24 to £23, if the market ratio changed from 1:12 to 1:11½, or by crying up the florin from £24 to £25, if the market ratio changed from 1:12 to 1:12½.]

Instead of saying: the gold florin is worth £24.—, it is possible to assign to the same coin another value, provided that other coins got new rates accordingly. The rate, in "imaginary money," of the silver scudo should be a function of the rate of the florin; and, to be precise, this functional relationship should reflect the market ratio between gold and silver.

(*c*) It is a matter of indifference which coin is chosen as the one whose rate is fixed, while the value of all others may vary. Both can conceivably be allowed to vary, but only on condition that the rates reflect the market ratio between gold and silver.

(*d*) According to historical experience, it was, however, more expedient to keep the rates of gold coins fixed, while the rates of silver coins might, if necessary, be altered. Since gold coins were regarded as a symbol of sovereignty, rulers were reluctant to damage the prestige of this symbol by alterations. Not only the rulers but also the subjects believed that gold coins should circulate at stable rates; they were convinced that an invariable archetype should serve as the standard of value. Both myths, that of the royal symbol and that of the unvarying standard, were the outcome of unfortunate experiences; the current rates of the real coins, as expressed in terms of money of account, were often manipulated for purposes other than the preservation of the bimetallic standard.

26. The discovery of "imaginary money" as an instrument of monetary policy was not the work of a theorist, but the result of a long process of historical change (see paragraph 8 above). However, if, among many contingent factors, one wanted to indicate which one came closest to being determined by deliberate choice, one should mention the longing of medieval men for the eternal, the immutable, the universal, accompanied by an abhorrence of the transitory, the mutable, and the particular. They stubbornly looked for an invariable standard of value and called it the pound; they pretended that it was immutable in the monetary chaos in which abraded, clipped, and adulterated foreign as well as domestic coins circulated side by side. Eventually they discovered that imaginary money could be used as an instrument of monetary policy, in order to obtain certain results. Legislators and economists after 1789 scorned this discovery. Far from realizing its potentialities, they failed to see its true import, considered only its passing attributes (cf. below, paragraphs 43 ff.), and then forgot all about it. If the great advocate of universal bimetallism, Enrico Cernuschi, had meditated upon the solution offered by the age-old experience of European nations, he would have exclaimed: "Eureka!"

27. Another reason why legislators and economists misunderstood, despised, and forgot this monetary device is that the concept "imaginary money" was surrounded by the thick mist of a strange terminology, repellent to the layman and conducive to deceitful practices. We have already pointed out how difficult it is in times of monetary devaluations and revaluations to persuade men that prices have not changed but that the monetary yardstick has become longer or shorter. Yet today the terms of comparison are only two: the monetary unit, e.g., the lira (in Italy), and one unit of a given commodity, e.g., a kilogram of bread; and there is only one ratio: between the monetary unit and the unit of a commodity. Whether a change in this ratio occurs because of a change in one or the other of the two variables should therefore be easily ascertainable. At the time of imaginary money three units had to be correlated: the imaginary monetary unit (the pound), the real monetary unit (the scudo), and a unit of an economic good (e.g., a kilogram of bread). As a result, there were also three ratios: pound to commodity, pound to scudo, and scudo to commodity. Upon reflection it is a simple proposition; yet it is apt to confuse casual observers as well as more profound thinkers. When individual or class interests were at stake, endless disputes were certain to arise. The point of the great controversy between Malestroit and Bodin was that Malestroit contended that a change in the pound-to-commodity ratio had been canceled by a contrary change in the pound-to-scudo ratio, with the result that the scudo-to-commodity ratio had remained constant. On the other hand, Bodin considered only the scudo-to-commodity ratio and declared that it alone had changed.

If we assume that the price of bread had increased from £1 to £2 and that, at the same time, the rate of the scudo had increased from £2 to £4, then the price of bread had remained unchanged at ½ scudo. The public, used to counting in pounds, shillings, and pence, complained about the rise in prices, but Malestroit demonstrated that "the general rise in prices, about which everyone today complains, is only a delusion, a way of counting without consistency or substance" (Malestroit, *Paradoxes*, Einaudi, ed.). The learned man was right, because the pound was a mere numerical expression, and the scudo a real silver coin. However, the people whose incomes were fixed in imaginary pounds, shillings, and pence were not wrong either. They were damaged if they did not succeed in getting their "abstract" incomes raised, because only then did they receive the same number of scudos as before. After the great monetary devaluations following the First World War we have become ac-

customed to the idea of variability in the monetary standard. Since prices are sticky, either because it is their natural tendency or because they are regulated by the government, we all suffer or benefit, as the case may be, whenever there is a change in the symbols of wealth without a change in the reality. Today monetary devaluations or revaluations attract immediate notice only through the fluctuations of the foreign exchanges in which only those few who have dealings abroad are directly interested. But this was not so in the past; then the public became immediately aware of monetary disturbances because of fluctuating *domestic* exchange rates, indicating current rates of real coins in terms of money of account. If the ratio between the precious metals changed from 1:12 to 1:11½, the market, being very sensitive, often anticipated the ruler's proclamation. The rate of the silver scudo priced officially at £2 (as compared to the gold florin priced at £24) rose little by little in the market until it reached £1 1*s.* 9*d.* Such an unofficial quotation was called in Italy "in abusivo" because it was an abuse of the law, and hence strictly prohibited; coins were supposed to be current at the rate fixed by the monetary ordinances. Nevertheless, it frequently happened that the change in the market rate, although illegal, was only a prelude to a change in the official rate, to be proclaimed sooner or later, depending upon the alertness of the monetary authorities.

28. With reference to monetary matters, the language used in former centuries was so confusing that the public was befuddled as to what was actually going on. Today this same terminology is so unfamiliar to economists that it constitutes a serious obstacle to the understanding of early monetary literature.

Prior to the French Revolution, the expression "enhancement of the currency" (Fr. *augmentation;* It. *aumento* or *alzamento*) meant that the real coins were cried up, that is, that their rates were raised by proclamation, as, for instance, the silver scudo from £2 to £2 1*s.* 9*d.* However, in so far as people reckoned and stipulated contracts in pounds, shillings, and pence, such a rise of the current rates corresponded to a weakening (Fr. *affaiblissement;* It. *indebolimento*), deterioration (It. *peggioramento*), or debasement of the money of account. By "crying up" the money, a single legislative act devalued the money of account and revalued the currency, that is, the real coins. Usually the result was that, after a while, prices were raised as expressed in pounds, shillings, and pence, although they remained constant if measured in revalued gold and silver currency. Contrary to what a modern economist would expect, "crying up" (Fr. *hausser la monnaie;* It. *alzare*) was syn-

onymous with debasement or with a shift from what was called "strong" money (Fr. *monnaie forte;* It. *moneta forte*) to "weak" or "base" money (Fr. *monnaie faible;* It. *moneta debole*).

29. Conversely, the expression "abatement of the currency" (Fr. *diminution;* It. *sbassamento*) indicated that the current coins were cried down, that is, that their rates were decreased, as, for example, when the silver scudo was called down by proclamation from £2 to £1 18*s.* 4*d.* Consequently, "abatement of the currency" was synonymous with an improvement or strengthening (Fr. *renforcement;* It. *rinforzamento*) of the imaginary money of account, which was the standard of value. By such an act, the money of account was revalued, and the currency devalued. After a while, prices in pounds, shillings, and pence tended to fall, although they often remained on the same level if measured in gold or silver. "To abate the currency" (Fr. *diminuer les monnaies;* It. *sbassare*) was, therefore, a shift from weak to strong money. Often it meant a return to good money (Fr. *retour à la forte monnaie*) which had been allowed to deteriorate.

30. As today, so also between A.D. 800 and 1800, people had their minds fixed on the mirage rather than on reality. Therefore, they protested especially against the enhancements of the currency and approved of abatements. Those who complained the most—and they formed the majority—were wage earners, pensioners, and all recipients of revenues fixed in pounds, shillings, and pence. They were hurt by enhancements, and the resulting curtailment of their purchasing power, through the rise in prices as expressed in money of account. This same group naturally gave its support to the abatements, which tended to lower the price level.

31. In a monetary system based on the use of imaginary money, the banks did not and could not issue notes promising to pay in money of account instead of in real currency. What would it have meant for a bank to be a debtor of 24 million pounds toward the bearers of circulating banknotes? In so far as people used imaginary money as a standard of deferred payments, but made payments in scudos and other real coins, the said bank, in case of enhancement of the scudo from £2 to £4, could have discharged its obligations with 6 million scudi instead of 12 million, thereby gaining the difference. On the other hand, if the scudo were cried down from £2 to £1, the bank would have been compelled to repay with 24 million scudi the original 12 million for which it was obligated, and thus would have been reduced to a state of bankruptcy. Perhaps it is possible to find a bank which failed for this reason,

but, if so, it was an accident due to a mistake in the conduct of business. This mistake must then also be attributed to the halo of mystery which for a thousand years surrounded the concept of imaginary money and caused it to be mistaken for something different from what it really was. Even the careful Pompeo Neri missed the truth—as so many other writers did—when he listed the pound-banco (*lira di banco*) among the imaginary moneys. As a matter of fact, his own description contradicts this classification.

According to Pompeo Neri, the pound-banco (*lira di banco*) was created "by taking as its measure a given weight of silver, or even an unadulterated coin, and by determining its contents in pure gold or silver, without giving any consideration to subsequent adulterations introduced by custom or law. Then the values of the imaginary pound-banco and scudo-banco would be fixed, so that they would be regulated by a standard independent of arbitrary legislation or public catastrophies. As a result, contracts would be made stable, and this standard of value, being perpetual and incorruptible, would be a convenient yardstick for measuring the value of all sorts of merchandise and real money" ("Osservazioni," *loc. cit.*, p. 153). Thus the pound-banco was a promise made by a bank which had received, let us say, 10 grains of pure gold, defined by the bank itself as a "pound," to restore to the owner an ingot of identical weight and fineness. However, this was not imaginary money but real money, and even the best of the real moneys, since it was immune from clipping and from frauds in weight or fineness. It was easily transferable from person to person, or even from place to place, and independent of variations in the name, the substance, or the rates of other currencies.

32. During the thousand years of its history the monetary system based on the coexistence of the imaginary pound and real moneys could and actually did perform the following functions in a more or less efficient way and with more or less comprehension on the part of princes, bankers, and contracting parties:

(*a*) This system allowed every state to have its own unit of account, the pound, which might be equal to the unit of other states, but not necessarily so; in most instances equality soon disappeared.

(*b*) This system also allowed every state to coin one or more real moneys: of gold only, of silver only, or of both metals. A state might even have no mint of its own, if it pleased the ruler to give currency to foreign coins. Beccaria—and Verri agreed with him—gave excellent

reasons for advising a prince, especially a small one, against minting his own currency. Except in some particular cases, "the coinage of money is but a comedy of transformations accompanied by an unnecessary waste of metal in minting; it is a public burden which only profits the projectors, men who conceal their gains under the cloak of a pretended benefit to the sovereign, and hence to the entire nation" (*Del disordine,* Florentine ed., p. 478).

This single unit of account—the pound and its fractions—made it possible to use for payments any number of coins or real moneys—gold as well as silver, domestic as well as foreign—upon the sole condition that their rates were fixed in proportion to the gold or silver contents of the coins; moreover, the official ratio and the market ratio between gold and silver bullion had to be equal.

The principal shortcoming of this system was that the official rates set by proclamation were slow in adapting themselves to changes in the market ratio. In order to overcome this defect, Ferdinando Galiani, by far the best Italian economist of the eighteenth century, proposed in his book, *Della moneta* (written in 1750, when he was twenty-three years of age) a practical remedy: the current or proclamation rates should no longer be compulsory. Instead, the current rate was simply to become an optional price (*prezzo di voce*), effective only in the absence of any agreement to the contrary. Does the state fix the prices of commodities in general? It does not. Why, then, should it fix the price of currency? "The prices of wheat, of wine, and of oil are much more important [than the currency rates]. Those of land, of buildings, of rents, of interest, and of foreign exchange are still more important, and yet those prices are not regulated by any other law than 'the consensus of the public' " (*Della moneta,* ed. Niccolini, pp. 159–60).

Ferdinando Galiani's proposal to make the unofficial rate legal would have compelled the prince to revise promptly the proclamation rates whenever they were out of line with those practiced in the market. By following this policy, he would have avoided the inconveniences and the lack of stability inherent in the modern bimetallic system and would have supplied the public with currency in the desired quantity and of the desired denominations.

Since each state was already provided with its own standard of value or imaginary pound and since the creation of paper money representing mere numbers is and was inconceivable, a bank, even if it were a national bank, necessarily assumed in those times a supranational char-

acter. The pound-banco, representing a given weight of pure gold or silver, was itself a universal currency, which, like any other of the real currencies, could be rated in the money of account of each state and which was more suitable than hard coin for the purpose of making international transfers. The bank moneys of Venice, Genoa, and Amsterdam were used in traffic all over Europe, owing to the confidence which these moneys enjoyed, because of their convertibility into invariable weights of gold and because they could easily be made current abroad. In the Christian community of medieval Europe it was possible for each nation to adopt any foreign currency as its own, by simply giving it a rating in domestic money of account.

33. If these were the functions which actually were or might be filled by imaginary money, it does not seem that a conscious effort was ever made to use it as a means to achieve a purpose—supposing this purpose were desirable and possible—for which it was particularly well suited. That purpose is the utopian idea of price stability, which must be called "utopian" for a number of reasons.

(1) An acceptable definition of the concept "the general level of prices" does not exist, since it is uncertain which goods should be included in the preparation of a satisfactory index: Only finished products, or also raw materials and unfinished products? Only tangible goods or also services? Only consumer goods or also capital goods? Furthermore, economists and statisticians are not in accord as to the criteria which should be used in constructing an index for measuring the price level itself, and all are skeptical about the possibility of adhering to those criteria, once they are chosen.

(2) The idea that it is desirable to stabilize the general level of prices—a naïve and undemonstrable idea—does not have to be accepted. Why should invariability of prices exist in a world where everything else continuously changes? Should we also aim at the invariability of each single price, which is manifestly absurd? Why intend the invariability of something as abstract as the general level of all prices? One should, however, recall that medieval man was inclined to look at the world in the light of eternity and immobility. The modern popular desire for a general price level that would be constant may be a fossil remnant of that medieval state of mind.

(3) The possibility of reaching that end by means of a monetary policy which consists in decreasing or increasing the volume of money in circulation, as prices go up or down, especially if those variations are undesirable, is questionable. The success of such a policy depends en-

tirely upon the assumption that everything else remains equal. If it is true that nothing, absolutely nothing, changes in the economic world except the quantity of money, then prices, by definition, will vary with this quantity. If nothing varies, except that the quantity of money is doubled, the person who has £10 instead of £5 will spend £10 instead of £5, because, if he is not willing to do so, his desire to build up monetary reserves will have changed, which is contrary to our assumption. If nothing varies, the same amount of economic goods is offered for £10, no more and no less. Consequently, one unit of an economic good priced at £5 must necessarily go up to £10. The assumption that other things remain equal is extremely useful for purposes of analysis, but does not work out very well in practice. Everything changes with the change in the volume of money in circulation: the cash reserves of the individuals, and consequently the velocity of circulation; the production of economic goods, and consequently also their supply. Monetary policy has to operate with a very delicate and complex mechanism. In order to be successful, the policy-maker must combine an analytical mind with a quick appraisal of the imponderable factors.

34. Whether one considers stability of the price level possible or utopian, desirable or naïve, does not matter much; what I wish to emphasize is that the attainment of this goal might have been, and still might be, greatly facilitated by using imaginary money as a tool of monetary policy.

Today such a policy, intended to counteract undesirable price fluctuations, requires that the monetary authorities take either one or the other of the following steps if, let us suppose, prices go up and are to be brought back to their former level: (1) either the volume of bank credit and the circulation of bank notes has to be contracted, or (2) the metallic currency has to be withdrawn and recoined with a higher content in fine per monetary unit, whereby, as a result, the number of units that can be coined from the existing stock of precious metal is reduced.

On the other hand, if prices fall and the monetary authorities want to raise them to their former level, the appropriate measures to be taken are: either (1) an expansion of the volume of bank credit and the circulation of bank notes or (2) a devaluation of the monetary unit by reducing its gold or silver content, whereby the number of units that can be coined from a given stock of precious metal is increased.

The trouble is that all these measures are very cumbersome and slow and that they are liable to cause violent and unpredictable reactions

which will disturb equilibrium conditions, if such exist, in other sectors of the economy.

The use of imaginary money as a tool of policy, on the other hand, offers a tempting solution of the difficulty. Let us assume that the index of general prices is at 100; that the gold florin is current at £24 and the silver scudo at £2. Let the index now rise to 111.11. In order to adjust the matter, all one need do is to cry down the currency by one-tenth, to reduce the rate of the florin from £24 to £21 12*s*., and that of the silver scudo from £2 to £1 16*s*. The transaction resembles what is called "a monetary deflation." The amount of currency in circulation is unchanged, but its purchasing power is automatically cut down by one-tenth. Everyone owns the same number of florins and silver scudi as before the proclamation, but everyone has one-tenth less in imaginary pounds. Since buying and selling is done in money of account, the reduction of its volume by one-tenth, by virtue of the quantity theory of money, will bring prices down again from 111.11 to 100.

And what to do if the price level drops to 90? In order to raise it again, all that the monetary authorities have to do is to issue a proclamation crying up the currency by one-ninth: the florin from £24 to £26 13*s*. 4*d*. and the silver scudo from £2 to £2 4*s*. 5⅓*d*. Such a transaction resembles what is called a "monetary inflation." Although the volume of currency remains the same, its purchasing power is raised by one-ninth by legislative fiat. Everyone now possesses one-ninth more in money of account, and, since this is the standard of value, prices must go up again from 90 to 100.

35. It is conceivable that the normal sequence of events may be the following:

(1) The production of precious metals increases.

(2) As a result, the volume of currency in circulation, florins and scudi, increases too.

(3) This increase automatically causes another increase in the number of imaginary pounds, as long as the current value of the florin and the scudo remains fixed at £24 and £2, respectively.

(4) Since the quantity of economic goods that are offered for sale remains steady, as do all the other data of the problem, except the volume of money, prices tend to increase.

(5) However, the prince, by crying down the currency at the opportune moment, prevents an increase in the volume of imaginary money, despite any increase in the volume of actual currency.

(6) Therefore, prices, too, are prevented from rising. The problem

created by a decrease in the production of precious metals and by a tendency of prices to fall, while the production of economic goods continues to grow, is solved by reversing the procedure described above.

36. It is not easy to understand why Irving Fisher, who examined with such care the historical precedents for his managed and invariable dollar, failed to mention the system of imaginary money. To those princes of past centuries who were eager to secure for their subjects the benefits of price stability, this system could have rendered great service. Illusory stability, to be sure, because stable prices in imaginary pounds would nevertheless result in the payment of a greater or lesser quantity of florins or scudi. But did Pompeo Neri not teach that "the public was scrupulous in preserving the identity of the word pound in sound, rather than in value" ("Osservazioni," *loc. cit.*, p. 110)?

37. In the same formal way, another troublesome problem of modern times, that of foreign exchange, might have been considered solved. But it would have been solved by being transferred from the international to the national scene. The monetary advisor, anxious to preserve the prestige of the domestic currency, could have reasoned as follows:

"In the system of imaginary money, by hypothesis, two national moneys exist side by side, one imaginary and the other real. Among the latter, we have supposed that there was a gold florin weighing 120 grains of pure gold and having a value of £24 in money of account.

"If the prince was careful to maintain the weight of the florin at 120 grains, the foreign exchanges, expressed in florins, would remain stable. A foreign prince might reduce the weight of his sequin from 120 to 100 grains of pure gold; in that case the domestic florin would be at a premium of 20 per cent over the sequin: a perpetual reason for national pride and prestige.

"If, later on, the prince decided to cry up the florin by one-tenth and to increase the current rate from £24 to £26 8*s.*, this was a domestic matter which affected only the 'internal' exchange, or the relation existing between the 'national' moneys: the real florin and the imaginary pound. The foreign exchanges between the real currency of one country and the real currency of another country were unaffected. What did it matter to foreigners, if someone chose to modify the basis for the settlement of debts between citizens of the same state?"

This analysis leads to one important observation: whereas the present system of real money is likely to arouse emotions, because it creates the false impression that foreigners are to blame for any devaluation of the national currency, the ancient system of real and imaginary money made

it clear to everyone that monetary devaluation was mainly a domestic matter, important only in the relations between classes and individuals within the same nation. In domestic trade, contracts were stipulated and accounts were kept in imaginary money, while in foreign trade prices were usually fixed in gold florins.

38. The rate at which a coin was officially allowed to circulate was called "corso di grida," the current rate by proclamation. There existed also a "corso di voce" or "corso in abusivo" which, as the names suggest, was the unofficial or market rate. These two conceptions, curious as they are, are to be found at every step when one goes through the monetary tracts, treatises, and proclamations before 1800. At first, one is perplexed by these terms, then the matter becomes somewhat clearer, and finally one is attracted. Is it possible that the legislators of the French Revolution were, through their eagerness to return to the true and simple, actually opening the road to mystery and complication? What they wanted to make clear to the public was that the monetary unit was a disc of silver weighing 4.5 grams, or a disc of gold of 0.29 grams. Thereby, they erroneously assumed, people would never again fall into the error of looking at the monetary unit as perpetually endowed with a fixed value of its own. That these enlightened legislators were wrong is shown by the fact that in our days the link between various monetary units, such as the mark, lira, and franc, has again been broken. From these monetary names all precise connotations disappeared when it became no longer possible to convert the corresponding units into specific weights of precious metal; and at present convertibility is neither unconditional, prompt, nor certain. Thus, after one and a third century of fixed metallic equivalents, people are again debating attempts to give a fixed meaning to the monetary names which correspond to nothing but signs or tokens.

Legislators before 1800 had solved the problem by clearly separating money as a token or sign and money as a commodity (metal). The former was called "imaginary money," the other was the real currency. Now the *theory* of "imaginary money" could lead to the *reality* of dealing with money as a marketable good, not different from other commodities. While their contracts were made in pounds, shillings, and pence, people thought of the gold florins or silver scudi in which they would be paid; and by thinking in this way they were constantly reminded of the fact that florins and scudi had no miraculous virtues of their own. These coins, therefore, in spite of their name, had no permanent value or other characteristics but were priced as were, for instance, wine, wheat, or a farm. From the Middle Ages down to the end of the

eighteenth century, men saw much better than we do that money is a negotiable commodity like any other. Because we exchange money only at national boundaries, it appears to us, at least inside a country, to be a supercommodity whose value is stable: One lire is always one lire, one franc is always one franc, and one mark is always one mark. In former times, because of the existence of money of account, men every day set a price on the florins, scudi, écus, doblons, sequins, and testoons which they received and paid out. Every day, in every single transaction, it was made clear to their minds that the money with which they paid, even bank money or paper money, was a commodity like any other, that its price was governed by the market and, like any other price, was the result of an infinite number of economic and noneconomic forces which determine the general equilibrium of all prices.

39. In the language of the Enlightenment, my present essay would have been called "an apology for imaginary money." After this attempt, which I believe to be the first one of its kind, a "philippic against imaginary money" seems superfluous. Such attacks, virulent as philippics usually are, can be found in all writings dealing with debasements and monetary disturbances, as, for example, in the historical summary given by Francesco Ferrara in one of his classic introductions.[19]

40. The myth of the immutability of the monetary unit, which could be used in the harmless game of keeping the price level stable in terms of imaginary money (but variable in terms of real money), or of stabilizing the foreign exchange (while allowing fluctuations in the domestic exchange), lent itself also to other, less innocent uses. The influence of what was a pure ideal allowed the sovereigns to engage in counterfeiting.

41. A sovereign often could not resist the temptation to tamper with the coinage, especially when through the expenses made in foreign and civil wars he was under compulsion to raise additional revenue, without being able to collect larger taxes from his subjects. One favorite method was recoinage: the sovereign decried or banned the old coins and forced the public to bring them to the mints so that he could deduct the seigniorage for the coinage of the new moneys.[20] The seigniorage was usually deducted in kind from the bullion or from the decried coins brought to

[19] "Della moneta e dei suoi surrogati," Introduction to Vol. VI of the Second Series of the *Biblioteca dell'economista*, pp. xxxv–liv; republished in F. Ferrara, *Esame storico-critico di economisti*, Vol. II, Pt. I, pp. 324–44.

[20] It should be observed that seigniorage was not necessarily higher on coins of base metal. There could be a low seigniorage on an inferior coin with much alloy and little silver, if it were not overvalued according to its current rate in money of account. On the other hand, there could be a high seigniorage on a fine coin of nearly 24 carats, if it were overvalued and made current at a high rate (in money of account).

the mint. This procedure allowed the prince to take away 10 or 20 per cent of the precious metals owned by the public. He was able to get more revenue without having to ask for a benevolence from the Estates General, who gave financial aid only grudgingly. It is no wonder that the mint was regarded as a source of revenue in a time when an adequate tax system had not yet been established and when revenues from the royal domain were no longer sufficient.

The system of the imaginary pound was useful in making the tribute somewhat less felt. If it had been the practice of the mint to pay 7 ounces in coin for one mark of precious metal, consisting of 8 ounces, it would have been obvious to the public that the prince retained one ounce for seigniorage. But such was not the practice. Let us suppose that the mint price was £480 for a mark of pure gold. A merchant who delivered bullion to the mint would consequently receive £480, or 20 florins of £24 each, for one mark of bullion. From this one mark of bullion the mint coined 22.85 florins instead of only 20 florins, current at the rate of £24. In so doing, the mint gained 2.85 florins on each mark, a seigniorage of exactly one-eighth. Afterward the price of bullion, expressed in new florins of £24, was likely to increase and to rise even above the mint price. If the operation was not too frequent and if the public had time to forget previous experiences, it could succeed.

High seigniorage, open or concealed, fell into disuse at the beginning of modern times. It was less easily concealed, and, when in later ages regular taxes were established, princes were no longer impelled to use this device.

42. Accusations of counterfeiting, such as the one which Dante hurled at Philip the Fair, King of France (1285–1314), were in many cases justified by the facts. The prince surreptitiously coined florins or scudi which were reduced in weight, in fineness, or in both, while he continued to call these adulterated coins by the same name as before and continued to make them current at the same rate: £24 for the florin and £2 for the silver scudo. By weighing and assaying the new coins, the public soon discovered them to be deficient in weight and fineness, and then became offended.

43. Instead of tampering with the real coins, princes could perform their operations through the instrument of the "imaginary money." A florin which hitherto had circulated for £24, or a newly coined florin of the same weight and fineness, could simply be "called up" to £30. Thereby nothing was changed, except that the circulating medium was raised one-fourth in nominal value. This would please large numbers of

people because with the same number of florins in their purses they had become richer by one-fourth; in imaginary pounds, it is true. A prince who had received 24 million pounds in the form of a million florins of £24 each could now repay his debt with only 0.8 million florins of £30 each. His debt was diminished, and he consequently gained, by 2 million florins.

44. Ferdinando Galiani justified enhancement of the currency in his theory by defining it as follows: enhancement is "a profit which the prince and the state derive from the slowness with which the majority of people change their ideas with regard to the value of money and the prices of goods." Even at present no better definition of devaluation, today's name for "enhancement of the currency," could be given. Galiani insisted that his definition had no malicious intent: "Are not the sale of noble titles, the award of honors, and a large number of other customs actually based simply on deep-rooted associations which cannot easily be changed?" And Galiani continued: "If a prince ennobles *all* his subjects, he does not give them added honor but takes away some honor from the word 'nobility.' The meaning of 'nobility' is changed. Similarly, if in establishing a new decoration for merit he does not confer this decoration first upon people who are already admired and illustrious, which fixes the value of the order in peoples' minds, but gives it to his lackeys, then the decoration will simply be regarded as a livery for servants, whatever its design." Similarly, "enhancement of the currency" does not produce a change of things but merely of words. The prices of commodities, in order to remain the same in reality, must consequently be changed in name. If this occurs on the same day on which the currency is enhanced and if everything is changed simultaneously and proportionately, then enhancing the currency will have no more effect than would a law giving Latin, Greek, or Hebrew, instead of Italian, names to the different coins. If there is a change in the words by which prices are expressed, and nothing else, things remain as they were. If, on the other hand, the words remain unchanged, then things themselves change. We are being told that an enhancement of prices is a remedy for enhancement (of the currency). When everything has been readjusted, the effects of the "enhancement" may be said to have vanished as the morning mist is dissipated by the rays of the sun. Disturbing effects of any enhancement of the currency must therefore be the result of the fact that prices are slow in adjusting themselves. The delay occurs because people who are accustomed to paying one ducat for a certain dish expect to be able to buy the same dish

as long as they pay something called a ducat. They complain about the avarice of whoever denies the dish to them, or they foolishly accuse others of having caused the dearth of all things. It must be noted that a prince who would repeat enhancement every month would necessarily destroy any association between a given commodity and its price, and thereby the device of enhancement would become perfectly useless and ineffective (as an instrument of monetary policy). What normally could be accomplished by an enhancement of the currency would subsequently have to be done by other means" (*Della moneta,* ed. Niccolini, pp. 186–87).

45. Galiani had already demonstrated that enhancing the currency favored debtors, by lessening the burden of private and public debts. It would bring about a temporary reduction of wages and salaries and taxes, thereby encouraging industry. Galiani was impatient with the defenders of those who were hurt; "Nor should one call for help and try to arouse pity with the words 'orphans,' 'widows,' 'virgins,' 'pupils,' because they are very few. The true orphan, the true pauper, is the industrious peasant, the craftsman, the mariner, the merchant. These should be pitied, and they are those who, being accustomed to paying on leases and rents, will benefit from enhancement of the currency" (*ibid.,* p. 209.)

46. Galiani's subtle praise is more devastating than the virulent philippic of Ferrara. In the long run, people prefer security; they prefer it to the advantage obtained at the expense of others. Through monetary devaluation or through the invisible reduction of wages owing to the fixity of popular associations regarding the value of money and the prices of commodities, debtors obtained, as in a Hebrew jubilee, partial remission. Imaginary money was a splendid instrument invented during the infancy of European nations for performing certain tasks of public policy which today are performed by other methods. However, this instrument destroyed all certainty. Instead of a crude but certain monetary unit like the grain or gram of pure gold, it established an abstract unit which the public fancied to be stable. Princes could manipulate this monetary device for their own advantage, although they acted as if it were for the benefit of the public. When the instrument was misused, the drawbacks outweighed the advantages. The device of imaginary money was consequently discarded at the end of the eighteenth century and was replaced by a real monetary unit which was fixed beyond doubt to a weight of fine gold; thus the gram of gold became the standard of value. Under this principle people lived and throve for more than a

century. But with the coming of a universal monetary deluge (since World War I) the monetary universe entered into a period of fluidity in which the long-forgotten imaginary money made its reappearance, namely, in the writings of those who proposed what in effect amounted to a pallid imitation of the device of earlier days. What has been attempted in these pages is not the advocacy of its reintroduction. We only have tried to demonstrate that what certain modern authors advocate is a monetary device which, after having been perfected over the centuries, was abandoned in the period of the French Revolution.

Part IV
Money as Credit

[14]

The Value of Money as a Substance

I

The intrinsic value of money and the measurement of value

Through all the discussions of the nature of money there runs the question as to whether money, in order to carry out its services of measurement, exchange and representation of values, is or ought to be a value itself; or whether it is enough if money is simply a token and symbol without intrinsic value, like an accounting sum which stands for a value without being one. The whole technical and historical discussion of this question, which involves the most profound issues in the theory of money and value, would be superfluous if it could be decided by a frequently quoted logical argument. A measuring instrument, it is said, has to have the same quality as the object to be measured: a measure of length has to be long, a measure of weight has to be heavy, a measure of space has to have dimensions; consequently, a measure of value has to be valuable. No matter how unrelated two things may be in all other respects, when I measure them against each other they must both have the quality that I am comparing. Any quantitative and numerical equality or inequality that I assert would be meaningless if it did not refer to relative quantities of one and the same quality. Indeed, this identity of qualities must not be of too general a nature; for instance, it is impossible to compare the beauty of a piece of architecture with the beauty of a person, even though both have the quality of beauty. Only the particular architectural or the particular human qualities of beauty make a comparison possible. But even if a common quality is lacking, one might still consider the reaction of the contemplating subject as a basis for comparability. If the beauty of a building and the beauty of a person are comparable in the amount of enjoyment that the contemplation of either one of them affords us, then an identity of qualities

might be asserted in spite of the apparent variation. The equal effect upon the same subject reflects the equality of the objects with reference to the relation in question. Two completely different phenomena that give the same pleasure to the same subject have, over and above all their differences, an equal force or an equal relation to the subject; just as when a gust of wind and a human hand break a branch of a tree demonstrate, in spite of the incomparability of their qualities, an equal amount of energy. Thus the substance of money, and everything that is measured by it, may be completely different, but they would have to coincide in the one point that they both have value; and even if value is nothing but a subjective response to the impressions received from things, at least the quality by which they affect the sense of value in men has to be the same in both – even though it cannot be isolated. Thus, it is claimed that money has to have the quality of value because it is compared with values and enters into a quantitative equation with values.

I will contrast this line of argument with another which produces different results. It is true that, in the example given, we can compare the force of the wind that breaks the branch of a tree with that of the human hand doing the same thing, only so far as this force exists as a quantity in both. But we can measure the force of the wind also by the thickness of the branch that it has broken. I admit that the broken branch does not yet express the amount of energy of the wind in the same sense as the energy of the hand may express it; but the comparative force of two gusts of wind, and thus the relative force of each, can be measured by the fact that one has broken a branch which the other was unable to harm. The following example seems to me to be conclusive. The most heterogeneous objects we know, the two poles of the world view which neither metaphysics nor science has succeeded in reducing to each other, are the motions of matter and the states of consciousness. The pure extension of the one and the pure internality of the other have not so far allowed any point to be discovered that could plausibly be regarded as their meeting ground. Nevertheless, the physiological psychologist can measure the relative changes in the strength of conscious sensations by the changes in the external motions that affect our sense organs. Since there is a constant quantitative relation between the two factors, the size of one determines the relative size of the other, without any qualitative relationship or identity having to exist between them. The logical principle that appeared to make the ability of money to measure value dependent upon its own value is thus breached. It is indeed correct that the quantities of different objects can be compared only if they are of the same quality; wherever measurement is done by direct comparison of two quantities it presupposes identical qualities. But wherever a change, a difference or the relation between two quantities is to be measured, it is sufficient for their determination that the proportions of the measuring objects are reflected by the proportions of those measured; and there need be no qualitative identity of the

objects. Two objects with different qualities cannot be equalized, but two proportions between qualitatively different things may be. The two objects *m* and *n* may have some relationship that has nothing to do with qualitative identity, so that neither one can serve directly as a measure for the other. The relation may be one of cause and effect, of symbolism, of common relationship to a third factor or anything else. Let us assume as given that an object *a* is known to be a quarter of *m*, and an object *b* is known to be some quantitative part of *n*. If a relation exists between *a* and *b*, corresponding to the relation *m* and *n*, it follows that *b* equals a quarter of *n*. In spite of a qualitative difference and the impossibility of any direct comparison between *a* and *b*, it is nevertheless possible to determine the quantity of one by the quantity of the other. For instance, there is no relation of identity between a certain quantity of food and the acute need for food that might be satisfied by it; but if so much food is available that half of the need is filled, I can accordingly determine that the available quantity of food equals half of the need. Under these circumstances it is sufficient that an overall relationship exists in order to measure the quantities of its parts. If one can now interpret the measurement of objects by money in this fashion, then the idea of their direct comparability and consequently the logical requirement that money itself should possess value becomes untenable.

In order to proceed from this logical possibility to reality, we need only assume a very general relationship between the quantity of goods and the quantity of money, which is illustrated by the connection – often obscured or disrupted – between an increasing supply of money and rising prices, an increasing supply of goods and falling prices. Thus we can form, with qualifications as to their exact scope, the concepts of a total supply of commodities, a total supply of money and a relationship of mutual dependence between them.

Every single commodity is now a definite part of the available sum of commodities; if we call the latter *a*, the commodity is $1/m\ a$. Its price is the corresponding part of the total quantity of money; if we call the latter *b*, then the price equals $1/m\ b$. If we knew the quantity of *a* and *b*, and the proportion of all saleable goods which a specific object represents, then we should also know its price in terms of money, and vice-versa. A definite amount of money can thus determine or measure the value of an object, regardless of whether money and the valuable object possess any identical quality, and so regardless of whether money itself is valuable.

Problems of measurement

It is always necessary to keep in mind the complete relativity of measurement. Absolute quantities that are equivalent measure each other in a quite different sense from the partial quantities which are in question here. If it is assumed –

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with certain qualifications – that the total amount of money equals the value of the total amount of commodities for sale, then this equation need not be taken as a measure of one quantity by the other. They are set in a relation of equivalence only through the relationship that both have to the valuing person and his practical purposes. The following quite common cases show how strong is the tendency to treat money and commodities generally as simply corresponding to each other. If a primitive tribe, who use a commodity as a unit of exchange, trade with a more developed neighbour who uses money, then the two units are frequently treated as equal in value. Thus the ancient Irish, when they entered into relations with the Romans, made their own value-unit, the cow, equivalent to an ounce of silver. The wild mountain tribes in Annam, who trade only in kind, use the buffalo as a basic value-unit; in their transactions with the more cultivated inhabitants of the plains the value-unit of the latter – a bar of silver of a particular size – is regarded as equivalent to one buffalo. The same basic approach can be found in a wild tribe of Laos, who live by trade. Their unit of value is the iron hoe, but they also produce gold which they sell to neighbouring tribes and which is the only object they weigh. For the purpose of weighing it they have no other measure than corn, and so they sell one corn measure of gold for one hoe. One against one is the naive expression of an equivalence between these dubious totalities; since the single commodity in barter exemplifies the value of all commodities just as the single monetary unit represents the idea of the total amount of money, it may be assumed that the relation between single units is, at least symbolically, interpreted as a relation between the totalities.

If the equivalence of these total amounts exists as an effective, though unconscious *a priori*, there emerges an objective proportion between the partial quantities apart from that of their subjective fortuitousness. For now there really exists something that is exactly the same on both sides; namely, the division between each of the two partial quantities and the total quantity to which it belongs. If we assume complete equilibrium of prices, then each commodity would be related to its price, within the area of exchange, in the same way as all available commodities were related to the total amount of spendable money. It is totally irrelevant whether money has a conceptual, qualitative relationship to commodities. If a commodity costs 20 *m*, this represents $1/n$ of the total money supply, i.e. its value is $1/n$ of the total supply of commodities. By this means, 20 *m* are able to measure the value of the commodities even though they are generically completely different from them. We have to keep in mind, however, that the assumption of a simple relationship between all commodities and all money is only a preliminary, crude and schematic step. If a single commodity had to be directly equated with a money value, it would be reasonable to insist that the commodity and its measure must have some quality in common. But for the purposes of exchange and valuation it is only necessary to determine the relation of different (or all) commodities to each other (that is,

result of the division of the single commodity by all the others), and to equate this with the corresponding fraction of the available supply of money. This requires only that there shall be a numerically determinable quantity. If the commodity n relates to the sum A of all saleable goods, as the money unit a relates to the sum B of all available money units, then the economic value of n is expressed by a/B. The matter is not usually perceived in this way because A as well as B are taken for granted. Their changes are not easily observed and we are not conscious of their function as denominators; we are exclusively interested in the numerators n and a for each individual case. Thus, the idea could emerge that n and a correspond to each other in some absolute and direct way; and if this were so they would indeed have to have some identical quality. If that general element upon which the relationship is based were forgotten, if it operated only practically but not consciously, then it would reveal a profound characteristic of human nature. The limited receptiveness of human consciousness and the economical and expedient manner of its use means that only a small number of the innumerable qualities and aspects of an object that interests us are taken into consideration. It is enough for the different viewpoints that determine the selection and ordering of the factors that attract our attention that the latter can be arranged as a systematic series. This series begins with a succession of phenomena in which only what is common to all is taken into account, only the basis that all the phenomena share, is considered. At the other end of the scale, only the distinctive features of each phenomenon, the absolute individuality, enter our consciousness, while the general and fundamental elements remain unconscious. Between these two extremes, there exists at various levels those points or aspects of the total phenomenon upon whihc the greatest attention is focused. In general, it may be said that theoretical interests direct awareness more to generalities, practical interests more to the specific features of things. For the thinker who is interested in metaphysics, the individual differences between things are often regarded as inessential, and he is concerned with such general conceptions as 'being' and 'becoming' which are common to all things. Practical life, on the other hand, requires us to be attentive to the differences, peculiarities and nuances of people and circumstances with which we are concerned; while the general human qualities and the basis that is common to all the problematic conditions seem obvious and not in need of special attention. Indeed, even such attention can only clarify them with great difficulty. For instance, the relations between members of a family develop on the basis of experience of those personal qualities by which each member is distinguished from any other; the general character of these family relations is usually not a subject for particular observation by the members of that family. Only outsiders seem to be able to describe it. However, this does not mean that the general unconscious basis is not psychologically effective. The individual qualities of the members of each family will, in fact, bring about very different

conditions according to the general character and the atmosphere that prevail in the family as a whole. This atmosphere provides the basis, often unremarked, upon which the qualities of the individuals develop in their own specific way. The same holds for larger groups. Even though all relationships among men depend upon the particular contribution of each individual, they are actually established in a specific form only because there are universal human phenomena and conditions which form the denominator to which individual differences are added as the numerators to produce the totality of the relationship. Exactly the same psychological relationship may prevail with respect to money prices. The equation between the value of a commodity and the value of a definite amount of money does not signify an equation between simple factors but a proportion, that is an equation between two fractions, the denominator of which, within a given economic area, is on one side the sum total of all commodities and on the other the total amount of money. These two quantities, of course, have to be more strictly determined. The equation is established by the fact that, for practical reasons, these two sums are posed *a priori* as equivalents; or, to state the matter more precisely, the practical circumstances in which we handle both categories are reflected in our theoretical consciousness as an equation. However, since this is the general basis of all equations between specific commodities and specific prices, it does not enter our consciousness, but provides the unconsciously operating factor without which the individual instances, which alone are interesting and thus enter into consciousness, could not possibly form a relationship. The tremendous importance of that absolute and fundamental equation would make the fact of its remaining unconscious just as probable as in the analogous cases that I have described.

If we were to assume that money has no substantial value, then the single money price would have no relation to the commodity whose value it was supposed to express, if our observation were restricted to these two factors. One would not know why one object is higher or lower in price, by a definite amount, than another. But if we establish as an absolute presupposition that the sum total of everything saleable is equivalent to the total amount of money – the meaning of 'total amount' to be investigated later – then the price of every single commodity becomes simply the proportion between its value and the total value of commodities, a proportion that is repeated in respect of price and total amount of money. I have to emphasize again that this is not a case of circular reasoning, in the sense that the ability of a definite amount of money to measure the value of a specific commodity is based upon an equation between all money and all commodities which already assumes the measurability of one by the other. The question as to whether every measurement requires the existence of some identical qualities in the object and in that which measures it would then not be relevant to the specific case, but would be absorbed unresolved into the assumptions. A measurement of relative quantities is, however,

possible if there is some relation between the absolute quantities, which need not be that of measurability or identity. There is certainly no identity or possibility of measurement between the size of an iron pipe and a given water pressure; but if both are integrated parts of a mechanical system with a specific power output, then it is possible, under known conditions of change in the water pressure, to calculate from changes in the output of power what is the diameter of the pipes in the system. In the same way, commodities and money may not be measurable by each other in general. It is sufficient that both play a part in human life, within the system of men's practical ends, for the quantitative modification of one to become an index of the other. It is not without relevance to this reduction of the significance of every money quantity to a fraction – even if it remains undecided what is the absolute quantity of which it is a part – that the Romans marked their coins (with some well-founded exceptions) according to their relative and not their absolute weight. Thus *as* signifies only a whole consisting of twelve parts; it may refer to an inheritance just as well as to quantities and weights, to the pound as well as to any part of a pound. The fact that only the relativity of the measure enters consciousness and is effective is not affected by the hypothesis that suggests that in ancient times the *as* signified a bar of copper of a specific absolute weight.

The quantity of effective money

We now have to deal more specifically with the qualifications to the concept of the total quantity of money. It is not because of the immeasurable quantitative difference between all available commodities and all available money that it is impossible to assert that there is as much money to spend as there are commodities for sale. There exists no direct relation of less and more between the two, because there is no common measure for them as there would be for objects that have identical qualities. No quantity of commodities is related to a definite quantity of money, since all the purposes of money could, in principle, be attained by a quantity of money reduced as much as desired. The extent to which this can be achieved in practice without bringing transactions to a stop is illustrated by the following recorded fact. Some centuries ago, silver coins existed in Russia of such minute size that it was impossible to take them by hand from the table; they were tipped out of the purse, the amount payable was separated out and both parties proceeded to pick up their share with their tongues and spit it back into their purses. One might say that, whatever the absolute amount of money available, it always remains a lot of 'money' so long as it performs the services of money. All that varies is the quantity of these tokens or pieces in a different respect, namely as material of some kind; their quantity as money need not be affected. Thus, a direct comparison between all

commodities and all money does not allow any conclusion. The lack of relationship between the total amounts of money and of commodities – as denominators of the fractions that express value – results from the fact that the total supply of money is turned over much more quickly than is the total amount of commodities. Nobody will leave large sums of money unused if it can be avoided, and usually it can be avoided. But no merchant can avoid keeping a considerable part of his stock for some time before it can be sold. The difference in the velocity of turnover becomes greater still if one includes those objects that are not offered for sale, but are occasionally saleable if there is a tempting offer. If the amount of money required for the sale of the total supply of goods were calculated on the basis of the prices actually paid for these goods, the estimate would vastly exceed the actual supply of money. From this point of view, it can be stated that there is much less money than commodities and that the proportion between the commodity and its price is not at all equal to the proportion between all commodities and all money, but is considerably smaller than this. However, there are two ways in which we can save our basic proposition. First, we might regard as the total quantity of commodities, that quantity that is actually in the process of being sold. To use an Aristotelian concept: the unsold commodity is merely a possible commodity, which becomes a real commodity only at the moment of sale. Just as money is real money only at the moment when it buys something, i.e. when it exercises the function of money, so the commodity becomes a commodity only when it is sold; until that time, it is only a possible object for sale, an ideal anticipation. From this standpoint, it is an obvious and analytical statement that there is as much money as there are objects to be sold – including as money, of course, all those money substitutes provided by the banking and credit system. To be sure, the commodities temporarily excluded from the selling process are not without economic effect, and economic life would be changed tremendously if the total supply of commodities were put completely into circulation as is the supply of money. Upon closer scrutiny, the commodity supply in reserve seems to me to have an influence on actual sales only in three ways: on the rate of circulation of money, on the production of the material of money and money equivalents, and on the relation between money expenditure and the reserves. But these factors have already exercised their influence on the actual turnover; the empirical relation between commodity and price has been formed under their influence and they do not exclude an interpretation of the total quantity of commodities as the actual sales of commodities at a given moment.

Secondly, this can also be regarded as a consequence of the fact that the same amount of money – since money is not consumed as commodities are – can effect an unlimited number of transactions; and that its insignificant quantity at any given moment, when compared with the quantity of commodities, is compensated for by the velocity of its circulation. The higher levels of finance

illustrate clearly that the substance of money plays only a very minor role in value transactions. In 1890 the Bank of France had a turnover on current accounts which was 135 times the amount of the money actually deposited (54 billion as against 400 million francs), while at the German Reichsbank the ratio was 190. Within the total sum of money in use, which determines the money price of commodities, the actual amount of money is negligible in relation to the total available as a result of its circulation. Thus it is possible to assert, with reference to a specific period but not to a single moment, that the total quantity of money in circulation corresponds with the total amount of objects saleable during this period.

The individual also makes his expenditures and accepts the prices for larger purchases not in relation to his momentary disposal of money, but in relation to his total income over a prolonged period. In our equation, the money fraction may attain equality with the commodity fraction through the fact that its denominator is not the quantity of money available as a substance, but is a multiple of this amount determined by the circulation of money during a given period. From this point of view, the antinomy between the stock of available commodities and those commodities that are the value counterparts of money can be solved; and the assertion that no basic disproportion can arise between the total amount of commodities and of money in an autonomous economic area may be upheld. This is true in spite of disagreements about the proper relation between a particular commodity and its price, in spite of the fluctuations and discrepancies that may develop if some definite size of the fractions concerned has become psychologically established while a different one has become more appropriate by reason of objective changes, and in spite of temporary shortages in the means of exchange resulting from a rapid increase in the number of transactions. Imports and exports of metal which are the result of a shortage or excess of money in relation to commodity values in a given country are nothing but adjustments within a larger economic area in which particular countries are the provinces; they indicate that a proper relation between two provinces has been restored after changes have occurred in one of them. Under these circumstances, an answer to the question whether a given price is appropriate or not can be derived directly from the two previous questions: first, what is the amount of money and the sum total of objects for sale at the present time; and, second, what proportion does the object under consideration form of the total quantity of commodities available? The second question is the decisive one. The equation between the commodity fraction and the money fraction can be objectively and quantitatively true or false; whereas the equation between objects in general and money in general is only a matter of expediency, not one of truth in the sense that it can be logically established. The relationship between the totalities has, as it were, the significance of an axiom, which is not true in the same sense as are the statements based upon it;

only the latter can be proven, whereas the axiom cannot refer to anything from which it could be logically derived. A very important methodological rule is established here, which I will illustrate from a completely different category of values. The basic assertion of pessimism is that there is in life a considerable excess of suffering over happiness, that living beings, considered as a whole or on the average, experience much more pain than pleasure. It is quite impossible to make such an assertion, which presupposes that pleasure and pain can be directly balanced and set off against each other as two qualitatively equal magnitudes with opposite signs. In reality this is impossible because there is no common measure. When we suffer we cannot experience what amount of pleasure would be necessary to compensate for the suffering. How then can we explain that such comparisons are always being made; that in everyday affairs, in a coherent destiny, in the sum of an individual life, we judge that the quantity of enjoyment has fallen below or has exceeded the amount of pain? It is possible only because the experience of life has taught us, more or less strictly, how fortune and misfortune are actually distributed, how much suffering has to be accepted in order to attain a certain amount of pleasure, and how much of each is man's usual portion. Only when we have formed some notion of this kind, no matter how unconscious and vague, is it possible to say that in a particular case a pleasure has been paid for too dearly – i.e. with too large an amount of suffering – or that in one individual life the pain exceeded the happiness. The average itself cannot be 'disproportionate' because it is the standard by which we determine whether the relation between feelings in an individual case is fair or not. In the same way, it is impossible to say that people on the average are tall or small, since the average provides the standard by which the individual is measured; and it is misleading to say that 'time' passes quickly or slowly, since the passage of time – i.e. the average experienced pace of events – is the measuring rod by which the quickness or slowness of the passage of single events is measured, while the average itself is neither quick nor slow. Thus, the pessimistic assertion that the average human life contains more suffering than enjoyment is methodologically just as impossible as the optimistic assertion of the contrary. The sensation of the total quantities of pleasure and pain (or, differently expressed, the average of them for an individual or for a period of time) is the original phenomenon, whose components cannot be compared with each other because this would require a measure independent of both and yet comprehending both equally.

This should suffice to characterize the type of knowledge with which we are dealing here. In the areas mentioned, and also in many others, the primary elements are not comparable because they are of different qualities and cannot be measured by each other or by a third factor. But the fact that a certain amount of one element, and a certain amount of the other element, is present provides a measure to be applied to individual cases, events and problems,

where both elements are involved. In so far as, in individual cases, the elements repeat the proportions that occur in the total quantities, then the elements have a 'correct', i.e. normal, average or typical relation, and deviations appear as a 'preponderance' or 'disproportion' of one element. In themselves, the elements in individual cases have no more a right or wrong, an equal or unequal, relation than have the totalities; they acquire such a relation only through the total quantities being established as an absolute, in terms of which the singular, the relative, is calculated. The absolute is not subject to the rules of comparison that it makes possible for the relative.

The relation between the object of sale and its money price could belong to this type. Perhaps they have nothing in common as regards content and perhaps they are qualitatively so unequal that they are quantitatively incomparable. But since everything saleable and the total amount of money together form an economic cosmos, the price of one commodity could be the 'appropriate price' if it constitutes the same part of the total effective amount of money as does the commodity of the total amount of goods. The mutual proportionality need not depend upon the equal 'value' of the object and the specific amount of money. The money price does not have to represent a value at all, or at least not a value in the same sense; it has only to constitute the same fraction of all money as the commodity constitutes of all commodity values. Individual economic transactions illustrate how dependent the money price of a commodity is upon its relation to a total quantity of commodities. We say that we are willing to sacrifice this money – which is rather inconvenient for us – only if we obtain a reasonable equivalent. Every reduction of that sacrifice is counted as a positive profit. But it is a profit only so far as the money can be spent on another occasion. If I had nothing else to do with the money, I would spend all the money I own unhesitatingly on the one object for which it is demanded. The appropriateness of the price means only that I, as an average person, have enough money left to buy the other things that I want. The expenditure on every single object has to be adjusted to the fact that I want to buy other objects besides. If everybody regulates his private expenditures in such a way that the payment for every type of commodity is proportionate to his total income, this means that his expenditure for the single object is related to his total expenses just as the importance of the single object is related to the totality of desired and available objects. This scheme of the private economy of an individual is obviously not only an analogy of the general economy; its general application determines the average prices. The continuous subjective balancing precipitates the objective relation between commodity and price; this relationship depends not only upon the proportion between the total effective supply of goods and the total amount of money, but also – subject to all kinds of modifications – on the proportion between the total wants of the individual and his total available money income.

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Does money possess an intrinsic value?

The preceding argument has not yet touched upon the question as to whether in reality money has value or not. It was only meant to show that the function of money in measuring values does not impose upon it the character of being itself a valuable object. However, the mere possibility that it does have value opens the road to understanding not only the historical development of money but, above all, its essential nature. In the primitive stages of the economy, use-values appear as money: cattle, salt, slaves, tobacco, hides, etc. Whatever the way in which money has evolved, in the beginning it must have been a value experienced as such. It is possible to exchange the most valuable things against a printed form only when the chain of purposes is very extensive and reliable and provides us with a guarantee that what is immediately valueless will help us to acquire other values. It is in this manner that one can carry out a series of logical deductions, through impossible or contradictory stages, to a valid and binding conclusion, but only when the process of thought is assured of its direction and its correctness. Primitive and still vacillating thinking would immediately lose its direction at one of the intermediate stages; and it has, therefore, to exercise its functions in statements each of which has to be concrete and obviously correct – at the cost of being less versatile and less comprehensive in its goals. Similarly, the extension of the succession of values by valueless things enormously increases their range and usefulness, yet is possible only with a growing intellectuality of individuals and with the continued organization of the group. Nobody will be stupid enough to exchange a value against something that is valueless, unless he is sure of being able to convert the latter into values again. Exchange was at first necessarily exchange in kind, an exchange between direct values. One assumes that objects that were frequently exchanged and circulated because of their general desirability, and the value of which in relation to other objects was therefore frequently measured, were psychologically most suited to become general standards of value. Apparently in direct contrast with the earlier result, according to which money as such does not have to be of value, we discover here that the most needed and the most valuable object is apt to become money. I do not mean needed in the physiological sense; for instance, the desire for adornment can play a dominant role among the experienced 'necessities'. Indeed, we are told that for primitive people the adornment of their bodies, and the objects used for it, are more valuable than all the things that we consider so much more urgent. The necessity of things is for us only an emphasis that our sentiments attribute to objects that are in themselves equivalent or 'neutral' and depends entirely upon our purposes. Thus, we cannot calculate theoretically what are the values that are immediately urgent and fit to play the function of money. The only indispensable assumption seems to me that the money character is originally attached to those objects that

show a particular frequency of exchange against a variety of other things as a result of experienced necessity. Money could not have developed as a means of exchange or as a measure of value unless its material substance had been experienced as immediately valuable.

At the present time, by comparison, money is no longer valuable because its substance is regarded as a necessity, an indispensable value. No European today regards a coin as valuable because it can be changed into a piece of jewelry. The present-day value of money cannot be traced to its value as metal, precisely because precious metals are available in too great quantities to find a profitably use merely for adornment and for technical purposes. The completion of the process conceived by the theory concerning the value of money as a metal would result in such a multitude of objects made of precious metal that their value would be reduced to a minimum. The valuation of money because of the possibility of converting it into other objects is possible only to the extent that this does happen or happens only on a very small scale. Even though at the beginning of the development, i.e. when there is a limited supply of precious metals, the value of money may have been determined by its alternative use for adornment, this condition disappears as production is increased. This argument is further supported by the fact that, although primitive people regard a particular style of self-adornment as a vital necessity, the subsequent elaboration of scales of value actually places this interest in the category of the 'dispensable' or 'superfluous'. In modern culture, adornment does not at all play the social role that we discover with amazement in ethnological and even in medieval accounts. This fact must also contribute to reducing the significance of money based upon the substance of which it is made. It may be said that the value of money moves increasingly from its *terminus a quo* to its *terminus ad quem*, and that metal money stands on an equal basis with paper money as a result of the growing psychological indifference to its value as metal. It would be wrong to consider the valuelessness of paper money as irrelevant on the grounds that it is simply a draft upon metal. This is refuted by the fact that unsecured paper money is still valued as money. Even if one points to the political force which alone imposes the current rate of exchange of paper money, this means precisely that other reasons besides direct material use can give, and actually do give, money value to a particular substance. The increasing replacement of metal money by paper money and the various forms of credit unavoidably react upon the character of money – in roughly the same way as in personal relations when somebody allows himself always to be represented by others, so that finally he receives no greater esteem than is accorded to his representatives. The functional value of money exceeds its value as a substance the more extensive and diversified are the services it performs and the more rapidly it circulates. Modern commerce tends more and more to eliminate money as a substantial embodiment of value, and this trend is unavoidable because, even if the production of precious metals

were increased to the utmost extent, it would still be inadequate to allow all transactions to be conducted in cash. Clearing house business on the one hand and international bills of exchange on the other are only the outstanding examples of this general tendency, the earlier features of which will be discussed in the final section of this chapter.

Generally speaking, the less developed the economic concepts, the more strongly does measurement involve a direct physical relation between the values compared. The interpretation outlined earlier, according to which the equality of value between a commodity and a sum of money consists of an equality between two fractions – in which the individual commodity and sum of money are the numerators and the total quantities of all commodities and all money are the denominators – clearly holds universally, because only this interpretation transforms a particular kind of object into money. However, since money evolves only slowly, this mode will also emerge from the more primitive mode of direct comparison of the objects in exchange. The lowest stage is perhaps illustrated by a case reported from the island of New Britain. The natives there use cowry shells strung together, which they call *dewarra*, as money. This money is used for purchases according to a linear measure (e.g. an arm-length, etc.); fish are usually paid for by *dewarra* equal to their own length. It is also reported from the cowry money region that a type of purchase prevails in which equal measures of two commodities are considered to be of equal value; thus, a measure of grain is worth an equal measure of cowry shells. The direct equivalence of commodity and price has here attained its most complete and simple expression. The comparison of values between which there is no quantitative congruence represents a more highly developed mental process. There are rudiments of such a naive equation of values by equal quantities in the phenomenon that Mungo Park reports of some West African tribes in the eighteenth century. Iron bars circulated there as money and served to designate the quantities of other commodities; thus a certain measure of tobacco or rum used to be called a 'bar of tobacco' or a 'bar of rum'. In this case, the disposition to regard value equality as equality of quantities, which was obviously a powerful element – resulting from sense impressions – in the primitive construction of values has been transposed into a linguistic expression. Several other phenomena, very diversified in appearance, can be attributed to the same general attitude. Old coins of bronze from the city of Olbia on the Dnieper, a colony of Miletus, have been preserved which have the shape of a fish, with inscriptions which probably mean tuna fish and fish basket. It is assumed that this fishing tribe originally used tuna fish as a standard of exchange, and that it was considered necessary when coins were introduced – perhaps because of exchange with less developed neighbouring tribes – to represent the value of one tuna fish on each coin, thus symbolizing, by using the same form, that it had the same value and exchangeability. In other areas, the same visible association was made

less emphatically by impressing a picture of the object (a bull, fish or axe), which was the basic unit of exchange in the period of barter and whose value the coin represented, upon the coin. The same basic sentiment prevails in the Zend-Avesta, when it is prescribed that a physician should ask as his fee for healing a house-owner the value of an inferior ox, for healing a village magistrate an ox of average quality, for curing a town official the value of a high-quality ox, for the governor of a province the value of a carriage-and-four. On the other hand, the physician would be entitled to a female donkey for curing the wife of a village magistrate, a mare for the wife of a patrician, a female camel for the wife of a governor. The identity between the sex of the patient and the sex of the value-equivalent demonstrates the inclination to base the equivalence of values upon a direct external equality. It is just the same with the fact that money originally consisted of large and heavy objects – hides, cattle, copper, bronze – or of large quantities, as in the case of cowry shell money. The first bank note of which we have knowledge, preserved from China at the end of the fourteenth century, is eighteen inches long and nine inches wide. The peasant saying, 'Much gets more', is still influential, reflecting a natural sentiment which is proven wrong only by a more refined and reflective empiricism. The largest coins even of precious metals are found almost exclusively among less developed peoples where barter still prevails. The largest gold coins are the *lool* of the Annamese, worth 880 marks, the Japanese *obang* (220 marks), and the *benta* of the Ashanti; Annam also has a silver coin worth 60 marks. The same sentiment about the importance of quantity reserved the privilege of minting the largest coins to the highest authorities, while the smaller coins, though of the same metal, were coined by lower authorities. The Persian Emperor coined the large coins, the satraps the small gold coins of less than a quarter the value. This feature of considerable quantity is characteristic not only of the early forms of metal money, but in some cases also of the preceding kinds of money. The Slavs who inhabited the area between Saale and Elbe during the first century AD, and who were a very barbarous primitive race, used linen cloth as money; the exchange value of one cloth was 100 chickens or grain sufficient for ten men for one month. Even in more elaborate money systems it is noteworthy how the concept of money becomes less and less determined by metal values. The medieval guilder was a gold coin worth a ducat, while today it equals only 100 copper farthings; the original *groschen* was a thick (*grossus*) silver coin; the original mark amounted to a pound of silver, the pound sterling equalled seventy marks. Under primitive barter conditions, money transactions took place not for the small needs of everyday life, but only for the acquisition of larger and more valuable objects. The desire for symmetry which characterizes those cultures that are not yet fully developed also regulated money exchange, and a large token of value was demanded for large objects. Only at higher stages of cultural development is it realized that a considerable quantitative inequality still permits

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equality of power, of significance and of value. Where practical life is based upon the equating of objects, a direct equality is demanded at first as the size of primitive money in relation to the objects for which it is exchanged illustrates. In the same direction, the abstraction which later recognizes a small piece of metal as the equivalent of an object of any size approaches the goal that one side of the equation no longer functions as a value in itself but is only the abstract expression of the value of the other side. The measuring function of money, which is loosely connected with its material content, has therefore varied least through all the changes of the modern economy.

The development of the purely symbolic character of money

One of the greatest advances made by mankind – the discovery of a new world out of the material of the old – is to establish a proportion between two quantities, not by direct comparison, but in terms of the fact that each of them relates to a third quantity and that these two relations are either equal or unequal. Two performances of entirely different quality are given; they become comparable if they display the same strength of will and self-sacrifice in relation to the required effort. Two destinies reveal very different degrees of happiness; yet they acquire a measurable relation if each is interpreted according to the extent to which its bearer deserved his fate. Two movements with quite different velocities can be related and equated if we observe that the acceleration from the initial stage is identical in each case. A kind of homogeneity emerges – and not only for our feelings – between two elements which, differing in their substance, have an equal relation to a third or fourth element. The one thereby becomes a factor for the calculability of the other. Furthermore, no matter how incomparable two people may be in their ostensible qualities, the relation of each to another person establishes an equality between them; as soon as one of them shows the same degree of love or hatred, domination or subjection, towards a third person as the other does towards a fourth person, these relations have established the separateness of personal identity. As a final example: the perfection of works of art of different kinds could not be compared and their values could not be arranged on a scale, unless each of them first had a definite relation to the particular ideal of its own kind. From the problem, the material and the style of each work of art, there evolves a norm which the actual work approaches more or less closely; and it is this relation that makes it possible to compare even the most diverse works of art. The possible conformity of such relations to a norm produces an aesthetic cosmos, a precise order, an ideal homogeneity in relation to value, from the individual works which are initially quite heterogeneous. This is not only true for the world of art. Out of the material of our isolated valuations there develops a pattern of graded significance. Disharmony is experienced

only as a result of the desire for a consistent order and an inner relation of values. We owe this essential feature of our world view to our ability to balance against each other not only two things, but also the relations of these two to two others, and so unite them by judging them equal or similar. Money, as a product of this fundamental power or form of our mind, is not only its most extreme example, but is, as it were, its pure embodiment. For money can express the value relation between things realized in exchange only by equating the relation between a specific sum and some general denominator, with the relation between a corresponding commodity and the totality of commodities available for exchange. Money is not, by its nature, a valuable object whose parts happen to have the same proportion to each other or to the whole that other values have to each other. The significance of money is only to express the value relations between other objects. It succeeds in this with the aid of man's developed intelligence, which is able to equate the relations between things even though the things themselves are not identical or similar. This ability only gradually evolves from the more primitive capacity to judge and express the identity or similarity of two objects directly, which is the source of the phenomena mentioned earlier that reflect the attempt to establish a direct relationship between money and its exchange values.

In modern economies this transition began with the mercantilist system. The efforts of governments to get as much coin as possible into the country were also guided, of course, by the principle 'much gets more', but the final purpose that these measures were intended to promote was the stimulation of industry and the market. The next stage beyond this was the discovery that the values that sustained this purpose did not result from money as a substance, but from the direct product of labour. It was much the same with the aims of state policy in earlier times, to acquire as much land as possible and to 'populate' it with as many people as possible. Until the eighteenth century it did not occur to any statesman that real national greatness could be promoted in any other way than by the acquisition of new territory. The justification of such aims under particular historical conditions, however, has not prevented the discovery that this kind of abundance is important only as a basis for dynamic development, which needs in fact only limited gains of such objects (land or money). It has become evident that the physical availability of a money equivalent becomes less and less essential for the increase of production and wealth, even though large amounts of money are sought not so much for themselves as for definite functional purposes. These purposes can be realized by free-floating processes not involving money in a substantial form, as the international exchange of goods illustrates. The significance of money as expressing the relative value of commodities is, according to our earlier discussion, quite independent of any intrinsic value. Just as it is irrelevant whether a scale to measure space consists of iron, wood or glass, since only the relation of its parts to each other or to

another measure concerns us, so the scale that money provides for the determination of values has nothing to do with the nature of its substance. This ideal significance of money as a standard and an expression of the value of goods has remained completely unchanged, whereas its character as an intermediary, as a means to store and to transport values, has changed in some degree and is still in the process of changing. Money passes from the form of directness and substantiality in which it first carried out these functions to the ideal form; that is, it exercises its effects merely as an idea which is embodied in a representative symbol.

The development of money seems to be an element in a profound cultural trend. The different levels of culture may be distinguished by the extent to which, and at what points, they have a direct relationship with the objects that concern them, and on the other hand by the extent to which they use symbols. The way of life is radically different according to whether religious needs are satisfied by symbolic services and formulas, or by a direct approach of the individual to God; whether the respect of people for each other is manifested through established rules that indicate relative positions by specific ceremonies, or through informal courtesy, attachment and respect; whether purchases, agreements and contracts are made by simply making their content known, or are legalized and made binding by an external symbol of solemn undertaking; whether theoretical knowledge deals directly with sense reality or with its representation through general concepts and metaphysical or mythological symbols. But of course, these differences are not rigid. Rather, the history of mankind shows a continuous fluctuation between them. On the one hand, the symbolic representation of reality increases, but at the same time, as a counter-movement, symbols are constantly analysed and reduced to their original foundation. I will mention a singular example of this. Sexual objects have long been concealed through propriety and shame, while the words referring to them were used without hesitation. Only in recent centuries have the words themselves come under the same interdict. The symbol was thus brought into agreement with the emotional attitude to reality. But in very recent times this connection has begun to be dissolved again. Naturalism in art has drawn our attention to the lack of differentiation and freedom in perception if the same sensations are attached to the word, which is a mere symbol used for artistic purposes, as to the object itself. The representation of indecency is not at all the same thing as an indecent exhibition; and the perception of reality must be distinguished from the symbolical world in which art, including naturalism, exists. Perhaps in these circumstances there emerges a greater freedom among educated people in talking about delicate subjects. So long as an objective and chaste attitude can be presupposed, what was formerly forbidden is now allowed; the sense of shame is restricted more to the matter itself and does not affect the word as a mere symbol. Thus the relation between reality and symbol fluctuates in narrower as well as in

more general areas. One is almost inclined to think – though such generalities cannot be demonstrated – that either every stage of culture (and finally every nation, every group and every individual) displays a specific proportion between the symbolic and the directly realistic treatment of its interests, or else that this proportion is generally stable and only the objects that are affected by it are subject to change. But perhaps it may be stated more specifically that a conspicuous prevalence of symbolism is as much part of primitive and naive as of very highly developed and complicated stages of cultural development. It may be that the progressive development frees us from symbols in the realm of cognition, but makes us more dependent on them in practical matters. By contrast with the nebulous symbolism of mythological world views, modern philosophy shows an incomparable directness in its interpretation of objects. On the other hand, the extensive and intensive multiplication of life-experiences has the result that we have to subsume, condense and represent them by symbolic forms to a greater extent than was necessary under simpler and more restricted conditions. Symbolism, which at lower cultural stages often means detours and waste of energy, is expedient and saves energy at the higher stages. One may think here of diplomatic techniques in the international as well as the party political sphere. Certainly, it is the relation between actual degrees of power that determines the outcome of the struggle between interests. But these are no longer measured against each other directly in a physical fight; they are represented conceptually. Behind the representative of each collective power stands in condensed potential form the real power of his party, and it is just in proportion to the latter that his voice is effective and his interest able to prevail. He himself is the symbol of this power. The intellectual exchange between the representatives of different power groups symbolizes the course that a real battle would have taken, in such fashion that the vanquished accepts the result as though he had really been defeated. I call to mind, for instance, the negotiations between employees and employers to avoid an impending strike. Each party yields just at the point which, according to its estimate of the respective strength of the parties, would be enforced by an actual strike. The *ultima rationis* is avoided by anticipating its results through imaginative devices. If such a representation and measurement of real strength could always be made accurately by the imagination, then every battle could be avoided. The utopian suggestion to decide the outcome of future wars by a game of chess between the generals is absurd, because the result of a game of chess does not give any indication of what would have been the outcome of a struggle between the armies, and so cannot symbolize and represent it in a valid way. However, a war game in which the whole armed forces, all fortuitous occurrences, all the intelligence of the leaders, found an appropriate symbolical expression, might possibly eliminate the physical struggle if such a game could be conceived.

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The multitude of factors – of powers, substances and events – that operate in modern life demand a concentration in comprehensive symbols which can be manipulated with the assurance that they will lead to the same result as if all the details had been taken into account, so that the result will be applicable and valid for all particulars. This should be possible to the extent that the quantitative relations between things become, so to speak, independent. The growing differentiation of our representations has the result that the problem of 'how much' is, to a certain extent, psychologically separated from the question of 'what' – no matter how strange this may sound from the logical point of view. It occurred first and most successully in the construction of numbers, by extracting the 'so and so much' out of 'so many things' and making it into independent concepts. The more stable the concepts become with reference to their qualitative content, the more attention becomes focused upon their quantitative relations. Finally, the ideal of knowledge is seen as the dissolution of all the qualitative categories of reality into purely quantitative ones. This specification and emphasis of quantity facilitates the symbolic treatment of things. Since those that differ in content may coincide with respect to quantity, the relations, characteristics and movements of one of them may provide a valid representation of those of another. The simplest examples are the tokens that represent the numerical value of any object, or the thermometer that shows the temperature in degrees. It may appear self-evident today that symbols should be created by segregating the quantitative aspects of things; but this is in fact an achievement of the human mind which has remarkable consequences. The institution of money depends upon it inasmuch as money represents pure quantity in a numerical form, regardless of all the specific qualities of a valued object. An account from ancient Russia illustrates a very characteristic transition from the qualitative to the quantitative symbolic representation. Originally, marten furs served as a means of exchange. As trade developed, the size and quality of individual pelts lost all significance for their exchange value; each pelt simply equalled any other, and only the number of pelts mattered. Eventually only the tips of the pelts were used as money, and finally pieces of leather, probably stamped by the government, circulated as a means of exchange. This clearly illustrates how the reduction to a quantitative viewpoint supports the symbolization of values, which is the basis for the genuine realization of money.

However, it appears that at first ideal money does not meet the higher economic needs, although it is particularly suited for general acceptance, since it has no relation to particular values, but an equal relation to all of them. The extraordinary spread of cowry-money – which was used for a thousand years in a large part of Africa, at an earlier time in the region of the Indian Ocean, and in prehistoric times in Europe – would not have been possible if it had not been so genuinely ideal. At the lower economic stages, extreme contrasts of money values exist side by side; on the one hand, there is money which is entirely

concrete in value, such as cattle or cotton cloth, which circulates when large amounts of money are involved, and on the other, there is completely ideal money such as crowy shells, the bark of the mulberry tree which Marco Polo discovered in China, or the pieces of porcelain with Chinese characters, which circulated in Siam. A certain functional development beyond the types of money with concrete value begins where natural products which are at the same time export articles become means of exchange: tobacco in Virginia, rice in Carolina, cod in Newfoundland, tea in China and furs in Massachusetts. In the case of export articles, value becomes psychologically separated from the immediacy which prevails in the domestic use of money. However, the most useful compromise between abstract kinds of money, such as those just mentioned, and money which has intrinsic value, is still jewelry money, that is, gold and silver; this is neither so whimsical and senseless as the former, nor so crude and singular as the latter. Gold and silver are obviously the forms through which money can most easily and certainly become a symbol. Money has to pass through this incarnation in order to achieve its greatest effects, and it seems unlikely that it will escape from it in the foreseeable future.

As secondary symbols – as they may be called by contrast with the naive symbolism of naive states of mind – increasingly replace the direct substance of things and values in practical life, the importance of intellect in the conduct of life is extraordinarily enhanced. As soon as life no longer moves between particular sense impressions but is determined by abstractions, averages and synoptic views, then, particularly in the sphere of human relations, a more rapid and exact process of abstraction will produce an advantage. If public order today can be secured by the mere appearance of an official, whereas in former times it required physical force; if a mere signature binds us unconditionally, both externally and internally; if a mere hint, or a facial expression, suffices among civilized people to indicate a lasting relationship which, under less developed conditions can be shown only by lengthy explanations or long-term behaviour; if sacrifices can be imposed upon us by written accounts which could be wrested from more ignorant peoples only by the real working of the factors conceived – then this significance of symbolic things and acts is obviously possible only as a result of greatly enhanced intellectuality, and of the existence of such independent mental power that the particular details of phenomena no longer require attention.

I have made these observations in order to clarify the role of money too in this trend of cultural development. The increasingly influential principle of economizing strength and materials leads to more and more extensive experiments with representatives and symbols that have virtually no relation to what they represent. The same course is followed when operations with values are carried out by a symbol that loses more and more any material relation to the specific phenomena of its area and becomes merely a symbol. This form of life

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not only presupposes a remarkable expansion of mental processes (consider, for instance, the complicated psychological pre-conditions required to cover bank notes by cash reserves) but also their intensification, a fundamental re-orientation of culture towards intellectuality. The idea that life is essentially based on intellect, and that intellect is accepted in practical life as the most valuable of our mental energies, goes hand in hand with the growth of a money economy, as our further discussion will show plainly. Intellect is also undoubtedly sovereign in the field of commerce, and especially in financial transactions. The growth of intellectual abilities and of abstract thought characterizes the age in which money becomes more and more a mere symbol, neutral as regards its intrinsic value.

II

Renunciation of the non-monetary uses of monetary material

It must be kept in mind that thus far we have only established a trend of development which began when the intrinsic value of money was co-ordinated with all other values. Thus, some other conceptions have to be disproved which apparently coincide with our theory that money has no intrinsic value, in so far as they emphasize the distinction between money and all other values and thus seek to prove that money cannot possibly be a value of the same kind. As is so often the case, this establishes in a rigid form and by anticipation what can be established only by endless approximation. In arguing against the dogma of the intrinsic value of money, we should not become victims of the dogma that money is valueless – an error into which the following notions might lead us. It appears that even the most useful object must renounce its usefulness in order to function as money. If, for example, in Abyssinia specifically cut pieces of rock salt circulate as coins, they are money precisely because they are not used as salt. On the coast of Somaliland pieces of blue cotton cloth, each two ells long, used to circulate as money. This was a considerable progress over the use of cloth money that was cut and composed arbitrarily, but nevertheless it indicates a tendency to abandon the use of cloth as cloth. The possible use of gold and silver for technical and aesthetic purposes cannot be realized as long as they circulate as money, and the same is true of all other kinds of money. The various uses that the material of money has for our purposes must all be renounced if it is to be used as money. As soon as such materials reveal their practical, aesthetic or other value they are withdrawn from circulation and are no longer money. All other values may be compared with each other and exchanged according to the measure of their utility in order to acquire a specific value, but money is kept completely apart from this series. For as soon as it is

used in the same manner as the value that it buys, it ceases to be money. It may be part of the unique suitability of precious metals as money material that they can easily be restored from some other form to the form of money. Nevertheless, at any given moment they have the choice of being either money or jewelry, that is of functioning either as money or as use value. It may appear that money is then assimilated again to the other categories of value. For if I buy a yard of wood for fuel I value its substance only for the heat that it produces and not for any other possible use. In reality, however, the situation is quite different. If it is claimed that the value of money consists in the value of its material, this means that its value is embodied in the qualities or powers of the substance which are not those of money. The apparent paradox indicates that money does not necessarily have to be based upon substances that are intrinsically valuable, i.e. valuable in some other respect. It is sufficient if the ability to function as money is transferred to any substance, the other qualities of which are quite irrelevant. It remains to be seen whether the abandonment of all those value functions that support the theory that money must possess intrinsic value, justifies the conclusion that money can be only money and nothing but money.

The point in question is the very important phenomenon of an object that has several functions of which only one, to the exclusion of all others, can be realized; and whether this realized function is modified in its significance and its value by the retreat of the others. In order to understand the co-existence of different possibilities, it may be permissible to point out first how the succession of diverse functions affects the one that finally survives. If the repentant sinner is given a higher value in the moral order of the world than the righteous man who has never erred, then this valuation of the moral superiority of the sinner is not derived from the presently existing situation – for the ethical content of this situation is, according to our assumptions, exactly the same as that of the righteous man – but from the preceding situation, in which the moral behaviour was different and from the fact that this situation no longer exists. Again, if freedom and self-determination is restored after there has been obstruction of our activity and external enforcement of its direction, our actions then acquire a particular feeling of well-being and value, which arises not from their content or success, but exclusively from the fact that the form of dependency has been eliminated. The same activity, following an uninterrupted series of independent actions, would lack the attraction that springs simply from the passing of a preceding form of life. This influence of not-being on being appears – somewhat modified and more obvious in spite of the differences of content – in the significance that immediate emotional life has for lyrical or musical art. For even though the lyric and music are based upon the strength of inner emotions, their character as art requires that the immediacy of these emotions should be overcome. Although the raw material of emotion, with its impulsiveness, its personal limitations, its unbalanced fortuitousness, is the prerequisite of a work

of art, the purity of art requires a distance, a release from the emotion. This is the essential meaning of art, for the artist as well as for those who enjoy it, namely, that it raises us above the immediacy of its relation to ourselves and to the world. The value of art depends upon our overcoming this immediacy, which then operates as if it no longer existed. And if it is asserted that the attraction of the work of art depends, after all, upon the resonance of that autochthonous emotion, that original agitation of the soul, it will nevertheless be admitted that the specific element of art lies not in what is common to the immediate and aesthetic form of emotion, but in the new colouring which the aesthetic form receives to the extent that the immediate form has faded away.

Finally, let us consider the most decisive and most general instance, which is considered only rarely because it is deeply embedded in our fundamental valuations. It seems to me that a vast number of life experiences that we enjoy derive their intensity from the fact that, for their sake, we leave unexplored innumerable opportunities for other enjoyments and for other ways of proving ourselves. A regal extravagance, a careless grandeur of existence, is revealed by the way that people ignore each other or pass on after a brief encounter, by our total indifference towards many to whom we could give much and who could give much to us. But there also emanates from this unique value of non-enjoyment a new, enhanced and more concentrated charm in what we do actually possess. The fact that this one among innumerable possibilities has become reality gives it a triumphant tone; the shades of the untried, neglected richness of life provide its victor's retinue. Moreover, what is given to other people often derives its value from what is retained, or indeed resolutely withheld. A cordial expansiveness, especially towards those of lower status, loses its value if it goes too far, if one shows too little reserve. It is all the more important to the recipient that one even offers a part of oneself, when he feels that one has still kept back something of oneself. In the last resort, it is the same with the significance of our own actions and undertakings. Sudden and compelling demands often make evident to us that we have abilities and powers for tasks that have hitherto seemed remote; that we have energies that would have remained latent if by chance an emergency had not elicited them from us. This shows that, besides the energies that are actually used, there are indeterminate potentialities which lie dormant in everyone, so that each person could have become something different from what he actually became. Life allows only a very limited number among these many possibilities to be realized; consequently, these appear more significant and precious the more we understand that they are a selection from many, that many forms of activity remain undeveloped and have to be sacrificed in order to develop others. Since so many possible achievements have to be sacrificed for the sake of one particular accomplishment, the latter represents, as it were, the quintessence of a much wider range of life-energies. By denying growth to these other energies it acquires significance and sharpness, a tone of

distinction and accumulated force, which makes it the focus and representative of our total personality, transcending the area with which it is directly concerned.

Money may be subsumed under this general type of value formation. It is certainly correct that the other values of money's substance have to be discarded for the substance to become money; but the value that money has, and that allows it to perform its function, may be determined by those other possible uses which have to be foregone. As in the cases that we have just discussed, the perceived value of the developed function is constituted by its positive content and also by the exclusion of all other functions. What is effective here is not the operation of other functions but the fact that they do not operate. If the value of any object is determined by the fact that something else is sacrificed for it, then the value of the money material is determined by giving up all its other uses so that it can become money. This kind of valuation is, of course, reciprocal; i.e. the value of the money material for other uses will also increase if its use as money is abandoned. The wampum of the North American Indians consisted of mussel shells, which served as money but could also be worn as a decorative belt. These functions are obviously correlated; the role of the shells as jewelry has acquired an air of distinction by virtue of the fact that it requires abstention from using them directly as money. This whole type of value may be regarded as an instance of scarcity value. This usually implies that an object is demanded by more individuals or in greater quantity than the supply is adequate to meet. If different needs that can be satisfied by the same object compete for it – whether these needs occur in a single individual or among several individuals – the situation is naturally affected by the restriction of the supply, which makes impossible the satisfaction of all the needs. Just as the exchange value of grain can be traced to the fact that there is not enough of it to satisfy all those who are hungry, so the exchange value of the money material is the result of the fact that there is not enough to satisfy all those needs for it additional to the need for money. So far from the renunciation of other uses reducing the value of the metal that is used for money to that of quite worthless materials, these unrealized uses of the material instead contribute largely to the value of money.

The first argument against money as merely a symbol

There is another argument which seeks to convince us more directly than the one we have just refuted that money cannot be a value. Let us imagine an all-powerful individual with despotic authority within a given group over everything that he desires; one, for example, such as those chiefs in Oceania of whom it is said that they 'cannot steal' because everything already belongs to them. Such an individual would have no occasion to seize the money of the group,

since he can in any case take possession of everything that money can buy. If money were itself a value in addition to other available values, then he would desire it as much as those other values. If it is clear that this does not happen in the fictitious case that I have described, then it seems to follow that money is really only a representative of real values, and is unnecessary once the real values are attainable without money. But this simple idea presupposes what it wishes to prove, namely that the substance of money has no value of its own aside from its functioning as money. For if it had such value it would be desired by the wielder of power not so much as money but for its other value as a substance. If such a value does not exist, its absence does not need to be demonstrated again. Leaving aside its logical deficiency, however, this case illustrates what specific kind of value money has. Money has acquired the value it possesses as a means of exchange; if there is nothing to exchange, money has no value. For obviously, its significance as a means of storing and transporting values is not of the same importance, but is a derivative of the function of money as means of exchange; without the latter, the other functions could not be exercised, whereas its function as means of exchange is independent of them. Money has no value either for a person to whom the goods that it can buy are valueless, or for a person who does not need money to acquire them. In short, money is the expression and the agent of the relationship that makes the satisfaction of one person always mutually dependent upon another person. Money has no place where there is no mutual relationship, either because one does not want anything from other people, or because one lives on a different plane – without any relation to them as it were – and is able to satisfy any need without any service in return. Looked at in this way, the world of money is related to the world of concrete values as thought is related to extension in Spinoza's system: it is impossible that either one should interfere with the other, because each of them expresses the whole world by itself and in its language. Thus, the total amount of value does not consist of the sum total of the value of things plus the total value of money; there is a certain quantity of value that may be realized in either form, as things or as money.

If money were reduced entirely to this value and had divested itself of all co-ordination with valuable things, it would realize, in the field of economics, the extraordinary conception that is the basis of Plato's theory of ideas. Plato was led, by a profound dissatisfaction with the world of experience to which we are confined, to conceive a metaphysical realm of ideas outside space and time, in which the real, harmonious, absolute essence of things existed. Earthly reality, therefore, became void of all real being and significance; but on the other hand, something was reflected back upon it from the realm of ideas; it had at least some part in the glowing realm of the absolute, as its faint shadow, and so it acquired a significance which was at first denied to it. This relationship is repeated and confirmed in the realm of values. The reality of things that

confronts the perceiving mind is devoid of values, as we asserted at the beginning of this investigation; it develops in a form indifferent to values, often destroying what is most noble and preserving what is most base, because it does not proceed in terms of a hierarchy of worth, interests or values. We then subordinate this natural objective existence to a hierarchy of values, constructed in terms of good and bad, noble and mediocre, precious and valueless. This construction does not in any way affect being in its tangible reality, but it is the source of all meaning that reality may have for us; and we experience it – in spite of our awareness of its human origin – as being quite the opposite of mere fancy and subjectivity. The value of things – ethical as well as eudaemonistic, religious as well as aesthetic – hovers, like the Platonic ideas, above the world; a realm that is governed by its own alien and intangible inner norms, but that lends relief and colour to reality. Economic value originates by derivation from these primary, directly experienced values, by weighing the objects in which values are incorporated against each other, so far as they are exchangeable. Within this area, however, economic value, no matter how it has constituted itself, has the same peculiar relation to the individual objects as has value in general. It is a world apart, in which the objects are classified and arranged according to particular norms which are not inherent in the objects. Objects that are ordered and related by their economic value form a cosmos that is entirely different from that formed by their natural and immediate reality. If money were really nothing but the expression of the values of things external to money, it would be related to things just as the idea, which Plato conceived also as a substantial, metaphysical entity, is related to empirical reality. The movements of money – balancing, accumulation, outflow – would directly represent the value relationship between things. The world of values, which hovers above the real world apparently unconnected yet without question governing it, would be represented in its 'pure form' by money. And just as Plato interprets the real world, from the observation and sublimation of which the ideas have arisen, as a mere reflection of these ideas, so then do the economic relations, stages and fluctuations of concrete things appear as derivatives from their own derivative, namely as representatives and shadows of the significance that their money equivalent possesses. No other species of values is more favourably situated in this respect than are economic values. Religious values are embodied in priests and churches, ethical–social values in administrators and the visible institutions of state-power, the values of knowledge in the norms of logic; but none of these is more detached than are economic values from concrete valuable objects or processes; none is more completely the mere abstract bearer of value; in none of them is the whole world of relevant values so faithfully reflected.

The development of money is a striving towards the ideal of a pure symbol of economic value which is never attained. At first, as we must clearly remember, money belongs to the same series as all other objects of value, and its concrete

material value is balanced against these. With the growing need for means of exchange and standards of value it changes more and more from a connecting link between value equations to a symbol of these equations and thus becomes more independent of the value of its material. Yet money cannot cast off a residue of material value, not exactly for inherent reasons, but on account of certain shortcomings of economic technique. One of these has to do with money as a means of exchange. The substitution of symbolic meaning for the intrinsic value of money is made possible only by a number of factors which we noted earlier. These are that the proportion between the single commodity and the economically effective total quantity of commodities is, with certain qualifications, equal to the proportion between a certain amount of money and the economically effective total quantity of money; that the denominators of these fractions are practically but not consciously effective, since only the changing numerators are of real interest in determining the transactions; and that in this transaction a direct equation between the commodity and the sum of money appears to take place, although of course it is quite a different basis from that of the original equation between the object and the material value of money. Even if this development is accepted, it remains true that the factors arising from the respective total sums of value are situated within fluctuating limits, and the instinctively formed estimation of their size will always be rather inexact. Perhaps that is why it is impossible to do without a direct value equation between commodities and money. The portion of intrinsic material value contained in money provides the support and complementation that we need because our knowledge of the exact proportion is insufficient; otherwise an identity between the measured value and the standard, that is an intrinsic value of money, would not be required. So long as experience and economic practice show that the proposition is imprecise, the measuring process will require a certain qualitative unity of the standard and the values themselves. It may be of interest to point out a corresponding instance in the aesthetic use of precious metals. An expert reported from the London Exhibition of 1851 on the differences between English and Indian gold and silverware. The English craftsman seems to have striven to incorporate the largest possible amount of metal in the smallest possible form; the Indian craftsman however, 'used enamelling, damascene and filigree work, etc., in such a way as to incorporate the greatest possible amount of highly skilled work in the smallest possible quantity of metal'. Yet even in the latter case it is certainly not irrelevant for the aesthetic significance of the jewelry that the small amount of metal employed is precious metal. Even if this practice is carried to a point where the amount of metal has only a minimal value, this minimum still has to be of precious material for the purpose of decoration and aesthetic pleasure. The intrinsic value of the material is not important, only the fact that the sole adequate bearer of a perfect formal relationship between the parts is a very precious material.

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It is, by the way, quite obvious that this attribution of the material value of money to a complementing and supporting principle with reference to the uncertain relations is only an interpretation of processes that occur in the subconscious of the economic subjects themselves. Economic interactions take place with such admirable expediency, by subtly organized dovetailing of innumerable details, that it would be necessary to assume that they were integrated by a superior mind, operating with superhuman wisdom, if one did not fall back upon the unconscious power of adaptation of the human species. The conscious intentions and foresight of individuals would not suffice to maintain the harmony that economic activity displays alongside its fearful discords and inadequacies. We have to assume that there are unconscious experiences and calculations which accumulate during the historical development of the economy and which regulate its course. It should be remembered, however, that unconscious conceptions do not provide a satisfactory explanation, but are only aids to understanding that are actually based upon a fallacy. We arrive at determinate thoughts and actions from particular conceptions, chains of reasoning, etc. But if these consequences emerge without the antecedents, we conclude that the latter nevertheless existed without our being conscious of them. From a logical point of view, this is clearly unwarranted. Surreptitiously, we turn the merely negative fact that we are ignorant of the causative conceptions into a positive assertion that unconscious representations exist. Actually we know nothing of the processes that produce a psychic effect without conscious antecedents, and the notion of unconscious representations, experiences and inferences only expresses the fact that the effects occur as if they were the result of conscious motivations and ideas. The urge to explain has to rest content with investigating these processes and treating them as (unconsciously) effective causes, although they merely symbolize the real course of events. In our present state of knowledge it is unavoidable, and thus legitimate, to interpret the formation of values – their consolidation and fluctuation – as unconscious processes which follow the norms and forms of conscious reasoning.

The second argument against money as merely a symbol

The second reason for not regarding money as being only a symbol is connected with its significance as an element in exchange. Although, in principle, the exchange function of money could be accomplished by mere token money, no human power could provide a sufficient guarantee against possible misuse. The functions of exchange and reckoning obviously depend upon a limitation of the quantity of money, upon its 'scarcity', as the expression goes. If the proportion between the single amount and the total sum of commodities and of money is accepted as valid, then the proportion appears to be unchanged by an

arbitrary increase in the amount of money and is able to retain its significance for the establishment of prices. The money fraction would show a proportionate increase of both the numerator and the denominator, without changing the value of the fraction. In reality, however, these changes do not occur in the same proportions if the amount of money is considerably increased. The denominator of the money fraction is in fact increased, but the numerator is unchanged until all exchange transactions have been adjusted to the new basis. The price, which equals the absolute size of the numerator, is therefore unchanged for the time being, whereas, as a fraction of the total sum of money, it has become much smaller. Consequently, the owner of new quantities of money, and in the first place the government, occupies a highly privileged position in relation to all sellers of commodities. The most serious repercussions upon exchange transactions will follow from this situation, particularly at the moment when the government's own revenues are paid in devalued money. The numerator of the money fraction – the price of commodities – rises proportionately to the increased supply of money only after the large quantities of new money have already been spent by the government, which then finds itself confronted again with a reduced supply of money. The temptation then to make a new issue of money is generally irresistible, and the process begins all over again. I mention this only as an example of the numerous and frequently discussed failures of arbitrary issues of paper money, which present themselves as a temptation whenever money is not closely linked with a substance of a limited supply. This is shown most clearly by an apparently contradictory example. In the sixteenth century, a French statesman suggested that silver should no longer be used for money, and that coins should be made from iron, because the bulk import of silver from America was depriving this metal of its scarcity. The use of a metal that becomes valuable only by official coinage would provide a better guarantee for the required limitations of the quantity of money, since the supply of money would become unlimited if every owner of silver was thereby automatically an owner of money. This peculiar suggestion shows a very distinct understanding of the fact that a precious metal is not as such the proper material for money, but only in so far as it sets a necessary limit to the supply of money. If a metal fails to do this, then it has to be replaced by another substance, the supply of which can be more effectively controlled. The preference for metal as a means of exchange is the consequence of certain functional qualities; if for any reason these are lacking it is replaced by another currency better qualified in this respect. Owing to the poor condition and incalculable variety of coins coming into Genoa in 1673, transactions were based on bills of exchange. Today we know that only precious metals, and indeed only gold, guarantee the requisite qualities, and in particular the limitation of quantity; and that paper money can escape the dangers of misuse by arbitrary inflation only if it is tied to a metal value established by law or by the economy. The following instance illustrates

how effective such a restriction is, even in controlling individual speculation. During the American Civil War the circulation of Confederate paper money – 'greenbacks' – was prohibited in the western states, and although they were legal tender, nobody dared to repay in paper money a loan received in gold, by which means he could have made a profit of 150 per cent. In the eighteenth century the situation was similar in respect of the treasury bonds that the French government had issued to meet its pressing need for revenue. It was decreed that only 25 per cent of any payment could be made in these bonds, but nevertheless the value of the bonds soon declined to a very small proportion of their nominal worth. Such cases show the extent to which the significance of specie is sustained by the laws of exchange themselves. This does not happen only in the type of case that I have quoted so far. When the Bank of England ceased to redeem its notes between 1796 and 1819 the fall in the value of gold was only 3–5 per cent, but commodities prices rose 20–50 per cent as a result! Whenever a compulsory rate of exchange leaves only paper money and small coins in circulation, serious harm can be avoided only if the exchange rates show only minimal fluctuation over long periods, and to ensure this the issue of paper money must be strictly limited. This indispensable regulating function of gold, and formerly of silver, is due not to the correspondence between its value and that of the objects for which it is exchanged, but to the relative scarcity of the metal, which prevents the flooding of the market with money and the consequent undermining of the proportion upon which the equivalence of a commodity with a certain amount of money is based. The disruption of this proportion may be brought about from both sides. The excessive increase in money creates pessimism and mistrust among the people, so that they attempt to dispense with money and to fall back upon barter and promissory notes. This reduction of the demand for money leads to a further decline in the value of the money in circulation. The authority responsible for issuing money attempts to counteract the decline in value by further increasing the supply of money; thus supply and demand drift further apart, and the reciprocal effects that we have noted produce a cumulative decline in the value of money. This distrust of the value of money produced by government coinage – in contrast to the confidence in the value of specie – may assume a form in which, as in the later Roman Republic, coin circulates only in the retail trade, whereas large-scale transactions are carried on with money which is reckoned by weight. Only in this fashion, it was believed, could trade be protected against political crises, party interests and government interference.

The supply of money

It may appear from the foregoing that the inconveniences of an unlimited increase in the volume of money are attributable not so much to the increase

itself, but rather to the way in which it is distributed. Shocks, hypertrophy and stagnation occur only because the newly created money is initially in one hand and spreads from there in an uneven and inappropriate manner. This might be avoidable if a way could be found of distributing the money equally or according to some principle of equity. Thus, it has been said that if every Englishman were suddenly to find that he had twice as much money in his pocket, all prices would increase correspondingly but no one would gain any advantage; the only difference would be that the pounds, shillings and pence would have to be calculated in larger amounts. This would not only dispose of the objection to token money but would also illustrate the advantages of an increase in the volume of money, arising from the empirical fact that more money means more transactions, greater well-being, power and culture.

There is little to be gained from a discussion of such hypotheses, based upon quite unrealizable presuppositions, yet they lead to a better understanding of the real conditions which render a gradual elimination of the intrinsic value of money impossible. Let us assume an ideal condition in which an increase in the volume of money has brought about an equal increase in what every individual owns: then one conclusion – that nothing has changed because all prices rise equally – contradicts the other – that the increase in the volume of money brings about a stimulation and expansion of trade. It is tempting to assume that the relations between individuals, that is the relative social position of superiors and inferiors, would in this case remain unchanged, while the total sum of objective cultural goods would be increased; that the content and enjoyment of life in an absolute sense would have risen both generally and for each individual, without changing anything in the relationship between wealth and poverty, which mutually determine each other. It might be pointed out that the modern commercial culture has already made available to the poor a number of goods – public amenities, educational opportunities, means of subsistence, etc. – which even well-to-do people did not enjoy formerly, without changing the relative position of rich and poor. The possibility that an increase in the volume of money, distributed proportionately, extends objective culture and also the cultural content of the individual life in absolute terms, while the relations among individuals remain the same, deserves examination. On closer scrutiny, however, it appears that real success can be achieved only by an unequal distribution of the increased supply of money, at least in the first instance. Money, which is entirely a social institution and quite meaningless if restricted to one individual, can bring about a change in general conditions only by changing the relations between individuals. The increased liveliness and intensity of commerce that ensues from a plethora of money can be traced to the fact that the desire for money increases at the same time. The wish to acquire as much money as possible from other people, though always present, evidently becomes sufficiently urgent to lead to extraordinary exertion and diligence only when the

individual becomes acutely aware of having less than others; this is the sense of the remark, '*Les affaires – c'est l'argent des autres.*' If what the above theory presupposes were true – namely, that an increase in the volume of money would leave the relations of people to each other and the relative prices of commodities completely unchanged – there would be no such stimulation of work energies. Moreover, the magical doubling of the volume of money will also affect the relations between individuals because the financial situation of the individuals is different to begin with. The doubling of three different incomes of 1,000, 10,000 and 100,000 marks, for instance, changes the relation between the recipients because the objects bought for the second 1,000, 10,000 marks, etc., are not simply duplicates of what was bought for the first 1,000 marks, and so on. In the first case there would be, perhaps, an improvement in nutrition, in the second a refinement of artistic culture, and in the third a greater involvement in financial speculation. If we assume a preceding absolute equality among individuals then no changes would be produced either in the subjective or in the objective aspects of their lives, because if the latter changed then it would be in an unpredictable way; they would show an upswing of activity only if the differences in individual incomes became, or were felt to be, more important than previously.

Even more relevant to our purposes are considerations about the factual implications of this theory; namely, that the doubling of all money incomes would leave everything unchanged, because all commodity prices would be simultaneously doubled. This reasoning is false, because it overlooks a peculiar and decisive characteristic of money, which might be termed its relative inelasticity. This consists in the fact that the distribution of an additional quantity of money in a given economic region does not raise all prices proportionately, but creates new price relationships which do not necessarily result from the power of individual interests. Inelasticity is a consequence of the fact that the money price of a commodity, despite its relativity and the absence of an inherent connection with the commodity, nevertheless acquires a certain stability and appears to be the objectively adequate equivalent. If the price of an object has remained stable within definite limits, then it does not usually change without resistance simply because the value of money has changed. The association – of concepts as well as of interests – between the object and its price has become psychologically so firmly fixed that the seller will not readily admit a decline or the buyer an increase, as would be a matter of course if the balancing of money value and commodity value were accomplished by the same unrestricted mechanism through which the thermometer rises or falls according to the temperature without any disturbance of the exact relation between cause and effect resulting from change in the degree of resistance to the movement. If one suddenly has twice as much money in one's pocket as a short time before, one is not inclined immediately to pay twice the amount for each commodity. Or it may be that

with the bravado of the newly rich, reckoning the new wealth by the previous standards, one will not trouble about price at all. However, both the willingness to pay more and the disinclination to pay as much as the new appropriate price show that a proportional regulation of prices is out of the question during the initial period of abundant money, and that the established association between a commodity and a traditional range of prices has a continuously disturbing influence. Furthermore, the demand for commodities will change considerably following an increase or decrease in the quantity of money even if this affects everybody equally. If there is a decrease, for instance, objects that have a sufficiently steady sale may still be sold at half the price up to that amount or even in greater abundance, but beyond a certain limit they may not find any buyers at all. In the case of a general increase in the supply of money, on the other hand, a lively demand will develop for those goods that were desired by the mass of the people, i.e. for goods that are just above their present standard of living. The demand would not increase very greatly for those goods that satisfy basic needs, which can be met by a limited supply, or for those that satisfy the most refined and cultivated needs, which are significant only for a limited, scarcely expanding, circle. Price increases would affect mainly the goods between these extremes where prices would remain relatively stable. There would be no question of the increased supply of money affecting all prices equally. In general terms, the theory that the relativity of prices renders the absolute quantity of money a matter of indifference is incorrect, because this relativity is in practice continuously disrupted by a psychological process which makes the prices of certain commodities rigid and absolute.

It might be argued that these doubts about the harmlessness of an unrestricted increase in the supply of money are valid only for the transitional periods of adjustment between two different price levels. They presuppose that the whole process evolves from a proportional relationship between the quantities of goods and money. It must be possible to establish this relationship at a different level, and future fluctuations could be eliminated just as well as the preceding ones. The doubts can refer only to the period of change, not to the accomplished changes, which cannot be held responsible for the maladjustments, dislocations and difficulties of the transition period. It is impossible to conceive of any means of exchange that would not eventually enforce an adjustment, so that the money price of a commodity expressed the proportion between its value and the value of the total quantity of commodities; and therefore an arbitrary increase in money is unable to disrupt this proportion permanently. This reasoning is quite correct, but it does not prove that the removal of all limitations upon the increase in the supply of money is possible, taking into account the inadequacy of human circumstances. For the transitional period, the instability and difficulties of which are admitted, would then become a permanent condition, and the state of adjustment that is attainable in principle for any quantity of money would never be reached.

Reality and pure concepts

This argument may be summarized as follows. Money performs its services best when it is not simply money, that is when it does not merely represent the value of things in pure abstraction. Precious metals are also valuable as jewelry or for technical purposes, but this has to be conceptually distinguished as a primary fact from the secondary fact that they are valuable on account of it; whereas it is the first and only quality of money to be valuable. It is not technically feasible to accomplish what is conceptually correct, namely to transform the money function into a pure token money, and to detach it completely from every substantial value that limits the quantity of money, even though the actual development of money suggests that this will be the final outcome. This is not a contradiction. A great number of processes occur in the same manner; they closely approach a definite goal by which their course is unambiguously determined, yet they would lose precisely those qualities that led them towards the goal if they were actually to reach it. One phenomenon that is eminently characteristic of the money economy may illustrate this point and provide, at the same time, an analogy for the consequences of unlimited money supply with reference to individual circumstances. The striving of the individual to earn more and more money is of the greatest socioeconomic significance. By seeking the greatest possible gain, the stockbroker brings about liveliness of transactions, the adjustment of supply and demand, the introduction of otherwise sterile values into economic circulation. However, very high profits on the stock exchange can usually be realized only when there is excessive fluctuation of the rates of exchange and a preponderance of purely speculative elements. In such conditions, the production and consumption of goods, which is the ultimate interest of society, is excessively stimulated in one area and neglected in another, and in any case is diverted from the course of development which corresponds with its specific inner conditions and with real needs. Here the specific quality of money becomes a basis for the divergence between the individual and the social interest, which has previously coincided up to a point. Only through the fact that the value of things has become detached from the objects and has acquired an independent existence in a specific substance is it possible for money to develop interests, movements and norms that, on occasion, act contrary to those of the symbolized objects. The activities of private enterprise, which are connected with money, promote the social interest of the production and consumption of goods so long as they remain merely endeavours, whereas the final attainment of their ends might undermine the aims of society. This type of situation is most frequently and decisively produced in those cases where emotional impulses strive for a final objective without being aware that all the hoped-for satisfaction is the consequence of relative advances, and may perhaps turn into its opposite when the goal is reached. I would call your

attention to love, which receives its content and colouring from the desire for the closest and most permanent union, and frequently loses both when its object is attained; or to political ideals, which provide the strength and spiritual fervour in the life of whole generations but which, once they are realized, do not bring about an ideal condition, but practical materialism, torpidity and philistinism; or to the longing for a peaceful and undisturbed way of life, which is the goal of all effort and labour, yet which once accomplished often ends in idleness and inner dissatisfaction. It has indeed become a platitude to say that even happiness, though it is the object of all our endeavours, would be mere boredom if it were ever achieved as an eternal state. Although our will drives us in this direction, the attainment of such a condition would contradict its striving, and only the admixture of the suffering that we want to avoid can give any sense to the pursuit of happiness. This kind of process may be summed up by saying that the effectiveness of some or perhaps all elements of life depends upon the concurrence of opposing elements. The proportion in which an element and its opposite are combined and co-operate are naturally variable, sometimes in the sense that one element steadily increases while the other declines, so that the trend of the development appears to be one in which one element will finally supplant the other. But as soon as this happened and every trace of the second element disappeared, the sense and effectiveness of the first element would also be paralysed. This happens, for instance, with the opposition between individualism and socialism. There are periods in which the latter determines historical development, not only in reality, but also as an inference from ideal convictions and an expression of a developing conception of society which strives toward perfection. But if, in the party politics of such an age, it is then concluded that, since all progress depends upon the growth of the socialist elements, their triumph will produce the most advanced and ideal state of things, this overlooks the fact that the whole success of socialist measures depends upon the circumstance under which they are introduced into an individualistic economic system. The progress resulting from the relative increase of socialist measures does not justify the conclusion that their complete implementation would represent further progress. It is the same with periods of increasing individualism. The significance of individualistic measures depends upon the fact that centralized socialist institutions continue to exist; these can be progressively reduced, but their complete disappearance would lead to unanticipated results differing widely from those that individualism had previously brought about. In the field of art, the contrary tendencies towards naturalism and towards mannerism show a similar pattern. At each particular moment in the development of art there is a mixture of simple reflection of reality and subjective transformation. From the standpoint of realism, art becomes more perfect through the growth of the objective element. But at the very moment when this became the sole content of a work of art the growing interest would

suddenly turn to indifference, because the work of art would no longer be distinct from reality, would lose its significance as a separate entity. On the other hand, although enhancement of the generalizing and idealizing element may refine art for a time, it must reach a point where the relation to reality, which the idealistic movement was supposed to represent in a purer and more perfect form, is completely lost as a result of the elimination of all individualistic contingency. In short, a number of most important processes follow this pattern the growing importance of one element leads to greater success, but the complete hegemony of this element, and the total elimination of the contrasting element, would not result in total success; on the contrary, it would deprive the original element of its specific character. The relationship between the intrinsic value of money and its purely functional and symbolic nature may develop in analogous fashion; the latter increasingly replaces the former, but a certain measure of the former has to be retained because the functional and symbolic character of money would lose its basis and significance if this trend were brought to its final conclusion.

It is not only a formal analogy that is in question here, but the unity of the deeper meaning of life, which is expressed in this external similarity. In practice, we can only cope with the variety of elements and tendencies that make up life by allowing our behaviour, in every context and at every period of time, to be governed by a uniform and one-sided principle. But in this way the diversity of reality catches up with us again and again, and weaves our subjective striving, along with all those factors that oppose it, into an empirical existence which allows the ideal to enter reality. This does not imply a denial of the ideal; life is adapted to such absolute strivings as its elements, in the same way as the physical world is adapted to motions that, if left unimpeded, would have inconceivable consequences, but that, as a result of their meeting with counterforces, produce the orderly world of natural events. If the practical world is formed in such a way that our will is focused upon eternity and only attains the world of reality by being deflected and rebuffed, then here too the structure of practical life has predetermined the theoretical structure. On innumerable occasions, our concepts of things are made so unalloyed and absolute that they do not reflect experience, and only their qualification and modification by opposing concepts can give them an empirical form. However, these concepts are not for that reason thoroughly bad; it is precisely through this unique procedure of exaggeration followed by retraction in the formation of concepts and maxims, that a view of the world which is in conformity with our understanding emerges. The formula through which our mind establishes a relation with the oneness of things, which is not directly accessible, by supplementing and reproducing it, is in practice as well as in theory a primary too-much, too-high, too-pure. It gains the consistency and scope of reality and truth only by means of restraining contrasts. Thus, the pure concept of money as the mere expression of the

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reciprocally measured value of things, which has no intrinsic value of its own, remains completely justified, although in historical reality this concept is consistently disparaged and limited by the contrary concept of money as possessing intrinsic value. Our intellect can grasp reality only as a modification of pure concepts, which, no matter how much they diverge from reality, are legitimized by the service they render in the interpretation of reality.

III

The historical development of money from substance to function

We have now to consider the historical manifestations of our theoretical constructions. The broad cultural ramifications of the nature and significance of money are to be seen in the movements that lead money towards its pure concept and away from its attachment to particular substances – even though it never attains the goal that determines its course of development. Thus, money is involved in the general development which in every domain of life and in every sense strives to dissolve substance into free-floating processes. On the one hand, money forms part of this comprehensive development; on the other, it has a special relationship with concrete values, as that which symbolizes them. Furthermore, money is influenced by the broad cultural trends, and it is at the same time an independent cause of these trends. We are interested in this interrelation here in so far as the form of money is determined by the conditions and needs of human society. With the reservation that this process never reaches the goal, I shall now examine the growing importance of money as a function or symbol, which comes to overshadow its significance as a substance.

On a more profound examination, the dissolution of the concept of money as a substance is much less radical than appears at first sight; for, strictly speaking, the substance value of money is also a functional value. No matter how much precious metals are appreciated simply as substances, they are in fact appreciated only because they adorn, distinguish, are technically useful, give aesthetic pleasure, etc., that is to say, because they perform functions. Their value does not consist in their autonomous being, but always in their performance. Their substance as such, apart from their performance, like the substance of all practical objects, is totally irrelevant to us. It may be said of the majority of objects that they are not valuable, but become valuable; and in order to do so they must continually emerge out of themselves and interact with other objects. Our sense of value is bound up with the effects that objects produce. Even if a particular aesthetic mood were to attribute objective value to the precious metals on the ground that their mere existence, quite apart from all recognition and enjoyment, enriches the world, they would never enter the economic system

through this kind of value. In the economy all value is connected with performance, and it is an arbitrary way of speaking, which conceals the actual condition, to say that precious metals have a substantial value which is distinct from their performance as money. Every value possessed by precious metals as substances is also a functional value, with the exception of their function as money. All the values of the precious metals form a series that is simply a series of functions. This is naturally less easily comprehended, the less lively these functions are in reality. All the misgivings of the Middle Ages about the taking of interest arise from the fact that money then appeared to be, and actually was, much more solid and substantial, more starkly contrasted with other things, than in modern times when it appears and operates in a much more dynamic, variable and pliable way. The adoption of the Aristotelian doctrine that it is unnatural for money to engender money; the condemnation of interest as theft, because the capital repaid equals the borrowed capital; the argument in favour of this interpretation by Alexander of Hales, that money did not wear out by use and that it was not profitable, as were the objects of a lease, to the creditor; the doctrine of Aquinas that in the case of money, whose sole end is to be spent, use and spending were identical, and that therefore the use of money, unlike the use of a house, could not be sold separately – all these doctrines illustrate how inflexible and dissociated from the fluctuations of life money appeared, how little it was regarded as a productive power. The actual insignificance of money's effects concealed its functional character. This is the same basic sentiment concerning money as that which regards it as a metallic substance. This view, like that of the Middle Ages, opposes money as an entity *per se* to the circulation of economic objects, instead of bringing money into this circulation and recognizing that money, whatever represents it, does not *have* a function, but *is* a function.

At the opposite pole from the mentality of the Middle Ages is the credit economy, in which the bill of exchange serves as money. The dominant idea in the Middle Ages was the substance of money, rather than its effects, which were in fact reduced to a minimum, though they could not really be eliminated altogether. In the modern conception of money based upon metal, the vital point is the working of the substance; and finally, in a credit economy there is a tendency to eliminate substance entirely, and to regard the effects as the only important matter.

This superficial view owes something to an earlier scheme of thought which distinguished in all phenomena between substance and accident. Certainly this was historically of tremendous importance: the analysis of every phenomenon into a substantial core and relative, changeable appearances and qualities was a first orientation, a first guiding thread through the mysterious formlessness of things, giving them a structure and subjecting them to a general category that was consonant with our intellect. The mere sense differences that appear at first

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thus become organized and determined in their mutual relations. But it is the nature of such forms, as of social organizations, to appear and to claim to be eternal. Just as the destruction of one social order in favour of another gives the impression that all order and regularity is being abandoned, so does reconstruction in the intellectual realm. The objective stability as well as the subjective understanding of the world seems to be destroyed when a category that formed the backbone of a world view is abrogated. But money value will be just as little able to resist its reduction to functional value as light, heat and life can retain their particular substantial quality or resist their dissolution into forms of motion.

Social interactions and their crystallization into separate structures

I shall now examine certain structural relationships of the economy. The extent to which it depends upon these relationships and not upon the substance of money, where money really functions as money, may be shown by a negative example based upon a general observation. We notice that, in a relationship between two people, the external form is rarely an adequate expression of its inner intensity. This inadequacy results from the fact that the inner relations develop continuously, while the external relations develop in a spasmodic fashion. Even if the two correspond at any given time, the latter persist in their traditional form whereas the former grow. At a certain point, there is a sudden development of the external relationship, and characteristically this does not usually stop at the point corresponding to the inner relationship but anticipates a more advanced intimacy. The use of the intimate form of address – 'du' – with friends as the final expression of an affection that has existed for a long time is often felt at first to be exaggerated, and it produces suddenly an external closeness which is usually followed only slowly by a corresponding inner intimacy. Sometimes it does not follow at all. Some relationships break down because the form, although to a certain extent justified, overtakes the inner relation. A corresponding phenomenon can be found in the impersonal realm. Social forces which seek expression in certain constellations of law, modes of exchange and conditions of government, often fail because the traditional forms in these areas easily become rigid. If the desired external change nevertheless takes place, then it often goes beyond the state of readiness of the inner forces, and their subsequent legitimation does not always succeed. In some instances, the money economy has been introduced in this way. When the general economic conditions have been tending towards it for a long time, it takes shape as such a powerful phenomenon that the general conditions can no longer accommodate it, and if the growth of the inner economic forces does not catch up rapidly enough with the anticipated forms the new institutions may come to a tragic

end. Such was the situation when the Fuggers, and indeed all the great bankers of southern Germany, came to grief. Their financial operations, comparable with those of modern world bankers, took place in an age that had outgrown the barter economy of the Middle Ages but did not yet dispose of the communications, guarantees, or commercial practices that are an indispensable correlate of such transactions. The general conditions were not such that debts could be collected in Spain or from ruling princes without further ado. The new forms of the money economy misled Anton Fugger into extending them far beyond what was justified by the actual conditions in Europe. For the same reasons, the debtors of these financial magnates were no better off. The financial crisis in Spain in the sixteenth century resulted from the fact that, although money was usually available in Spain, it was not available in the Netherlands where it was most needed. Consequently, difficulties, delays and expenses arose which contributed to the ruin of Spanish finances. In other local conditions money functioned in quite a different fashion. The Netherlands had the tremendous advantage in their war with Spain in that their money could be used just where it was available. In the hands of the Dutch it was really 'money', because it could function unhampered, even though the Dutch actually owned much less money in a material form than did Spain, since their economic life was based upon credit. The function of money can be exercised with less money material, the more favourable are the local conditions; and one might say paradoxically that, the more it is really money in its essential significance, the less need there is for it to be money in a material sense.

Alongside the influence of local conditions, it is the stability and reliability of social interaction or, as it were, the consistency of the economic domain that prepares the dissolution of money as a substance. This is illustrated by the fact that money brings about a continually increasing number of effects while it remains itself immobile. The notion that the economic significance of money results simply from its value and the frequency of its circulation at any given time overlooks the powerful effects that money produces through the hope and fear, the desire and anxiety that are associated with it. It radiates these economically important sentiments, as heaven and hell also radiate them, but as pure ideas. The idea of the availability or shortage of money at a given time produces effort or paralysis; and the gold reserves that lie in the bank vaults as cover for their notes demonstrate clearly that the merely psychological representation of money is fully effective. In this instance, money can truly be described as the 'unmoved mover'. It is obvious that the effect of this merely potential money depends upon the refinement and stability of the economic organization. Wherever social relations are loose, sporadic and sluggish, sales will be made only for cash, and the immobile money will not make use of the many psychological channels through which it can operate. The dual role of money that is lent should also be considered here, first in the ideal but very significant form of

active debts, and second as a reality in the hands of the debtor. As a claim it counts among the assets of the creditor, and although it is not immediately available it is still very effective; on the other hand, although it does not form part of the debtor's property he can still achieve the same economic effects as if it did. The lending of money divides its activity into two parts and increases enormously the product of its economic energy. But the intellectual abstraction on which this process rests can attain its results only in a firmly established and civilized social order, in which it is possible to lend money with relative security and to base economic activity on this partial function of money. A certain comprehensiveness and intensity of social relations is required for money to become effective – otherwise it does not differ at all from other goods that are exchanged – and a further intensification of social relations is needed in order to intellectualize its effects. These conspicuous phenomena illustrate clearly that the inner nature of money is only loosely tied to its material basis; since money is entirely a sociological phenomenon, a form of human interaction, its character stands out all the more clearly the more concentrated, dependable and agreeable social relations are. Indeed, the general stability and reliability of cultural interaction influences all the external aspects of money. Only in a stable and closely organized society that assures mutual protection and provides safeguards against a variety of elemental dangers, both external and psychological, is it possible for such a delicate and easily destroyed material as paper to become the representative of the highest money value. In the Middle Ages, characteristically, leather money was very often used. If paper money signifies the progressive dissolution of money value into purely functional value, then leather money may be regarded as symbolizing the first step towards it. Leather money preserves, out of all the qualities that characterize money as a substance, the quality of relative indestructibility; this quality can be surrendered only when the structure of individual and social relations has reached an advanced stage.

Monetary policy

The theory and practice of monetary policy confirm the course of development from the substantial to the functional significance of money, as well as the dependence of the latter upon sociological conditions. The fiscalism of the Middle Ages, and mercantilism, may be regarded as materialistic monetary policies. Just as materialism incorporates the phenomena and values of spirit into matter, so fiscalism and mercantilism considered the nature and energy of socio-political life tied to the material of money. The same difference exists between them, however, as between the crude and the sophisticated form of materialism. The former claims that perception itself is a material process, that the brain produces thoughts just as the liver secretes bile; the latter asserts that

perception itself is not material, but is a form of movement of the material, that thoughts consist of a special kind of oscillation of material elements, as do light, heat or electricity. In accordance with this difference of intellectual outlook, fiscalism discerns the interest of government as being to acquire as much ready money as possible for direct use by the princes for government purposes, while mercantilism, on the other hand, lays the greatest stress not upon the accumulation of money but upon the stimulation of economic activity. These materialistic trends of monetary policy are still closely associated with the idea that the money material represents value as such, but the change from a crudely objective to a functional significance of this material is already discernible. The political constitutions of these periods correspond with this situation. Where the medieval fiscal constitution prevails, the prince has only an external, not an organic, relationship to his country, which is established by marriage or conquest and is well indicated by the tendency to extract as much money as possible from the country. The frequent sale of whole territories for money was a logical conclusion of this tendency. The purely monetary connection between ruler and subject demonstrated the absence of any other relationship. The continuous depreciation of the currency by medieval rulers was an appropriate technique within such a sociological relationship; for these methods, which give all the benefits to one side and the entire loss to the other, are possible only when an organic relationship is lacking. The love of ready money, which seems to be an innate characteristic of oriental peoples, has been traced to the fiscal policy of their rulers, who use the royal prerogative of coinage as a means of taxation without concern for the consequences of devaluation. The necessary counterpart of this policy is the passion of their subjects for accumulating ready money in the form of gold and silver. The emergence of the centralized despotic state involved a much closer and more vital relationship among the various political elements; and the idea of an organic whole provides a common basis for the princely ideal, from '*l'état c'est moi*' to the notion of the king as the first servant of his people. Although the interest of the government is still in this case directed towards the import of ample quantities of money material (i.e. bullion), the livelier interaction between the head and the members of the state and the greater animation of political life are reflected in the fact that the ultimate end of acquisition is no longer mere ownership but the nurture and growth of industry by money. When these liberal tendencies had produced a freer flow of political life, an unhampered flexibility and a less stable equilibrium of elements, the material basis was prepared for Adam Smith's theory that gold and silver are merely tools, no different from kitchen utensils, and that their import increases the wealth of a country just as little as the multiplication of kitchen utensils provides more food. When the traditional regulation of money material has been abolished, in order to make way for more anarchistic ideas, this new tendency of monetary theory, as might be expected, leads to another

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extreme. Proudhon, who wants to abolish all established forms of the state and to recognize only the free and direct interaction of individuals as the proper form of social life, attacks the use of money in general, seeing it as exactly analogous to those forms of authority that absorb the living interaction of individuals and crystallize it within themselves. The exchangeability of values should be organized without money as an intermediary, just as the administration of society should be accomplished by all citizens without the intervention of the king. In the same way as every citizen has voting rights, so every commodity should represent value without the mediation of money. The trend towards this theory of money, which may be characterized as transcendental by contrast with the materialistic theory, began with the views of Adam Smith. While materialism asserts that mind is matter, the transcendental philosophy teaches that matter itself is mind. This does not refer to mind in the spiritualist sense, as a substance, an autonomous being (although of an immaterial kind), but to the knowledge that any object, whether physical or mental, exists for us only in so far as it is conceived by the active process of the mind, or more precisely, in so far as it is a function of the mind. If the materialistic interpretation of money now appears to be an error, historical analysis shows that this error was not accidental but was the appropriate theoretical expression of an actual sociological condition, which had first to be overcome by the real forces before its theoretical counterpart could be overcome in theory.

Social interaction and exchange relations: money's functions

There is a further context in which the sociological character of money appears. The interaction between individuals is the starting point of all social formations. The real historical origins of social life are still obscure, but whatever they were, a systematic genetic analysis must begin from this most simple and immediate relationship, which even today is the source of innumerable new social formations. Further development replaces the immediacy of interacting forces with the creation of higher supra-individual formations, which appear as independent representatives of these forces and absorb and mediate the relations between individuals. These formations exist in great variety; as tangible realities and as mere ideas and products of the imagination; as complex organizations and as individual existences. In this way, the objective laws of custom, law and morality developed from the necessities and practices, which originate incidentally in the relations between group members and which eventually become fixed. They are ideal products of human conceptions and valuation, which in our mind now stand beyond the will and action of the individual as 'pure forms'. Thus, in the continuation of this process, the law of the state is embodied in the judges and the whole administrative hierarchy; the cohesive power of a

political party lies in its executive committee and its parliamentary representatives; the unity of a regiment is incarnated in its flag, and that of a mystical union rests in its Holy Grail, etc. The interactions between the primary elements that produce the social unit are replaced by the fact that each of these elements establishes an independent relation to a higher or intermediate organ. Money belongs to this category of reified social functions. The function of exchange, as a direct interaction between individuals, becomes crystallized in the form of money as an independent structure. The exchange of the products of labour, or of any other possessions, is obviously one of the purest and most primitive forms of human socialization; not in the sense that 'society' already existed and then brought about acts of exchange but, on the contrary, that exchange is one of the functions that creates an inner bond between men – a society, in place of a mere collection of individuals. Society is not an absolute entity which must first exist so that all the individual relations of its members – super- and subordination, cohesion, imitation, division of labour, exchange, common attack and defence, religious community, party formations and many others – can develop within its framework or be represented by it: it is only the synthesis or the general term for the totality of these specific interactions. Any one of the interactions may, of course, be eliminated and 'society' still exist, but only if a sufficiently large number of others remain intact. If all interaction ceases there is no longer any society. In the same way, a living organism can continue to exist if one or the other of its functions – which is an interaction between parts – ceases, but it cannot live if all functions cease, because 'life' is nothing but the sum of interacting forces among the atoms of the organism. It is, therefore, almost a tautology to say that exchange brings about socialization: for exchange is a form of socialization. It is one of those relations through which a number of individuals become a social group, and 'society' is identical with the sum total of these relations.

The frequently emphasized inconveniences and deficiencies of barter are comparable with those that appear in other social interactions when they are still in the stage of immediacy. If all governmental measures have to be discussed and approved by the whole body of citizens; if the defence of the group against external enemies is still assured by military service for all its members; if collective effort and organization depends entirely upon personal authority and force; if the administration of justice requires the verdict of the whole community – if all these things are necessary then the growing size and complexity of the group will produce all those inadequacies, hindrances and breakdowns that eventually suggest, on one hand, the transfer of these functions to specific organs and, on the other hand, the creation of representative and integrating ideals and symbols. The function of exchange leads in fact to both kinds of structure: to a class of merchants and to money. The merchant is the differentiated representative of the exchange functions, which otherwise are

carried out directly by the producers; instead of the simple interaction between producers, a new relationship of each of them to the merchant is established, just as the direct cohesion and control of the group members is replaced by their common relation to the organs of government. Anticipating a more exact knowledge, one may say that money stands between the objects of exchange as the merchant stands between the exchanging subjects. The equivalence between objects of exchange is no longer effected directly, and its fluctuations are no longer concealed; instead, each object acquires a relationship of equivalence and exchange with money. The merchant is the personified function of exchange, and money is the reified function of being exchanged. Money is, as I noted earlier, the reification of the pure relationship between things as expressed in their economic motion. Money stands beyond the individual objects that are related to it, in a realm organized according to its own norms which is the objectification of the movements of balancing and exchange originally accomplished by the objects themselves. However, this is only a preliminary view. For, in the last analysis, it is not the objects but the people who carry on these processes, and the relations between the objects are really relations between people. The activity of exchange among individuals is represented by money in a concrete, independent, and, as it were, congealed form, in the same sense as government represents the reciprocal self-regulation of the members of a community, as the palladium or the ark of the covenant represents the cohesion of the group, or the military order represents its self-defence. All these are instances of a general type, in which a specific feature becomes detached from the primary phenomena, substances or events to which it was bound in the same way that a quality is bound to its substance or action to its subject. This feature then assumes a structure of its own and the process of abstraction is brought to a conclusion when it crystallizes in a concrete formation. Outside exchange, money has as little meaning as have regiments and flags outside the needs of communal attack and defence, or as have priests and temples independently of communal religiosity. The dual nature of money, as a concrete and valued substance and, at the same time, as something that owes its significance to the complete dissolution of substance into motion and function, derives from the fact that money is the reification of exchange among people, the embodiment of a pure function.

The developments in the material of money express its sociological character more and more clearly. The use of simple means of exchange such as salt, cattle, tobacco and grain is determined by a pure individual interest, in a solipsistic fashion; that is to say, they are eventually consumed by a single person since no one else has any interest in them at that particular time. The use of precious metals for jewelry, on the other hand, indicates a relation between individuals: people adorn themselves for others. Adornment is a social need, and precious metals are particularly apt for attracting the attention of others by

their glitter. In consequence, certain kinds of ornament are reserved for particular social positions: in medieval France gold was not permitted below a certain rank. Since the whole significance of adornment lies in the psychological process that is incited in other people by the wearer, the precious metals differ fundamentally from the primitive, as it were, centripetal, means of exchange. Exchange, as the purest sociological occurrence, the most complete form of interaction, finds its appropriate representation in the material of jewelry, the significance of which for its owner is only indirect, namely as relation to other people.

If the embodiment of the action of exchange in a particular form is accomplished technically in such a way that each object is first exchanged for this form rather than directly for another object, the question arises: upon closer examination, what is the corresponding behaviour of the people behind the objects? Their general behaviour in relation to merchants, however much it is a cause and effect of monetary transactions, provides only an analogy. It seems clear to me that the basis and the sociological representative of the relation between objects and money is the relationship between economically active individuals and the central power which issues and guarantees the currency. Money serves as an absolute intermediary between all commodities only if coinage has raised it above its character as a mere quantity of metal – to say nothing of simpler kinds of money. The abstraction of the process of exchange from specific real exchanges, and its embodiment in a distinctive form, can happen only if exchange has become something other than a private process between two individuals which is confined to individual actions. This new and broader character of exchange is established when the value of exchange given by one party has no direct value for the other party, but is merely a claim upon other definite values; a claim whose realization depends upon the economic community as a whole or upon the government as its representative. When barter is replaced by money transactions a third factor is introduced between the two parties: the community as a whole, which provides a real value corresponding to money. The pivotal point in the interaction of the two parties recedes from the direct line of contact between them, and moves to the relationship which each of them, through his interest in money, has with the economic community that accepts the money, and demonstrates this fact by having money minted by its highest representative. This is the core of truth in the theory that money is only a claim upon society. Money appears, so to speak, as a bill of exchange from which the name of the drawee is lacking, or alternatively, which is guaranteed rather than accepted. It has been argued against this theory that metallic money involves credit, that credit creates a liability, whereas metallic money payment liquidates any liability; but this argument overlooks the fact that the liquidation of the individual's liability may still involve an obligation for the community. The liquidation of every private obligation by money means that the community now assumes this obligation towards the creditor. The

obligation that arises from a service in kind can be removed in only two ways: either by providing an equivalent service, or by creating a claim for an equivalent service. The owner of money possesses such a claim and, by transferring it to whoever performed the service, he directs him to an anonymous producer who, on the basis of his membership of the community, offers the required service in exchange for the money. The distinction that has been made between paper money which is backed in some way (e.g. by gold) and that which is unbacked, with reference to the credit character of money, is quite irrelevant here. It has been assumed that only unredeemable paper money is really money, while redeemable paper money is only a claim for payment; but on the other hand, it has also been urged that this difference is meaningless for the transactions between buyer and seller, because even the guaranteed paper money does not function as a promise to pay but as final payment, in contrast to the cheque, which is only a promise between buyer and seller. This way of posing the question does not penetrate to the sociological background. Viewed from the sociological perspective, there is no doubt that metallic money is also a promise and that it differs from the cheque only with respect to the size of the group which vouches for its being accepted. The common relationship that the owner of money and the seller have to a social group – the claim of the former to a service and the trust of the latter that this claim will be honoured – provides the sociological constellation in which money transactions, as distinct from barter, are accomplished.

Metallic money, which is usually regarded as the absolute opposite of credit money, contains in fact two presuppositions of credit which are peculiarly intertwined. First, an examination of the metallic substance of the coin is not feasible in everyday transactions. Cash transactions cannot develop without public confidence in the issuing government, or perhaps in those persons who are able to determine the real value of the coin in relation to its nominal value. The inscription on the coins of Malta – *non aes sed fides* – indicates very appropriately the element of trust without which even a coin of full value cannot perform its function in most cases. The variety of reasons, often contradictory, for accepting a coin indicates that it is not some objective proof that is essential. In some parts of Africa the Maria-Theresa thaler has to be white and clean, in other parts it has to be greasy and dirty, in order to be accepted as genuine.

Secondly, there has to be confidence that the money that is accepted can be spent again at the same value. What is indispensable and conclusive is *non aes sed fides* – the confidence in the ability of an economic community to ensure that the value given in exchange for an interim value, a coin, will be replaced without loss. No one can make use of a coin without giving credit in these two respects. Only this twofold trust confers upon a dirty and perhaps unrecognizable coin a definite amount of value. Without the general trust that people have in each other, society itself would disintegrate, for very few relationships are based

entirely upon what is known with certainty about another person, and very few relationships would endure if trust were not as strong as, or stronger than, rational proof or personal observation. In the same way, money transactions would collapse without trust. There are nuances of this trust. The assertion that money is always credit because its value rests upon the recipient's confidence that he will be able to acquire a certain quantity of goods in exchange for it is not entirely adequate. For it is not only a money economy, but any economy, that depends upon such trust. If the farmer did not have confidence that his field would bear grain this year as in former years, he would not sow; if the trader did not believe that the public would desire his goods, he would not provide them, etc. This kind of trust is only a weak form of inductive knowledge. But in the case of credit, of trust in someone, there is an additional element which is hard to describe: it is most clearly embodied in religious faith. When someone says that he believes in God, this does not merely express an imperfect stage of knowledge about God, but a state of mind which has nothing to do with knowledge, which is both less and more than knowledge. To 'believe in someone', without adding or even conceiving what it is that one believes about him, is to employ a very subtle and profound idiom. It expresses the feeling that there exists between our idea of a being and the being itself a definite connection and unity, a certain consistency in our conception of it, an assurance and lack of resistance in the surrender of the Ego to this conception, which may rest upon particular reasons, but is not explained by them. Economic credit does contain an element of this supra-theoretical belief, and so does the confidence that the community will assure the validity of the tokens for which we have exchanged the products of our labour in an exchange against material goods. This is largely, as I have said, a simple induction, but it contains a further element of social-psychological quasi-religious faith. The feeling of personal security that the possession of money gives is perhaps the most concentrated and pointed form and manifestation of confidence in the socio-political organization and order. The subjectivity of this process is, so to speak, a higher power of the subjectivity that creates the value of precious metals in the first place. The latter is presupposed, but now it has a practical outcome in money transactions through that two-sided faith. This also illustrates that the development from material money to credit money is less radical than appears at first, because credit money has to be interpreted as the evolution, growing independence and isolation of those elements of credit which already exist in fact in material money.

The nature of the economic circle and its significance for money

The guarantee for the continuous usefulness of money, which is the essence of the relation of the contracting parties to the whole social group, has, however, a peculiar form. From an abstract point of view, this guarantee does not exist

because the owner of money cannot force anybody to give him something for money, even for money that is indisputably good; this becomes evident in cases of boycott. Only where obligations already exist can the creditor be forced to accept money in settlement of the obligation, and even that is not the case in all legal systems. The possibility that the claim that money represents will not be satisfied confirms the character of money as mere credit; for it is the essence of credit that the probability of realizing it is never one hundred per cent, no matter how closely it may approach it. The individual is free, in fact, to transfer his product or other possessions to the owner of money or to retain them, whereas the community is duty-bound to him. This distribution of freedom and bondage, although paradoxical, frequently serves as a category of knowledge. Thus, the advocates of 'statistical laws' have asserted that society, in given conditions, must produce a definite number of murders, thefts and illegitimate births, but that the individual is not thereby constrained to such behaviour and remains free to act morally or immorally. The statistical law does not determine that a particular individual must commit such acts, but only that the social whole to which he belongs must produce a determinate number. Or we may be told that society or the species as a whole have a determinate role in the divine scheme of the universe, in the evolution of being towards its final transcendental purposes; but that the individual representatives of these purposes are irrelevant, are free to distribute the execution among themselves, and that any particular individual may opt out without impairing the total performance. Finally, it has been asserted that the actions of a group are always strictly determined in the manner of a natural law by the direction of their interests, as material masses are determined by gravitation; but that the individual may be misled by theories and conflicts, that he confronts numerous alternatives among which he may choose rightly or wrongly – in contrast with the actions of the collective entity which have no freedom because they are guided by deviating instincts and purposes. We do not have to investigate here whether these ideas are true or false. I want only to indicate that the model of a relationship between the collective entity and the individual is accepted in many different contexts; the former is conceived as being ruled by necessity, the latter as free; the restraint of the former is moderated by the freedom of the latter, and this freedom itself is limited by the collective restraint and adapted to the necessity of the total result. The guarantee of the general usefulness of money, which the ruler or other representative of the community undertakes by the coinage of metal or the printing of paper, is an acceptance of the overwhelming probability that every individual, in spite of his liberty to refuse the money, will accept it.

These circumstances lead to the conclusion that the currency must be of a higher value the larger the group for which it is supposed to be valid. Within a small local group money of inferior value may circulate. This happens in the most primitive culture: in Darfur, local means of exchange – hoes, tobacco,

balls of cotton, etc. – circulated within each district; the better currency – cloth, cows, slaves – was valid for all of them. It may even happen that the paper money issued by a state is restricted to a single province; Turkey issued notes in 1853 that were supposed to be valid only in Constantinople. Very small and closely allied associations occasionally come to an agreement to accept any symbol, even a counter, as money. The spread of trade relations, however, requires a valuable currency, if only because the transportation of money over long distances makes it desirable that the value should be concentrated in a small volume. Thus, the historical empires and the trading states with extensive markets were always driven towards money with a high material value. Some contrary trends prove the same rule. The essential advantage of medieval rights of coinage consisted in the fact that the sovereign was allowed to coin new pennies in his domain at any time and to enforce the exchange of all old coins, or foreign coins, that entered the area as a result of trade, against the new ones; with each debasement of his coins he profited by the difference between the new and the exchanged coin. But this advantage depended upon a large domain, for in small areas the privilege of coinage did not pay because the market for the coins was too small. If the profit from debasement of the coinage had not been contingent upon the size of the area, the chaos of coins in Germany would have been much worse, because of the terrible frivolity with which the privilege of coinage was granted to every monastery and every small town. Just because the socioeconomic structure of a domain required stable money, the profit to be had from an enforced inferior money was considerable. This is illustrated further by the fact that the growth of European trade in the fourteenth century led to the acceptance of the *gulden* as the general unit of coinage, and the replacement of the silver standard by the gold standard. Shillings and pennies, that is the small coins minted by every small state or town for internal transactions, could be as base as desired. The privilege of coinage in the Middle Ages was at first restricted to silver coins; the privilege of minting gold coins needed special permission, which was granted only to the governments of larger territories. It is very characteristic of this relation that the last remnant of the Roman dominion which the Byzantine Court retained until the sixth century, was the exclusive right to mint gold coins. Finally, this relation is confirmed by the following instance. Among the cases of restriction of the circulation of paper money to a particular region within the state that issued it, there is that of France, where at one time paper money was legal tender throughout the country except at the seaports, that is at the points where there was extensive trade. When the scope of trading expands, the currency also has to be made acceptable and tempting to foreigners and to trading partners. The extension of the economic area leads, *ceteris paribus*, to a reduction of direct contact; the reciprocal knowledge of conditions becomes less complete, confidence is more limited, and the possibility of getting claims satisfied is less certain. Under such conditions,

no one will supply commodities if the money given in exchange can be used only in the territory of the buyer and is of doubtful value elsewhere. The seller will demand money that is valuable in itself, that is to say accepted everywhere. The increase in the material value of money signifies the extension of the circle of subjects in which it is generally accepted, while in a smaller circle its negotiability may be secured by social, legal and personal guarantees and relationships. If we suppose that the usefulness of money is the reason for its acceptance, its material value may be regarded as a pledge for that usefulness; it may have a zero value if negotiability is assured by other means, and it will be high when the risk is great. However, expanding economic relations eventually produce in the enlarged, and finally international, circle the same features that originally characterized only closed groups; economic and legal conditions overcome the spatial separation more and more, and they come to operate just as reliably, precisely and predictably over a great distance as they did previously in local communities. To the extent that this happens, the pledge, that is the intrinsic value of the money, can be reduced. The view of the advocates of bimetallism, that it would be possibly only on an international scale, conforms with this consideration. Even though we are still far from having a close and reliable interrelationship within or between nations, the trend is undoubtedly in that direction. The association and unification of constantly expanding social groups, supported by laws, customs and interests, is the basis for the diminishing intrinsic value of money and its replacement by functional value.

It is significant that the expansion of trade relations, which originally increased the intrinsic value of the means of exchange, leads, in modern civilization, to its complete elimination by the inter-local and international balancing of accounts through banking operations and bills of exchange. The same development occurs in particular sectors of the use of money. Taxes today are levied principally on income, not on property. A wealthy banker who has incurred losses over the past few years pays no tax in Prussia, except for the small property tax recently introduced. It is not the ownership of money, but the profit from its use, the money yielded by money, that determines tax obligations and, in so far as voting rights depend upon tax liability, also determines rights in the community. A glance at the role of money capital in ancient Rome will reveal the general direction of development. Just as money was acquired by unproductive methods, through war, tribute and money-changing, so also it was lent for consumption, not for production. Thus, interest obviously could not be interpreted as a natural product of capital; and the vague, inorganic relationship between capital and interest that emerged from this situation is reflected in the difficulty of coming to grips with the problem of interest, which persisted far into the Christian era. Only the concept and fact of productive capital eventually provided a practical solution. The earlier situation forms a striking contrast with that of the present time, in which the significance of capital depends not on

what it is, but on what it performs. It has changed from a rigid element, estranged from production, to a living function within production.

The guarantee, which is the vital nerve of money, naturally loses some of its force when the objective institution representing the community in fact represents only limited segments of the community and its interests. The private bank, for instance, is a relatively objective supra-personal entity interposed in the exchanges between individual interests. This sociological character enables it to issue money, but if its note issue is not soon transferred to a central institution under state supervision, the limitations of the area that it represents will become apparent in the imperfect 'money' character of its notes. The defects of the North American paper money economy result in part from the view that, while coinage is a state matter, the provision of paper money is a responsibility of the private banks with which the state should not interfere. This view overlooks the fact that the difference between metallic and paper money is only relative; that, as money, each consists merely in the substantiation of the exchange function through a common relation of the interested parties to an objective institution, and that money can perform its function only to the extent that the issuing institution represents and expresses the interests of the whole area. Consequently, local rulers sometimes attempt to give their coins at least the appearance of issuing from a more comprehensive institution. Even centuries after the deaths of Philip and Alexander, coins with their names and seals were minted at a number of places, giving the appearance of being royal coins although they were in fact the coins of particular cities. Progressive development strives in reality for the expansion, and consequently the centralization, of the institutions and powers that guarantee money values. It is a significant feature of this development that the treasury bonds that governments issued before the eighteenth century were the first to create a claim upon state revenues as a whole. In this case, the certainty of payment did not depend upon particular circumstances that had to be investigated, but upon a general confidence in the state's capacity to pay. This illustrates the great centralizing tendency of modern times, which does not at all contradict the trend towards individualization. They form parts of a single process of clearer differentiation and new concentration of the two parts of the personality, one of which is turned towards society and the other towards the self. This development eliminates all individualistic and isolating elements from the nature of money, and makes the centralizing forces of the most inclusive social circle the representatives of money. Personal credit as well as state credit profits by this development in the abstract form of money property. Individual princes had little personal credit in the fifteenth and early sixteenth centuries; it was not their own solvency that was considered, but the value of the guarantees and pledges that they gave. Personal credit is based upon the assumption that the total value of a debtor's property is adequate to cover his debt regardless of the changing composition of his property; only

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when the total value of an individual's property has been appraised in terms of money will he have permanent credit. Otherwise credit depends on the changing character of his property. Even in the eighteenth century, most debts were expressed as specific quantities of specific coins, and this seems to be a stage of transition to the present time. The concept of abstract value detached from any specific form – value that is no longer guaranteed by an objective quality but only by the state or the individual person – was not yet wholly effective.

The transition to money's general functional character

The main point, however, is that the significance of metal in monetary affairs recedes more and more into the background, as compared with safeguarding the functional value of money through community institutions. For metal is originally always private property, and public interests and public forces can never gain absolute control over it. One might say that money becomes increasingly a public institution in the strict sense of the word; it consists more and more of what public authorities, public institutions and the various forms of intercourse and guarantees of the general public make of money, and the extent to which they legitimize it. It is significant, therefore, that in earlier periods money could not yet be based only on its abstract function: money transactions were tied either to specific enterprises, to the technical production of coins, or to the trade in precious metals. At the beginning of the thirteenth century, the regular business of exchange was carried out in Vienna by the cloth-dyer, in England, and to some extent also in Germany, by the goldsmith. The exchange of coins, which was the core of money transactions in the Middle Ages (because payments everywhere had to be made in local coins), was originally the privilege of the mint itself, of the *Münzer Hausgenossen*. Only later, when the towns acquired the right of coinage, did the business of exchange and the trade in precious metals become separated from the mint. The function of a coin is originally bound to its material in what is almost a personal union; but when a public authority guarantees its value it acquires independence and exchange, and trade in the material from which it is made becomes open to everybody, precisely to the extent that its function as money is assured by the collectivity. The growing depersonalization of money and its closer relationship to a centralized and more extensive community are directly and effectively connected with the accentuation of those functions that are independent of the metallic value. The value of money is based on a guarantee represented by the central political power, which eventually replaces the significance of the metal. There is here an analogy with a neglected aspect of valuation. When the value of an object is due to the fact that it makes possible the acquisition of another object, its value is then determined by two factors: the intrinsic value of the object to be acquired, and the degree of

certainty that it can acquire that object. A diminution in one of these factors may leave the total value unaffected, within certain limits, if it is accompanied by an augmentation of the other factor. Thus, for example, the significance of one of our perceptions depends both upon its reliability and upon the importance of what is perceived. In the natural sciences, the factor of reliability tends to be more important, in the social sciences the significance of the object perceived; and thus there may be equality in the value of perceptions in these two fields. Only if we follow Aristotle in not doubting the certainty of knowledge can the value of perception be regarded as depending solely upon the value of the object. The value of a lottery ticket is a product of the probability that it will be drawn and of the size of the possible prize; the value of an action is a product of the probability that its purpose will be accomplished and of the importance of this purpose; the value of a bond is composed of the security of the capital and the rate of interest. Money does not function in exactly the same way, for its growing reliability is not associated with a declining value of the object that it can acquire. But the analogy is still valid in so far as the growing certainty that coin will be accepted at its face value makes possible a diminution in the intrinsic value of the metal content without altering the total value. On the other hand, the causes as well as the effects of the sociological position of money bring about a situation in which the relations between the central power of the group and its individual elements become stronger and closer because the relations among these elements themselves are now channelled through the central power. The Carolingian rulers plainly attempted to replace barter and the exchange of cattle by a money economy. They frequently decreed that coins were not to be rejected and they punished rejection severely. Coinage was exclusively a royal privilege, and the enforcement of money transactions meant an extension of the royal power into areas in which private and personal modes of exchange had previously existed. In the same way, the Roman gold and silver coins after the time of Augustus were minted exclusively in the name and at the command of the emperor, while the right to issue small coins was assigned to the Senate and to local authorities. It is only a generalization of the same trend that great princes often created powerful coinage systems, as did Darius I, Alexander the Great, Augustus, Diocletian and others down to Napoleon I. The whole technique which supports a great social power in a barter economy encourages self-sufficiency and the creation of a state within the state, as happened with the large territorial domains from the time of the Merovingians, whereas the equivalent power institutions in a monetary economy have developed and persisted in alliance with the state organization. The modern centralized state, therefore, came into being partly as a result of the prodigious growth of the money economy which followed the opening up of the gold and silver resources of America. The self-sufficiency of feudalism was destroyed by the fact that every transaction depended upon the use of coins, involving a central

power and extending the relationships of the contracting parties beyond the coinage itself, with the result that the power of money to bind the individual more closely to the crown came to be regarded as the deeper meaning of the mercantilist system. The fact that the territorial rulers wrested this means of centralization from the German emperors is considered one of the essential reasons for the breakdown of the German empire; the French and English kings of the thirteenth and fourteenth centuries, on the other hand, established the unity of their states with the aid of this trend towards money transactions. After the Russian empire was already unified, Ivan III gave sovereignty over parts of the country to his younger sons, but he retained for the central power the rights of coinage and the administration of justice. The area of loose trade relations outside political boundaries grows remarkably in extent and consistency once the stability of the official money makes it generally acceptable and thus enables it to draw all parts of the trading area into a closer relationship with the country in which it originates. The rate of exchange of the English sovereign gave considerable prestige to English trade in Portugal and Brazil and made the trade relations with these countries very close. In Germany soon after the Carolingian period the king granted the right of coinage to various individuals and religious establishments, but retained control over the alloy, quality and form of the coins. Before the twelfth century, however, those who had such rights of coinage were allowed to determine for themselves the standard and form of coinage, and were thus able to make as much profit as they wished. The separation of coinage from the central power goes hand in hand with debasement of the currency; the essential function of money declines the less strongly it is guaranteed by the largest sociological group or its central organ. The reverse process illustrates the same point: the debasement of the currency brought about the dissolution and collapse of the largest group, on the unity of which it depended. A purely formal and symbolic relationship may also have contributed to these phenomena. It is one of the essential characteristics of gold and silver that they are relatively indestructible, and since the amount added by mining is insignificant their total quantity remains almost stable over long periods of time. Whereas most other objects are used up, disappear and are replaced in an unending process, money with its almost unlimited durability remains unaffected by this change of individual objects. As a result, it is raised above these objects, just as the objective unity of a social group is raised above the variation of its individual members. It is precisely the characteristic form of life of these reified abstractions of group functions, that they exist outside their embodiment in real individuals, as stable formations amid the transitory individual manifestations, which are, so to speak, integrated into them, formed by them and then released again. Such, for example, is the immortality of a king, which is independent of the accidents of his personality, his particular acts, or the changing fortunes of his society; the well-nigh indestructible coin with his

portrait upon it is a symbol and a demonstration of this fact. The business of finance on a large scale began only in the sixteenth century with the business transactions of princes; the intercourse with princes that followed raised the financiers to a position of royal dignity, while trade in commodities came to appear plebeian. The hatred that the socialists have for finance, therefore, may not only be directed against the power of the capitalist over the worker in private enterprise; it may also arise from anti-monarchical instincts, for even though the reification of the social whole, which is a prerequisite of money, need not necessarily take a monarchical form, it is in fact monarchy that has most strongly favoured the intervention of a central power in the economic functioning of the group. Moreover, the fixed residences of princes, which require centralization, are possible only with the emergence of money taxes, for taxes paid in kind cannot be transported and they are appropriate only to a wandering court which consumes them as it goes. It is in the same spirit that modern tax policy tends to leave taxes on real property to local authorities, and to reserve income tax for the state. By focusing the tax demands of the central power upon the money income of the individual, it grasps precisely the kind of property with which it has the closest relation. The development of officialdom, with its close relation to finance, is thus only a symptom of the trend towards centralization. Feudal administration was decentralized, and the interest of the vassal with his distant landed property separated him from the central power, whereas regular money payments draw the officials toward the central power, and continually reaffirm his dependence. At the beginning of the nineteenth century the *Sublime Porte*, as a result of the continuous debasement of the currency, was obliged to mint coins of double weight for the officials and officers, because it was precisely in its relations with state officials that money of full value was needed. The tremendous growth and differentiation of the civil service became possible only through a money economy; it is, however, only one symptom of the relation that exists between money and the objectification of group cohesion in a special central instituion. In Greek culture this relation was represented not by political, but by religious, unity. All Greek money was once sacred; it emanated from the priesthood, as did other generally valid concepts of measure referring to weight, size and time. This priesthood represented at the same time the unity of the various regions. The earliest associations developed on a religious basis, and in some cases they covered relatively large areas. The shrines had a non-particularistic centralizing significance, and money expressed this by bearing the symbol of the common God. The religious social unity, crystallized in the temple, became active again through the money that was put into circulation, and money acquired a basis and a function far beyond the significance of the metal content of the individual coin. Supported by, and supporting, these sociological constellations, the function of money grew in significance at the expense of its substance. A few examples and reflections will

make this process clear. Among the many services of money, I will mention here only the facilitation of trade, the stability of the standard of value, the mobilization of values and the acceleration of circulation, and the distillation of values in a concentrated form.

I would like to emphasize, by way of introduction, that the debasement of the coinage by the sovereign (which I discussed earlier) reveals most clearly, through its defrauding of the masses, the significance of the functional value of money in contrast with its value as metal. What motivated the subjects to accept base coin and to give substantially better coin in exchange was the fact that the former fulfilled the exchange purpose of money. The lords of the mint extorted a disproportionately high recompense for the functional value of money; for the sake of which their subjects had to agree to the exchange of coins, that is to sacrifice the value of the metal. But this only exemplifies the very general phenomenon that money, which by its form serves trade better than anything else, is not superior only by virtue of its material, since it can also transcend the significance of its own material, as in the following case. In 1621, when the value of the *reichsthaler* rose from 48 to 54 shillings as a result of the debasement of the currency in Lower Germany, the authorities of Holstein, Pomerania, Lübeck, Hamburg and other areas issued a decree according to which the *reichsthaler* should, from a certain date, be worth only 40 shillings. Although this was generally regarded and accepted as being fair and sensible, the *reichsthaler* continued to be worth 48 shillings because this was more convenient for division and reckoning. At a more advanced and complicated stage, the same thing may happen when bonds are issued in large and small denominations; the stock exchange quotes the latter at a higher price because they are more in demand and serve transactions in small amounts better, although the value pro rata is exactly the same. Indeed, a committee on the currency in the American colonies stated in 1749 that in countries with an undeveloped economy which consume more than they produce, money should always be of lesser value than that of their wealthier neighbours, since otherwise it would inevitably flow out to these countries. This case illustrates in an accentuated way the fact, mentioned previously, that the suitability of a particular form of money for calculation and settling accounts creates a value for this form that is deliberately raised above the actually valid price. The functional value of money has here outgrown its material value to the point of reversing their significance. We may take as examples of the increase in the functional value as compared with the material value those cases in which inferior coins maintain a scarcely credible price in relation to precious metals. This happens for instance in gold mining districts, where the wealth acquired stimulates vigorous trading, but cash is lacking for everyday transactions. Among the gold miners in Brazil a need for small cash developed at the end of the seventeenth century which the King of Portugal exploited by supplying silver money in exchange for tremendous sums

in gold. Subsequently, in California and Australia, it also happened that gold miners had to pay between twice and sixteen times the real value in gold in order to acquire small change. The worst phenomena of this kind are shown by the currency conditions that prevailed until recently in Turkey, but that are now being changed. No nickel or copper money existed; all small change consisted of a wretched silver alloy – *altiliks*, *beschliks* and *metalliques* – the supply of which was totally inadequate. In consequence, the value of these coins, which the government nominally reduced in 1880 by about 50 per cent, has remained unchanged, and the coins are exchanged at parity with gold; the *metalliques*, indeed, which are regarded as one of the worst money tokens in the whole world, sometimes rise above parity with gold. This is extremely characteristic; the smallest coin is the most important for exchange and is valued accordingly, so that these small coins are always the first to be debased. The price of *metalliques* illustrates the paradox that a coin may be more valuable the less valuable it is, because the lack of material value makes it suitable for certain functional purposes by which its value may be increased almost indefinitely.

The objections to a silver standard are based upon the increasing recognition, and the growing role, of the functional significance of money; namely, that convenience in handling is the primary requirement of money. A foodstuff may be retained even though its use is inconvenient, so long as it is nutritious and enjoyable, and an uncomfortable dress may be kept because it is beautiful or warm; but inconvenient money is like unpalatable food or an unbecoming dress, since its main purpose is to provide a convenient means for the exchange of goods. Its difference from other goods arises from the fact that it has, and should have, fewer secondary qualities aside from its principal quality. Because money is an absolute abstraction above all concrete goods, it is encumbered and distorted by every quality outside its original character.

The value of money may be increased or decreased independently of its material value by an expansion or contraction of the function of money, even in the case of its value stability, which is closely connected with its material value. The Roman emperors had the exclusive right to mint gold and silver coins, while copper coins, which were used in everyday transactions, were minted by the Senate or, in the eastern provinces, by the towns. This provided some kind of guarantee that the emperor would not inundate the country with small coins of no substantial value. The final outcome was that the emperors continued their debasement of the silver coinage which led, in due course, to the total collapse of the Roman coinage. This produced a strange reversal of value relationships: as a result of debasement, silver coins became the means for everyday transactions, while copper coins, which had not changed in value, became increasingly the standard of value. The original role of the metals as representatives of money value was reversed by a change in the relative stability of their value. It has been emphasized recently, with reference to the greater

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importance of stability value as against material value, that a transition from paper currency to the gold standard does not necessarily involve a resumption of gold payments. In a country such as Austria, where the currency notes are at parity with silver, a changeover to the gold standard would bring about the decisive advantage of a stabilization of money value, and would accomplish the vital function of gold without using the material itself. In recent times, the interest in the stability of money value has even led to proposals for abolishing the metal reserve against which notes are issued. So long as such a reserve exists, the various countries belong to a common system which submits domestic transactions in each country to all the fluctuations of political and economic events in all the other countries. Unguaranteed paper money, since it could not be exported, would have the advantage of being available for all kinds of enterprises within the country, and above all of having complete value stability. However much this theory may be open to criticism, the mere suggestion illustrates how the concept of money has been psychologically separated from the concept of a money material and how it is gradually being perfected through the notion of functional services. All these functions of money are obviously subject to the conditions that apply to the general dissolution of money into functions; at any given time they are only partially valid, and the concepts indicate a line of development the goal of which is never reached. The fact that the values that money is supposed to measure, and the mutual relations that it is supposed to express, are purely psychological makes such stability of measurement as exists in the case of space or weight impossible.

The declining significance of money as substance

In practice, the stability of value is accepted as a fact when any question arises concerning the repayment of a money loan after the value of money has changed. If the value of money has declined generally so that the same sum is of lesser value when it is repaid, then the law disregards this fact; the identical sum of money is taken to be of identical value. If the coinage has been debased by alloying or by changing the standard, then the law may decide that the debt shall be repaid according to the new standard, or according to the metal content of the new standard, or simply at its nominal value. Generally speaking, the view prevails that money retains its value unchanged. Such stability is, of course, also a fiction where other objects are concerned and no one doubts that, for example, fifty pounds of potatoes lent in the spring may be worth either more or less when they are later returned in kind. In such a case, however, reference can be made to the direct significance of the object; while the exchange value of potatoes may fluctuate, their value in providing satisfaction and nourishment remains unchanged. Money, however, has no value of this kind, but only

exchange value, and the assumption of its value stability is thus all the more striking. Reasons of expediency will tend to ensure that this essential fiction becomes true. I have already indicated that in the case of money which is made from precious metals the connection with jewelry helps to maintain stability of value; as the demand for jewelry is highly elastic, it absorbs a larger quantity of the growing supply of precious metals and thus prevents too great a pressure upon their value, and on the other hand a growing need for money can be satisfied by drawing upon the stock of jewelry, from which the required quantity can be taken and a rise in the price of precious metals avoided. The continuation of this trend seems to imply as its goal the complete elimination of the material basis of money. For even a material as suitable as a precious metal cannot altogether avoid fluctuations that result from particular conditions of demand, production and processing, which have little to do with the fact that the metal also serves as a medium of exchange and as an expression of the relative value of goods. Perfect stability of the value of money could be attained only if it were nothing in itself, but only the pure expression of the value relationship between concrete goods. Money would then reach a neutral position which would be as little affected by the fluctuations in commodities as is the yardstick by the different lengths that it measures. The value of money established by the performance of this service would then also reach its maximum stability, because the relationship of supply and demand could be regulated more easily than when it depends upon a substance the quantity of which we can never fully control. This is not to deny that, under particular historical and psychological conditions, the value of money may be more stable if it is tied to a metal than if it is detached from it – as I observed earlier.

Thus, to return to the analogies used previously, while the deepest and most sublime love may be that between two souls, which excludes all carnal desire, so long as such love is unattainable, the sentiment of love will develop most fully where a spiritual relation is complemented and mediated by a close sensual bond. Paradise may fulfil the promise of eternal bliss under conditions in which the consciousness of bliss no longer requires the contrast of opposite emotions, but, as long as we remain human, positive happiness depends upon the contrast with our other experiences of pain, indifference and depression. Thus, although money with no intrinsic value would be the best means of exchange in an ideal social order, until that point is reached the most satisfactory form of money may be that which is bound to a material substance. This condition does not imply a deviation from the persistent trend towards the transformation of money into a purely symbolic representative of its essential function.

A particular stage in the process of differentiation between the functional and the material value of money is indicated by those cases in which a certain kind of money is used as a standard of value but not for actual payments. Money cannot exercise the function of exchange without, at the same time, measuring

values; but the latter function is in certain respects independent of the former. In ancient Egypt prices were determined by the *uten*, a piece of coiled copper wire, but payments were made in all kinds of goods. In the Middle Ages price was often determined in money terms, but the buyer was free to pay in whatever manner was convenient. In many places in Africa at the present day the exchange of goods is carried out according to a monetary standard which is sometimes quite complicated, while money itself for the most part does not even exist. The business of the very important Genoese exchange market in the sixteenth century was based upon the standard of the *scudo de' marchi*. This standard was almost entirely imaginary and did not exist in any actual coinage: 100 of these *scudi* were worth up to 99 of the best gold *scudi*. All obligations were expressed in *scudi de' marchi* and, as a result of its ideal character, this standard of value was absolutely stable, unaffected by the fluctuations and inconsistencies of actual currencies. The East India Company, in order to counteract the debasement, depreciation and counterfeiting of Indian coins, introduced the *rupee current*, a coin that was not minted at all but corresponded to a definite amount of silver, and simply provided a standard by which to measure the value of the actual debased currency. Through the existence of such a stable ideal standard the actual coins also attained a stable relative value. In this way, a state of affairs was very nearly established which a theorist of the early nineteenth century conceived. He regarded all money, whether coined or in other forms, as a claim upon exchangeable goods, and finally arrived at the negation of the reality of money. Money in the strict sense is contrasted with the currency, which is simply the 'claim' expressed in money terms, while money itself is only the ideal standard by which all property values are measured. Here, the principle of the *scudo de' marchi* has become a general theory; money has been idealized to a pure form and a concept of relation, so that it is no longer identical with a tangible reality but relates to the latter as does an abstract law to an empirical case. In the cases cited above, the function of measuring value has been separated from its material representative; the coin used for calculation is deliberately set in opposition to the metal coin, in order to establish its position beyond the sphere of the latter. In this relationship the ideal money fulfils the same purposes as 'good money', which is 'good' only because it is a reliable measure of values.

This leads us to the subject of the representation of money values by equivalents, in so far as this illustrates that one of the essential services performed by money is to make values more mobile. The more the significance of money as a means of exchange, a standard of value and a method of storing value increases in relation to its material value, the more easily it can circulate in the world in a form other than metal. The same development that leads from the rigidity and the substantial determinateness of money to the representation of money occurs also in these representations themselves; for example, in the evolution of the bill payable to the bearer from the promissory note given by one individual to

another. The various stages of this development have still to be traced. The stipulation, in the acknowledgment of a debt, that the bearer as well as the original creditor is entitled to collect the money, is found already in the Middle Ages; but its object was to facilitate collection of the debt by a representative of the creditor, not to allow the transfer of the value. This purely formal mobility of paper values was given a more real content in the French *billet en blanc* which was current on the stock exchange in Lyons. It was still worded to refer to an individual creditor, but without specifying his name; only after a name had been inserted in the vacant space was the individual creditor determined. The trade in bills of exchange was first properly established in Antwerp in the sixteenth century. Initially they were often rejected at the due date if they were not accompanied by a note of transfer, and an imperial order had to be issued asserting their general validity. Here we have a very clear succession of stages. The value in question is, at it were, confined between the creditor and the debtor by the individually designated promissory note. It acquires mobility first of all by becoming payable at least to another person, although still on the account of the original creditor, and this process is then extended by postponing but not yet eliminating the designation of an individual creditor, until finally the value becomes completely mobile with the bearer bill, which can change hands like a coin. This appears as the reverse, or the subjective, aspect of the development that we observed in respect of state treasury bonds. Inasmuch as these bonds were ultimately redeemable from general state revenues rather than specific revenues of the crown, they lost their rigidity from the point of view of the debtor; they emerged from their confined sphere into the general movement of the economy and became much more mobile representatives of value because a test of their particular worth was no longer needed.

The general acceleration in the circulation of values also determines the relationship between the material and the function of money. In opposition to a one-sided interpretation of the relation between money and money substitutes it has been asserted that the latter – cheques, bills of exchange, warrants and transfers – do not replace money but only give rise to a more rapid circulation. This function of money representatives is well illustrated by the fact that bank notes change consistently from large and slowly circulating values to smaller values. The Bank of England did not issue notes under £20 before 1759, while the Bank of France issued only 500-franc notes up to 1848. The money substitutes make it possible for the individual to dispense with a large reserve of cash, but the main advantage is that the available money can now be used in other ways, for example by the banks. What is economized is not money itself but its use as a passive reserve of cash. It may be noted more generally that credit and cash do not simply replace each other, but that each produces a more lively activity of the other. At times when there is most cash on the market, credit activities also often expand exuberantly, even to a pathological degree, as in the

sixteenth century when large imports of precious metals were associated with a vast and insecure expansion of credit and feverish activity in company-promoting in Germany. The fact that the extent of money and credit increase together shows that they render the same services, and when the functions of one of them are enhanced the other is also provoked into more lively activity. This does not contradict the other relation between money and credit, in which credit makes cash superfluous; we are told, for instance, that there was less cash available in England in 1838 than fifty years earlier in spite of the tremendously increased production, and in France there was less than before the Revolution. This dual relationship between two phenomena, which arise from the same motive, on one side to stimulate each other and on the other side to limit or supplant each other, is easily conceivable and not at all rare. I would remind you that the fundamental emotion of love can manifest itself sensually and spiritually in such a way that these two forms strengthen each other, but also in such a way that the one seeks to eliminate the other; and that very often an interplay between the two possibilities expresses the basic emotion most fully and vividly.

I would remind you also that the diverse activities of the quest for knowledge, whether they incite each other or supplant each other, reveal the same unity in the fundamental interest; and finally, that the political energies of a group become concentrated in divergent parties, according to the nature and the milieu of individuals, yet these parties display their strength not only in the passionate struggle against each other but also in their occasional association for common action in the interest of the group as a whole. The significance of credit, both as inciting a greater circulation of cash and as taking the place of this cash circulation, indicates the unity of the service which these two means of exchange render.

The growth of trade leads to a more rapid circulation of money rather than an increase in the money material. I mentioned earlier that in 1890 the Bank of France put into circulation on current account 135 times as much as the amount deposited with it, while the German Reichsbank circulated 190 times as much as its deposits. It is rarely appreciated how incredibly small is the quantity of material with which money renders its services. The striking phenomenon that money disappears without trace on the outbreak of war or other catastrophes only means that there has been an interruption of its circulation, caused or intensified by the reluctance of individuals to part with their money even momentarily. In normal times the money stock seems to be larger than it actually is, because of the velocity of circulation – just as a glowing spark, rotated quickly in the dark, appears as a glowing circle, but dwindles again to a minute speck of material as soon as the movement ceases. This happens most violently in the case of debased money. For money belongs to that category of phenomena in which normal activity has determinate limits and extent, while

any deviation or malfunctioning causes vast and almost inconceivable damage. Typical examples are the powers of fire and water. Good money does not have so many side-effects as does base money, and since its use need not be so strictly regulated or supervised, it can circulate more easily and more smoothly than can bad money. The more precise the form in which money renders its services, the smaller is the quantity of money required and the more easily can its place be taken by a more rapid circulation. The increase in transactions can also be accomplished by diminishing the value of coins instead of augmenting the quantity of tangible money in circulation. The trend of coinage is generally from larger to smaller coins. One characteristic example is the English farthing (equal to 0.12 grammes of silver), which was for a long time the smallest coin; only from 1843 were half-farthings minted. Until that time all values below a farthing were excluded from money transactions, and any exchanges that involved values lying between two whole farthings were rendered difficult. A traveller from Abyssinia reported (1882) that trade was considerably hampered because only one coin, the Maria Theresa Taler of 1780, was accepted, and small coins were practically non-existent. If somebody wanted to buy barley worth half a *taler*, he was obliged to take other goods for the balance of his coin. On the other hand, trade was reported to be particularly easy in Borneo in the 1860s since the value of the *taler* corresponded with approximately 4,000 cowry shells and thus poor people had money for even the smallest quantities of goods. It is true that, as a result of the divisibility of the coin, free assistance was no longer given; the loans and mutual help that are the rule in primitive conditions disappear as soon as a money equivalent is available, and consequently demanded, for even the smallest service. But mutual aid, which is at first a social necessity and later a moral obligation or simple kindness, does not yet signify the possibility of a proper economy, any more than does its opposite, robbery. The offering of gifts develops into an economic system only when trade and its objects become reified. This subjective procedure – the exchange of gifts – is certainly of great value, even economic value, but it sets very narrow limits to the economy, and these can be removed only by measures that destroy the values; one such measure is the introduction of small coins. The dissolution of the substance of money into atoms, so to speak, considerably increases the volume of transactions; and by accelerating the circulation of money it increases, in effect, the quantity of money. In other words, the manner in which money functions can be a substitute for an increase in the quantity of money material.

Finally, some of the effects of money have a sense that is incongruous with the nature of the money material itself. It is one of the functions of money to concentrate, as well as to represent, the economic significance of objects in its own idiom. The unity of the sum of money that is paid for an object incorporates the values of all the elements of its uses, extending perhaps over a long period of

time, as well as the particular values of its spatially separate parts and the values of all the powers and substances that prepared, and finally ended in, money. A money price, no matter how many coins it includes, is still a unity. The complete interchangeability of its parts confines the meaning of money exclusively to its quantitative sum, and the parts form a total unity which scarcely exists elsewhere in practical life. If one says of an extremely valuable and complex object, for example a country estate, that it is worth half a million marks, then this sum, however many specific presuppositions and considerations it is based upon, concentrates the value of the property into a unitary concept, in just the same way as when a simple, unitary object is valued in terms of a unitary coin concept, for example that one hour of work is worth one mark. This can only be compared with the unity of a concept that brings together the essential characteristics from a number of individual instances. When I use the general term 'tree', for example, the characteristics that I abstract from very different manifestations in individual trees are not merely assembled side by side but are integrated in a unitary existence. It is the deeper significance of a concept that it is not simply an aggregate of characteristics but an ideal unity in which these characteristics encounter each other and are fused together in spite of their differences; and it is in this fashion that the money price brings together in a concentrated unity the numerous and wide-ranging economic meanings of objects. It may appear that the purely quantitative character of money would make this impossible; that one mark could never form a unity with a second mark, in the way that elements of an organic body or of a social group do, because any mutual relationship would be lacking and would remain always in mere juxtaposition. But this is not so in those cases where the sum of money expresses the value of an object. Half a million marks are, in themselves, only an aggregate of independent units, but as the value of a country estate they are a unitary symbol, the expression or equivalent of its value. They are not a mere aggregate of mark-units any more than a temperature of 20° is an aggregate of twenty particular degrees rather than a unitary state of heat. This corresponds with the above-mentioned ability of money to concentrate values. Money is thus one of the great cultural elements whose function it is to assemble great forces at a single point and so to overcome the passive and active opposition to our purposes by this concentration of energies. We should think of the machine in this context, not only for the obvious reason that machinery directs the forces towards our desired ends, but also because every improvement and speeding up of machinery imposes a greater intensity of work upon the worker. This is precisely the reason why progress in technology and the shortening of working time can and must go hand in hand, because the powers of nature and of man serve our purposes in a more concentrated form through improved machinery. We can observe the same cultural tendency at work in the growing pre-eminence of laws of nature in shaping our world view; compared with the preoccupation

with individual phenomena, or the fortuitousness and narrowness of crude empiricism, a law of nature represents a tremendous concentration of knowledge, summarizing in a brief formula the characteristics and movements of innumerable instances. Through laws of nature the mind compresses the vast array of spatial and temporal events into an intelligible system which contains, so to speak, the whole world.

In a quite different sphere, the replacement of hand weapons by firearms shows the same form of development; gunpowder provides an enormous concentration of power, which unleashes with a minimum of muscular effort an effect otherwise unattainable. It may also be that the significance and the differentiation of the individual personality in the historical development that takes place through the organizations of the clan, the family and the association are subject to the same principle. The active forces radiate more and more from individualized, externally limited representatives; they appear to be more concentrated than before, and the elements that decide the destiny of a group, that are distributed over the group as long as the individual is closely connected with it, are now concentrated in the individual himself. The right of self-determination of modern man could not have emerged if an increased quantity of means of activity had not been brought together in the narrow form of personal existence. There is no contradiction in asserting that, at the same time, the functions of those earlier close communities have been transferred, for the most part, to a much more extensive association, the State. From the point of view of its actual achievements, the life of the modern state, with its bureaucracy, its powers and its centralization, is much more intensive than that of small primitive communities. The modern state is based upon an extraordinary collectivization, integration and unification of all political forces; compared with the waste of energy in a nation that is subdivided into small-scale autonomous communities, the free and differentiated personality on the one hand and the modern state on the other represent an unrivalled concentration of forces. In this way the energy of society acquires a form that allows a minimum effort to achieve the maximum effect in face of each particular need. It is interesting to note that money not only conforms with this historical trend towards the concentration of forces by expressing the value of things in the most concise and condensed way; but in addition, it confirms this trend by a direct relationship with many of the instances that belong to quite different spheres. For example, in the early stages of firearms money provided the sinews of war (*pecunia nervus belli*); it wrested weapons from the knights and citizens and handed them over to the mercenary, making the possession and use of weapons a privilege of the owner of wealth. It is hardly necessary to demonstrate how closely the origins and progress of machine technology are connected with the monetary system. But I shall show later that the formation of primary groups which liberated the individual and, concurrently, the development of the State, were very closely related to the

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emergence of the monetary economy. We can see that the cultural trend towards a concentration of forces has many direct and indirect connections with the money form of values. All the implications of money for other parts of the cultural process result from its essential function of providing the most concise possible expression and the most intense representation of the economic value of things. The conservation and transfer of values have traditionally been regarded as the principal functions of money, but these are only the crude, secondary manifestations of its basic function. This function obviously has no inner relation to the material value of money, and indeed it becomes evident, through this function, that what is essential in money are the ideas incorporated in it, which point far beyond the significance of its material representatives. The greater the role of money becomes in concentrating values – and this occurs not simply through the increase in its quantity, but through an extension of its function to more and more objects and the consolidation of even more diverse values in this form – the less it will need to be tied to a material substance; for the mechanical sameness and rigidity of a substance will become increasingly inadequate compared with the abundance, mutability and variety of values which are projected upon and consolidated in, the concept of money.

This process might be called the growing spiritualization of money, since it is the essence of mental activity to bring unity out of diversity. In the sensible world, things exist side by side; only in the sphere of the mind are they integrated. The elements of a concept form a unity, as do subject and predicate in a proposition; there is no equivalent in the world of directly perceived phenomena. The organism, as the bridge between matter and mind, is the first step towards such an equivalent; interaction merges its elements and it strives constantly for an unattainable perfect unity. Only in the mind, however, does interaction become real integration. The interaction of exchange brings about a mental unity of values. The spatially extended substance is only a symbol of money, because the disconnectedness of what exists as substance contradicts the nature of money as an abstract representation of interaction. Only to the extent that the material element recedes does money become real money, that is a real integration and a point of unification of interacting elements of value, which only the mind can accomplish.

The increasing significance of money as value

If the functions of money can be exercised in part side by side with its material, and in part independently of the quantity of this material, and if therefore the value of money declines, then this does not mean that there is a general decline in the value of money, but only in determinate quantities of it. The two things do not coincide, and it might almost be said that the less valuable any given

quantity of money becomes, the more valuable is money generally. For only when money is cheap and any given amount of it less valuable can it have the wide diffusion, rapid circulation and general utility that assure its present role. The same relationship between a particular quantity of money and money in general prevails in the individual mind. It is just the spend-thrifts, who part most easily with money for specific purchases, who are at the same time most dependent on money in general. This is one of the meanings of the saying that one can despise money only if one possesses it in abundance. In peaceful times and places, where the tempo of economical life is slow and money circulates sluggishly, a given quantity of money is valued more highly than it is in the economic jungle of modern urban life. The rapid circulation of money induces habits of spending and acquisition; it makes a specific quantity of money psychologically less significant and valuable, while money in general becomes increasingly important because money matters now affect the individual more vitally than they do in a less agitated style of life. We are confronted here with a very common phenomenon; namely, that the total value of something increases to the same extent as the value of its individual parts declines. For example, the size and significance of a social group often becomes greater the less highly the lives and interests of its individual members are valued; the objective culture, the diversity and liveliness of its content attain their highest point through a division of labour that often condemns the individual representative and participant in this culture to a monotonous specialization, narrowness and stunted growth. The whole becomes more perfect and harmonious, the less the individual is a harmonious being. The same phenomenon appears in impersonal things. The charm and perfection of certain poems consists in the fact that the individual words have no independent meaning; they serve the dominant emotion or the artistic purpose of the whole, and all the varied associations that make up the full meaning of the word are excluded, except for those that bear upon the central theme of the poem. The whole poem is artistically more perfect to the extent that its individual elements lose their meaning. Finally, a more trivial example: the costs of production and the aesthetic value of a mosaic are higher the smaller are the single pieces; the colours of the whole are most striking and most subtle when the single piece occupies a small area and is in itself insignificant.

In the sphere of valuation it is not at all unusual for the values of the whole and the parts to develop in inverse ratio. This is not fortuitous, but expresses a causal connection. The fact that a given quantity of money is less valuable today than it was centuries ago is a direct pre-condition for the enormously increased significance of money in general. This condition itself in turn depends upon the increase in the functional as against the material value of money. It is apparent not only in the case of money in general, but also in various derivative phenomena. For example, the rate of interest was extremely high so long as there

were few interest-bearing loans, as a result of the Church's doctrine of usury and the general conditions of a barter economy. The rate of interest declined steadily with the growing importance of interest in economic life.

From a theoretical standpoint it would be a profound mistake to regard the change from substance to function as a process in which money becomes 'valueless', as though it were similar to depriving a man of his soul. This view misses the main point, namely that the functions into which money is dissolved are valuable in themselves, and that the value that money acquires is a supplementary value in the case of metallic money but the sole value in the case of token money. It is unquestionably a real value, like that of the locomotive whose value in providing transportation exceeds the value of the material from which it is constructed. It is true that money is able to function initially because it has intrinsic value, but subsequently it becomes valuable because it exercises these functions. To equate the value of money with the value of its material is like equating the value of a locomotive with the weight of iron that it contains plus the value of the labour employed in its construction. It may appear that this comparison does in fact disprove the assumption that there is a specific value originating from the function. The price of a locomotive (in this context we need not differentiate between value and price) in fact consists of the value of the material plus the value of the labour invested in it. The fact that a locomotive, like money, brings about the exchange of objects is only a reason for it to be valued at all; its actual value does not depend upon this fact. Similarly, the utility of countless other objects is responsible for their having a market price, but the actual level of market prices is determined by many other factors. Utility establishes, at most, a limit beyond which the price cannot rise, but it has no influence upon the actual price level. If this comparison is valid, then the value of money seems to be removed once again from its functions to its material. But the comparison is not valid in one decisive respect. The fact that a locomotive is priced according to the cost of materials and labour results entirely from the fact that anyone may build locomotives, and that consequently the concept itself, without which material and labour would never produce a locomotive, has no influence upon the formation of price. If there were a patent for the construction of locomotives, then its value, in addition to the value of materials and labour, would be reflected in a higher price. As soon as a concept becomes common property, its realizations in practice are no longer 'scarce', and only scarcity can give functional significance a special effect upon price. In the case of money there is something that corresponds with a patent, namely the governmental right of coinage, which forbids the realization of the concept of money by unauthorized persons. The 'scarcity' of money is based upon this governmental monopoly, to a limited extent when it consists of precious metals and totally when it is paper money or coinage. The monopoly of the government is formulated with characteristic rigour in a Chinese law which punishes

the counterfeiter who uses genuine precious metals more severely than one who uses inferior materials; the former enters into a more improper competition with the government and infringes its prerogative more profoundly. If everyone were allowed to mint coins their value would indeed decline to the value of the material plus labour, and the advantages of monopoly would be eliminated. Thus, ethnologists have observed that the power position of wealthy men and chiefs is easily undermined when everyone can produce money, as in the case of shell money. Conversely, anyone who possesses money shares to that extent in the privilege of the State to coin money, just as the buyer of a patented object shares in the patent of the inventor. The privilege of the central power to coin money, which guarantees the functioning of money as money, ensures that these functions contribute an additional value to the value of the material and labour embodied in money, or, where the latter values are lacking altogether, endow money with its value. One of the decrees of Roman law is very characteristic in this respect. From the time that minted coins replaced weighed quantities of copper as money, the Roman law insisted that these coins be accepted at their face value, regardless of their material value. This independence from the metal content required a further provision, namely that only these coins should be accepted as money, while all other coins should be treated as mere commodities. Only as a claim for this particular coin can an action for debt be pursued in monetary terms; and all other actions for debts have to be formulated, like commodity debts, in terms of real value, independently of their nominal value as money (*quanti ea res est*). This means that the value of other coins was not monetary but material, because the function of money was reserved for the legal coin. Thus, the legal coin acquired a value which other coins could acquire only through the material of which they were made, and this justified its independence from any intrinsic value. Just as a quart measure has economic value, not because it is the product of material and labour – for if it were not useful for some purpose outside itself no one would want it – but because it is used for measuring, so too money has value because it serves as a means of measurement and in other ways. The fact that this value can itself be expressed only in money makes it less easy to recognize than the value of a quart measure, which can be expressed in terms other than itself. The services of money determine its 'use value', which must find expression in its 'exchange value'; money is one of these objects whose 'utility value', which depends upon the government monopoly of coinage, includes its 'scarcity value' which this monopoly establishes. The theory of money as having a material value is opposed to the general trend of knowledge in which the meaning of things is transposed from their *terminus a quo* to their *terminus ad quem*. Money has value not on account of what it is, but on account of the ends that it serves; and although an original intrinsic value of money made possible its later functions, it acquires its value subsequently from these functions, and gains at a higher level what it had given up at an earlier stage.

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In the development that I have outlined, money tends towards a point at which, as a pure symbol, it is completely absorbed by its exchange and measuring functions. There are many parallels in the history of thought. Our original, untutored interest in phenomena usually comprehends them as undifferentiated wholes. They confront us as a unity of form and content, and our valuations are bound to the form because it is the form of this specific content, to the content because it is the content of this specific form. In higher stages of development these elements are separated and the function as pure form is appreciated in specific ways. The diverse contents of these forms are often treated as irrelevant. Thus, for instance, we appreciate the religious mood while being indifferent to the dogmatic content. We consider it valuable that this elevation, striving and appeasement of the soul, which is the universal element in the many different historical creeds, should exist. Similarly, an exhibition of strength often elicits a respect which is denied to its consequences. Thus, a more refined aesthetic interest turns increasingly towards what is pure art in a work of art, to the form of art in the broadest sense, and is increasingly indifferent towards the material of art; that is, towards its theme and towards the feeling that originally inspired it. The sublimation and objectification of such feelings is the aesthetic function in both the production and the consumption of art. In the same way, we value cognition as a formal function of the mind which reflects the external world, regardless of whether the objects and results of cognition are gratifying or distasteful, useful or merely ideal. This differentiation of value feelings has yet another important aspect. The evolution of the modern naturalistic spirit tends to dethrone universal concepts, and to emphasize singular instances as the only legitimate content of conceptions. In theory and in practice, the universal is treated as something purely abstract which acquires meaning only in its material embodiment, that is in tangible instances. In rising above these concrete instances one seems to enter a void. Yet the sense of the significance of universals, which reached its climax with Plato, has not altogether disappeared; and we should attain completely satisfying relation to the world only if every aspect of our world view reconciled the material reality of singular instances with the depth and scope of a formal universality. Historicism and a sociological world view are attempts to confirm universality and yet to deny its abstractness, to transcend the singular instance, to derive the singular from the general without sacrificing its material reality; for society is universal but not abstract. The valuation of functions as distinct from content has its place here. Function is universal in relation to the purpose that it serves. Religious sentiment is a universal by contrast with the content of a particular creed; cognition is universal as against any one of its particular objects; power is universal by contrast with the specific and varied problems to which it is always applied in the same way. All of these are forms and frameworks which comprehend a great variety of material. Money seems to participate in this trend when valuation becomes

independent of the material of money and is transferred to its function, which is universal and yet not abstract. The valuation, which at first concerned a particular functioning substance, becomes differentiated, and while the precious metal continues to be valued, its function, which goes beyond the particular substance with which it is associated, attains a specific value of its own. The form in which money exists for us is that of mediating exchanges and measuring values. A metal becomes money by assuming this form, just as ideas about the supernatural become religion when they are incorporated into the function of religious sentiment, and as the block of marble becomes a work of art when artistic creativity endows it with a form that is simply the expression in space of the artistic function. The refinement of the sense of the original dissolves the interfusion of function and allows each to develop as an independent value. It is true that the functional value of money still needs to be represented. The decisive point, however, is that its value no longer arises from what represents it; on the contrary, the latter is quite secondary, and its nature has no importance except on technical grounds which have nothing to do with the sense of value.

[15]

The Credit Theory of Money

A. Mitchell Innes

[EDITOR'S NOTE. – *So much has been written on the subject of 'money' that a scientific writer like Mr. Innes is often misunderstood. Many economists and college professors have differed with the statements made in his first paper, but it seems that none were able to disprove his position. Following this number there will appear a symposium of criticisms and replies to the first paper, and we cordially invite criticisms and replies to this his second paper.*]

The article which appeared in the May, 1913, number of this JOURNAL under the title 'What is Money?' was a summary exposition of the Credit Theory of money, as opposed to the Metallic Theory which has hitherto been held by nearly all historians and has formed the basis of the teaching of practically all economists on the subject of money.

Up to the time of Adam Smith, not only was money identified with the precious metals, but it was popularly held that they formed the only real wealth; and though it must not be thought that the popular delusion was held by all serious thinkers, still, to Adam Smith belongs the credit of having finally and for all time established the principle that wealth does not reside in the precious metals.

But when it came to the question of the nature of money, Adam Smith's vision failed him, as the contradictory nature of his statements attests. It could not have been otherwise. Even today accurate information as to the historical facts concerning money is none too accessible: in the day of Adam Smith, the material on which to found a correct theory of money was not available, even had he possessed the knowledge with which to use it. Steuart perceived that the monetary unit was not necessarily identified with the coinage, Mun realized that gold and silver were not the basis of foreign trade, Boisguillebert had boldly asserted that paper fulfilled all the functions which were performed by silver. But apart from a few half-formed ideas such as these, there was nothing which could guide Adam Smith in the attempt to solve the problems of this part of his Inquiry, and, having convinced himself of the truth of his main contention that wealth was not gold and silver, he was faced with two alternatives. Either money was not gold and silver, or it was not wealth, and he inevitably chose the latter alternative. Herein, however, Adam Smith came into conflict not with a popular delusion but with the realities of life as learnt from the universal experience of mankind. If money is not wealth, in the common acceptation of the word as meaning that mysterious 'purchasing power' which alone constitutes real riches, then the whole of human commerce is based on a fallacy. Smith's definition of money as being, not wealth, but the 'wheel which circulates wealth,' does not explain the facts which we see around us, the striving after money, the desire to accumulate money. If money were but a wheel, why

should we try to accumulate wheels. Why should a million wheels be of more use than one, or, if we are to regard money as all one wheel, why should a huge wheel serve better than a small one, or at any rate a moderate-sized one. The analogy is false.

Much has been written since the day of Adam Smith on the subject of money, and much useful investigation has been made, but we still hold to the old idea that gold and silver are the only real money and that all other forms of money are mere substitutes. The necessary result of this fundamental error is that the utmost confusion prevails in this branch of the science of political economy, as any one will see who cares to take the trouble to compare the chapters on 'Wealth,' 'Money,' 'Capital,' 'Interest,' 'Income' in the works of recognized authorities since Adam Smith. There is hardly a point on which any two are agreed.

How complete the divorce is between the experience of daily life and the teaching of the economists can be best seen by reading, for example, Marshall's chapter on capital, with its complicated divisions into national capital, social capital, personal capital, etc. Every banker and every commercial man knows that there is only one kind of capital, and that is money. Every commercial and financial transaction is based on the truth of this proposition, every balance sheet is made out in accordance with this well-established fact. And yet every economist bases his teaching on the hypothesis that capital is not money.

It is only when we understand and accept the credit theory, that we see how perfectly science harmonizes with the known facts of every day life.

Shortly, the Credit Theory is this: that a sale and purchase is the exchange of a commodity for a credit. From this main theory springs the sub-theory that the value of credit or money does not depend on the value of any metal or metals, but on the right which the creditor acquires to 'payment,' that is to say, to satisfaction for the credit, and on the obligation of the debtor to 'pay' his debt, and conversely on the right of the debtor to release himself from his debt by the tender of an equivalent debt owed by the creditor, and the obligation of the creditor to accept this tender in satisfaction of his credit.[1]

Such is the fundamental theory, but in practice it is not necessary for a debtor to acquire credits on the same person to whom he is debtor. We are all both buyers and sellers, so that we are all at the same time both debtors and creditors of each other, and by the wonderfully efficient machinery of the banks to which we sell our credits, and which thus become the clearing houses of commerce, the debts and credits of the whole community are centralized and set off against each other. In practice, therefore, any good credit will pay any debt.

Again in theory we create a debt every time we buy and acquire a credit every time we sell, but in practice this theory is also modified, at least in advanced commercial communities. When we are successful in business, we accumulate credits on a banker and we can then buy without creating new debts, by merely transferring to our sellers a part of our accumulated credits. Or again, if we have no accumulated credits at the moment when we wish to make a purchase, we can, instead of becoming the debtors of the person from whom we buy, arrange with our banker to 'borrow' a credit on his books, and can transfer this borrowed credit to our seller, on undertaking to hand over to the banker the same amount of credit (and something over) which we acquire when we, in our turn, become sellers. Then again, the government, the greatest buyer of commodities and services in the land, issues in payment of its purchases[2] vast quantities of small tokens which are called coins or notes, and which are redeemable by the mechanism of taxation, and these credits on the government we can use in the payment of small purchases in preference to giving credits on ourselves or transferring those on our bankers.

So numerous have these government tokens become in the last few centuries, and so universal their use in everyday life – far exceeding that of any other species of money – that we have come to associate them more especially with the word 'money.' But they have no more claim to the title than any other tokens or acknowledgements of debt. Every merchant who pays for a purchase with his bill, and every banker who issues his notes or authorises drafts to be drawn on him, issues money just as surely as does a government which issues drafts on the Treasury, or which puts its stamp on a piece of metal or a sheet of paper, and of all the false ideas current on the subject of money none is more harmful than that which attributes to the government the special function of monopolising the issues of money. If banks could not issue money, they could not carry on their business, and when the government puts obstacles in the way of the issue of certain forms of money, one of the results is to force the public to accustom itself to other and perhaps less convenient forms.

As can be clearly proved by a careful study of history, a dollar or a pound or any other monetary unit is not a fixed thing of known size and weight, and of ascertained value, nor did government money always hold the pre-eminent position which it today enjoys in most countries – not by any means.

In France not so long ago, not only were there many different monetary units, all called by the same name of *livre*, but these livres – or such of them as were used by the government – were again often classified into *forte monnaie* and *faible monnaie*, the government money being *faible*. This distinction implied that the government money was of less value than bank money, or, in technical language, was depreciated in terms of bank money, so that the bankers refused, in spite of the legal tender laws, to accept a *livre* of credit on the government as the equivalent of a *livre* of credit on a bank.

The kings and their councillors were often puzzled by this phenomenon, and the consequences which flowed from it. Time and again they issued money which they certainly believed to be 'forte,' and delared to be so by law, and yet soon after, they had to avow that in some mysterious manner, it had 'devonu faible,' become weak.

With the apparent exception of England, where the depreciation of government money, though considerable, was far less than on the continent, a similar situation was general throughout Europe; in countries in which there was a dominant bank, like Amsterdam, Hamburg and Venice, the higher standard being known as 'bank money,' and the lower standard as 'current money.' Out of this situation rose another interesting and important phenomenon:- while the wholesale trade, which dealt with the bankers followed the bank standard, the retail trade which dealt largely through the medium of the government coins, naturally followed more or less closely the government standard[3] and prices rose as that standard fell in value. In the German States, where there were literally hundreds of monetary standards, all called by the same name of *Mark*,[4] the history of money is particularly involved, and the fact that the retail trade always followed a lower standard than did the wholesale trade in the same place, has led historians to believe that the latter used as their standard a *Mark* weight of pure silver, while the retail trade used the *Mark* weight of the debased silver used in the coins. But this idea can be conclusively shown to be erroneous, and the 'mark of pfennigsilber' did not refer to the weight of the coins, but to the quantity of pfennigcoins (the only coins known in Germany during the greater part of the middle ages) required to make up a money mark.

As may well be imagined, much confusion usually prevailed in money matters, and the extreme difficulty of settling in what standard debts should be paid and contracts, especially as

regards rents should be fulfilled, often caused serious discontent. To remedy this the kings of France attempted, probably with little success, to introduce by legislation certain rules as to the standard which should be applied to the various cases which might arise.

We, who are accustomed to the piping times of peace and to long periods of prosperity and government stability hardly realize how unstable a thing any given monetary unit may be. When we in the United States hear of the fall in the value of the paper of some bank or the money of some foreign government and see it quoted at a discount in terms of the dollar, we are accustomed to think of the dollar as an invariable unit and of the depreciated money as being something which has departed in value from our invariable standard. But when we take the trouble to study history we find that the dollar of the American Government and the pound of the English Government have by no means always been the stable things we now imagine them to be. The English pound was in use in all the American colonies, and yet the pound of each differed in value from that of the others, and all the Colonial pounds differed from that of the mother country. In the early days of the American Union, the different official monies differed from the standard in use in business and were at a heavy discount in terms of the latter.

The notion that we all have today that the government coin is the one and only dollar and that all other forms of money are promises to pay that dollar is no longer tenable in the face of the clear historical evidence to the contrary. A government dollar is a promise to 'pay,' a promise to 'satisfy,' a promise to 'redeem,' just as all other money is. All forms of money are identical in their nature. It is hard to get the public to realize this fundamental principle, without a true understanding of which it is impossible to grasp any of the phenomena of money. Hard, too, is it to realize that in America today, there are in any given place many different dollars in use, for the fact is not so apparent in our days as it was in former times. Let us suppose that I take to my banker in, say, New Orleans, a number of sight drafts of the same nominal value, one on the Sub-Treasury, one on another well-known bank in the city, one on an obscure tradesman in the suburbs, one on a well-known bank in New York, and one on a reputable merchant in Chicago. For the draft on the Sub-Treasury and for that on the bank in the city, any banker will probably give me a credit for exactly the nominal value, but the others will all be exchanged at different prices. For the draft on the New York bank I might get more than the stated amount, for that of the New York merchant, I should probably get less, while for that on the obscure tradesman, my banker would probably give nothing without my endorsement, and even then I should receive less than the nominal amount. All these documents represent different dollars of debt, which the banker buys for whatever he thinks they may be worth to him. The banker whose dollars we buy, estimates all these other dollars in terms of his own. The dollar of a first class banker is the highest standard of credit that can be obtained generally speaking, though the standard of a first class banker in a city like London or New York may be worth to a provincial banker somewhat more than his own money. The dollar of government money in America is equal to that of bank money, because of the confidence which we have come to have in government credit, and it usually ranks in any given city slightly higher than does the money of a banker outside the city, not at all because it represents gold, but merely because the financial operations of the government are so extensive that government money is required everywhere for the discharge of taxes or other obligations to the government. Everybody who incurs a debt issues his own dollar, which may or may not be identical with the dollar of any one else's money. It is a little difficult to realize this curious fact, because in practice the only dollars which circulate are government dollars and bank dollars and, as both represent the highest and

most convenient form of credit, their relative value is much the same, though not always identical. This apparent stability of government money in our day obscures the phenomenon which was familiar to our forefathers.

The one essential condition to the stability of all money by whomsoever issued is, as I explained in the former article, that it should be redeemable at the proper time, not in pieces of metal, but in credit. A credit redeems a debt and nothing else does, unless in virtue of a special statute or a particular contract.

The main obstacle to the adoption of a truer view of the nature of money is the difficulty of persuading the public that 'things are not what they seem,' that what appears to be the simple and obvious explanation of everyday phenomena is incompatible with ascertainable, demonstrable facts – to make the public realize, as it were, that while they believe themselves to be watching the sun's progress round the earth, they are really watching the progress of the earth round the sun. It is hard to disbelieve the evidence of our senses.

We see a law which establishes in the United States a 'standard dollar' of a definite weight of gold of a certain fineness; we see a law making the acceptance of these coins in payment of debt obligatory on the creditor – a law which is cheerfully obeyed without question; we see all commercial transactions carried on in dollars; and finally we everywhere see coins (or equivalent notes) called dollars or multiples or fractions thereof, by means of which innumerable purchases are made and debts settled. Seeing all these things, what more natural than to believe that, when the Law declared a certain coin to be the Standard Dollar, it really became so; that, when we pronounce the word 'dollar' we refer to this standard coin, that when we do our commercial transactions we do them, theoretically at least, in these coins with which we are so familiar. What more obvious that when we give or take a 'promise to pay' so many dollars, we mean thereby a promise to pay golden coins or their equivalent.

Suddenly we are told that our cherished beliefs are erroneous, that the Law has no power to create a standard dollar, that, when we buy and sell, the standard which we use is not a piece of gold, but something abstract and intangible, that when we 'promise to pay,' we do not undertake to pay gold coins, but that we merely undertake to cancel our debt by an equivalent credit expressed in terms of our abstract, intangible standard; that a government coin is a 'promise to pay,' just like a private bill or note. What wonder if the teacher of the novel doctrine is viewed with suspicion? What wonder if the public refuses to be at once convinced that the earth revolves round the sun?

So it is, however. The eye has never seen, nor the hand touched a dollar. All that we can touch or see is a promise to pay or satisfy a debt due for an amount called a dollar. That which we handle may be called a dollar certificate or a dollar note or a dollar coin; it may bear words promising to pay a dollar or promisiug to exchange it for a dollar coin of gold or silver, or it may merely bear the word dollar, or, as in the case of the English sovereign, worth a pound, it may bear no inscription at all, but merely a king's head. What is stamped on the face of a coin or printed on the face of a note matters not at all; what does matter, and this is the only thing that matters is: What is the obligation which the issuer of that coin or note really undertakes, and is he able to fulfill that promise, whatever it may be?

The theory of an abstract standard is not so extraordinary as it at first appears, and it presents no difficulty to those scientific men with whom I have discussed the theory. All our measures are the same. No one has ever seen an ounce or a foot or an hour. A foot is the distance between two fixed points, but neither the distance nor the points have a corporeal existence. We divide,

as it were, infinite distance or space into arbitrary parts, and devise more or less accurate implements for measuring such parts when applied to things having a corporeal existence. Weight is the force of gravity as demonstrated with reference to the objects around us, and we measure it by comparing the effect of this force on any given objects with that exerted on another known object. But at best, this measure is but an approximation, because the force is not exerted everywhere equally.

Our measure of time is a thing to which no concrete standard can be applied, and an hour can never be reckoned with perfect accuracy. In countries where solar time is used, the hour is the twenty-fourth part of the time reckoned from sunset to sunset, and the standard is therefore of the roughest. But because the people who calculate thus live in countries where the difference between the length of a day in summer and in winter is not so great as it is further north, they feel no inconvenience from this inaccuracy, and indeed they do not seem to be aware of it – so strong is the force of habit.

Credit and debt are abstract ideas, and we could not, if we would, measure them by the standard of any tangible thing. We divide, as it were, infinite credit and debt into arbitrary parts called a dollar or a pound, and long habit makes us think of these measures as something fixed and accurate; whereas, as a matter of fact, they are peculiarly liable to fluctuation.

Now there is only one test to which monetary theories can be subjected, and which they must pass, and that is the test of history. Nothing but history can confirm the accuracy of our reasoning, and if our theory cannot stand the test of history, then there is no truth in it. It is no use to appeal to the evidence of our senses, it is useless to cite laws in support of a theory. A law is not a scientific truth. The law may assert that a certain piece of metal is a standard dollar, but that does not make it so. The law might assert that the sun revolved round the earth, but that would not influence the forces of nature.

Like causes produce like effects, and if governments had been able to create standard coins having a fixed value in terms of the monetary unit, the monetary history of the world must have been different from what it has been. While modern historians deplore the wickedness of medieval monarchs who brought all sorts of evils on their people by their unprincipled debasements of the coinage, the kings themselves, who should have been pretty good judges, attributed their misfortunes to the wickedness of their subjects, impelled by lust of gain to clip and file the coins, and to force the precious metals above their official, or as the royal documents said, their 'proper value' – and to clip the coins, and to offer or take the coins at any but their official value were crimes for which severe penalties were enacted.

The rise of the value of the gold *ecus* of France and the gold guineas of England, the latter popularly valued as high as 80 shillings though officially issued at 20 shillings may with some plausibility be accounted for on the theory that silver not gold was the 'standard of value,' and that it is perfectly natural that gold might vary in terms of silver, as much as any other commodity. But how account for the fact that the 'gros tournois,' a coin of good silver, constantly rose in value in spite of all the kings could do to prevent it, and in spite of the fact that it was being progressively reduced in weight. How account for the fact that, when in the fifteenth century, the gulden became one of the most used of the monetary units of Germany, the gold gulden coin (there was no silver coin of that name) became of more value than the gulden of money, as used in commerce. How, above all, account for the fact that while, as I have said, the guinea rose in terms of shillings, so also did the shillings themselves. The full weight shilling of William III, as it issued from the mint – for William III would never have been guilty of

debasing the coinage – was worth more than the shilling of commerce, and was snapped up by dealers and exported to Holland. 'Ah, but,' say the critics, 'you have forgotten that all the shillings in circulation were clipped and filled, till there was not a full weight coin in the country, never had the coinage been in so deplorable a condition.' But if it is admitted that the rise of the value of the gold coins and the full weight silver coins was due to the debasement of the coins through clipping, then it has to be admitted that the clipped coins must have been the standard of value and not the full-weight coins as issued by the government. But what, then, becomes of the theory that the standard is fixed by government through its coinage. And if the standard was not fixed through the official coinage, as it certainly was not, who fixed the amount of metal which was to be called a shilling? The merchants? They certainly did not. On the contrary, they appealed to parliament for protection against the evil-doers who for their profit exported the full-weight silver coins. Was it those who secretly clipped the good coins? If so, the power of these evil-doers over the monetary standard exceeded the combined power of king and parliament and the great body of the merchants. The idea is too absurd for discussion. Besides the clipped shillings were not a standard; the price at which they should be given and taken was a matter of haggling between the buyer and the seller, and often gave rise to great difficulty. Indeed, just as happened frequently during the middle ages, no one knew for certain what was the value of the coins in his pocket. 'But,' say the triumphant critics, 'you will not deny that the great recoinage act of 1696, which called in the damaged coins and at great expense to the government, exchanged them for a whole new issue of full weight coins, resulted in the re-establishment of the value of the shilling. You will surely not deny the rise of the value of our money was the direct result of this beneficent measure.' And the critic points to the unanimous verdict of historians. It is true that all historians ascribe the fall in the value of the shilling to the debased condition of the coinage and its rise to the recoinage act. But in this they only follow Macaulay, whose history has been characterized by a wit as the greatest work of fiction in the English language. Certainly he had made no special study of the problems of money.

Let as then look at the facts a little more closely.

It is not King Jean or King Philippe or Edward or Henry who have been the depreciators of money, but King War, the great creator of debts, helped by his lieutenants, plague, murrain and ruined crops – whatever, in fact, prevents debts from being punctually discharged. It is not recoinage acts which have been the restorers of the value of money, but Peace, the great creator of credits, and upon the invariable truth of this statement the credit theory of money must largely depend. Now, for seven years – from 1690 to 1697 – the country had been engaged in the most costly war ever known to English history up to that time. The armies of the allies had to be maintained largely by English subsidies, and Parliament, feeling its newly acquired strength, and as unable as the rest of the country to appreciate the character of the great Dutchman who devoted his life to their service, doled out supplies with a stingy hand. At the same time a series of disastrously wet and cold seasons, which the Jacobites attributed to the curse of God on the Usurper, did great damage to agriculture. The customs dues fell to half, and the people could not pay their taxes. The country was over head and ears in debt.

Now observe. In 1694 the combatants were already exhausted, and negotiations for peace were unsuccessfully started. Throughout 1695, the war languished, and it was evident that peace was absolutely necessary. In 1696 war was practically over, and in 1697 peace was signed. The floating debt was funded through the agency of the newly founded Bank of England

and foreign commerce by means of which credits in foreign countries was acquired, was once again able to expand. These three causes are amply sufficient to account for the restoration of the value of English money, and had there been any one at that time who understood the nature of money, he could have predicted with absolute certainty the disastrous effect that the creation of a huge floating debt would have on the value of money and could have foretold the healing effect of the peace and the funding of the debt and the return of agricultural prosperity. He could have saved the government the wholly unnecessary expense (small, however, when compared with the total indebtedness) of the recoinage act. Far from doing anything to alleviate the situation, the Act intensified the crisis, and it was in spite of the Act, not because of it, that the finances of the country gradually returned to a normal condition.

I must here turn aside for a moment to explain the nature of a funding of debt. I said in the former article : 'Hence it follows that a man is only solvent if he has *immediately available* credits at least equal to the amounts of his debts *immediately due and presented for payment.* If therefore the sum of his immediate debts exceeds the sum of his immediate credits, the real value of these debts to his creditors will fall to an amount which will make them equal to the amount of his credits.' The same thing of course applies to the indebtedness of a country.

The debts which count in the depreciation of the monetary unit are those which are contracted without any provision for their payment and which are either payable at sight as in the case of currency notes or payable at short terms and have to be constantly renewed for want of credits with which to cancel them. William's war debt was incurred for the maintenance of the English armies and for the payment of the subsidies with which he had fed the allies. In 1694 the association of rich British merchants calling themselves the Bank of England was formed for the express purpose of providing money to pay the war expenses. They did not supply him with gold in large quantities, but with immediately available credits. That is to say the merchants who possessed or could command large credits both at home and abroad, undertook to cancel with their credits the debts incurred by the government, and at the same time undertook not to present for payment the credits which they thus acquired on the government, on condition of the government paying to them an annual interest. This is what is meant by funding a debt or raising a loan. The immediate floating debt of the government is cancelled, so far as the government is concerned, and ceases consequently to affect the value of the monetary unit. In place of the load of debt clamoring for payment, there is only the interest on the debt, probably not more than five or six per cent of the capital, an amount which under normal circumstances a country has no difficulty in meeting.

I have dwelt on the financial situation of 1696 for the reason that it exposes better than any other the case with which I am acquainted the fallacies of the arguments of the upholders of the theory of a metallic standard. To them the standard is a little piece of metal, and so long as some one (any one apparently) does not reduce its size or mix it with dross or clip bits out of it, it must remain invariable, unless, indeed, the government gives forced currency to its paper notes, which are held by economists to be promises to pay in the standard metal, and which, therefore, it is maintained, fall if the promise cannot be redeemed.

Now in the case under examination it cannot be argued, as did the Bullion Committee of 1810 that the fall in the value of the pound was due to excessive issue of Bank of England notes, because, the Bank having just been started, there can have been no great circulation of notes. Nor can it be attributed to a forced currency of government notes, as in the case of the American war of independence or the civil war, because in this instance there was no government

paper money. And consequently, the facts of the economic situation being ignored, it is attributed to the clipping of the coinage.

Those who glibly talk of the arbitrary depreciation of the monetary unit through manipulations of the coinage do not realize how difficult a thing it is to carry through any change of a standard measure to which a people has been accustomed by long use. Even when the government money has become permanently depreciated and fixed at a lower level, bankers have, as history shows, been slow to adopt the new standard.

Even the strongest governments hesitate to undertake the difficult task of changing the existing system of weights and measures. Every scientific man in England and America is in favor of introducing the metric system of weights and measures, and (in England) a decimal system of money, and the change has been preached and advocated for many years, but so far without success. No, to ask us to believe that the coin clippers wielded a power which enabled them to change the standard of our money is to overtax our credulity. Why, even smaller changes than those mentioned have been attended with great difficulties. Though in England weights and measures have been standardized by law, local measures, local standards still linger on and are in daily use. It required the great revolution in France to change their standards and retail trade in the country is still calculated in sous, instead of the official franc and centime. In Egypt the peasant still divides his piastre into forty faddahs, though the faddah has been officially dead these many years and the decimal millieme is the official change.

This slight sketch of the Credit Theory of money which I was able to give in the space allotted to me in the May, 1913, number of the JOURNAL and the summary indication in that and the present number of the evidence in support of that theory, which the student of the paths and byways of history may expect to find – this must suffice for the present. I do not expect that conversion to the newer doctrine will be rapid, but the more earnestly the problems of money and currency and banking are studied, the more sure it is that the metallic theory of money must before many years be abandoned. There are literally none of these problems which can be explained on the old theory. There is literally no evidence which, when weighed and sifted, supports the theory of a metallic standard. The fact that the monetary unit is a thing distinct from the coinage is no new discovery. It was pointed out by a distinguished economist, Sir James Steuart, who wrote before the days of Adam Smith, and among modern writers Jevons calls attention to the phenomenon. The frequent use of the expressions 'money of account' and 'ideal money' in older writings shows that the idea was familiar to many. As the middle ages wore on, and the increase of government expenditure brought about a great increase in the quantity of coins, money became, naturally enough, identified with the coinage, which circulated in abundance when trade was good, and which disappeared in times of distress when there was little to buy and sell. Hence arose the popular delusion that abundance of coins meant prosperity and the want of them was the cause of poverty. When the kings tried to supply the want by fresh coinages, the new pieces disappeared in bad times like the old, and the phenomenon could only be accounted for on the assumption that evilly-disposed persons exported them, melted them or hoarded them for their private gain, and heavy penalties were decreed against the criminals, who by their act plunged the country into poverty. No doubt a certain amount of exporting and melting took place, when the coins of high intrinsic value (a very small proportion of the whole), the *monnaie blanche*, as it was called in France, rose above its official value, but the absurdity of the popular outcry for more coins was well exposed by that fine old economist, the Sieur de Boisguillebert, who pointed out that the apparent abundance and scarcity of coins

was deceptive, and that the amount of coinage was in both cases the same, the only difference being that while trade was brisk, comparatively few coins by their rapid circulation appeared to be many; while in days of financial distress, when trade was, as not infrequently happened in the middle ages, almost at a standstill, coins seemed to be scarce.

The present writer is not the first to enunciate the Credit Theory of money. This distinction belongs to that remarkable economist H.D. Macleod. Many writers have, of course, maintained that certain credit instruments must be included in the term 'money,' but Macleod, almost the only economist known to me who has scientifically treated of banking and credit,[5] alone saw that money was to be identified with credit, and these articles are but a more consistent and logical development of his teaching. Macleod wrote in advance of his time and the want of accurate historical knowledge prevented his realizing that credit was more ancient than the earliest use of metal coins. His ideas therefore never entirely clarified themselves, and he was unable to formulate the basic theory that a sale and purchase is the exchange of a commodity for a credit and not for a piece of metal or any other tangible property. In that theory lies the essence of the whole science of money.

But even when we have grasped this truth there remain obscurities which in the present state of our knowledge cannot be entirely eliminated.

What *is* a monetary unit? What is a dollar?

We do not know. All we do know for certain – and I wish to reiterate and emphasize the fact that on this point the evidence which in these articles I have only been able briefly to indicate, is clear and conclusive – all, I say, that we do know is that the dollar is a measure of the value of all commodities, but is not itself a commodity, nor can it be embodied in any commodiy. It is intangible, immaterial, abstract. It is a measure in terms of credit and debt. Under normal circumstances, it appears to have the power of maintaining its accuracy as a measure over long periods. Under other circumstances it loses this power with great rapidity. It is easily depreciated by excessive indebtedness, and once this depreciation has become confirmed, it seems exceedingly difficult and perhaps impossible for it to regain its previous position. The depreciation (or part of it) appears to be permanently acquired; though there is a difference in this respect between depreciation in terms of foreign money and a depreciation of the purchasing price of the credit unit in its own country.

But while the monetary unit may depreciate, it never seems to appreciate. A general rise of prices at times rapid and at times slow is the common feature of all financial history; and while a rapid rise may be followed by a fall, the fall seems to be nothing more than a return to a state of equilibrium. I doubt whether there are any instances of a fall to a price lower than that which prevailed before the rise, and anything approaching a persistent fall in prices, denoting a continuous rise of the value of money, appears to be unknown.

That which maintains the steadiness of the monetary unit (in so far as it is steady) appears to be what Adam Smith calls the 'higgling of the market,' the tug of war which is constantly going on between buyers and sellers, the former to pay as little of the precious thing as possible, the latter to acquire as much as possible. Under perfectly normal conditions, that is to say when commerce is carried on without any violent disturbances, from whatever cause, these two forces are probably well-balanced, their strength is equal, and neither can obtain any material advantage over the other. In the quiet seclusion of those peaceful countries which pursue the even tenor of their way uninfluenced by the wars or the material development of more strenuous lands, prices seem to maintain a remarkable regularity for long periods.

The most interesting practical application of the credit theory of money will, I think, be found in the consideration of the relation between the currency system known as the gold standard and the rise of prices. Several economists of the present day feel that such a relation exists, and explain it on the theory of the depreciation of the value of gold owing to the operation of the law of supply and demand, a law, however, which can hardly be regarded as applicable to the case.

We know how it works in ordinary commerce. If the production of a commodity increases at a rate greater than the demand, dealers, finding their stock becoming unduly large, lower the price in order to find a market for the surplus. The lowering of the price is a conscious act.

Not so, however, in the case of gold, the price of which, estimated in money, is invariable; and we must seek another reason. It will, I think, be found in the theory here advanced that the value of a credit on any debtor depends on an equation between the amount of debt immediately payable by the debtor credit and the amount of credits which he has immediately available for the cancellation of his debts.

Whenever we see in a country signs of a continuous fall in the value of the credit unit, we shall, if we look carefully, find that it is due to excessive indebtedness.

We have seen in the Middle Ages how prices rose owing to the failure of consecutive governments throughout Europe to observe the law of the equation of debts and credits. The value of the money unit fell owing to the constant excess of government indebtedness over the credits that could be squeezed by taxation out of a people impoverished by the ravages of war and the plagues and famines and murrains which afflicted them.

If I am not mistaken, we shall find at the present day a precisely similar result of far different causes. We shall find, partly as a result of our currency systems, nations, governments, bankers, all combining to incur immediate liabilities greatly in excess of the credits available to meet them.

We imagine that, by maintaining gold at a fixed price, we are keeping up the value of our monetary unit, while, in fact, we are doing just the contrary. The longer we maintain gold at its present price, while the metal continues to be as plentiful as it now is the more we depreciate our money.

Let me try to make this clear.

In the previous article I explained (pp. 398–402) the nature of a coin or certificate and how they acquired their value by taxation. It is essential to have that explanation clearly in mind if what follows is to be intelligible. To begin with it will be well to amplify that explanation, and to present the problem in a rather different aspect.

We are accustomed to consider the issue of money as a precious blessing, and taxation as a burden which is apt to become well nigh intolerable. But this is the reverse of the truth. It is the issue of money which is the burden and the taxation which is the blessing. Every time a coin or certificate is issued a solemn obligation is laid on the people of the country. A credit on the public treasury is opened, a public debt incurred. It is true that a coin does not purport to convey an obligation, there is no law which imposes an obligation, and the fact is not generally recognized. It is nevertheless the simple truth. A credit, it cannot be too often or too emphatically stated, is a right to 'satisfaction.' This right depends on no statute, but on common or customary law. It is inherent in the very nature of credit throughout the world. It is credit. The parties can, of course, agree between themselves as to the form which that satisfaction shall take, but there is one form which requires no negotiation or agreement, the right of the holder of the credit

(the creditor) to hand back to the issuer of the debt (the debtor) the latter's acknowledgement or obligation, when the former in his turn becomes debtor and the latter creditor, and thus to cancel the two debts and the two credits. A is debtor to B and gives his obligation or acknowledgement of debt. Shortly afterwards, B becomes debtor to A and hands back the acknowledgement. The debt of A to B and of B to A, the credit of B on A and that of A on B are thereby cancelled.

Nothing else but a credit gives this common law right, and consequently every document or instrument, in whatever form or of whatever material, which gives this right of cancelling a debt by returning it to the issuer is a credit document, an acknowledgement of debt, an 'instrument of credit.'

Now a government coin (and therefore also a government note or certificate which represents a coin) confers this right on the holder, and there is no other essentially necessary right which is attached to it. The holder of a coin or certificate has the absolute right to pay any debt due to the government by tendering that coin or certificate, and it is this right and nothing else which gives them their value. It is immaterial whether or not the right is conveyed by statute, or even whether there may be a statute law defining the nature of a coin or certificate otherwise. Legal definitions cannot alter the fundamental nature of a financial transaction.

It matters not at all what object the government has in view in issuing their tokens, whether its object is to pay for a service rendered or to supply the 'medium of exchange.' What the government thinks it is doing when it gives coins in exchange for bullion, or what name the law gives to the operation – all this is of no consequence. What is of consequence is the result of what they are doing, and this, as I have said, is that within every coin issued a burden or charge or obligation or debt is laid on the community in favor of certain individuals, and it can only be wiped out by taxation.

Whenever a tax is imposed, each taxpayer becomes responsible for the redemption of a small part of the debt which the government has contracted by its issues of money, whether coins, certificates, notes, drafts on the treasury, or by whatever name this money is called. He has to acquire his portion of the debt from some holder of a coin or certificate or other form of government money, and present it to the Treasury in liquidation of his legal debt. He has to redeem or cancel that portion of the debt. As a matter of fact most of the government money finds its way to the banks, and we pay our tax by a cheque on our banker, who hands over to the treasury the coins or notes or certificates in exchange for the cheque and debits our account.

This, then – the redemption of government debt by taxation – is the basic law of coinage and of any issue of government 'money' in whatever form. It has lain forgotten for centuries, and instead of it we have developed the notion that somehow the metallic character of the coin is the really important thing whereas in fact it has no direct importance. We have grown so accustomed to paying taxes or any other debt with coins, that we have come to consider it as a sort of natural right to do so. We have come to consider coins as 'money' par excellence, and the matter of which they are composed as in some mysterious way the embodiment of wealth. The more coins there are in circulation, the more 'money' there is, and therefore the richer we are.

The fact, however, is that the more government money there is in circulation, the poorer we are. Of all the principles which we may learn from the credit theory, none is more important than this, and until we have thoroughly digested it we are not in a position to enact sound currency laws.

One may imagine the critics saying: 'There may be something in what you say. It is rather curious that the government should take gold coins in payment of a debt and should not undertake to accept any other commodity. Perhaps, as you say, the stamping of the coin does give it a special character, perhaps the issue of a coin may be regarded as the creation of an obligation, however contrary the theory may be to what I have hitherto been taught. Still, I cannot altogether see things in your way. In any case, whatever may be the effect of the stamping of a coin, it does not alter its value in any way. When I present you with a sovereign or a $5 piece, I really pay my debt to you, because I am giving you something that is intrinsically worth that amount. You can melt it and sell it again for the same amount, if you wish. What then is the use of making such a point of the obligation which is undertaken by the issue of a coin?'

A similar criticism was made in somewhat different language in a review of my previous article. The author wrote as follows:

> Mr. Innes says that modern governments have conspired to raise the price of gold, but in this he errs. No legislation of the present time fixes the price of gold or attempts to do so. England has enacted that a certain weight and fineness of gold shall be called a pound, the US that a certain weight and fineness shall be called a dollar. But a pound or dollar are mere abstract names and have no connection or relation with value or price. * * A like quantity of gold by any other name will have the same value – as, for instance, bullion.

Now let as see on whose side the error lies. If it were true, as my critic says, and as many economists hold, that all the governments of the world do is to enact that certain weight of gold shall be called a pound or a dollar, it is certain that such a law would produce no effect on the market price of gold. No one would pay any attention to so futile a law. But, as I have already said, the government invests a certain weight of gold when bearing the government stamp with extraordinary power, that of settling debt to the amount of a pound or a dollar. This is a very different thing from merely calling it by a certain name. As history however conclusively proves, even this would not suffice to fix the price of gold in terms of the monetary unit if the government confined itself to buying only so much gold as was required for the purpose of the coinage. But the English government has taken a far more important step than this. It has done what medieval governments never did; it has bound the Bank of England (which is really a government department of a rather peculiar kind) to buy all gold offered to it at the uniform price of £3 17*s* 9*d* an ounce, and to sell it again at £3 17*s* 10½*d* an ounce. In other words, the bank is bound to give for an ounce of gold a credit on its books for £3 17*s* 9*d*, and to give gold for credit, at a small profit of 1½*d* an ounce. If this is not fixing the price of gold, words have no meaning.

The United States government achieves the same result by a somewhat different method.

The Government of the United States does not profess to buy gold. All it professes to do is to accept it on deposit, make it into bits called standard dollars, stamp them with a guarantee of weight and purity, and hand them back to the owner, or, if he wishes it, he will be given a certificate or certificates in place of the gold. Now I again wish to emphasize the fact that it is not what the government professes to do that matters, but what it actually does. The fact that the law regards this transaction as a deposit does not make it so. The transaction is not really a deposit, but a sale and purchase. In exchange for each ounce of gold the owner receives in *money*. If the gold were merely taken on deposit, or for the purpose of stamping it without giving to the owner of the stamped metal any special right to pay his taxes with his gold, that is

to say without investing the gold with the character of an obligation, without making it into money, the transaction would be a deposit, but not otherwise: and the fact that the law holds the transaction to be a deposit, merely shows that the legislature acted under the influence of erroneous views on the subject of money. It could hardly have done otherwise, because the whole world had for long been a slave to the most absurd notions on the subject, and indeed England was one of the few countries in which the word *silver*[6] did not come to mean money. By the seventeenth century the idea that gold and silver were subject to the ordinary laws of purchase and sale had become, if not extinct, at least so beclouded as to be as good as dead. Gold and silver[7] did not seem to be the object of sale and purchase, being themselves, it was supposed, that for which all commodities were sold. It is only by keeping before our mind's eye a truer view of the nature of money as deduced from known facts that we can realize the real effect to the government's action. Let me give an illustration of the position of a modern government.

When a farmer disposes of his corn to a merchant in return for money, he is said to have sold it. He may have received bank notes, or a cheque or coin or the merchant's bill or note – it matters not which. The transaction is a true sale. Now let us suppose that the farmer took the merchant's note for the value of the corn and that the latter, instead of selling the corn for his profit, declared that it was not his intention to buy the corn, but merely to keep it on deposit for the owner, and that he would keep it till the owner or the holder of a bill presented it to be exchanged for the corn again. This situation of the merchant would be precisely similar to that of the Government today with respect to the purchase of gold. The farmer would deposit the money with his banker and would get a credit on the banker in exchange for it. There, so far as the farmer was concerned, the matter would end. The note would eventually find its way to the merchant's banker and would be set off against his credit in the bank books. If he was in a very large way of business, like the government, and great quantities of his notes were on the market, there would be no difficulty in getting the corn in exchange for a note, if any one wanted it at the price at which the merchant had received it. If no one wanted it at that price, it would remain on the merchant's hands and he would lose the whole price paid. It does not in the least matter to the farmer what view the merchant takes of the transaction. He has disposed of his corn, and never wants to see it again. He has got for it what he wanted, namely money, that is all he cares about. The same is true with reference to the relations between the government and the gold miners or gold dealers. They dispose of their gold to the mint and in return they get *money*, and that is all they care about. What the government does with the gold, or what view they take of the transaction is immaterial.

Now if we can conceive our merchant acting as the government does, he might, instead of keeping the corn and issuing his notes or bill, sew the corn into sacks of various sizes, print on the sacks the amount of money he had paid for the corn contained in them and then hand them back to the farmer. These sacks would then be money, and if such awkward money could be used they would circulate just as the notes would and just as our coins do. Debtors to the merchant would have the option of handing them back to him intact in payment of their debts or, if they wished to do so, they could use the corn, and the merchant's obligation would then be automatically cancelled by their action. The only difference between the sack of corn and the gold coin is one of convenience, the one being large and unwieldy, the other small and portable.

Now what consideration would influence the holder of the sack of corn in his decision – whether to use the corn or keep the sack intact and pay his debt with it? Obviously he would be

influenced by the market value of the corn as compared with the amount of debt which could be paid with the obligation. If the market price of corn were superior to the amount of the debt, it would be at once used as corn. If the market price were equal to the debt, part would be used as corn and part would, perhaps, for a time, be used in payment of debt; but all would before long find its way to the mill. If, however, the amount of the debt, as printed on the sack, were superior to the market value of the corn, then the sack would be kept intact and it would be used for paying debt.

It would thus be easy to see from the number of sacks in circulation whether our merchant was buying corn at or above its market price. If he continued buying, and the sacks in circulation continued to increase, it would be a sure sign that they were worth more as money than they were as corn; and, when the time came, as it would inevitably come – be he never so rich – when he would no longer be able to provide credits for the redemption of the sacks, their value would fall by the amount which he had paid for the corn in excess of the price at which the market could absorb it for consumption.

This is one of the most important corollaries to the credit theory. A coin will only remain in circulation for any length of time if its nominal value exceeds the intrinsic value of the metal of which it is composed, and this is true not only theoretically but historically. Indeed, it is so self-evident that it might be received as axiomatic, and would be, had we not involved ourselves in a maze of false ideas.

To apply this corollary to a country like America, where little gold circulates and the bulk is held by the Treasury against certificates, it may be stated thus:– Gold cannot be held for any length of time against outstanding certificates, without being redeemed, unless the official price at which it is taken exceeds the market value of the gold. Thus stated, the principle cannot be submitted to the test of history, because the hoarding of gold through government action is of modern growth, and since the practice has been adopted, the price has been ruled by law, and we do not know what the market price is. But once we accept the principle (which can be proved historically beyond any reasonable doubt) that the monetary unit is not a weight of metal, and that the word 'price' applies equally to gold as to any other commodity, it is obvious that gold against which there are outstanding certificates could no more be held, if required by the market, than can corn or pig-iron against which there are outstanding warehouse certificates. The very expression 'market price' means the price at which the 'market' will absorb the whole available supply; and it is evident that if the market were calling for gold at the current price, the certificates would soon be presented for redemption. There is at present stored in the United States Treasury nearly a billion dollars' worth of gold held against outstanding certificates, and the stock is increasing at the rate of about a hundred million dollars a year. It is obvious that if the official price of gold, the 'mint price' as it is called, were not higher than its market value as a commodity, such a situation could no more arise than it could with any other commodity. It is just as if the government bought all the eggs in the country at a given price and kept them in cold storage rather than sell them at a lower price. Of course, a certain amount of the gold is withdrawn for consumption, because it cannot be bought for less than the government price, but, if gold were left to be governed by the ordinary laws of commerce, there can be no question but that the price would fall, to the great loss of shareholders in gold mines and the great benefit of the rest of humanity.

Hence I said in my last article that the governments of the world were holding up gold at a prohibitive price.

If we believed in eggs as we now believe in gold, eggs might now be selling at a dollar a piece. They would pour into New York by the shipload from all parts of the globe. Their arrival would be hailed with delight by the financial papers, and the Secretary of the Treasury, in his annual reports, would express his satisfaction at this visible sign of the sound financial condition of the country. Visitors would troop through the icy corridors of the great government vaults where the precious objects were stored, and would gaze with admiration on the prodigious wealth of the United States. Custard would be a delicacy for the tables of the rich.

Now let us return for a moment to our eccentric corn merchant, and see whether the peculiarity of his situation can throw any more light on the financial position of the United States. We shall, I think, find that it throws a flood of light on the problem of the rise of prices, a problem so grave that no statesman of today can afford to ignore a theory which explains simply and naturally how the phenomenon arises, and indicates the means of arresting its progress.

If our merchant persisted in his singular method of business and paid a higher price for the corn than other merchants were willing to pay, corn would pour into his warehouses, and the market would be flooded with his paper or with sacks of corn bearing his obligation for the amount of the purchase price. However rich he might be, his obligations would soon exceed the amount of his credits: the bankers would refuse to take his paper or his sacks at their nominal value, and they would fall to a discount. In vain he would protest that his bills and sacks were good, so long as the sacks were of full weight and that his warehouses contained enough corn to cover the bills at the price at which he had bought it. The bankers would reply that the corn was not saleable at his price and that he must meet his obligations in credits, not in corn.

If this is true with reference to our merchant, it must also be true with reference to government issues. If the government is really buying gold at an excessive price, and if, in consequence, it is issuing its obligations which are immediately payable in excess of its credits which are immediately available, then, its obligations must be falling in value. Owing to the immense power of the government, partly through its legislative power and partly through the enormous extent of its commercial and financial transactions, it may be possible more or less to conceal the fact. But the fact must be there, if we can discover it. *And the fact is there in the shape of rising prices.*

First let us see whether the government is issuing obligations in excess of its credits.

From what I have said in these two articles follows the important principle that a government issue of money must be met by a corresponding tax. It is the tax which imparts to the obligation its 'value.' A dollar of money is a dollar, not because of the material of which it is made, but because of the dollar of tax which is imposed to redeem it.

But what do we see? The United States government issues its obligations up to any amount in exchange for gold, without the imposition of any corresponding taxation; and the result is that there is an enormous and constantly increasing floating debt, without any provisions whatever being made for its extinction. It is true that all the government paper money is convertible into gold coin; *but redemption of paper issues in gold coin is not redemption at all, but merely the exchange of one form of obligation for another of an identical nature.* This debt at present amounts to nearly three billion dollars, and, of course, increases as more and more gold is brought to the mint and returned to the owners stamped with the government obligation, or deposited in the Treasury against certificates. Of this amount, about one-third is normally in circulation. As regards the coins and notes in circulation, the public stands to the government in precisely the same relation as does the holder of a banknote to the bank. The public are

depositors with the government. But as regards the bulk of the coins and certificates, which are not normally in circulation[8] the public would, if the government were in the same position as a commercial company or a bank, clamor for payment of the debt, and if it were not properly paid, the debtor would be declared a bankrupt. But because we do not realize that the financial needs of a government do not differ from those of a private person, and that we have just as much right to 'payment' of a gold coin as we have to 'payment' of a banknote, it does not occur to us to make any such demand on the government, and the coins and certificates accumulate with the banks.

Such being the situation, there can, if the Credit Theory is correct, be no question but that the money of the American Government is depreciating. But it will readily occur to those who have read so far that, if this is the case, we should find, in accordance with the principles here laid down, that there would be today the same phenomenon as there was in the middle ages when a similar situation arose – namely two monetary standards, the higher standard being the undepreciated standard of the banks, and the other, with the same name as the former, being the depreciated standard of the government. We might, in short, expect to find two dollars, a 'bank dollar' and a 'current dollar,' and we would then hace, just as in the middle ages, two prices for commodities, the bank price being used by wholesale dealers and the current price, which would be the standard of the coinage, being used for the retail trade. We should then probably see the difference between the two gradually increasing, and retail prices rising while wholesale prices in terms of the bank money remaining more or less stationary.

But we see nothing of all this. On the contrary, there is apparently no special depreciation of the government money, but a gradual rise of prices, a rise which, if it implies the depreciation of any money, implies evidently the depreciation of all money, by whomsoever issued; and there is nothing in the credit theory, if considered by itself, which would lead the student to think that a general fall in the value of bank money or merchants' money would follow an excessive indebtedness on the part of the government.

Assuming then, that the rise of prices does indicate a general depreciation of money, an explanation which is accepted by most writers, and assuming that, so far as the government money is concerned, the depreciation is satisfactorily explained by the credit theory; to what are we to attribute the fact that this depreciation is not confined to government money, but is shared by all the money of the country.

It must be at once admitted that much difficulty surrounds this question. The workings of the forces of commerce that control prices have always been obscure, and are not less so than they formerly were – probably, indeed, more so. The great combinations which are such powerful factors in the regulation of prices in America, and the great speculative financial interests whose operations affect the produce markets, do not let the public into their secrets, if they have any. Though we may talk vaguely about the rise of the cost of production, increase of home consumption, tariffs, trusts, etc., the fact seems to be that we have very little accurate knowledge of how a rise of price of any particular article starts, and until we can get exact concrete information covering in minute detail a great number of transactions both large and small, we shall remain a good deal in the dark as regards the forces behind the rise of prices, whatever theory we cling to. Having made these prefatory remarks, I now proceed to give what seem to be cogent reasons for believing that a depreciation of government money, as distinct from bank money, must, under present circumstances, be followed by a general depreciation of all money throughout the country, that is to say, a general rise of prices, and not

by a mere rise of prices in terms of government money, prices in terms of bank money remaining stationary.

Throughout history there seems to have been a general tendency for bank money to follow the downward course of government money sooner or later, and the difficulty of drawing a sharp line between the two would necessarily be greater now than formerly, both owing to the fact that the depreciation of government money in our day is more gradual and therefore more insidious than it formerly was, and because the enormous quantity of government money on the market makes it a much more dominant factor in trade than it was in the middle ages. There are at present as I have just said, nearly three billion dollars of government money in the United States, and the addition of a hundred million a year, though a large amount in itself, is less than four per cent of the whole. Moreover, while the 'mutations' in old days took place in a single day, when the coins might be reduced by as much as fifty per cent in a single edict, the inflation of the government money at the present time takes place gradually day by day, as the gold is brought to the mint. Thus we do not realize that a depreciation is going on.

Again in old days the financial straits of the governments were well known to the bankers and merchants, who knew too that every issue of tokens would before long be followed by an arbitrary reduction of their value. Under these circumstances no banker in his senses would take them at their full nominal value, and it was easy to draw a sharp distinction between government money and bank money. Today, however, we are not aware that there is anything wrong with our currency. On the contrary, we have full confidence in it, and believe our system to be the only sound and perfect one, and there is thus no ground for discriminating against government issues. We are not aware that government money is government debt, and so far from our legislators realizing that the issue of additional money is an increase of an already inflated floating debt, Congress, by the new Federal Reserve Act, proposes to issue a large quantity of fresh obligations, in the belief that so long as they are redeemable in gold coin, there is nothing to fear.

But by far the most important factor in the situation is the law which provides that banks shall keep 15 or 20 or 25 per cent (as the case may be) of their liabilities in government currency. The effect of this law has been to spread the idea that the banks can properly go on lending to any amount, provided that they keep this legal reserve, and thus the more the currency is inflated, the greater become the obligations of the banks. The importance of this consideration cannot be too earnestly impressed on the public attention. The law which was presumably intended as a limitation of the lending power of the banks has, through ignorance of the principles of sound money, actually become the main cause of over-lending, the prime factor in the rise of prices. Each new inflation of the government debt induces an excess of banking loans four or five times as great as the government debt created. Millions of dollars worth of this redundant currency are daily used in the payment of bank balances; indeed millions of it are used for no other purpose. They lie in the vaults of the New York Clearing House, and the right to them is transferred by certificates. These certificates 'font la navette' as the French say. They go to and fro, backwards and forwards from bank to bank, weaving the air.

The payment of clearing house balances in this way could not occur unless the currency were redundant. It is not really payment at all, it is a purely fictitious operation, the substitution of a debt due by the government for a debt due by a bank. Payment involves complete cancellation of two debts and two credits, and this cancellation is the only legitimate way of paying clearing house debts.

The existence, therefore, of a redundant currency operates to inflate bank loans in two ways, firstly, by serving as a 'basis' of loans and secondly by serving as a means of paying clearing house balances. Over ten million dollars have been paid in one day by one bank by a transfer of government money in payment of an adverse clearing house balance in New York.

Just as the inflation of government money leads to inflation of bank money, so, no doubt, the inflation of bank money leads to excessive indebtedness of private dealers, as between each other. The stream of debt widens more and more as it flows.

That such a situation must bring about a general decline in the value of money, few will be found to deny. But if we are asked to explain exactly how a general excess of debts and credits produces this result, we must admit that we cannot explain. Or, at least, it must be admitted by the present writer that he cannot explain; though others with more insight into the phenomena of commerce may probably be able to supply his lack of knowledge.

It is easy to see how the price of any particular commodity rises, when the demand exceeds the supply. It is easy to see how the money of any particular country or bank may depreciate, if it is known to be in financial difficulties owing to excessive indebtedness. We can see the machinery at work.

But how are we to see the machinery by which prices are raised, owing to a general excess of debts and credits, where no one recognizes that such an excess exists, when no one realizes that there is any cause for the depreciation of money?

I am inclined to think that the explanation may be found in the disturbance of the equilibrium between buyers and sellers to which I have already referred. Money is easier to come by than it would be under ordinary circumstances, and, while the power of the buyer to obtain the highest possible price for his goods is not diminished, the desire of the buyer to pay as little as possible is lessened, his resistance is weakened, he loses in the tug of war. A general spirit of extravagance is engendered, which enables the seller to win as against the buyer. Money really loses its value in the eyes of the buyer. He must have what he wants immediately, whether the price is high or low. On the other hand, the excessive ease with which a capitalist can obtain credit, enables him to hold up commodities speculatively, for a higher price. It puts a power into the hands of the speculator which he would not normally have.

These, however, are mere susggestions on my part and I do not pretend that they supply a completely satisfactory explanation of the mechanism by which prices are raised. Sellers are also buyers, and buyers are also sellers, and it is by no means clear why a man, in his capacity as seller should have more power one way than as a buyer he has in another.

The whole subject, however, of the mechanism of a rise of prices is one which merits a careful study on the part of those who have a more intimate knowledge of the workings of commerce than the present writer can lay claim to.

Before closing this paper, it may be useful to summarize the principal points which it has been the aim of the writer to bring before students of this most interesting and little understood branch of political economy.

There is no such thing as a mechanism of exchange.

A sale and purchase is the exchange of a commodity for a credit.

Credit and credit alone is money.

The monetary unit is an abstract standard for the measurement of credit and debt. It is liable to fluctuation and only remains stable if the law of the equation of credits and debts is observed.

A credit cancels a debt; this is the primitive law of commerce. By sale a credit is acquired, by purchase a debt is created. Purchases, therefore, are paid for by sales.

The object of commerce is the acquisition of credits.

A banker is one who centralises the debts of mankind and cancels them against one another. Banks are the clearing houses of commerce.

A coin is an instrument of credit or token of indebtedness; identical in its nature with a tally or with any other form of money, by whomsoever issued.

The issue of money is not an exclusive privilege of government, but merely one of its functions, as a great buyer of services and commodities. Money in one form or another is, in fact, issued by banks, merchants, etc.

The depreciation of money in the middle ages was not due to the arbitrary debasement of the weight and fineness of the coins. On the contrary, the government of the middle ages struggled against this depreciation which was due to wars, pestilences and famines – in short to excessive indebtedness.

Until modern days, there never was any fixed relationship between the monetary unit and the coinage.

The precious metals are not a standard of value.

The value of credit does not depend on the existence of gold behind it, but on the solvency of the debtor.

Debts due at a certain moment can only be off-set against credits which become available at that moment.

Government money is redeemed by taxation.

The government stamp on a piece of gold changes the character of the gold from that of a mere commodity to that of a token of indebtedness.

The redemption of paper money in gold coin is not redemption at all, but merely the exchange of one form of obligation for another of an identical nature.

The 'reserves of lawful money' in the banks have no more importance than any other bank asset.

Laws of legal tender promote panics.

The governments of the world have conspired together to make a corner in gold and hold it up at an excessive price.

The nominal value of the dollar coin exceeds the market value of the gold of which it is made. Coins can only remain in circulation for any length of time if their nominal value exceeds their intrinsic value.

The issue of coins in exchange for gold at a fixed and excessive price, without providing taxes for their redemption, causes an inflation of government money, and thus causes an excessive floating debt and a depreciation of government money.

Large reserves of 'lawful money' in the banks are evidence of an inflation of the government currency.

The inflation of government money induces a still greater inflation of credit throughout the country, and a consequent general depreciation of money.

The depreciation of money is the cause of rising prices.

Notes

1. Readers are warned that it is essential to bear constantly in mind the definition of credit, as laid down in the first article. Those who are not accustomed to this literal use of the word 'credit,' may find it easier to substitute in their minds the word 'debt.' Both words have the same meaning, the one or other being used, according as the situation is being discussed from the point of view of the creditor or the debtor. That which is a credit from the point of view of the creditor is a debt from the point of view of the debtor.
2. Modern governments, unfortunately do not limit their issues of money to the payment of purchases. But of this later on.
3. I do not wish to be understood as saying that the retail trade followed the standard of the coins, except to the extent that they shared the fate of the king's *livre*. Owing to the abuse of the system of 'mutations' and the attempted monetary reforms, it is probable that the coins often suffered not only the depreciation of the king's *livre*, but had their own independent fluctuations.
4. Like the *livre* in France, the *mark* was both a measure of weight and a monetary unit. But while the *livre* was never used for the weighing of the precious metals, the *mark* was the unit of weight for these metals, and this has caused German historians to confuse the two. How the same word came in many countries, though not in all, to be used for two such different purposes, we do not know. Possibly it originally only signified a unit of any kind. Another instance of the use of the same word for two different kinds of measurement is found in the word 'inch,' a measure of length, and the word 'ounce' a measure of weight. Both these words are etymologically the same.
5. Goschen's 'Theory of Foreign Exchanges' must be included among scientific treatises on credit. Hartley Withers's recent works, 'The Meaning of Money' and 'Money Changing' are practical rather than scientific treatises. They are indispensable to the student.
6. Even when the coins that once were silver were most debased, they were still regarded as silver in theory, though not in practice.
7. The views on the subject of gold were, however, rather mixed.
8. Owing to the government policy of monopolizing the issue of money in small denominations, the amount in circulation increases largely at certain seasons of the year.

[16]

BANKS, CREDIT, AND THE FINANCIAL SYSTEM IN SCHUMPETER

An interpretation

Richard Arena and Agnès Festré

Recent advances in economic theory contributed to the reconsideration of a former analytical problem which had been neglected after World War II; that is, the relation between economic dynamics and financial structures. The introduction of the assumption of asymmetric information into macrodynamics provided the foundations for this re-examination. This hypothesis indeed explains the emergence of banks and banking institutions which fundamentally differ from financial markets since they prevent economic agents from settling contracts among themselves, which would typically permit an optimal allocation of resources. Because of informational asymmetries, banks cannot be characterized as pure intermediaries, as "brokers," helping the workings of the market. They appear rather to be "social accountants" who substitute a set of asymmetric relations among firms for an auction market ruled by the usual law of supply and demand (Stiglitz and Weiss 1988). This conception of financial structures will obviously exert strong effects on macrodynamics especially in the realm of the business cycles theory.

Surprisingly, this problem is not a new one at all. It was, for instance, an issue that Joseph Schumpeter considered as crucial to his characterization of capitalist development. The literature, however, scarcely stressed this fact and too often interpreted Schumpeter's theory as one in which real factors – such as technology – play the main role. This chapter adopts a different attitude: We claim that Schumpeter's approach afforded some flexibility to both monetary and financial factors in the workings of the economic system. Moreover, Schumpeter assumed that banks play a dominant role in determining what those factors will be.

This view might seem to contrast with what Schumpeter himself sometimes asserted, that is, that he faithfully followed Walras's ideas (Arena 1992). However, it is the *finance* side of Schumpeter's writings that demonstrates his break with Walras, especially in light of the history of economic dynamics and of monetary theory.

For Schumpeter, the meaning attributed to the static or the stationary

economic state is not indeed the one suggested by Walras but rather the one suggested by Wicksell. Schumpeter does not consider economics as a set of successive generalizations of static exchange between two commodities in which dynamics appear to be merely complications implied by the change of "fundamentals." On the contrary, and in compliance with Wicksell's approach, the stationary state is interpreted as a pure pedagogic device which allows the theoretician to define and characterize the main tools of economic inquiry, before focusing on and analyzing the dynamics.

Furthermore, according to Schumpeter, and here again, in the Wicksellian tradition, real and monetary factors are not considered to be independent. Instead, monetary factors strongly influence real economic phenomena. Schumpeter's critiques of the quantity theory of money and of the notion of "*encaisse desirée*" (Graziani 1978; Messori 1983, 1984; Arena 1985), and his insistence on the "capitalistic function of money" – in contrast with its "market economy function" (Schumpeter 1917: 206) – show how implausible it is that Schumpeter was a follower of Walras in the realm of monetary theory.

These views will, however, be confirmed by the following arguments taken from Schumpeter's writings, that take into account and throw new light on Schumpeter's ideas about money, banking, and finance. Thus, in the first section of this chapter, we shall investigate the fundamental role played by banks in creating the credit system and how credit affects that economic system. In the second section, we shall consider financial activities. This inquiry also stresses the predominance of the banks in the financial system. Moreover, the result of this inquiry shows a perspective of economic life which does not rely on the usual tools of analysis provided by auction markets.

CREDIT AND BANKS IN SCHUMPETER'S THEORY OF THE "COMMODITY SPHERE"

Schumpeter renewed the Wicksellian tradition and focused on dynamics, that is, the framework of economic development. Within this framework, Schumpeter defines two "spheres." The first one is the "business sphere" (1939: I, 124), also referred to as the "commodity sphere" or "sphere of circulation" (1917: 176). It is here that the national product circulates among social groups with the help of bank money creation or credit. Therefore, the circulation in the "business sphere" is related to what Thomas Tooke called the "reflux principle," as Schumpeter noticed explicitly:

> The practically unlimited demand for credit is matched by a practically unlimited supply of credit. That this is repeatedly overlooked is due only to the prejudice which regards the resources of banks as determined by objective conditions, particularly saving, and which ignores the factor of money creation. Neither the demand for credit nor the supply of it are unlimited in terms of goods. But what is involved here is the monetary

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> expression of these goods. The banks can always grant further loans, since the larger amounts going out are then matched by larger amounts coming in. The demand for credit makes possible not only itself, but also a corresponding supply; and every supply makes possible a corresponding demand, so that supply and demand in this case do not confront each other as independent forces.
>
> (Schumpeter 1917: 207)

The second sphere is what Schumpeter calls "the money market," which includes both "spheres of hoards and reserves" and "of capital" (1917: 176). The common characteristic of these spheres and therefore the distinctive feature of the money market is that they both permit the working of stock markets. The money market is indeed the place in which "hoards and reserves" – or "cash reserves," defined as "idle," noncirculating money – and "income-yielding assets" – or "capital," which includes the real estate market, mortages, the stock market, and so on – are exchanged (Schumpeter 1917: 176). In the "commodity sphere," credit creation by banks is considered, by Schumpeter, as the main source of financing the economic development process. More precisely, this category of credit considered in economic activity consists of "new means of payment created ad hoc, since the entrepreneurs have no means of their own and since there are – so far – no savings" (Schumpeter 1939: II, 111). Those means are requested by entrepreneurs in order to finance their innovations. They do not only include money as such. Thus, Schumpeter enumerates them, referring not only to "commodities which in fact circulate as money," "money made of a material the market price of which is less than the purchasing power of the monetary unit made of it," "bank notes" but also to "current accounts and clearing accounts," "the amount of all payments which are disbursements out of income and are handled exclusively by compensation," and, finally, "credit instruments and claim titles of all kinds, to the extent that they in fact perform the role of money" (Schumpeter 1917).

Therefore money, strictly defined, no longer plays the role it was afforded within the circular flow: "Not only a part but the whole of the exchange process can be settled by . . . credit media" (Schumpeter 1934: 53).

This fact implies the definition of the Schumpeterian entrepreneur as a typical debtor:

> The entrepreneurial function is not, in principle, connected with the possession of wealth, as analysis and experience equally teach, even though the accidental fact of the possession of wealth constitutes a practical advantage. . . .
>
> [An agent] can only become an entrepreneur by previously becoming a debtor. . . . [The entrepreneur] is the typical debtor in capitalist society.
>
> The argument must now be completed by the negative proof that the same cannot be said of any other type and that no one else is a debtor by the nature of his economic function.
>
> (Schumpeter 1934: 101–3)

This feature of the category of entrepreneur and the fact that Schumpeter attributes to credit the role of reorienting financing from routine activities to innovative ones could lead to the conclusion that Schumpeter's contributions are within the realm of Banking School tradition. However, this impression quickly dissipates. On one hand, he accepts the possibility of money quantity autonomously affecting inflation and pricing and, therefore, seems to welcome a synthesis of both Banking and Currency traditions:

> In any case, however, we cannot here consider quantity of "existing" or "circulating" or "available" money as an independent variable, because, although it varies in function of some elements that may, in the sense of the old quantity theory, be looked upon as data, it also varies in response to other variables of our process, entrepreneurial activity in particular.
>
> (Schumpeter 1939: II, 546–7)

On the other hand, Schumpeter explicitly denies a complete allegiance to the tradition of the Banking School:

> This should be sufficient to destroy the superstition that bank money reaching the market by way of credits granted for production cannot exert any independent effect on the price level, and, when issued in accordance with sound banking principles, cannot bring about inflation; that the role of the banks is only that of a conductor and medium of passive adjustment to commodity processes, and that the banks merely help the flow of commodities by creating its monetary complement.
>
> (Schumpeter 1917: 209)

In fact, Schumpeter's view on the endogeneity of bank money supply is far more complex. Let us reread one of the passages which might be the more complete description of his position:

> [T]here is always no matter how great the amount of credit in circulation, some demand for credit which remains unsatisfied even though it is able to pay the current rate of interest. The productive demand for any commodity, e.g., wool, is limited, at constant quantity of money, by the falling probability of processing continually increasing quantities; by contrast, demand for credit is self-propagating, in that the consequences of its expansion and increasing satisfaction go on creating the economic conditions for even more credit demand. The more bank money is issued, the more credit is necessary for the purchase of one and the same quantity of means of production, and the more, also, can economically be invested in their acquisition.
>
> This demand for credit makes possible not only itself, but also a corresponding supply; and every supply makes possible a corresponding demand, so that supply and demand in this case do not confront each other as independent forces. To this extent, therefore, the banks determine

> not only to whom they will grant credit but also how much credit as a whole they wish to grant and what demand to call forth.
>
> (Schumpeter 1917: 207)

These passages highlight important indications about the respective roles of entrepreneurs and bankers in determining the volume of credit. It first shows that this determination results from an interaction between both agents. In this prospect, the initiative of the process comes from firms, but banks can decide to ration them, especially in compliance with the expectations banks can form as to whether or not the borrowed funds will be repaid:

> We know already by what forces this supply is regulated: first with regard to possible failures by entrepreneurs, and secondly with regard to the possible depreciation of the credit means of payment.
>
> (Schumpeter 1917: 195)

Schumpeter is obviously aware of the fact that credit cannot be considered as the only means of financing firms and, especially, innovations.

Empirically, other possibilities do exist. For instance, Schumpeter mentions interfirm credit or "government fiat" (1939: I, 114).

Moreover, even if, strictly speaking, the circular flow scheme does not admit the existence of saving or investment and assumes that the firm finances itself on its current receipts, it is, however, possible to focus on what Schumpeter calls "steady growth":

> We will envisage a society, stationary in every respect except in that it displays a positive rate of saving. Production functions are invariant and external disturbances are absent. . . .
>
> The result would, in fact, be a steady growth of the system's industrial outfit by the steady addition to it of new units of plant and machinery, which, however, must be of the same types as those which are already in use or would otherwise intrude.
>
> (Schumpeter 1939: I, 79–80)

This "steady growth" is an interesting point. It is not considered by Schumpeter as a true dynamic situation. However, it offers speculations about financing firms in the absence of banks and banking situations. In this case, we are confronted with a usual saving/investment mechanism: investment is financed through accumulated saving. However, Schumpeter's definitions of saving and investment are original:

> By Saving we mean the earmarking, by a household, of an element of its current receipts – as distinguished from "capital gains" – for the acquisition of titles to income or for the repayment of debt. If a firm does the same thing with the element of its net receipts from the sales of products and services, we shall speak of Accumulation. The distinction between Saving

> and Accumulation also applies, although it may be difficult to carry out, in cases in which, as in the case of many farmers, "firm" and "household" are one. We confine both concepts to decisions about monetary funds and we neglect, for convenience's sake, any similar decision that may be taken with respect to commodities. Saving and Accumulation will thus be treated as elements of a monetary process: the complementary processes in the world of goods constitute a distinct problem."
>
> (Schumpeter 1939: I, 75)

Saving and investment are not only defined as monetary magnitudes; they are also characterized in relation to their orientation toward productive ends. Thus, investment includes the acquisition of shares and bonds and of land or buildings, provided they are dedicated to business purposes (Schumpeter 1939: I, 76). Saving implies "intention to acquire titles to income, the decision to save is taken with reference to given or expected investment opportunities and the prospect of income they offer" (1939: I, 77).

Therefore, Schumpeter's conception of the saving/investment mechanism is not so drastically different from Keynes's *Treatise* theory of financial markets: this analogy, and its limits, will become clearer later, in the last part of this chapter. Now it is only necessary to notice that, in the steady growth case, the saving/investment can replace the credit mechanism that appears in the development scheme. Although this succession is different from the distinction between natural and monetary economies, it, however, presents a clear Wicksellian flavor. It corresponds to the case, investigated in *Business Cycles*, in which the analysis

> excludes bank credit and assumes that savers offer their additional savings to firms which, having been in competitive equilibrium at the previous point of time, have no use for them at the previous rate of interest and, at a suitably reduced rate, no other use than to add new units to their existing stock of machinery.
>
> (Schumpeter 1939: I, 81)

In this situation, the saving and investment sides imply a confrontation between capitalists on the supply side and entrepreneurs on the demand side. The former must withdraw their reserves from the circular flow since there is no creation of credit means of payment. The entrepreneur's demand is determined by expected profits on investment:

> we shall imagine that the entrepreneur is able to attach determined quantities of entrepreneurial profit to the individual monetary units from zero to the limit for practical purposes, in the same way as every individual attaches certain values to the successive units of any good.
>
> (Schumpeter 1934: 192).

The capitalist's supply takes prospective gains into account. However,

> Il est clair que le marché des prêts, non seulement fonctionne avec une

> perfection aussi relative que tous les autres marchés, mais encore souffre de ce que le fournisseur habituel – c'est-à-dire sans couverture et sans garantie – ne consent de prêt qu'aux entrepreneurs qui lui sont connus et dont, en une certaine mesure, il comprend et approuve les plans.
>
> (Schumpeter 1935: 281)

Supply and demand then interact in order to determine the level of the rate of interest.

The introduction of credit, in the development case, sensibly changes this scenario. The entrepreneur's demand does not change drastically if we refer to the steady growth situation. Things are, however, different if we focus on the supply side. Bankers replace capitalists and we enter into the famous Schumpeterian scheme of financing economic development by bank credit.

Credit implies the emergence of a nonzero interest. This emergence leads, in turn, to a strong increase of saving since capitalists are confronted with the introduction of a new source of income. From this, as Schumpeter also notices, it follows that the actual saving is, in part, a consequence of the existing interest. In other words, development creates new opportunities for the investment of saving. These opportunities are provided by the money market, as we defined it previously. Simultaneously, "on the surface . . . credit creation tends to lose its relation to innovation and . . . becomes an instrument for financing business in general" (Schumpeter 1939: I, 159).

BANKS AND THE FINANCIAL SYSTEM IN SCHUMPETER'S THEORY OF THE MONEY MARKET

Some passages of Schumpeter's writings seem to describe banks as purely neutral financial intermediaries (see, for instance, Schumpeter 1990: 188). However, this view cannot be seriously developed. As we already saw, banks play a major role in determining the volume of credit. Therefore, they exert permanent and asymmetric effects on the money market. Their influence is not, however, limited to the control of credit.

> The most cursory glance at money market processes shows that the banks regulate both stock market speculation and the pulse-beat of industrial and commercial life, now restraining, now stimulating them.
>
> (Schumpeter 1917: 206).

Such an assertion implies that banks strongly influence economic life. This influence is related to two main circumstances: on the one hand, Schumpeter perceives the money market as the interaction of two independent spheres; on the other, this market is dominated by the banks. To understand those circumstances, let us enter into details.

We must first notice that, in the normal course of development, entrepreneurs appear to be both credit manufacturers and financial intermediaries. On one

side, they indeed first create "from nothing" credit means of payment which strongly contribute to the emergence of interest. On the other side, it is true, however, that

> the banker . . . is not so much primarily a middleman in the commodity "purchasing power" as a producer of this commodity. However, since all reserve funds and savings to-day usually flow to him, and the total demand for free purchasing power, whether existing or to be created, concentrates on him, he has either replaced private capitalists or become their agent; he has himself become the capitalist par excellence.
>
> (Schumpeter 1934: 74)

It is then interesting to analyze how Schumpeter copes with the money market.

As we already noticed, the first sphere of this market is the "sphere of hoards and reserves." The existence of this sphere points out two different forms of money. One is the "circulating money," which "enters into money income and confronts the flow of consumer goods for the purposes of establishing the value of money." The other form of money corresponds to "noncirculating money." To this category belongs, above all:

1 hoards;
2 the sums that at any given time serve as a basis for the issue of other types of money and are therefore temporarily immobilized;
3 unemployed sums waiting to be used; and
4 the true cash reserves of banks, firms and private persons (Schumpeter 1917: 176).

The volume of this type of money "is a matter of business conditions and the rate of interest" (1917: 176).

The second sphere included within the money market refers to "capital" or to "income-yielding assets." This capital market is "what the businessman calls the money market . . . that about which every newspaper reports daily under this title. . . . In any case, the capital market is the same as the phenomenon that practice describes as the money market. There is no other capital market" (Schumpeter 1917: 124). The capital market, therefore, includes the stock market but also the real estate market, the mortgage market, and even the land market (1917: 124).

The distinction between the sphere of hoards and reserves and the sphere of capital is, however, rather secondary to Schumpeter. A footnote in the *Theory of Economic Development* centered upon this problem and gave a clear indication, asserting that "at the most one may with Spiethoff distinguish the capital market as the market for long-term purchasing power from the money market as the market for short loans. But purchasing power is the commodity in each" (Schumpeter 1934: 124n.). Therefore, the two markets are not independent at all. For reasons which we shall now discuss and which express a Wicksellian

view, the working of financial markets is submitted to the working of money markets and, therefore, to the choices of the banking system. Two main arguments might be used here.

Schumpeter first insists on the idea that the short term rate of interest is essentially a "monetary phenomenon" (Schumpeter 1939: I, 128). This is the consequence of the definition of saving and investment as monetary magnitudes. In this prospect, the notion of real rate of interest is not so relevant:

> Nominal and real rates in this sense are only different measurements of the same thing or, if we prefer to speak of different things even in this case, it is the monetary rate which represents the fundamental phenomenon and the real rate which represents the derived phenomenon.
>
> (Schumpeter 1939: I, 127)

Obviously, this conception resembles Keynes's approach to the financial circulation in the *Treatise*. We, however, know that Schumpeter rejected the theory of liquidity preference, considered as contradictory with the assumption of banks' asymmetric influence. He noticed, however, that "the reader should be on his guard against both surface similarities and surface differences" between Keynes's theory and his own (Schumpeter 1939: I, 127, n. 2). From this prospect, it is impossible to include among these similarities the treatment of speculative behavior. The sole form of speculation to which Schumpeter refers indeed concerns short-term loans and, from the author's view, it is often beneficial for new firms (Schumpeter 1934: 125).

Second, the capital sphere does not appear to be independent from the sphere of hoards and reserves. The usual dichotomy between short-term loans and long-term assets is therefore inadequate for Schumpeter:

> In capitalist society . . . all equities and claims can normally be sold at will, *irrespective of the purposes that the sums originally paid in may serve* – irrespectively also of the purposes any good serve that may correspond to them – hence bought by the means of short-term funds. Bonds, for instance, thus become a vehicle of the shifting of balances, which only technically and by degree differs from short-term instruments. As soon as this is realized, doubts arise about the very existence of a distinct thing to be called the long-term interest rate. The contractual rate on long-time instruments has, of course, a certain right to that name. . . . Braving some danger of misunderstanding, we may hence go so far as to say that there exists no such thing as the long-term rate and that, if we nevertheless wish to use the concept, the thing we ought to mean is some kind of "trend value" of short rates.
>
> (Schumpeter 1939: II, 614)

This quotation is based on two distinct arguments. On one hand, Schumpeter does not consider that there is a difference of nature between short-term loans and long-term assets. He is indeed concerned that the tendency of

capitalist evolution is to create the conditions of a "perfect negotiability of all instruments of credit whatever their legal form may be" (Schumpeter 1939: II, 613). Therefore, bonds or shares only differ from short-term instruments "technically and by degree" (1939: II, 614). This assertion results from the fact that financial speculation implies withdrawal of existing balances or use of the facilities of creating money or credit creation. A fundamental link exists between credit and finance, hence, between banks and financial markets.

It is then easy to understand, on the other hand, the conditions involved in determining the so-called long-term rate of interest are nothing else than those, including risk, which prevail in the short-term funds market. Now those conditions are clearly expressed by the short rates. From both arguments, it is then clear why the long-term rate of interest is considered by Schumpeter as a "trend value" of short rates. This quantitative relation between short- and long-term rates embodies the major influence exerted by banks on the long-term financial markets.

Finally, three main features capture the originality of Schumpeter's contributions and their differences from standard analyses. First, Schumpeter introduces economic activity as a combination of two unavoidable circulations which express two irreducible forms of activity – that is, industry and finance. This view sensibly contrasts with the orthodox conception, according to which industrial and financial activities are only specific real exchanges.

Second, Schumpeter attributes a fundamental role to the banking system in the regulation of the economy. As we saw, banks rule both the process of credit creation and the necessity of financial intermediation.

Finally, this predominance of banks permits them to exert a strong influence on the formation of the rate of interest. Creating credit from nothing, banks are indeed able to control the rate of interest on short loans and, thanks to their role as financial intermediaries between saving and investment, to extend this predominance to the whole structure of interest rates. Far from neglecting the monetary dimension of economic life in a purely real approach, Schumpeter therefore appears to be one of the main builders of a possible alternative tradition to mainstream monetary analysis.

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The Theory of the Monetary Circuit*

A. Graziani

The theory of the circuit faces the fundamental questions of any macroeconomic theory, namely how the level of activity of an economic system is determined and what determines the distribution of the social dividend among the main social groups. The basic idea is that, in a wage economy, possession of wealth as such does not imply being admitted to a share of real income. Since access to money and credit is a key factor in a wage economy, producers of money and credit enjoy a privileged position and are admitted as such to a share of total product. It is therefore a typical aspect of the theory of the circuit that in any macroeconomic model banks and firms can never be merged into one single sector.

La théorie du circuit se trouve confrontée aux mêmes questions fondamentales que toute autre théorie macroéconomique, à savoir la nature des déterminants du niveau d'activité d'un système économique tout comme de la répartition du produit social entre les principaux groupes sociaux. L'idée de base est que, dans une économie fondée sur le salariat, la possession de la richesse en soi ne signifie pas un accès au revenu réel. Dans la mesure où l'accès au crédit et à la monnaie constitue un facteur clé dans une telle économie, les producteurs de la monnaie et du crédit bénéficient d'une position privilégiée et ont droit, à ce titre, à une part du produit total. Il en résulte une caractéristique typique de la théorie du circuit, à savoir que les banques et les entreprises ne peuvent nullement être agrégées pour constituer un secteur unique.

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I. – INTRODUCTION

Over the last ten to fifteen years, a *theory of the economic circuit* has been developed mostly in the French and Italian literatures. Contributors to this theory emphasize the point that a correct understanding of the workings of an economic system can only be acquired if the economy is analysed from the outset *as a monetary economy*. In their view, the mere fact of barter being replaced by quicker and less cumbersome monetary exchanges is not enough to qualify a true monetary economy. The existence of money alters the structure and inner workings of economic systems, modifies the behavioural functions of the agents, and gives new content to the equilibrium position as for activity levels as well as for income distribution[1].

The theory of the monetary circuit emerges as a reaction to the standard neo-classical interpretation of economic equilibrium as the result of individual choices taken by isolated and independent agents. The model of the circuit is built so as to stress the existence of relationships among macro-groups, going beyond individual choices. In this perspective, marginal theory of distribution is rejected, in favour of a theory stressing both the power of the banks, in that they provide the necessary means of payment, and the power of the firms, in that they determine the allocation of productive resources. In this view, the level of employment and the distribution of income, far from being determined by individual negotiations in the framework of the general determination of relative prices, is determined by decisions taken jointly by banks and firms.

Two main groups are active in France. One of them, the so-called Dijon School, is led by Bernard Schmitt and Alvaro Cencini. The favourite problems of this group, beyond the basic analysis of the nature and role of money, are a re-examination of Keynesian economics and an analysis of international payments. Another group is led in Paris by Alain Parguez and in Bordeaux by Fréderic Poulon, and is mainly concerned with the analysis of activity levels, unemployment, and stabilization policies.

The authors of the circuit reject General Equilibrium Theory, which they consider to be the theory of a barter economy, with money added *ex post* (and with considerable effort) as a technical means of exchange. They also reject present-day standard macroeconomics, based on the so-called Hicksian IS-LM model, on the grounds that it considers the money stock as an exogeneous variable, that it omits to specify the nature and origins of money, that it does not analyse the relationships

between banks and firms, and that it relies on a strictly marginal theory of income distribution.

It would be more difficult to define the relationships existing between the Theory of the Circuit and the so-called Post-Keynesian School. Probably different attitudes are taken as regards the first generation of post-Keynesians, like Kaldor, Joan Robinson or Richard Kahn, as contrasted to later representatives like the late S. Weintraub, P. Davidson, J. Kregel, or B. Moore. In general, the attitude would be that while the post-Keynesian school correctly rejects the marginal theory of income distribution, still it ignores the fundamental role of banks and does not analyse the relationships between banks and firms (this of course would not apply to H. Minsky and B. Moore).

The authors who most closely seem to inspire the Theory of the Circuit are J.M. Keynes (mostly the *Treatise on Money*, much less the *General Theory*) and Kalecki. Elements from the Marxian doctrine are surely present in the debates on the monetary circuit, in spite of the fact that none of the authors belonging to the school seems to accept the Marxian theory of value.

Whether the circuit approach can be really considered an original contribution of contemporary theory is a debatable point. In fact, long before the French theory of the circuit was developed, a rigorous analysis of the process of money creation had been supplied by the leading economists of the Swedish and German schools, such as Wicksell (1898), Schumpeter (1912), Hahn (1920), and Schneider (1962). Beside that, the idea that decisions concerning production are the responsibility not only of entrepreneurs but of bankers as well, was one of the basic points in Schumpeter's *Theory of Economic Development*. As for the theory of income distribution, present-day circuit theorists, as already said, tend to follow Kalecki and, to a lesser extent, Keynes. Finally, the idea that banks and firms participate in the distribution of the surplus product, which gets divided into industrial profit and interest, goes back to Marx.

This paper will attempt to give the flavour of the theory of the Monetary Circuit. This is probably one of the very few attempts to provide a coverage of this theory in English. The relevant literature is scattered among French, Italian, and Canadian authors (an overview of the theory is Lavoie, 1987).

II. – THE DEFINITION OF MONEY

The definition of money and the analysis of the money supply process are basic issues in the theory of the economic circuit. In principle, the monetary base in a closed economy can be created through two different channels : it can be either supplied directly by the Central Bank to commercial banks, or it can be introduced by a Government deficit not covered by newly issued bonds. Still, most of the present-day models of a closed economy tend to limit their definition of the supply of money to the latter source, thus identifying the supply of monetary base with a Government deficit not covered by public debt[2]. (In an open economy, the monetary base can also originate from a balance of payments surplus).

Circuit theorists tend to adopt the opposite assumption. At least by way of a first approximation, they tend to assume away any money financing of Government deficits, and to consider that *the money stock is increased or decreased by means of debt and credit operations taking place between the Central Bank and commercial banks*. The ideal model of the theory of the circuit therefore resembles the so-called *Wicksellian model of a pure credit economy*, with the addition of a Central Bank[3].

The starting point of the theory of the circuit, is that a true monetary economy is inconsistent with the presence of a commodity money. A commodity money is by definition a kind of money that any producer can produce for himself. But an economy using as money a commodity coming out of a regular process of production, cannot be distinguished from a *barter economy*. A true monetary economy must therefore be using a *token money*, which is nowadays a paper currency[4].

However, to say that a monetary economy makes use of paper currency is not enough to identify a monetary economy. If, for instance, goods are traded *against promises of payment* such as bills of exchange, any act of trade gives rise to a debt of the buyer and to a credit of the seller. A similar economy is not a monetary economy, but *a credit economy*. If in a credit economy at the end of the period some agents still owe money to other ones, a final payment is needed, which means that no money has been used. If, on the other hand, final payments were continually postponed and replaced by new promises, buyers would enjoy and unlimited *privilege of seignorage*. Money is therefore something different from a regular commodity and something more than a mere promise of payment.

In order for money to exist, three basic conditions must be met :

a) money has to be *a token currency* (otherwise it would give rise to barter and not to monetary exchanges);

b) money has to be accepted *as a means of final settlement* of the transaction (otherwise it would be credit and not money);

c) money must not grant privileges of seignorage to any agent making a payment.

The only way to satisfy those three conditions is to have payments made by means of *promises of a third agent*, the typical third agent being nowadays a bank. When an agent makes a payment by means of a cheque, he satisfies his partner by the promise of the bank to pay the amount due. Once the payment is made, no debt and credit relationships are left between the two agents. But one of them is now a creditor of the bank, while the second is a debtor of the same bank. This insures that, although making final payments by means of paper money, agents are not granted any kind of privilege. For this to be true, any monetary payment must therefore be *a triangular transaction*, involving at least three agents, the payer, the payee, and the bank (Schmitt, 1975, p. 14; Schmitt and Cencini, 1982, p. 139; Cencini 1984, p. 31; Parguez, 1985b). Real money is therefore credit money. Even a metallic coin is credit money : as Keynes once said, a rupee is a "note printed on silver" (Keynes, 1913, ch. III, p. 26).

In principle, in a perfectly competitive credit market, no one would borrow money from a bank before a payment comes due. This is the simple consequence of assuming rational behaviour, since there would be no point in borrowing money and paying interest on it while keeping it idle[5]. Money therefore *only comes into existence the moment a payment is made*. At that moment, in one and the same act, money is created, the borrower becomes a debtor to the bank and the agent receiving a payment becomes the creditor of the same bank.

A first conclusion may now be drawn. Since in a monetary economy money payments go necessarily through a third agent, the third agent being one that specialises in the activity of producing means of payment (in modern times a bank), *banks and firms must be considered as two distinct kinds of agents*. Firms are present in the market as sellers or buyers of commodities and make recourse to banks in order to perform their payments; banks on the other hand produce means of payment, and act as clearing houses among firms. In any model of a monetary economy, *banks and firms cannot be aggregated into one single sector.*

A definition of a monetary economy such as the one given above, implies a hypothesis on the historical origins of money which is widely

different from the one commonly accepted. It is usually believed that money was in the origin a commodity money, subsequently replaced by a paper currency, integrated in a still later time by banking credit (Menger, 1892). According to the definition of a monetary economy given above, money has always necessarily been in the nature of credit money, no matter whether embodied in a metallic coin or represented by paper notes.

III. – THE MONETARY CIRCUIT

We shall now give a brief description of the single phases of the monetary circuit[6]. The agents considered in this first description are only four : the Central Bank, Commercial Banks. Firms, and Wage-earners. Something concerning the Government sector will be added later.

The first step in the economic process is the decision taken by banks of granting credit to firms in order to enable them to start production[7]. If we consider firms as a whole, their only external purchase is labour force. All other exchanges being internal transactions, no further monetary payment is required. Only at the end of the production process firms buy capital goods to be used in the following period.

It this simplified case, therefore, initial credit requirements, being equal to the wage bill, depend on money wages negotiated on the labour market and on employment decisions taken by firms[8]. On the other hand, negotiations between banks and firms on the money market determine *the amount of credit actually granted* and the rate of interest charged to firms.

The working of the labour maket is strictly interrelated with the working of the money market. On the labour market, firms and wage-earners negotiate the level of money wages. Since money wages determine initial credit requirements, firms, while negotiating with unions on the labour market, will be trying to anticipate how the banking system will react to any possible increase in wages. Behaviour of firms on the labour market will therefore depend on the credit policy of the banking sector (Lavoie, 1987; Perroux, 1970, pp. 2284-5).

The second step is given by production and expenditure decisions. Once firms and wage-earners have come to an agreement, two separate actions are started. On the one hand firms decide on the number of workers to be hired, the level of production, the subdivision of production between consumption goods and capital goods. According to the theory of the circuit, firms *enjoy a total independence* for decisions

concerning the real sector. Wage-earners on the other hand, can only decide how to spend their money wages. They will decide therefore how much to spend on the commodity market, how much to save, and how to allocate saving between securities and money balances (Keynes, 1930, ch. X (i), p. 136, and ch. XX, pp. 315-7). In this simplified case, with no Government and no foreign sector, securities sold on the financial market can only be issued by firms. Wage-earners have thus to choose between placing their savings in securities, or keep them in liquid form in bank deposits (Keynes, 1937b). As long as money wages are not spent, an amount of money equal to the wage bill is in existence. The total amount of money is a debt of the firms to the banking sector and a credit of wage-earners to the same sector. Money which is spent on the commodities market, as well as money spent on securities issued by firms, goes back to firms, and will be available for repaying debts to the banking system. As soom as firms repay their debt to the banks, the money initially created is destroyed.

With the destruction of money, the circuit is closed. Money will be created again if banks grant a new credit for a new production cycle. This may happen almost automatically, it firms, instead of repaying their debt, use the proceeds from sales of commodities and from issuance of securities, in order to start a new production process. But in principle, the very fact of using for a new cycle liquidity granted for the previous one, implies an agreement on the part of the bank, which is tantamount to the concession of a new credit.

If the expenditure of wage-earners equals the whole of their wages, no matter whether they spend money on the commodities market or on the financial market, firms get back the whole of their expenditure and they are able to repay fully their debt to the banks. In that case, the monetary circuit is closed without losses (or, as the French would say, *sans fuites*).

If on the other hand, wage-earners decide to keep part of their savings in the form of liquid balances (that is, banking deposits), firms will get back from the market less money than they have initially injected in it. In the terminology of circuit theory, there has been a loss in the circuit and firms will be unable to repay to the banks the whole of their debt. At the end of the cycle, money initially created will not be totally destroyed, and a part of it will be still in existence in the form of a debt of firms to the banks. If banks decide to grant firms the same amount of credit as they inititially did, *the total money stock in existence will increase*. In fact, the money stock will now be equal to the wage bill paid at the beginning of the new cycle plus the

amount of deposits carried on by wage-earners from the previous one. Thus, the stock of money in existence depends on the rate at which money is currently created and destroyed. An assumption is therefore required for the existence of a money stock, namely that wage-earners *spend their money incomes gradually over time.* This may well seem an assumption of irrational behaviour, if no uncertainty is present. It is however a necessary assumption, if we do not want the velocity of circulation to become infinite and money to disappear altogether form the system.

We must now go on from a synthetic overview of the monetary circuit to a more detailed analysis of each of the single phases composing it.

IV. – THE DEMAND FOR FINANCE

As already stated, negotiations between banks and firms on the money market determine the amount of finance banks are prepared to grant to the firms and the rate of interest to be charged on it.

Negotiations on the money market have an influence on the level of activity. Effective demand may fall owing to a decline in the marginal efficiency of investment; but, as Keynes himself said, the market may very well become congested owing to lack of finance, if banks are reluctant to engage in financially risky projects (Keynes, 1937b, p. 669; Parguez, 1975, p. 108).

Initial finance requirements of firms are determined by the amount of the wage bill plus, if we are considering internal payments among firms, the cost of intermediate goods.

An important point to be made at this juncture, is that finance requirements depend on the monetary cost of output in general, and *are not specifically connected with investment activity.* The problem of financing investment is a different one, appearing, as we shall see presently, not at the beginning but at the end of the economic circuit.

In fact, *initial finance* and *final finance* are widely different in nature, and they should not be confused. This is all the more important since most authors tend either to ignore totally problems of initial finance, or to deal jointly with initial and final finance, as though they were one and the same thing.

Initial finance is liquidity anticipated by banks in order to cover the current cost of output. It is in the nature of short-term liquidity, and is provided on the so-called money market.

This point, elementary as it may seem, deserves a brief explanation. A bank cannot buy commodities by means of its own credit (if it did so, it would acquire commodities from the market without giving anything in return). But, as any other firm, a bank may use its own profits in order to buy any kind of commodities, including capital goods. In this case, there is no difference between a bank and any other kind of firm. The question is rather what the bank can finance when acting *within the limits of banking activity*, namely when it is not buying commodities but granting credit.

When bank credit is granted, two outcomes are possible. In the first case, the credit, sooner or later, is repaid. In this case the bank has only financed the production, or at most the temporary holding, of a capital good, which has subsequently found a buyer who has financed the purchase by means of his own income. (If the purchase had been financed by means of bank credit, there would still be a credit pending somewhere in the banking system). In the second case, the credit never gets repaid. In this case, some agent (a customer of the bank, or the bank itself, if the insolvent customer has been expropriated) becomes the owner of real goods by giving in exchange only a promise of payment. But this case would infringe the fundamental rule of any market economy, namely that no agent may make a final payment by means of a simple promise of payment. In principle, this second case must therefore be excluded. We can therefore conclude that bank credit can only be used in order to bridge the gap between production and resale of commodities. Its use is of financing production (no matter whether of consumption or of capital goods) but it cannot be used for permanent placings. The final ownership of commodities (again it may be consumption or capital goods) can only be acquired by spending earned income, something that bank credit cannot supply.

As a matter of fact, intermediate cases may actually be present. For instance when repayment of bank credit is delayed, and credit is renewed again and again before the customer is declared insolvent. But even in such cases, the final outcome should be that the bank gets back its money, either by regular payment or by selling the property of the insolvent customer. Initial finance granted to firms is therefore in the nature of *temporary finance*.

Final finance is liquidity that firms get back as proceeds from sales of commodities or from new issues on the financial market. It would be wrong to think that the cost of consumers goods should be totally covered by proceeds from the sales of consumption goods, or that investment should be totally financed on the financial market. What

matters to firms is that *final finance be sufficient to cover total initial finance*. If this happens, firms will be able to repay their debt to the banks and will consider themselves to be in equilibrium.

It should be clear by now that *investment finance is supplied by final finance and not by bank advances*. What banks do is a totally different operation, namely to supply initial finance in order to cover current costs of production, both of consumption and of capital goods. Investment is financed by agents prepared to buy capital goods – be it a direct purchase of means of production in kind, be it an indirect purchase performed by acquiring securities on the stock market. Since financing investment means buying capital goods, investment can only be financed by agents who are spending their own incomes. Banks (provided legislation allows them to do so) can finance investment only by spending their own net profits. If a bank could buy capital goods (or any other commodity) by means of its own credit creation, it would be infringing the fundamental rule of any monetary economy, namely that no agent may make a final payment by issuing his own debt.

V. – THE CREDIT POTENTIAL OF THE BANKING SYSTEM

The analysis of the supply of money to be found in the theory of the circuit strongly emphasizes the principle that bank deposits are created by loans, and not loans by deposits. In agreement with the basic principles of money and banking, it therefore stresses the fact that the credit potential of the banking system depends on the monetary base, the reserve ratio, and the preference of the public as between cash and deposits. The public can only influence the level of the credit potential by modifying its preference for cash but, apart from that, once reserves are given, the amount of credit created by banks only depends on the demand for loans.

These are well-known principles. Still, they have not been constantly applied to the microeconomic analysis of bank behaviour. As a consequence, statements such as : "The activity of a bank consists in collecting deposits and lending them at interest", or "The lending capacity of the banks depends on the willingness of the public to open deposits", or even "The liquidity of the banks is increased whenever the preference of the public for deposits as against other forms of wealth is increased", are still common in the literature. Similar ideas stem out of the basic prejudice, according to which banks are mere intermediaries between depositors and investors. They are also loosely connected to the equally popular idea that banks are in fact collecting savings and

financing investment. This image is just one step from the idea that an adequate amount of saving should be previously formed and kept aside, before any investment can be actually undertaken[9].

When a bank grants credit to an agent and as a consequence a deposit is created, the bank is engaged to pay upon demand the amount for which credit has been granted.

Let us begin to analyse the measure of the credit potential by an extreme case in which one single bank is serving all agents present in the market (or in the 'economic space', as some would say) and there is no Central Bank or any other monetary authority imposing rules on commercial banks. In this hypothetical case, only one means of payment exists, namely deposits created by the only bank present in the market. In this case, the bank has *an unlimited credit potential*, and runs no risk of insolvency. Any new financing, no matter how big, can only give rise to payments made to other customers of the same bank. In order to make such payments, the bank has only to open new deposits in the name of the payees – something the bank can do with a strike of the pen[10].

A problem of solvency only appears if at least two different means of payment exist. This happens if banks are more than one, or if money issued by the Central Bank is used alongside with deposits of commercial banks. If there are two banks, agents receiving a payment from a customer of the first bank, can ask for their credit to be converted into a deposit with the second bank, which means that the first one will be called to make a payment in favour of the second one.

The question now arises about how a bank can make a payment in favour of another bank.

A first possibility is that the first bank pays the second one by opening a deposit in its name. If that form of payment is accepted, the two banks are acting as though they were one and the same bank. The credit potential of a number of banks acting like that would be unlimited, just as it happens when the market is being served by one single bank.

A second possibility is that, while the first bank is granting credit to its own customers, the second bank is also expanding credit *at the same rate*. Provided, if reciprocal payments of the two banks balance, no actual payment has to be made by any one of the two. In this case, provided the shares of the two banks in the deposits market are constant, again there are no limits to credit creation. As Keynes said, "there is no limit to the amount of bank-money which the banks can safely create, *provided that they move forward in step*"[11].

If however reciprocal credits do not compensate, a payment must be done. As it happens with single agents, a bank cannot make a payment just by issuing a promise to pay, since this would be a credit transaction and not a monetary payment. A monetary payment, as distinguished by credit, can only be made by using the promise to pay of a third party. Just as single agents use bank deposits, namely promises to pay issued by banks, *single banks use promises to pay issued by the Central Bank.* The role of the Central Bank is in fact of acting as third party between single banks so far as their reciprocal payments are concerned. In order to enable a bank to make a payment to another bank, the required amount of Central Bank notes must be made available to it, either in the form of notes previously supplied and kept as reserves, or in the form of stand-by credits with the Central Bank.

The moment the Central Bank allows a commercial bank to draw on its account in order to pay another bank, money of the Central Bank is being created. Central Bank money is therefore *a debt of commercial banks towards the Central Bank itself.*

In this simplified model where there is no Government sector, reserves can only be created if the Central Bank opens credit positions with single commercial banks. The total amount of reserves is therefore *a debt of commercial banks towards the Central Bank*, just as the total amount of deposits is a debt of firms towards commercial banks.

In a more complex model, including the Government sector, the possibility exists for the Central Bank to create money in order to finance the Government deficit. Central Bank money thus created is no longer a debt of commercial banks, but *a debt of the Government towards the Central Bank.*

We now consider the question of what determines the credit potential of one single commercial bank which acts along with other banks. We remember that the credit potential of a single bank serving the whole market was found to be infinite. The opposite extreme case is that of a single bank having just one customer. The credit potential of such a bank is strictly limited to the amount of its reserves. In fact when the bank has granted credit to an agent in the amount of its own reserves, as soon as the agent has made use of the credit received by making a payment to another agent, since by definition the second agent is the customer of a different bank, the first bank will be held to pay out the whole of its reserves, and its activity as a bank will come to an end, unless the Central Bank grants it more reserves.

Another way of stating the same result is to say that a bank serving the whole market needs no reserves, while a single bank having only

one customer needs a 100% reserve ratio. An immediate consequence is that, in intermediate cases, when each bank serves more than one agent but not the whole market, each bank will need an amount of reserves proportional to the fraction of the market it is serving. The higher the fraction of agents banking with any bank, the lower will be the reserve requirements of that bank, and the higher its credit potential for any given amount of reserves.

This is another reason (beyond that of acquiring reserves from other banks) why single banks are always actively trying to expand their own economic space by capturing new customers and by increasing the amount of their deposits. This can also explain the argument, so popular in the literature, that the credit potential of a bank depends on its ability in collecting deposits, and that therefore the very activity of a bank should be described as that of being an intermediary between depositors and investors.

Now let us turn to the monetary base. An isolated bank has two ways of acquiring reserves : it can borrow reserves from the Central Bank, or it can acquire reserves by collecting deposits. The second kind of reserves, those gathered by collecting deposits, may have been introduced in the economy because other banks have borrowed them from the Central Bank (or, if the Government sector is being considered, because there has been some money financing of the Government deficit). Where reserves come from is immaterial to the single bank. In fact reserves of any kind contribute equally well to building up the credit potential of the bank. For a single bank, reserves collected by means of deposits may be just as costly, if not more costly, than reserves borrowed from the Central Bank.

The preceding argument can be summarized by way of simple formulae. If r_j is the reserve coefficient and Z_j is reserves (notes of the Central Bank) held by the single bank, the potential level of deposits D_j (whenever agents use only deposits as means of payment, so that reserves are wholly in the hands of commercial banks) is :

$$D_j = \frac{1}{r_j} Z_j .$$

The reserve coefficient can be defined as an inverse function of d_j, the share of the bank in the deposit market :

$$r_j = 1 - d_j ,$$

while the fraction of total reserves held by the single bank can be taken as equal to its share of the deposit market :

$$Z_j = d_j Z .$$

Deposits thus become :

$$D_j = \frac{d_j}{1 - d_j} Z.$$

Since reserves Z are the sum total of debts of commercial banks and of debts of the Government towards the Central Bank (we are now assuming Government to be present) :

$$Z = Z_B + Z_G,$$

and since the balance sheet identity of the single bank imposes that assets (loans plus reserves) equal liabilities (deposits plus debts towards the Central Bank) :

$$L_j = D_j + Z_{jB} - Z_j,$$

we finally get :

$$L_j = \frac{d_j}{1 - d_j} [d_j Z_G + Z_B].$$

The above formula is a measure of the potential of the bank in the loans market. As already observed, the fact that the credit potential of a single bank depends not only on the total amount of reserves Z, but also on its own economic space d_j, explains why bankers insist on the idea that it is by collecting deposits that they are enabled to grant credits. It should be clear that, while this view is correct if referred to single banks, it can explain the credit potential of the banking system as a whole only to the extent that reserves are supplied by money financing of Government deficits[12].

VI. – INCOME FORMATION, PRICES, AND PROFITS

In current economic theory, three basic models of income formation can be distinguished, the neo-classical model, the Keynesian model, and the Kaleckian model.

According to the neo-classical model, the level of economic activity is determined by individual preferences. Households as suppliers of labour, by balancing marginal utility of income and marginal disutility of labour, determine the number of hours worked. The level of real income is thus determined. The distribution of real income between

wages and profits is performed by the market so as to equate real wages to the marginal productivity of labour.

In the Keynesian model (Keynes, 1936), activity levels are set by effective demand, as determined by autonomous investment coupled with a given propensity to consume out of income. Since firms are acting on the basis of given technological constraints (which determine their supply function), once the level of the social dividend has been determined by aggregate demand, its distribution between wages and profits follows the marginal rule.

In the Kaleckian model (Kalecki, 1938, 1939, 1942, 1971), the absolute amount of consumption and investment is decided upon by capitalists (or alternatively, capitalists decide the level of investment, while consumption is determined as a residual, the economy being in full employment conditions). Given the consumption propensities of capitalists and wage-earners respectively, distribution is then determined so as to equate demand and supply on the consumption goods market (equilibrium on the consumption goods market implies equality of savings and investment)[13].

It need not be emphasized that neo-classical theory is strongly criticised by circuit theorists because of its basic assumption of an economic equilibrium determined by individual choices, with the consequent acceptance of the principle of consumers' sovereignty. In the circuit approach it is rather producers' sovereignty which prevails.

Once the neo-classical approach is rejected, the choice with which the theory of the circuit is confronted is between the Keynesian theory of aggregate demand, and the Kaleckian theory of income distribution.

In principle, circuit theorists do not refuse the approach of the *General Theory*. In fact, it has often been remarked by some of them that the *General Theory* implicitly contains the idea of a monetary circuit[14]. Still, in spite of its being consistent with the circuit approach, the Keynesian model of the *General Theory* is not adopted by circuit theorists, who prefer to follow the model of income distribution first outlined by Keynes in the *Treatise*, elaborated by Kalecki, and later on utilized by the post-Keynesian school (Lavoie, 1982). The Kaleckian model in fact, with its emphasis on the one-sided determination of output on the part of firms, reflects better the assumption of total independence of firms as for decisions concerning the real sector.

Turning now to explaining price formation, let us imagine that firms put on sale the whole of output currently produced. They then decide to enter the market also on the demand side in order to buy a specified fraction of production. In order to buy the desired amount of output,

they need additional finance, which is added to the finance granted them at the outset for the purpose of paying the wage bill.

Let us adopt the following symbols :

w	Money wage rate
N	Total employment
c, s	Consumption and savings propensities of wage earners
π	Average productivity of labour
B	Total amount of bonds issued by firms
i	Rate of interest paid on bonds
p	Market price of output.

In each period, interest payments to savers, which must be added to labour income, are defined as being equal to iB.

The total supply of commodities will be equal to :

$$X = N\pi.$$

Market demand will be given by the sum of demands coming from wage earners and from firms. The demand from wage earners is :

$$C = cwN + ciB$$

If firms have decided to buy the fraction b of total output, their demand, in monetary terms, will be :

$$I = b\pi Np.$$

The level of prices at which demand and supply are equal will be given by the following equality :

$$\pi Np = cwN + ciB + \pi bNp.$$

It should be noticed that the preceding equality may seem as being in the nature of an equilibrium condition in a perfectly competitive market. It might as well be interpreted as being a condition imposed by firms enjoying an oligopolistic position and being therefore able to sell finished products at a price high enough to secure the desired profit margins.

From the preceding equation, we get the level of money prices :

$$p = \frac{1 - s}{1 - b}\left[\frac{w}{\pi} + \frac{iB}{\pi N}\right]$$

The price level as determined by the preceding equation suggests the following :

a) the level of money prices does not depend on the quantity of money. In fact, the quantity of money does not even appear in the equation for the price level. The money stock, being a totally endogenous variable, cannot enter into the determination of the price level;
b) the level of money prices depends instead on the savings and investment propensities (s and b), as well as on the level of money costs;
c) any change in the level of money prices will induce a corresponding change in the money stock, so for as the velocity of circulation is constant.

The price equation can be interpreted as follows : the term in square brackets is a measure of the money cost of output (namely wage costs plus interest costs per unit of output) while the factor $(1 - s)/(1 - b)$ is in the nature of a profit factor.

The rate of profit, can be defined as the ratio between net product and the money cost of production :

$$r = \frac{N\pi p - (wN + iB)}{wN + iB} = \frac{1 - s}{1 - b} - 1 = \frac{b - s}{1 - b}$$

Total profits in money terms are defined as the rate of profit times the money capital invested :

$$P = r(wN + iB) = \frac{b - s}{1 - b}(wN + iB).$$

By dividing by the price level, we get total profits in real terms :

$$P/p = \frac{\frac{b - s}{1 - b}(wN + iB)}{\left(\frac{1 - s}{1 - b}\right)\left(\frac{w}{\pi} + \frac{iB}{\pi N}\right)} = \left(\frac{b - s}{1 - s}\right)\pi N.$$

This result invites three comments :

a) the level of profits is strictly related to the formation of the price level. As Schmitt (1984, ch. 4, pp. 134-5) would say, profits are born in the commodities market;

b) real profits to not depend on the rate of interest paid on bonds. As a consequence, any attempt to control private investment by controlling the rate of interest is bound to be without effect, since it does not alter the level of real profits. This result, on which more comments will be made below, cannot be extended to interest paid to the banking system, since interest payments made to banks involve a transfer of real wealth from the industrial sector to the financial sector;

c) if $s = b$, namely if the propensity to save is equal to the fraction of output that firms want to keep for themselves (in short, we might say, if saving equals investment) money prices reduce to :

$$p = \frac{w}{\pi} + \frac{iB}{\pi N},$$

which means that prices equal money costs. Correspondingly, profits are zero, as in a perfectly competitive equilibrium;

d) if $s = 0$, namely if wage-earners consume the whole of their incomes, real profits become :

$$P/p = b\ \pi\ N$$

namely profits equal investment. Since, as we saw before, this is also a measure of the expenditure of capitalists in real terms, in this case, the famous conclusion that "wage-earners spend what they earn and capitalists earn what they spend", is literally verified.

It should be added that profits analysed so far are profits gross of interest payments made to banks. In order to get net profits, interest payments must be deducted. If, as assumed more than once, initial financing to firms is equal to the wage bill, then profits net of interest will be :

$$P_n = r(wN + iB) - iwN.$$

The preceding results can be easily extended to the case in which Government expenditure is present (Graziani, 1985).

Two cases should be distinguished, according to whether Government expenditure takes the form of transfers to households or of direct purchase of commodities on the market. In both cases, by way of example, we shall assume taxes to be wholly levied on profits, and subsidies to be totally given to labour. Taxes, in spite of being paid by firms, do not reduce their purchasing power, which only depends on bank credit. The consequence is that firms will still be able to buy the same amount

of commodities as they would buy without taxes. Therefore, whatever the level of taxation, real profits are not touched.

Moreover, since firms are assumed as before to take autonomous decisions as to the level of output, subsidies will not increase real consumption of households. The only difference will be that money prices will be higher, in proportion to subsidies being paid. This is of course true only insofar as the presence of taxes and subsidies does not induce firms to revise their own output plans.

If Government expenditure takes the form of direct purchase of commodities, Government and households will compete on the commodities market for the purchase of the amount of goods firms have decided to put on sale. Crowding out takes place at the expense of households, who see their real consumption reduced. Profits instead will be untouched since, as already noticed, real profits coincide with the amount of commodities firms have decided to buy for themselves, and the purchasing power of firms is practically unlimited. As a consequence, in spite of taxes being levied on profits, firms do not pay any tax. As Kalecki once pointed out, taxes, if measured, in real terms, are paid by wage-earners only (Kalecki, 1935, 1937; see also Keynes, 1930, p. 343).

Finally, since the price level only depends on aggregate demand and not on the existing quantity of money, the inflationary impact of deficit spending will not depend on how the deficit is financed, whether by debt or by money creation, but on its amount only.

VII. – FINANCIAL MARKETS

Income which is not spent on the goods market gives rise to monetary savings which, as already said, can either be spent on the financial market, namely on securities issued by firms, or kept in liquid form in a bank deposit. Savings kept in bank deposits are money lost to the firms, and give rise to an increase in the debt of firms towards the banking system.

Banks and firms thus compete on the financial markets for getting hold of the monetary savings of wage-earners. Banks do so by increasing the attractiveness of deposits (first of all by raising interest paid on deposits whenever allowed by the local legislation), and firms by increasing the yield of the securities they issue.

The question now arises about how far firms can go on bidding up interest paid on securities. The answer is that in principle there is no

limit to the increase in interest rates offered, *because interest is paid at no cost by firms to savers.*

If a saver chooses to keep a pound for ever in his bank deposit, firms will never be able to repay it to the banks and will pay interest on it for ever. If firms manage to issue a pound's worth securities, they will save a perpetual annuity of interest charges. Since, however, they will have to pay interest on securities sold to savers, and since savers will decide anyhow to keep in their cash balances a fraction of interest payments received (as of any other form of income), that percentage will be lost to firms, and on it firms will have to pay interest to the banks. It is, however, clear that gains by-pass losses, since by issuing bonds, firms save interest on the whole money value of the issue, while they pay extra interest to the banks only on a percentage of the bonds' yield.

The problem is now whether gains by-pass losses no matter what the level of the interest rate paid on securities may be. A good starting point for answering this question is given by the simple case in which firms offer an interest rate high enough to induce savers to place the whole of their savings on the financial market. In this case, firms are sure to get back, at the end of each period, the whole of the money they have initially spent. Part of it will go back to them as proceeds from sales on the goods market, the rest as proceeds from issuing securities. The final outcome will be that firms will be able to repay the whole of their banking debt. In this case, interest payments to savers (no less than wages paid to workers) will only be a clearing transaction for firms. The level of the rate of interest paid on securities, is thus totally irrelevant. It will therefore always be in the interest of firms to raise interest rates offered to savers up to the level which induces savers to run down their cash balances to a minimum. This result was already implicit in the equation for real profits appearing in the model of the preceding chapter. But it is not true in the case of the interest paid by firms to banks. We discuss this proposition next.

Clearly, at the end of each period firms must pay interest at the agreed rate on sums borrowed from banks. It is also clear that, in order to be able to pay interest to banks in money terms, firms must get money receipts from some other source. In fact, so far as the only money present in the market is the money that firms themselves have injected in it by paying wages, what they can get back by selling goods or by issuing securities can equal, at most, their initial expenditure. This means that in the most favourable case, firms will be able to repay their debt. Money will never be available for the payment of interest.

The situation is therefore as follows. On the one hand, firms owe the banks an amount of money equal to interest charged on loans. On the other hand, banks need to make use of interest payments made by firms in order to pay wages and salaries to their employees, buy commodities on the market, and possibly pay interest on deposits. If the expenditure of the banks equals interest that firms owe to them, the problem is solved (in any case, expenditure on the part of the banks cannot exceed their net income, otherwise banks would be purchasing commodities by means of credit created by themselves, which would violate the fundamental rule of a monetary economy).

Under a technical point of view, we can imagine that, when interest payments come due, firms borrow the necessary money from the banks. Subsequently, banks spend the money they have got from the firms (be it on wages and salaries, or on commodities sold by firms, or in the form of interest on deposits). The money thus comes once more in the hands of firms, who can make a final payment to the banks. In substance, what has taken place is a barter, firms having paid interest in kind (Lavoie, 1987; Graziani, 1984).

What share of output firms will have to yield to banks in real terms depends both on the level of interest rates and on the level of prices charged by firms on commodities sold to banks. High interest rates may therefore induce firms to protect their real profits by charging higher prices, thus giving rise to a possible round of inflation.

The consequence of interest being paid to banks is that real output gets divided into *real wages, industrial profits*, and *financial profits*. A *financial capital* is thus gradually built up by banks, along with an *industrial capital* built up by firms.

VIII. – THE "EQUILIBRIUM" CONDITIONS

"Equilibrium" prevails if firms, by selling commodities and by issuing securities, *get back the whole of the money they have initially spent and that they now owe to the banks*. Whenever the money cost of production along with the existing quantity of money (and therefore the debt of firms towards banks) are constant, firms are in "equilibrium". In this case, one would say that *the circuit gets regularly closed* at the end of each period.

Let us now consider an increase in money holdings of wage-earners. Two main cases should be distinguished :

a) A first possibility is that wage-earners *want a once and for all increase in money holdings*. It this case, once their cash balances

have reached the required level, consumers will resume their regular spending, and, with the usual time-pattern, again spend the whole of their incomes as before. In this case, there will be a once and for all increase in the debt of firms and a once and for all increase in the money stock. If banks accept such once and for all change and keep financing firms at the previous time rate and charging them the same rate of interest, the change in liquidity preference may go without repercussions on activity levels;

b) A second possibility is that wage-earners, owing to uncertainty or other factors, decide constantly *to devote a fraction of their money savings to increase their cash balances*, so as to realise a continuous increase in their money holdings. In this case, the money stock and the debt of firms becomes increasingly higher and higher[15].

Two reactions on the part of the banks are possible. Banks may react by refusing to renew loans in the previous amount, in which case, firms are forced to scale down their activity levels. On the other hand, banks may also consider as normal a situation in which the firms' debt keeps increasing year in year out. In this case, it will be up to the firms to decide whether or not to accept to go more and more into debt.

It should be recalled that what firms need in order to see their debt reduced is *not a reduction in saving, but a reduction in liquidity preference.* A reduction in saving might increase the equilibrium level of activity (if the model of income determination is the one of the *General Theory*) or alternatively it might increase the price level (if we follow a Kaleckian model). In no way a reduction in savings can eliminate or reduce the debt of firms towards banks, so long as savers are placing a fraction of their savings into cash balances.

If investment decisions are considered to be autonomous, in that they do not depend on the level of interest rates prevailing on the financial market, demand failures can only originate from a decline in what Keynes called the "marginal efficiency of investment", based on long term expectations of entrepreneurs. If this is the case, mere monetary policies can do very little to reverse the trend[16]. The fact of considering the money supply as endogeneous reinforces this result.

Circuit theory, as we know, defines the money stock as a debt of firms towards the banks. The consequence of such a definition is that, as soon as their own money balances exceed their equilibrium level, firms will reduce their debt, therefore destroying money by the same amount. Instead of having a constant money stock and a real quantity of money

automatically increased by declining prices, we have a nominal money stock automatically declining with declining prices, and a constant real money stock. With a constant real stock of money, there will be no downward pressure on the rate of interest, and no possible incentive to higher investment. The conclusion is that demand failures originating from the real side, will not be counterbalanced by declining interest rates.

Once again, the fact of defining the monetary base as being created by the banking system and not as being the consequence of a Government deficit seems to have far reaching consequences.

IX. – SUMMARY AND CONCLUSIONS

The preceding presentation has made clear that the theory of the circuit faces the same fundamental questions as any other macroeconomic theory, namely how the *level of activity* of a economic system is determined and what determines *the distribution of the social dividend* among the main social groups.

The basic idea is that, in a wage economy, possession of wealth as such does not imply being admitted to a share of real income. The ownership of resources as such, be it in the form of material wealth or of working ability, may only entitle its owner to a money income, the real content of which escapes any possible negotiation. Firms instead, being able to acquire means of production, are also able to determine activity levels, real consumption of wage earners, and the rate of accumulation.

Since access to money and credit is a key factor in a wage economy, producers of money and credit (banks and other financial institutions) enjoy a privileged position and are admitted as such to a share of total product (Neisser, 1928, p. 13). It is therefore a typical aspect of the theory of the circuit that banks and firms can never be merged into one single sector. A rigourous distinction has to be made between banks, as agents producing credit, and firms as agents using credit in order to purchase labour force and produce commodities.

The typical features of the model of the circuit may now be briefly recalled.

As already said, the non-Government sector is aggregated into three different operators. Commercial Banks, Firms, and Households. This allows not only to analyse the different strategies of banks and firms and their influence on activity levels, but also to enquire about the distribution of profits between the industrial and the financial sectors.

The analysis of the circuit starts with the creation of money. While the typical macro-economic models assume the whole of the existing monetary base as coming from the Government deficit, the theory of the circuit assumes an "equilibrium" position to be fully consistent with the existence of money created independently of any Government deficit, and therefore with the permanent presence of a debt of firms towards banks, as well as of commercial banks towards the Central Bank.

An immediate consequence is that the theory of the circuit considers the money stock to be *a strictly endogeneous variable*. Money is created because firms need finance in order to pay wages and buy means of production. Initial finance has therefore to cover current costs of production.

The circuit approach helps thus so dispel a recurring mistake in the literature, according to which finance supplied by banks is confused with the financing of fixed investment. Investment needs being financed in the sense that capital goods currently produced have to be sold to some agent wanting to keep them as real wealth. Only if all commodities produced are also sold, firms will get back the money they have advanced for producing it, and will thus be able to repay their debts to the banks. Under this viewpoint, no difference exists between capital goods and consumption goods. As emphasized by the theory of the circuit, the point is rather that for firms to get back the money they have spent in advance, they must get proceeds equal to the money incomes they have created. In order to do that, they must collect not only what wage-earners spend on buying commodities, but their money savings as well. This forces firms to issue securities on the financial markets. The function of the financial markets is therefore of bringing back to firms the monetary saving of wage-earners. Only under the very special assumptions of neo-classical equilibrium, proceeds from issues on the financial market equal the monetary value of investment, so that investment appears to be financed by means of long-term issues.

It is generally understood that in Keynes's *General Theory* no problem of initial finance exists and consequently banks have no autonomous role to play. In the *General Theory* it is in fact implicit that banks and firms share the same short-term expectations regarding aggregate demand, so that whenever a firm is prepared to undertake a certain level of production, there will also be a bank ready to finance the corresponding costs[17]. Such similarity of expectations between banks and firms is unknown to the theory of the circuit. The theory of the circuit revives instead the role of the Schumpeterian banker, on whose evaluations the destinies of the firm depend[18]. Few years after the

publication of the *General Theory*, Keynes expressed the same view when he pointed out that a situation in which a firm is asking for credit provides a clear picture of what is "the power of the banks" (Keynes, 1937a, p. 248).

A typical aspect of the theory of the circuit is the solution given to the problem of income distribution. Here the basic point is that firms, once in possession of the neccessary provision of liquidity, enjoy a free disposal of means of production and, within limits set only by social constraints, can impose on the market any level of employment as well as any investment rate. They can thus determine real consumption of wage-earners taken as a whole. But, according to the theory, by setting the level of real consumption, they also set the level of real income of wage-earners, since, for households taken an a whole, real consumption and real income coincide. It is in fact a point in the theory that financial wealth, while being a possible source for increasing consumption of single individuals, is no wealth to households as a whole.

An immediate consequence is that an equilibrium position as defined by the theory of the circuit does not imply any definite role for households or consumers. The principle of consumer' sovereignty (or even a milder principe of consumers preferences as being somehow relevant to economic equilibrium) is unknown to the theory of the circuit. Here the traces of Schumpeter's teaching can be detected once more.

A further consequence is that, firms being totally autonomous in their production strategies, and investment being independent of interest rates, no crowding out is admitted as for private investment. If a portion of aggregate demand is displaced by Government expenditure, this can only be consumption of wage-earners.

"Equilibrium" as defined by the theory of the circuit is not necessarily unique or stable. It is in fact in the nature of circuit analysis to allow for a multiplicity of possible "equilibria", depending on the strategies of banks and firms. This view is reinforced by the fact that, the money stock being endogeneous, no Pigou effect can be invoked as a stabilizer of last resort.

NOTES

1 – A general overview of the theory is given by Lavoie (1987). An attempt to define the position of the theory *vis-à-vis* mainstrean economics is contained in the recent book by Cencini (1988, Part II). A critical examination of Marxian theory from the viewpoint of circuit theory is performed by Cencini and Schmitt (1976).

2 – Turnovsky is a typical case in point. He recognizes that "the Central Bank may provide reserves by lending to the commercial banks", but considers this element as

negligible (1977, p. 18). As a consequence, in the rest of his analysis he assumes the monetary base as being totally supplied by means of Government deficit (pp. 68-70). The same treatment is given by Tobin (1983a). Such an approach is openly disregarded by Godley and Cripps (1981, p. 82-3), and is criticized by Sawyer (1985) : "The traditional Keynesian has pictured money as exogenously created by governments through open market operations and by government deficits. This has the unfortunate consequence of identifying money creation with the unfunded government deficit, which was translated over into a link between the money supply and the public sector borrowing requirement". (p. 16). See also De Vroey (1984); Moore (1984a and 1984b); Cartelier (1985); Lavoie (1987).

3 – The term "pure credit economy" was used by Wicksell (1898, chapt. IX, Sec. B); and by Robertson (1928). The model of an economy entirely based on credit is also outlined by Hawtrey (1923, Ch. I), and Robertson (1926).

4 – Parguez (1981 and 1984, p. 98); Graziani (1984, p. 10); Cencini (1988), pp. 9 ff.). Heinsohn and Steiger (1983) present a careful demonstration of the fact that even in ancient history true money has always been a pure credit money.

5 – This point was already made by Keynes in the *General Theory* (1936, p. 196). It is to be found again in Keynes (1937a, p. 246), and Keynes (1937b, p. 669; *C.W.*, XIV, pp. 208 and 223). See also Barrère (1979, p. 127, and 1985b, p. 41).

6 – Parguez (1981, pp. 420 ff.); Arena (1982, p. 435, and 1987, pp. 13-16); Vallageas (1985); Lavoie (1987). As already mentioned, a full description of the circuit can already be found in Wicksell (1898, chap. IX. Sec. B).

7 – Some authors would say that by so doing, banks are creating money. This is denied by Schmitt (1984, chapt. 4, p. 110; 1986, pp. 78 and 83). Schmitt is the author who has gone more deeply into the analysis of banking activity. His point is that since banks can only grant a loan against a promise of repayment made by an agent in the market, money, is in fact not created by banks but by market agents themselves. Parguez (1984, p. 98) gives a similar version of the same point by saying that money is a promise of a firm endorsed by a bank.

8 – Graziani (1984, pp. 6 and 26); Moore (1983, p. 546, and 1984b). Godley and Cripps (1981), prefer to say that the amount of money outstanding is equal to inventories valued at cost. Others prefer to add to wage costs the cost of intrafirm transactions; see Parguez (1985a, p. 234). The same problem had been already discussed by Lundberg (1937, p. 122-3).

9 – A detailed account of what Schumpeter named the old prejudice according to which deposits make loans, is given by Schumpeter (1954, pp. 1113-7). A brilliant criticism of the same idea can be found in Schneider (1962). Schneider's point is that even if banks tried to use deposits in order to make loans, they would be unable to do so. Once a deposit has been accepted, the depositor can make use of it on demand any moment, which means that, by depositing legal tender with a bank, a depositor is not losing liquidity. If the bank now makes a new loan, it is granting liquidity to another agent *without* subtracting liquidity to anyone else. The bank is therefore not "transmitting" liquidity from one agent to another one, a practice that would imply a loss of liquidity for one of them and a gain for another one. The bank is in fact creating new liquidity. See Schneider (1962, pp. 55-9).

10 – Wicksell (1898, chapt. VI, Sec. C, pp. 64 ff.). The analysis of credit supply without a Central Bank has recently been revived in the debate on free banking; see Goodhart (1988, chapt. II). Similar older debates can be found in Bagehot (1873), and Smith (1936).

11. Keynes (1930, I, chapt. 2(i), p. 26). As the banker and economist Hahn (1954) once said, only if it were possible to draw money out of a bank deposit and take it to the moon, troubles could be created to the banking system as a whole (p. 88). Whether or not moving in step implies collusive practices among banks is a delicate question, especially relevant to the discussion on the advantages and disadvantages of free banking.

12 – The above conclusions can be compared to the conclusions of the model contained in Tobin (1982b), the most advanced one in the field. Tobin recognizes the fact that the deposits of a bank are partly created by its own loans (his "retention function"). His definition of the deposits of a single bank contains, however, an autonomous element D_0, the nature of which is not explained. In order for his analysis to be consistent, the D_0 elements of the single banks should add up to zero (in which case deposits are wholly created by loans) or their sum-total should equal the monetary base created by Government deficit (this being the only deposit of commercial banks not requiring the existence of a previous loan).

13 – The working of the Kaleckian model could also be described by saying that firms sell consumption goods at a price such as to allow them to earn profits equal to investment. As we shall show later, the two ways of describing the working of the model are essentially the same.

14 – The idea that Keynesian theory implicity contains a monetary circuit is suggested by Barrère (1979, p. 160; 1985a, p. 22) and Poulon (1980; 1982a; 1982b; ch. 11, p. 300). See also Marjolin (1941) and Kregel (1986b).

15 – Some authors would say that, since firms are not getting back the money they have anticipated, the circuit does not get closed. This terminology is strongly opposed by Schmitt (1984, p. 159 and pp. 277-82), who considers cash balances as long-term financial credits, not as money. In Schmitt's conception money, being a mere means of payment, only exists at the very moment a payment is made (Schmitt, 1984, p. 247).

16 – This is a crucial divergence between the theory of the circuit and the approach of Keynes in the *General Theory*. Kregel (1987) shows how difficult it can be to reconcile Keynes with circuit theory if one does not want to drop the Keynesian theory of investment.

17 – This is implicit in Keynes' idea of the continuous overlapping of short-term expectations and realised results (Keynes, 1936, ch. 5, ii).

18 – A development, in circuit terms, of the Schumpeterian idea of an independent judgment of the banking system as to the marginal efficiency of investment is given by Messori (1985 and 1986).

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[18]

The credit theory of money: the monetary circuit approach

Alain Parguez and Mario Seccareccia

Introduction

The starting proposition of what is commonly described as the theory of the monetary circuit (TMC) is that, in a monetary economy in which buyers and sellers engage in economic transactions, 'money' is the by-product of a balance sheet operation of a third agent who, in modern parlance, can be dubbed a 'bank'. In particular, money *always* emerges as a debt (or liability) issued by this third agent on itself, which has as counterpart a credit simultaneously granted to buyers of goods and services within an economy. In this three-way balance sheet relation, every transaction entails the simultaneous creation or destruction of debt, and every seller of goods and services accepts payment of this bank liability on the basis of its general purchasing power or value. The value of this bank liability (or money), however, is not the consequence of some intrinsic characteristic, be it utility or liquidity. It stems, rather, from the certainty that accepting bank debt as payment is to acquire a right on the existing as well as future output that will be created by the agents who have been granted bank credit. Furthermore, these debts would not be legal titles to acquiring present and future real wealth were it not for the direct or indirect role played by the state in endorsing them.

In this regard, the TMC sheds light, among other things, on the historical origin of money. In accordance with Innes (1913) and Heinsohn and Steiger (1984), there can be private debt and credit contracts before the existence of money. This is because money emerges both causally and historically as a result of prior debt and credit relations. Money appears when a community (usually through the legal apparatus of the state) bestows the characteristic of being a legal title to a share of present and future wealth on debts issued by a specific agent. Money has, therefore, a pure 'extrinsic' value (Wray, 1998) that is generated by money's role in the industrial circulation.[1] In the 'efflux' phase (to use Tooke's original expression) of monetary circulation, debts are issued to allow private firms (as well as the state) to start the production process via the credits granted to them by the issuing banks. These debts are then extinguished or cancelled when firms (and the state)

reimburse the creditor banks by acquiring enough of the bank debt in circulation. In the case of firms, this occurs through the sale of commodities in the product market and/or securities in the financial market, and, in the case of the state, taxes and/or government securities. This is what could be described as the 'reflux' phase of the monetary circuit. Credit money, as a rule, is thus created only to be destroyed in the circulatory process and not to be held.

From this general conception of money, we can deduce the two major propositions of the TMC. First, money is, and has always been, a debt created *ex nihilo* by bank credit advances that are granted either to permit the generation of real wealth or to acquire existing physical assets. Second, there is no alternative between debt financing on the one hand, and the tapping of existing liquid resources (or accumulated savings) to 'finance' expenditures, on the other. At the macroeconomic level, spending in a monetary economy is always and everywhere in the nature of debt financing.

This chapter is divided into two major sections. We begin with a detailed exposition of the theory of money underlying the TMC. In this first section, we shall try to explain why many of the debates pertaining to this approach are the consequence of a fundamental misunderstanding of the dynamic process of money creation. A second section discusses why the TMC is a major advance relative to other existing approaches to money.

The nature of money in the monetary circuit

The simple model of the monetary circuit

As has been emphasized in our introduction, the economic process has always been supported by a set of debt contracts in all organized societies, including the despotic ultra-centralized systems of ancient Egypt and the former Soviet-style regimes of Eastern Europe (Wittfogel 1959). Historical records clearly suggest that, regardless of the type of pre-existing property relations in ancient societies, there can be debt contracts while currency does not yet exist. For instance, Babylonian bills of exchange, regulated by the Code of Hammurabi, and book entries, such as the wheat deposits in ancient Egypt, were all in the nature of credit–debt relations even before such societies had developed coins or other well-defined circulating media of exchange (Einzig 1966: 328).

Interestingly, and in conflict with the views of Heinsohn and Steiger (1984, 1994), even in societies in which communal property was the norm, forms of credit/debt relations existed as long as individuals held informal personal possessions rather than titles based on codified private property rights. To substantiate this, we shall take the example of the aboriginal people living in the Hudson's Bay area of present-day Canada during the pre- and early post-contact era. Given the rugged climate of the region, it is well known that the original nomadic people living around the Hudson's

Bay had developed primitive debt/credit relations based on gift exchange prior to European contact (Ray 1996: 88, Davies 1994: 11–12). When the Europeans did attempt to establish commercial fur trading relations with them, these people of the sub-Arctic fur trading area had no difficulty in establishing formal credit/debt relations *vis-à-vis* the European traders. The Amerindians had no concept of European currency, but they understood credit/debt relations perfectly well. Indeed, a cashless credit economy evolved with respect to the European fur trading enterprises, such as the Hudson's Bay Company. As in the modern TMC, the fur trading companies were to advance credit in the form of European traded goods and, through formal double-entry book-keeping based on an abstract unit of account called the *Made Beaver*, aboriginal trappers would then seek to extinguish their debts by harvesting beaver and other highly valued fur bearing animal pelts (Ray and Freeman 1978: ch. .9). These credit/debt relations emerging in semi-nomadic societies, such as those of the Indians of the sub-Arctic region of Canada (where land remained collective property, even after European contact), would suggest that private property rights are not a necessary prerequisite to the appearance of such relations in primitive economies. We agree with Heinsohn and Steiger (1984), however, that private credit/debt relations predate more advanced monetary systems based on state coins or private bank liabilities as circulating medium.

Indeed, in more modern monetary capitalist economies with entrenched private property rights, money appears when there exists a set of agents, which we shall call 'banks' (including the central bank), whose debts are accepted by all other agents in an economy as a means of payment to settle their own debt commitments. Banks are deemed to be so creditworthy that no holder of their debts would ever ask for reimbursement either in kind or in the debt of another agent. Banking institutions enjoy, therefore, the capacity of freely issuing debt without it being subject to an exogenous resource constraint. This means that banks can create these debts *ex nihilo* when they grant credit to non-bank agents who must spend them to acquire real resources. Bank credit entails the advancing of loans of newly-created bank debt to economic agents who cannot depend on some pre-existing stock of bank liability, which itself would be the result of previously-incurred outstanding bank credit in the economy.

Once credit has been advanced, however, non-bank agents become committed to paying back their loans at some future date by collecting the required quantity of bank debt out of their cash receipts, either from the sale of newly-produced commodities, or from the sale of titles to existing wealth. When initial borrowers reimburse their loans, there is an instantaneous cancellation of both the individual agent's debt towards the banks and the debts that the latter had issued on themselves to finance the loans. In the TMC, these conventional loans are what is regarded as credit money. This money is endogenously created *ex nihilo* when banks grant credit and it is extinguished or cancelled when the outstanding credit is reimbursed.

This dynamic flux and reflux process is the essence of the monetary circuit. Its different phases are directly mirrored in banks' balance sheets. In the initial phase when banks grant credit, they issue new debts upon themselves which they lend to non-bank agents. Since these debts are money, the latter appears as an increase in banks' liabilities which is equivalent to the newly-held deposits of the non-bank public. Logically accounted for as an equivalent increase in bank assets, the counterpart of this newly-created money is the forward debt of non-bank agents in the form of loans to be paid back at some definite date in the future.

The second phase of the monetary circuit is the period during which non-bank agents spend the money that they have borrowed to acquire real resources, which are generally labour and produced commodities. Sellers of labour services or commodities acquire the quantity of money which was created in the first phase. In the balance sheets of banks, there appears a mere transfer of deposits or liabilities from one group of individual holders to another: the sellers of commodities and labour services. These new holders of money owe nothing to banks. On the contrary, one may infer that it is the banks that owe something to these holders of money. Some Post Keynesian writers (e.g. Moore 1988) have interpreted this sellers' holding of bank debts as 'convenience lending' to banks. This interpretation has also been more recently advocated by heterodox French economists such as Gnos (1998). Sellers of labour services and produced commodities are indeed the new holders of bank liabilities but, we believe, they cannot also be considered as bank creditors. This is because money is merely debt that the banks have issued on themselves *ex nihilo*. The amount of this credit money that was initially advanced was not based on what this subsequent group of convenience 'lenders' wished to hold but on the amount that the initial borrowers wished to spend.

In the third and last stage of the monetary circuit, the initial holders of bank debts seek to recover them in the reflux process out of their receipts generated by their initial expenditures. They can now replenish their deposits and pay back their loans. At the same time banks can recoup the debts that they had issued on themselves to finance those loans and thereby extinguish their own implicit debts. The counterpart of this process is the cancellation of the initial borrowers' forward debt to banks. In the balance-sheet operation of the banks, this third stage of the monetary circuit is accounted for as an equivalent reduction in bank assets and liabilities.

The definition of money

From this simple model of circulation of bank debts, we can draw a first definition of money. Money cannot be, and never has been, a commodity whose value stems from its scarcity. Some circuitist writers have deemed it to be a pure token (Graziani 1998). While not disagreeing with this, one

may more correctly argue that it is an abstract or virtual token, since it is merely a debt that banks have issued on themselves. The value of this money (or its purchasing power) cannot be inferred on the basis of some neoclassical scarcity principle, since the quantity of new debts issued by banks is constrained only by the expressed demand for money of non-bank agents. The latter need this money in order to spend it on the acquisition of real resources. In the productive sphere, money exists therefore as the means of payment that gives rise to a sequential chain of transactions leading to the creation of new wealth. Money cannot be defined, as is traditionally done by economists, in terms of its presumed functions of unit of account or store of value. A monetary economy does require a unit of account but, in such an economy, accounts are settled in the prevailing monetary unit. The debts banks issue on themselves are denominated in the unit of account because it is the means of acquisition that ensures a viable circulation process upon which the creation of real wealth is based.

As previously mentioned, economies have existed without the use of money, such as ancient Egypt, or in which money played an insignificant role, but which had a state-imposed unit of account, such as the former Soviet Union. This would suggest that money's existence cannot be understood on the basis of this function. In much the same way, since we have argued that money is created *ex nihilo* to finance loans, and is destroyed only when these loans are repaid, its existence cannot depend on its store of value function. Such a function is inconsistent with the notion of money. Money exists and has a value only as long as it is spent by non-bank agents for the purpose of creating future wealth. The hoarding of money in the form of bank deposits merely obstructs the process of wealth creation upon which the value of money depends. Indeed, it is this inconsistency which explains why the traditional demand for money as a component of wealth has a potentially destabilizing role within the monetary circuit.

Money is credit-driven

This definition of money requires that there are agents capable of issuing debts upon themselves that are generally accepted by all other agents as a means of payment. Certain conditions must be fulfilled for the emergence of these banking agents in an economy. First, the state must either implicitly or explicitly come to endorse fully bank debts. This endorsement has two major consequences.

Amid the class of debtors, banks are now deemed as so creditworthy that no one would consider asking them to reimburse their debts either in commodities or in debts of other agents. Banks are therefore able to issue liabilities at will, which are implicit debts on themselves. Because of the state endorsement of these debts as the ultimate guarantor of their liquidity, it would be wrong to conceive holders of bank liability as bank

creditors. In a sense, given its endorsement by the state, one can legitimately argue that money is always fiat money, even when the state is not issuing it and the role of the state is marginal. The state's power to create money at will is the logical consequence of its role in the endorsement of bank activity. Having the legal authority to bestow on bank debt the characteristic feature of money, the state has also the power to issue debt on itself that will be money, freely convertible into bank liability. Regardless of the material support of these conventional debts in the form of gold, silver, copper coins or paper notes such as bank money, these coins or paper notes have an essentially extrinsic value because each holder is certain to possess a legal claim on real resources, and because it can serve ultimately as a means of settling one's debts. The very notion of a commodity money is an illusion which confuses the material support of money with money itself.

The historical process has been to shed the commodity guise of money and to integrate further state money within the activities of commercial banking, with the last phase of this integration being the creation of the state's own banking department: the central bank. In this latter case, the state's endorsement of the monetary activity of banks is now operated through the central bank which, as the ultimate purveyor of liquidity, further empowers commercial banks to lend their own debt to creditworthy borrowers without constraint. At the same time, the state is now entitled to finance its desired expenditures by credits granted by the central bank. In the accounts of the central bank, money is now created as debts issued by the latter on itself and appears as an increase in liabilities. This money is advanced to the state and accounted for as an equivalent increase in the central bank's assets. However, a small share of these central bank debts may still necessitate some material support in the form of legal tender banknotes, and these would also be accounted as central bank liabilities.

It follows, therefore, that money, whatever its material support, is always a debt created *ex nihilo* to finance loans. We believe that this analysis is consistent with the historical record. As was mentioned at the beginning of this section, credit money and banks pre-date pure state money which was directly issued by the state authority as coins and later notes and central bank liabilities (Innes 1913, Heinsohn and Steiger 1984, 1994). In many societies, such as Mesopotamia as early as the seventh century BC, and Greece after Solon's Reform in the fifth century BC (Davies 1994), the state's monetary requirements were financed by private bank credits. However, regardless of whether these requirements are financed by private banks or a central bank, loans can never be financed by some pre-existing deposits. Moreover, since credit money is created to finance loans to private agents and/or the state, it is by its very nature an endogenous variable. The neoclassical scarcity principle can never be applied to the creation of money.

We have argued that credit money could not exist without the state, and that all credit-driven money is by its very nature a fiat money, irrespective of whether it takes the form of a commercial bank or central bank liability. On the other hand, state power alone cannot guarantee the existence and survival of a viable monetary system. History records many examples of the complete collapse of monetary systems, such as in Russia before the First World War, immediately after the Revolution, and in the late 1990s, as well as in Germany after both World Wars. In each of these historical episodes, the state failed in its effort to maintain the stability of the existing monetary systems and was faced with an untenable situation of hyper-inflation. But how can one explain it? Mainstream economists point to the excessive creation of money, but one must also explain it in reference to what it is excessive.

Contrary to the traditional quantity theory based on the excessive creation arising from the careless use of the government's printing press, our analysis points to a slightly different explanation and suggests why another condition must be met for the existence of money. Rules of creditworthiness must ensure that banks issue debts on themselves to finance loans that ultimately lead to a creation of new real wealth. If banks were to issue liabilities to finance loans that could never support the generation of future real wealth, these debts would be deprived of value and no one would accept them. We may, therefore, put forth the following more general definition of money:

> Money is at all times the liabilities issued by banking institutions which have been endorsed by the state primarily for the purpose of financing the formation of future real wealth. This money has a real extrinsic value because every holder of these liabilities has acquired a claim on the future physical wealth that results from the initial bank credit advances.

The role of firms

Such a definition explains why business enterprises and the state have special access to bank credit. Firms must borrow credit money to finance their desired acquisitions of real resources needed to carry out their production plans. They have first to spend money to acquire the labour services required for the production of the planned output of consumption and capital goods out of their existing capital stock. It is firms' spending (including that of public sector enterprises) on labour services which therefore determines labour income. According to our general principle of circulation, firms (and banks) no longer owe anything to wage earners as soon as income is paid.

Firms have also to spend in order to maintain or increase their stock of capital goods by acquiring the newly-available equipment goods produced by the capital goods sector. Abstracting from any specific assumptions

regarding the degree of integration of business enterprises, we see no logical reason why investment, the acquisition of the newly-produced capital goods, should not be financed by bank loans. Some heterodox economists (see Bailly 1992) have argued that, if that were so, one would be espousing some new version of the old loanable funds theory. They assume that if firms also borrow money to finance investment, it would mean that they are borrowing pre-existing deposits generated by the payment of wages. However, this latter interpretation succumbs to the general criticism that we made previously against the mainstream theory of money. Regardless of whether it goes towards the financing of the wage bill or the purchase of capital goods, the TMC suggests that when banks grant loans they issue new debts that generate new deposits *ex nihilo*. They cannot, as a group, lend pre-existing deposits. Moreover, to the extent that the purpose of these loans is the creation of real wealth, money emerges to generate new production either for direct consumption (consumer goods proper) or for indirect consumption, by replenishing or increasing the stock of real capital, including inventories.

Consumption goods are usually acquired when income earners spend their income which is initially financed by money creation. This credit money created to finance income should permit the generation of the new output and the realization of the value of a share pertaining to articles of direct consumption. Conversely, the value of the share devoted to future consumption or investment must also be realized by loans entailing creation of money that would finance the acquisition of newly-produced equipment goods (Seccareccia 1996, 1998).

As has been shown in previous articles on the TMC (Parguez 1996, Seccareccia 1996), such an extensive conception of the role of credit advances is the necessary requirement for the validity of money. All debts issued by banks are claims on real wealth. If credit were restricted to the financing of wages, the value of equipment goods would not be realized in accordance with the initial expectations of firms (and banks). The newly-created money would lead to the creation and monetary validation only of articles of current consumption, and not of the capital goods that would also be needed to sustain production and consumption in the long term.

As argued above, banks must apply a set of financial criteria to their borrowers that allow the former to assess the creditworthiness of the borrowing firms so as to measure the latter's ability to generate real wealth, as well as to establish norms for banks themselves, in their capacity to lend their debts to the requisite borrowers. The creditworthiness of firms is usually measured by the profits that they individually target. On the other hand, the creditworthiness of the banks themselves (which sustains the conventional nature of the debts that they issue on themselves) is positively related to their own bank-specific capital values as determined by the monetary value of their equity that forms the collateral of their loans (Parguez 1998). In the case of firms, this ability to generate profits out of

current expenditure is measured by the targeted ratio of profits to income expenditure, which has been described elsewhere as the monetary *mark-up* (Parguez 1998). The more banks want to ensure that the commitments of their borrowers will generate wealth, the greater would be the monetary mark-up that they impose on business enterprises. Firms' capacity to earn the targeted profit (via their mark-up policy) is thus the prerequisite for continued access to bank credit, and is a critical factor in establishing the viability of the overall credit money system.

Some circuitist writers have raised doubts about the ability of firms to earn profits within the framework of the monetary circuit (Renaud 1998). Others have postulated that only producers in the consumer goods sector could extract monetary profits (Gnos 1998, Vallageas 1998). In our opinion, both interpretations seem to thrive on a misunderstanding of the circulation process. As shown above, profits are not the pecuniary difference between the reflux and the initial injection of money. Rather, they are generated by the excess of receipts from the sales of commodities over the initial income expenditure paid to the workers. While the nature of circulation establishes an ultimate equality between the efflux and the reflux of money, this is not contradicted by the fact that the initial flux of money is always superior to the income expenditure by firms.

Firms in the capital goods sector must also be able to earn profits from the sale of their output. These money profits are equal to the difference between the selling price of the new equipment goods and their income costs, with the market value of these new capital goods reflecting long-term expectations of profits by firms wishing to acquire these commodities.

This is merely a restatement of the theory of profits in the investment goods sector put forth by Keynes in the *Treatise on Money*. Firms wishing to acquire more capital goods in order to meet a forecasted future increase in consumption borrow an amount of money equivalent to the value of the additional capital goods by placing their orders for new equipment from the capital goods sector. In this process, the sellers of both sectors realize their money profits and the monetary circuit is now completed with the flux matching the reflux of credit money. All profits are now used to repay the loans which had been the prior source of investment finance and, at the same time, the credit money originally created is extinguished. It is, in part, for this reason that we reject the view put forth by Nell (1998) who has argued that, in order to minimize transaction and borrowing costs, and thereby the number of transactions in a production economy, the optimal quantity of credit money ought to be just equal to the wages paid in the equipment goods sector. Nell's view, which is based on the principle of cost minimization as well as on a peculiar notion of money, would perhaps also succumb to further criticism (which we discuss in a separate section) of the neoclassical conception of money.

Since loans are granted to firms by commercial banks chartered by the state, their own creditworthiness will ultimately depend on their ability to

earn profits out of their credit-creating activity. In the long run, the existence of money requires that bank profits generate enough equity value to match the value of assets sustained by banks' own desired monetary mark-up. Consequently, we can spell out this stability condition for the monetary system:

> The rate of interest charged on credit advances, which is the primary source of bank profits, must be high enough to support an amount of bank equity equal to that generated by bank assets resulting from the monetary mark-up imposed on firms.

From this, there ensues the concept of exogeneity of the rate of interest. By its nature, the rate is imposed by banks on firms and it can be included as part of the creditworthiness rules to which firms have to comply. There has been some discussion in the heterodox literature on the capacity of firms to pay interest to banks (Léonard 1987). With the existence of interest, firms would not be able to meet their obligations to the banks since the reflux would now exceed the initial efflux. This, however, arises because of a misunderstanding of the requirements of monetary circulation.

The problem is not the incapacity of firms to pay interest but the ability of banks to realize profits consistent with an equality between the flux and the reflux of credit money. We have argued that banks issue debts on themselves, and these ought to allow firms to pay all their production costs: wages, the share of profits advanced to *rentiers* and interest payments. When banks credit firms with an amount equal to the interest requirements, they increase both their liabilities and their assets. Firms have to pay back the debts issued to finance interest expenditure by running down their deposits to pay interest to banks. In the process, bank liabilities decrease while bank assets increase by an equivalent amount, thereby generating an increase in banks' net worth. Banks recycle a portion of the increased assets to pay wages to their employees and dividends to their shareholders. These expenditures further build up demand for the commodities and services of the non-bank sector. However, while banks may even acquire assets of business enterprises, usually by default, their ability to create money for their own purposes is strictly bounded by the expenditure which is required to sustain their own credit-creating activity.

The role of the state

The nature of monetary circulation also affects the role of the state as producer of public goods in modern economies. To provide society with its desired amount of public goods, the state has to spend money to acquire both a share of the labour force and a share of the available supply of capital goods. However, the state cannot spend the proceeds of taxes to obtain such goods, because taxes cannot be raised unless there is already a

pre-existing money in circulation. Logically speaking, taxes could only be levied in the *future* as the final outcome of the initial expenditures of firms and the state, when all private agents will have received their gross income and/or spent it. Hence, taxes could be levied on gross employment income (primarily wages and salaries) paid by the state and by business enterprises (income taxes), on expenditures arising from household income (value added and sales taxes), or on firms' gross profits generated by their sales to households, banks and the state (corporate profit taxes).

Taxes must therefore be conceived as a component of the reflux phase of the monetary circuit, while state expenditures are a necessary component of the flux phase. The latter expenditures must normally be financed by credits granted to the state by the central bank, unless such a bank does not exist (as in nineteenth century USA) or, if it exists, it is prohibited from engaging in such financing (as in the European Monetary Union). In these latter cases, state expenditures would be financed via the holding of government securities by commercial banks. However, in the more common case in which a central bank does exist, the bank would behave much as private commercial banks *vis-à-vis* other non-bank agents. By crediting the spending branch of the state (the treasury), the central bank grants loans by issuing debts on itself. The counterpart of these loans is a forward debt specifying the amount of these debts that the state has to collect through taxes to extinguish its debt obligations to the central bank. The collection of taxes simultaneously cancels a share of central bank debt issued in the first phase of the monetary circuit as well as an equivalent debt of the treasury.

The remaining quantity of central bank liability arising from government spending is normally referred to as the government deficit: a purely *ex post* notion which can be accounted for only in the reflux phase of the monetary circuit. Since it is an *ex post* value, the deficit is by its very nature already financed. When mainstream economists speak of 'deficit financing' or the 'monetization of the deficit', they display a profound misunderstanding of the nature of monetary circulation. Contrary to firms' indebtedness to commercial banks, the state has the power to determine the amount of its debt to the central bank, since it is a pure conventional debt, a debt of the state to itself. The state can *plan* the amount of its future deficit, which is the ultimate consequence of its power of endorsing bank debts as money. Since commercial bank debts are entirely convertible into state money, a significant portion of the state money that is injected into the economy will be transformed into commercial bank debts. Such a conversion allows commercial banks to acquire central bank liabilities which appear in their assets as reserves. Conversely, a share of commercial bank money will, at the same time, also be converted into state money by private agents wishing to hold cash or legal tender. In this process, commercial banks would be losing

reserves, and drawing down their deposits at the central bank. In a modern economy, this commercial bank absorption of reserves from state expenditures will normally exceed their losses of reserves determined by the public's demand for cash. As a consequence of their legal convertibility, the private sector can pay taxes in the form of commercial bank debts in the final stage of the monetary circuit. Since the state will require the conversion of bank deposits into its own money through its banking branch, commercial banks will lose reserves in the reflux phase of the monetary circuit. Assuming a given and low preference for cash on the part of the public, we therefore reach the conclusion that the higher the state deficit, the greater is the net increase in commercial bank reserves.

From this analysis of the role of the state within the monetary circuit, we may draw some crucial propositions regarding the endogenous nature of money:

- First, the quantity of newly-created money is always determined by the effective or expressed demand for credit from firms or the state.
- Commercial banks only meet creditworthy demand for loans which comply with the required monetary mark-up or profitability criteria that is reflected in the rate of interest that they impose on firms. Effective demand for loans is the result of firms having already adjusted their planned expenditures to the commercial banks' creditworthiness norms. Consequently, the effective demand for loans is always equal to the quantity of newly-created bank money. In part, however, these criteria of creditworthiness also depend on commercial banks' own credit worthiness as reflected in their capacity to convert freely their own liabilities to those of the central bank.
- The central bank must ultimately play an accommodating role. Even if it wishes to act otherwise, it will fail because of the existence of state expenditures. For instance, let us assume that the central bank tries to impose some required ratio of cash reserves to bank liabilities. As has been shown, banks' net increase in reserves merely mirrors the state deficit. On the other hand, the net increase in commercial bank liabilities reflects the amount of the initial debts incurred by firms *vis-à-vis* the banks which the former cannot reimburse after their sales of commodities and financial securities. In an economy in which the state deficit is significant, the net increase in reserves would usually be greater than the increase in bank liabilities. The *ex post* ratio of reserves to bank liabilities would be higher than the required ratio, thereby preventing any coercive action by the central bank. If anything, the latter would be engaged in a futile action of trying to mop up excess reserves within the banking system to prevent the interbank funds rate from falling below some targeted level (Mosler 1997–8).

Competing approaches to the theory of money and the TMC

We wish now to compare the TMC, which we believe to be a dynamic theory of money, with three other major approaches that have dominated the literature in monetary economics: the neoclassical theory of money, the Post Keynesian theory and the neo-chartalist approach.

An assessment of neoclassical theory

To discuss the neoclassical approach to the theory of money, we have to try first to encapsulate this approach into a set of major propositions. In drawing up this list, we seek to emphasize only the propositions shared by most neoclassical economists. In each case, we shall inquire about the relevance of the proposition in relation to the theory of the monetary circuit.

Barter and monetary exchange

The starting proposition of the neoclassical approach going back to Jevons (1875) and Menger (1892) is that money is to be *introduced* within an otherwise pre-existing pure barter economy. All neoclassical economists accept the barter economy analogy as the reference system within which money appears (Clower 1969). The introduction of money as a simple intermediary or means of exchange to facilitate the two-way barter system, however, merely increases the number of transactions in such an economy. For instance, before the introduction of money, barter entailed a two-way direct exchange between firms and sellers of productive services, as in Walras's original production model. The introduction of money merely breaks up such barter transactions into three indirect exchanges. Assuming that there exists a financial capitalist who possesses money as a third agent, firms must now exchange their output for money held by this third agent so as to be able to purchase productive services. Sellers of productive services must then exchange that money for the goods previously acquired by the financial capitalist. This same type of multiplicative effect on the number of transactions is to be found, for instance, in Hayek's analysis of a production equilibrium (Hayek 1941). All monetary transactions are *de facto* of the same nature as barter exchange with a *numéraire* money having been introduced to it. They are simply exchanges of commodities of equal pre-existing value with *numéraire* money having a specific intrinsic value like any other commodity. This value is not created by the exchange but rather exists prior to it. In effect, it is an existence condition for the exchange itself.

Since monetary transactions pertain to two commodities of equal pre-existing value, they cannot be debt relations. Because of their theory of exchange, neoclassical economists have never been able to deal properly with debt–credit relations. Historically two solutions have been offered to this question.

The first explanation implied that banks are pure intermediaries allocating a pre-existing stock of commodity money among agents needing capital. Within the context of this, deposits make loans or, perhaps more correctly, savings make loans. This tradition was followed by Hayek (1931, 1941), Gurley and Shaw (1960), Koopmans (1933) and many others, including those referred to by Realfonzo (1998). If, however, banks were to lend more money than the amount that they had obtained as original deposit liabilities, the law of exchange of equivalent values would have been broken and, as a consequence, a cumulative neo-Wicksellian process of inflation would be the outcome of this excess of credit (Seccareccia 1990).

A second solution offered by neoclassical theorists interprets the role of banks as the supplier of pure accounting services. When all trading is closed, there may still remain some transactors who, because of imperfect information or indivisibility in the barter process, find themselves indebted to other transactors, and therefore require money to settle their debts. Banks emerge in the clearing process with holdings of an exogenous stock of money which is then provided to all those transactors facing a financing constraint. This view is found in some of the early works of Clower (1967), Starr (1972) and Ostroy (1973) and is reviewed in Parguez (1975).

For either of these two solutions, the TMC invalidates their starting proposition. As we have argued previously, banks issuing debts on themselves for the financing of loans can never be intermediaries between savers and borrowers. Even when banks are forced into a position of advancing new loans in order to compensate for the high liquidity preference of the public, they do not in fact lend savings (Graziani 1996) since savers do not 'lend' their deposits to banks. Banks have to issue new loans in order to refinance any outstanding debts by firms. Consequently, they can never be pure intermediaries nor suppliers of accounting services that do not create money.

Money and utility

A second major proposition of the neoclassical conception of money as a pure medium of exchange is based on the presupposition that money exists because it has a specific intrinsic value. As put forth by Koopmans (1933) and later by Patinkin (1965), the value of money must be explained in the same way as the value of any other commodity, by the principle of marginal utility. This proposition has two major consequences.

First, money has a specific utility if, by using it as an intermediary in exchange, it increases the real wealth of transactors. Unfortunately, neoclassical economists have never provided a substantive proof for this proposition. As implied by the first proposition, money is introduced in an already perfect system of exchanges leading to a general equilibrium consistent with utility maximization for every transactor (Hahn 1982).

Second, even if a proof for the utility of money were to be found, it would merely explain the existence of a specific demand for money.

However, this Patinkinesque demand for money is not an indirect demand for commodities and services, but a reflection of the share of the aggregate stock of wealth which is held in money form instead of being exchanged for physical commodities and services. Herein lies the well-known paradox that money would derive its specific value from its role as intermediary in transactions, but its utility can only be derived if it is *held* by economic agents. In equilibrium, therefore, the whole stock of commodity money would be hoarded, and money would not play any role in circulation! For such reasons, this second proposition of neoclassical monetary theory contradicts what we have described as the dynamic nature of money analysed within the TMC, in which money is never a commodity possessing any intrinsic value. It is a pure conventional debt issued to generate a sequence of transactions leading to the formation of real wealth.

Money exogeneity

In neoclassical economics, money must also be scarce to have a specific value. The scarcity principle implies that the available quantity of money must be independent of the set of demand schedules for both money and other commodities. As emphasized by the neoclassical school from Walras onwards, the requirement of exogeneity became a logical necessity for the application of the scarcity principle. In this way, as an exogenous variable, money can never be credit-driven and hinge on the loan-granting actions of commercial banks. To achieve this result, banks are assumed not to create money because they are considered as pure financial intermediaries, with the supply of money being determined by the exogenous actions of the central bank, as in the standard monetarist model. However, the error of the monetarist school was to confuse logical necessity with empirical reality which invalidates this third proposition of neoclassical economics. Within the TMC, the quantity of money is strictly endogenous since it is loan-determined and cannot be set by the exogenous actions of the central bank.

The Post Keynesians and the TMC

Unlike the situation in neoclassical economics, it is more difficult to compare the Post Keynesian theory of money *vis-à-vis* the TMC because there exists no unified Post Keynesian conception of money. We shall try, therefore, first to address what the broad Post Keynesian approach and the TMC have in common, then to discuss what is deemed to be unclear, or perhaps missing, within the Post Keynesian tradition.

Points of convergence

All Post Keynesian economists agree with the theory of the monetary circuit on the rejection of the first proposition of the neoclassical theory of

money. They have accepted the credit/debt theory of money whereby money is always a debt issued by banks on themselves to finance loans. For this reason, they also reject the third proposition of neoclassical economics. Money is always endogenous because its quantity is demand-determined. Numerous Post Keynesians have thus broken away from Keynes's conception of money as it was spelled out originally in Chapter 17 of the *General Theory*. Money cannot be conceived as a commodity having a scarcity value amid other existing commodities in the system to which the equimarginal condition is applied.

However, within the Post Keynesian literature, the so-called 'horizontalist' view is perhaps the closest to the circuit theory of money (Rochon 1999). Within the Kaldor-Moore horizontalist model, banks always issue debts on themselves to finance loans granted to firms that are seeking to acquire real resources. In our opinion, the famous interest/money space horizontal diagram of the money supply rightly spells out that, for a given level of interest rates, banks accommodate all creditworthy demand for loans. Furthermore, horizontalists endorse the circuitist view that the central bank cannot directly control the quantity of credit money. What the central bank can control is the level of interest rates charged by the banks on their loans, with the latter setting their loan rates by merely fixing a mark-up on the base rate established by the central bank. Interest rates are, therefore, exogenous since they are not determined by a market mechanism that adjusts the demand for money to a fixed supply. Given bank mark-ups, the level of interest rates is determined by the behaviour of the central bank in targeting a specific inflation rate.

Indeed, horizontalists reject two crucial aspects of the *General Theory* conception of money. First, like the theory of the monetary circuit, they question the link between money and uncertainty. Keynesian uncertainty cannot *in esse* explain the existence of money, since firms would need bank loans to finance expenditures even within a stationary or ergodic environment. Money is a right to acquire real wealth generated by previous loans, and if sellers of real resources were absolutely uncertain about the outcome of the loan process, they would never accept payments in bank liabilities. Uncertainty can only have an impact on the creditworthiness rules imposed by banks, thereby altering the effective demand for loans. Second, horizontalists have emphasized the distinction between the demand for loans and the Keynesian demand for money, the latter of which is merely the demand for liquid balances emerging *ex post* out of the credit money previously issued to finance loans. Much like the TMC, therefore, they conclude that there can never be an excess supply of money (Lavoie 1992).

Diverging opinions

Some Post Keynesian economists, who have remained too strongly connected with the monetary economics of the *General Theory*, have been

unable to grasp fully the consequences of the TMC and do not dissociate themselves completely from the second proposition of neoclassical economics. The latter proposition pertaining to the stock demand for money was of crucial importance for the *General Theory* explanation of the non-neutrality of money. As is well known, the Keynes of the *General Theory* emphasized the demand for money as a component of aggregate wealth along Marshallian lines. Portfolio holders choose to hold money instead of other commodities because of its intrinsic liquidity characteristic. On the other hand, he assumed an exogenous quantity of money in accordance with the neoclassical scarcity principle. From his hybrid analytical framework, in Chapter 17 of the *General Theory* Keynes could then explain why the endogenous rate of interest, determined on the basis of the scarcity principle, could be the source of the average expected rate of profit in the economy. A strong rejection by Keynes of the second proposition of neoclassical monetary economics would certainly have jeopardized and, perhaps, could have led to an unravelling of the whole *General Theory* analytics.

These difficulties notwithstanding, many Post Keynesians, for instance, Dalziel (1995) and Howells (1995, 1997), have explicitly maintained the Keynesian demand for money as a crucial analytical device in explaining the dynamics of a monetary economy even in an endogenous money context. Moreover, some such as Chick (1992) and Howells (1995, 1997) do not accept the principle of an absolute credit-driven money. There would always be the possibility that money could be created through pure portfolio operations by the central bank. Others refuse to recognize that the central bank cannot have power over bank money creation via quantity constraints. That would supposedly depend upon the willingness of the central bank to be accommodating in satisfying the liquidity needs of commercial banks. Even horizontalists display some reluctance on this question. Moore (1996), for instance, accepts that there had been times when the central bank was not accommodating. However, much of this debate arises because Post Keynesians postulate a central bank without the state and ignore the impact of state expenditure on bank reserves. In contrast with what we have tried to do, they do not apply the endogeneity principle to the state itself (Moore 1988).

Even when they address the role of credit, many Post Keynesians, including some horizontalists, impose constraints on what can be financed by credit money. For instance, in Moore (1988) bank loans only go towards the financing of firms' circulating capital requirements. Like Wray (1990), Moore himself conceives of loan financing as a means of bridging the gap between firms' expenditure and revenue. Hence, banks issue debts for the sole purpose of financing deficits. This view is completely at odds with the TMC which shows that firms' or governments' deficits can only be accounted in the reflux phase of monetary circulation. Such a misunderstanding of the financing process is perhaps best revealed by the way in which profits are conceived in investment financing. Post Keynesians,

especially of Kaleckian pedigree, make the distinction between internal financing of investment out of business-retained earnings and external or debt financing. As has been discussed elsewhere (Seccareccia 1998), this distinction is somewhat misleading since in the TMC the internal generation of finance via business profits is merely the macroeconomic outcome of the new indebtedness of other agents in a monetary economy.

This inability on the part of some Post Keynesians to sever links with the second proposition of neoclassical monetary theory may perhaps also explain why some, such as Chick (1992), have endorsed an evolutionist conception of money. Accordingly, there would have been at least three stages of monetary evolution. In the first stage, banks are pure intermediaries which recycle previous savings since they cannot freely issue debts on themselves. In a second stage of this historical evolution, banks can issue debts on themselves because of the accommodating role of a central bank. There is apparently also a third stage, the disintermediation one, in which banks are presumed to go to the financial markets actively to raise funds via liability management. Funding out of these markets to acquire necessary cash reserves would be substituted for pure bank credit, thereby further eroding the reserve constraint on the ability of banks to provide credit. As our earlier discussion of the history of money has shown, however, such an evolutionist view of monetary developments is somewhat equivocal since banks have never been pure intermediaries.

The neo-chartalist approach and the TMC

While neoclassical economists point to the efficiency gains of introducing money in the context of barter exchange, and while Keynes had emphasized its liquidity role in the context of fundamental uncertainty, there is a third view on the existence of money. We may describe this third approach, as it has been put forth by Mosler (1997–8), Bell (1998b) and Wray (1998), as the neo-chartalist approach.[2]

The starting proposition of the neo-chartalist approach is that money is always a creation of the state and that the state can ultimately impose any token as money simply by requiring that tax liabilities be paid in such a unit. In this regard, taxes appear as the fundamental prerequisite to the existence of money. By varying the public's tax liability, it is assumed that the state can even determine the value of money, its purchasing power. From these propositions, neo-chartalists derive a conception of monetary circulation that is closer to the TMC than, say, that put forth by Keynes in the *General Theory*.

Taxes are required to impose state money by inducing private agents to sell real resources to the state in order to obtain sufficient money to settle their accounts with the latter. Taxes cannot, therefore, be used to finance state expenditures. The state must first inject money into the economy by issuing at will the token in which it has decreed taxes must be paid.

According to the neo-chartalist approach, in modern economies the state token is essentially created when the central bank issues debt on itself at the request of the treasury. When taxes are paid *a posteriori* in the reflux process, they extinguish an equivalent quantity of the state-created money. From this circuitist analysis of the financing process of the state, neo-chartalist writers are brought to reject the conventional analysis of budget deficits.

The orthodox notion of government deficit financing and the so-called 'monetization' of deficits is highly misleading and, indeed, a misnomer. Since deficits are merely *ex post* accounting values measuring the net flux/reflux process pertaining to the state sector, they have already been financed. As was shown earlier in our discussion of the TMC, the counterpart of the state budget deficit is both an increase in the private sector holdings of money and an increase in bank reserves. However, as soon as bank reserves become excessive, the banks will stop borrowing reserves in the funds market and thereby deprive the central bank of any power of intervention. Indeed, if reserves are excessive, banks will actually try to purchase new bonds, whose effect would be to push up bond prices and thus bring about a collapse in interest rates. We can also assume that other private sector holders will attempt to do the same, thereby further accelerating the fall in the level of interest rates in the economy. From this, we can infer that the state must issue new bonds just to keep interest rates at some target level defined by the monetary authorities. Neo-chartalists would generally agree with what is essentially a Post Keynesian horizontalist position, that the central bank sets the base level of interest rates (see Wray 1998). However, any uneasiness with the horizontalist position by neo-chartalists may be due to the fact that Post Keynesians tend to have a theory of the central bank without the state. A careful understanding of this link, and the role of the treasury, along the lines that we have spelled out previously, would probably bring these two views closer to the circuitist position.

However, an important difference between the TMC and the neo-chartalist view relates to the emphasis that the latter places on taxes. As we have defended in our historical discussion, viable monetary systems existed during periods of economic history when taxes were quite insignificant. What matters, therefore, was not whether tax liabilities were of any significance but rather whether, largely through the legal system, the state endorsed existing banks by allowing them to issue debts on themselves. For very long historical periods, state money had been quite negligible in relation to the circulation of bank liabilities. By linking the existence of money exclusively to that of taxes, neo-chartalists are led to find money in societies where there are heavy taxes levied *in natura*. Taxes can more easily be levied if there is a state-imposed unit of account which would serve as money (Wray 1998). Ironically, such a definition of money as a pure unit of account is very close to the Walrasian conception of *numéraire* money in which it is the (state) auctioneer that chooses a *numéraire* before efficient trading takes place!

The state can endorse central and/or private bank liabilities, but it cannot

impose the value of money. While the neo-chartalists seem to identify a positive relation between the value of money and the amount of tax liabilities in an economy, what actually matters is rather the nature or composition of state expenditure. In other words, what is consequential to the value of money is primarily the ability of state expenditure to increase the real wealth of society either directly, through the production of public goods, or indirectly, through their capacity to foster private investment expenditures. If state money is issued merely to finance wasteful expenditures that have no serious positive consequences on the private or collective wealth of a community, the effect in the long run would be to depreciate the value of money, regardless of the power of taxation of the state.

Finally, the neo-chartalist theory of money logically implies that state money precedes private bank money. In other words, the creation of state money upon which taxes can be collected is followed by the emergence of commercial bank money when the state accepts private bank liability in payment of taxes. As emphasized by Bell (1998a), bank money is hierarchically inferior or subordinate to state money. Banks' credit activity is a leverage on the existing stock of state money (Wray 1998). This presupposition signifies that state money is endogenous but bank money is not since, in the final analysis, it is constrained by the variation of the former. This conception of the monetary system which, as it stands, hovers closely to a textbook analysis of how bank money is created, needs to be better articulated. As we have sought to show in our discussion of the relations among banks, firms and the state, the TMC can provide neo-chartalists with a more comprehensive framework of analysis.

Conclusion

In this chapter, we have discussed the main outlines of the TMC approach to money and contrasted this with alternative approaches, including neoclassical theories and contemporary heterodox views. As far as the latter are concerned, we have tried to argue from the beginning that both Post Keynesians and neo-chartalists will find a more cogent and coherent integration of money and commercial banking within the general framework of circulation as enunciated within the TMC. With its broad analytical framework, the TMC is able both to accommodate and to offer meaningful solutions to many of the enigmas presently confronting competing heterodox theories of money.

Notes

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1 As defined by Keynes (1930) in the *Treatise on Money*.
2 The approach is originally anchored in the work of Knapp (1924).

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Part V
Money and the State

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The two concepts of money: implications for the analysis of optimal currency areas

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Abstract

Much of the economic analysis of moving to EMU has been undertaken within the context of the Optimal Currency Area paradigm. This is the spatial/geographic counterpart of the currently dominating model of the nature and evolution of money, here termed M theory, whereby money is viewed as having developed from a private sector cost minimisation process to facilitate trading. Here, I argue, first, that there is a second, cartalist, or C theory alternative, which is empirically more compelling. Second, I claim that this approach can predict observed relationships between sovereign countries and their currencies better than the OCA model. © 1998 Elsevier Science B.V. All rights reserved.

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1. Introduction

Much of the economic analysis and assessment of the comparative advantages and disadvantages of moving to a single currency, Euro, area in Europe has been undertaken within the context of the Optimal Currency Area paradigm. This, in its turn, is the spatial/geographic facet of the currently dominating model of the nature and evolution of money. The latter views money as having developed by a process, whereby the private sector has sought to minimize the costs of making exchanges in the process of trading. In this paper, I shall argue, first, that there is a second, alternative approach to the story of the evolution and nature of money,

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which is historically and empirically more compelling. Next, I shall claim that this second approach is far better able to predict and explain the observed relationship between sovereign countries and their associated currencies than the OCA model.

In fact, there has been a continuing debate between those who argue that the use of currency was based essentially on the *power* of the issuing authority (Cartalists)—i.e., that currency becomes money primarily because the coins (or monetary instruments more widely) are struck with the insignia of sovereignty, and not so much because they happen to be made of gold, silver and copper, (or later of paper)—and those who argue that the value of currency depends primarily, or solely, on the intrinsic value of the backing of that currency, (Metallists). [1] A conjoint debate exists between those who have argued that money evolved as a private sector, market-oriented, response to overcome the transactions costs inherent in barter, (let us call them Mengerians), [2] and those who again argue that the State [3] has generally played a central role in the evolution and use of money (Cartalists).

There is little doubt that the M team has assembled the more illustrious collection of economists (plus the endorsement of Aristotle [4] and Locke (1960), [5] and has expressed its analysis in more formal and elegant terms, from the earlier economists such as Jevons (1875), and Menger (1892), [6] von Mises (1912), Brunner (1971) and Alchian (1977b), on more recently to Kiyotaki and Wright (1989, 1993), plus a host of other eminent economists. Against them, the C team has arrayed a more motley, fringe group of economists, such as Knapp (1905) in Germany, and Mireaux (1930) [7] in France and (most of) the post-Keynesians in the UK and USA. [8] Nevertheless, as Mélitz (1974) and Redish (1992) have noted, the C team approach has also received the support of a large number, probably a sizeable majority, of those in other disciplines, e.g., anthropologists, numismatists and historians concerned with the origin of money. [9] Whereas the M group has been strong on formal theory, it has been constitutionally weak on institutional

[1] As noted in Goodhart (1989) (Chap. 2, p. 34). The problems which the switch to fiat money cause for M-form analysis are addressed later in Section 2.

[2] After the paper of Menger (1892).

[3] The religious authorities also played a major role, see [13,18]).

[4] *Politics*, Vol. 1 (circa 340 BC), also see comments by Grierson (1977) (p. 9), and [11].

[5] *Two Treatises of Government*, Second Treatise, pp. 318-320. Also, in the same vein, see Pufendorf (1744), Book V, Chap. 1.

[6] In his *Economic Journal* paper of 1892, Menger assembled virtually all the elements of the intuitive analysis that has remained at the heart of the M-form theory. Subsequent economists with similar views have developed more technically advanced and mathematically rigorous models of the same process without much change to its central message.

[7] Also see Fontana (1996).

[8] Keynes (1935) (pp. 3, 4), believed that *fiat* money had to be explained on a Cartalist basis, but there is less evidence on his views of the earlier origins of money.

[9] A leading contributor in this group is Grierson (1977). His pamphlet on *The Origins of Money* is particularly useful. Also see Einzig (1949) and Polanyi (1957).

detail and historical empiricism. Mélitz is the only current economist from the M team, known to me, who tries to address the anthropological and historical issues presented by the C team.

I shall expand on this discussion in Section 2, and attempt to demonstrate where the M team's model has its main weaknesses, and to provide further evidence, historical and analytical, in support of the C team approach.

The optimal currency area theory (OCA) connected with the names of Mundell, McKinnon and Kenen is a natural extension of the M team theory into the spatial, geographic domain. If the origin of money is to be seen in terms of private sector market evolution, whose function is to minimise transactions costs, then the evolution of a number of separate currencies in differing geographical areas should, analogously, be analysed in terms of private sector market evolution, whose function would have been to minimise some set of (micro-level) transaction and (macro-level) adjustment costs. Against this, the C team analysts would claim that the spatial determination of separate currencies has almost nothing to do with such economic cost minimisation and almost everything to do with considerations of political sovereignty. In Section 3, I shall argue that the C team hypothesis does far better in explaining and predicting historical reality than the M team (OCA) model. Indeed, the discrepancy is so marked that the continued supremacy among economists of the M (OCA) model indicates how strong remains the attachment of economists to nicely constructed models, whatever the facts may be (the belief that Central Banks not only can, but also do, control the monetary base of their economy is another example of this genre). The comparative paradigmatic success of the M team (OCA) model may also reflect economists' normative preference for systems determined by private sector cost minimisation rather than messier political factors.

Much of the discussion of the cost/benefit balance of, and the appropriate boundaries for, the single currency, Euro, area within the European Union have been undertaken within the context of the M (OCA) model. If we should reject that model, in favour of the C model, as is argued here, this would suggest a need for reconsideration of the issues that arise.

The key relationship in the C team model is the centrality of the link between political sovereignty and fiscal authority on the one hand and money creation, the mint and the central bank, on the other. A key fact in the proposed Euro system is that that link is to be weakened to a degree rarely, if ever, known before. A primary constitutional feature of the European Central Bank (ECB) is to be its absolute independence from government (at any level). Meanwhile, the political and fiscal powers of the various European institutions (Parliament, Commission, etc.,) at the matching federal level are far weaker (than has been the case in other previous federal states). That, in itself, raises constitutional and political issues, such as what would happen if the wishes of the community, expressed through its various (democratic) institutions, should not coincide with either the objectives or the operations of the European System of Central Banks (ESCB)?

Within the Euro area, the main political and fiscal powers are, instead, to remain at the level of the nation state. Historically, the nation states have been able, in extremis, (whether in the course of war or other—often self-induced—crisis), to call upon the assistance of the money-creating institutions, whether the mint via the debasement of the currency, a Treasury printing press, or the Central Bank. Whenever states (as in the USA or Australia), provinces (as in Canada), cantons, länder, etc., have joined together in a larger federal unity, both the main political, the main fiscal and the monetary powers and competencies have similarly emigrated to the federal level. The Euro area will not be like that.

In particular, the participating nation states will continue to have the main fiscal responsibilities; but in the monetary field, their status will have changed to a *subsidiary* level, in the sense that they can no longer, at a pinch, call upon the monetary authority to create money to finance their domestic national debt. There is to be an unprecedented divorce between the main monetary and fiscal authorities.

The thrust of the M team's theoretical analysis is that this divorce is all to the good; indeed, it is largely the purpose of the exercise. The blame for recent inflation has been placed on political myopia, via the time inconsistency analysis, and the ability of the political (fiscal) authorities to bend and misuse monetary powers for their own short-term objectives. While there is much truth and realism in this analysis, the C team analysts worry whether the divorce may not have some unforeseen side effects.

2. On the nature and origins of money

Many economists and historians have noted the severe transactions costs involved in barter, and also the advantageous characteristics of the precious metals as a medium of exchange (e.g., durability, divisibility, portability, etc.). Clower (1969) is a good example. This conjunction has led numerous economists to construct models showing how the private sector could evolve towards a monetary economy as a function of a search for cost minimisation procedures within a private sector system, within which government does not necessarily enter at all. Kiyotaki and Wright (1989, 1993) provide the current state-of-the-art examples of such models. Menger's work from the Economic Journal, 1892, is, perhaps, the most quoted early example.

Apart from their lack of historical support, (not that any such has usually been considered to be necessary), the main drawback of such models is that they fail to recognize the informational difficulties of using precious metals as money. As I have previously noted (Goodhart, 1989) (p. 34):

> Precious metals in an unworked state have been used as a means of payment in exchanges only under very special circumstances—e.g., in the various gold rushes in California and Klondike—and even then the picture, immortalised, for example, in a film by Charlie Chaplin, of merchants and bar

> tenders weighing and checking the gold dust before accepting it in payment, suggests that payment in unworked precious metals was more in common with barter than with a monetary payment.

When the ordinary person goes into a jeweller's shop, he (or she) has very little capacity to judge the fineness, or weight, of a gold or silver object put before him. We usually take on trust the jeweller's claim about the carats involved, supported by the fact that the claim is *potentially* objectively and independently verifiable, and that the jeweller's reputation depends on such verifiable claims being upheld.

Nevertheless, the cost and time involved in such verification is not small. The whole thrust of the paper of Alchian (1977b) is that money arises as a result of the existence of a good whose identification costs are low, [10] but the costs of identifying the quality of either unworked or fabricated precious metal for the ordinary person is high. An individual could, of course, go to a money-changer for expert advice, but that would also involve costs. So, such costs were probably higher, for example, than the cost of identifying the value of items in common everyday use, e.g., salt, corn, nails or even perhaps cattle, (most people in a rural agricultural community would reckon to be able to assess the value of a cow). [11] Likewise, such costs are again greater than the cost of assessing the value of an item which is acceptable by being part of a set of items needed for some intra-societal functions (e.g., religious or wergeld); Grierson (1977) is a leading advocate of this latter view (see Appendix A); also see Einzig (1949).

The above argument may appear to be a straw-man; few people have argued that precious metals would be used as a medium-of-exchange currency, until the identification problem was largely resolved by the technical innovation of a mint process, whereby the identification costs could be drastically reduced by means of

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[10] Now, if there is some good in which identification costs are both (a) *low* and (b) low for *everyone*, that will permit purchase of product identification information cheaply from the specialized intermediary expert. If his costs of identifying that offered (money) good are less than the reductions in costs by using the specialist for information about the basic goods, the total costs of identification can be reduced.

(p. 117).

> Costs of identifying qualities of a good are what counts. If costs for some good are low and generally low across members of society, the good will become a medium through which information costs can be reduced and exchange made more economical.

(pp. 121–122).Page numbers are from the reprint in *Economic Forces at Work* (Alchian, 1977a).

[11] Burns (1927) records that lumps, bars or instruments in copper became acceptable in exchange in the early civilizations, e.g., Egypt, Babylon and China, but there was sometimes reluctance to switch from the use of cattle for certain quasi-monetary purposes.

> The cattle unit [in Rome] died hard, for twenty years later [circa 430 B.C.], it was necessary to order by law (the lex Papiria) that payments in copper should replace payments in cattle.

(p. 17).

stamping a quality guarantee upon a coin (see Appendix B). Thus, the argument is that a combination of the innate characteristics of the precious metals, *plus* the identification cost reduction allowed by minting, enabled the private sector to evolve towards a monetary system.

Again, however, that analysis is historically flawed. Although, once the idea and technical process is discovered, minting would seem to be as capable of being done within the private sector as any other metal-working process, in practice, minting has, in the vast majority of cases, been a government, public sector, operation. [12] Amongst the experts on the historical evolution of minting coins are MacDonald (1916), Grierson (1977, 1979) and Craig (1953). These authorities, in turn, refer to hosts of other earlier writers. In those cases where the mint has been run by the private sector, the government has in most cases both set the standards of fineness and extracted a rent, or seigniorage tax, that collected most of the available profits. This concentration of minting under the government's aegis is not accidental. There are two associated reasons why this is so.

First, a mint requires an inventory of precious metals. It will, therefore, act as a magnet for opportunistic theft and violence. It will require protection, and the protector, (who wields the force necessary to maintain law and order in the economic system), will therefore be able to extract most of the rent from the system.

Second, the costs of identifying the true value (quality) of the metals included in the minted coin leads to time inconsistency. The mint operator is bound to claim that the quality will be maintained forever, but in practice will always be tempted to debase the currency in pursuit of a quick and immediately larger return. [13] Olson (1996) has described how the development of a secure, dynastic regime reduces time inconsistency in the ruler [14] (also see McGuire and Olson, 1996).

[12] "And let no man have a minter but the King", from the ordinances of Aethelred (Wantage, 1002) reported in Craig (1953).

[13] Craig (1953) (pp. 27–28) records that:

> The Chronicle of Winchester records that the current specie of this country was so much debased in consequence of the great number of mints established in different cities, of which the masters seemed to contend with each other who should enrich himself most at the expense of the public, that it would pass neither in foreign markets nor even in our own.

[14] Perhaps the most interesting evidence about the importance of a monarch's time horizon comes from the historical concern about the longevity of monarchs and from the once-widespread belief in the social desirability of dynasties. There are many ways to wish a King well, but the King's subjects, as the foregoing argument shows, have more reason to be sincere when they say "long live the King." If the King anticipates and values dynastic succession, that further lengthens the planning horizon and is good for his subjects. The historical prevalence of dynastic succession, in spite of the near-zero probability that the oldest son of a king is the most talented person for the job, probably owes something to an intuitive sense that everyone in a domain, including the present ruler, gains when rulers have a reason to take a long run view.

(Chap. 2, p. 25).

Few inventions are made by government bodies (except perhaps within the military field, e.g., the Manhattan project). This has also been so in the monetary field. The metallurgical developments and the invention of banknotes, in China and the West, came initially from the private sector, but money's initial role as a means of payment, for wergeld, bride price, religious occasions, etc. (which probably predated money's role as a medium of exchange), and its role in facilitating the fiscal basis of government, (discussed further later), meant that government made the monetary process, e.g., the guarantee through minting of the fineness and at the outset of the weight of the coins, into a pillar of the sovereign state. [15]

There is, as set out by Grierson, a further argument leading to the same conclusion. Society cannot work if violent behaviour is too prevalent. Some people will always be violent. An initial act of violence provokes revenge and a possibly endless feud. Feuds destroy society. One early crucial function of money, wergeld, was to set a tariff, whereby (the relatives of) the initial offender could recompense the damaged party. This practice spread to other inter-personal relationships, (bride-price, slaves), in some cases before formal markets and the use of money in trade arose. [16] Also see Exodus 21:32,35 and Deuteronomy 22:13–19,28–29. Kleiman (1987b) (pp. 261–287) describes such compensations.

I take it as a maintained assumption that the establishment of law and order involves and requires a governance structure. Others, for example, Benson (1990), do not accept that; it is, indeed, a major underlying issue. If law and order, the enforcement of contracts, and the whole infrastructure of settled behaviour that makes markets (and money) work is really independent of the governance structure of our societies, then, the M team approach becomes much sounder—the more so, if governments are actually inimical to such necessary infrastructure, but to me, the concept that the existence of law and order is independent of government seems pure (anarchist) wish-fulfillment.

[15] On this, see Gerloff (1952) and Laum (1924).

[16] Mélitz (1974) (pp. 39–42), accepts that money in its guise of a means of payment for such intra-societal transfers antedated money as a general medium of exchange in markets. However, on p. 77, he *defines* money as a medium of exchange held "in order to economize on transaction costs in the activity of trading a variety of other types of goods." My argument is that the means of payment role was (usually) prior in time and helped to facilitate and develop the subsequent more general medium of exchange role. The temporal ordering of the various uses of money remains, however, a contentious issue. The Bible, Genesis, 23: 16 and 37: 25, 28 indicate that silver was used as a medium of exchange for (large) payments from a very early date. In early history, money and religion were often as closely, or more closely, inter-related than money and the State. Temples were the great economic centers of the ancient world. They provided an opportunity to trade, especially at the festivals marking the end of the agricultural season; and having amassed considerable wealth from the gifts of their cult's devotees, they very often became lenders and 'bankers' on a great scale, hence, their need for a monetary standard, which probably anteceded that of the State. I am indebted to Professor Kleiman for pointing me in this direction. Also, see Kramer (1963) (pp. 75–86).

What is remarkable when reading the various histories of minting and currency is the correlation between strong kings (e.g., Charlemagne and Edward I) and successful currency reforms. Naturally, however, the temptation to debase the currency increases when (external) pressures threaten the continuing life of a government. Thus, Henry VIII's debasement was related to war with France and Scotland at a time when "The Exchequer's poverty was extreme...", Craig (1953) (p. 108). For a splendid account of how that process (currency debasement) worked in practice, see Sargent and Smith (1995). Glasner (1989), and (forthcoming, Glasner, 1998), emphasizes the value to governments facing (military) crises of having control over money creation.

Under the C view of money creation, the collapse of strong government would lead to the cessation, or downgrading of the quality, of minting and a reversion towards barter. [17] Under the M view, once the private sector has established a monetary equilibrium, thereby much reducing transactions costs, there is no conceivable mechanism within the model which would lead back to barter. Let us look at history. In Japan, for example,

> Rice and fabrics had been commonly used as a medium of exchange after the government ceased the mintage of coins in 958 AD...

(Seno'o, 1996)and

> by the end of the tenth century, money circulation ceased and the economy regressed back to a barter economy.

(Cargill et al., 1997).

In Europe, during Roman times, all coins were minted on the state's account; according to Crawford (1970), the fiscal needs of the state determined the quantity of mint output and coin in circulation. As Redish (1992) notes:

> Howgego (1990) has recently amplified this view suggesting that there was no one-to-one correlation between state expenditures and new coinage. If the state acquired bullion, it might be coined even in the absence of fiscal need. On the other hand, expenditures could be met by older issues, for example, coins received in taxes.

In any case, when the barbarians submerged Rome, strong government disintegrated. Both governments and mints fragmented into weaker smaller units. MacDonald (1916) describes the process (see Appendix C) as does Craig (1953), who also notes that amongst the ruling bodies operating mints at this time were Lords

[17] In more recent centuries, however, the alternative, chosen by the private sector has been, instead, to switch from using the inflationary currency of the domestic government to the more stable currency of some other government, see Bernholz (1989). The existence of such substitute currencies places some (high) upper limit on the potential ravages of the inflation tax.

Spiritual, as well as Temporal. [18] With governments being weaker and less secure, their currencies became of lower quality, more likely to be debased, and less acceptable in commerce (much of the minting that occurred was not to finance trade, but for Danegeld and other facets of (military) relationships between power centres). Meanwhile, most, but not all, commercial relationships reverted to barter. This decline was halted by Charlemagne and his successor, Louis the Pious.

It is only when a settled and strong government has been established that the authorities can offer both a sufficiently long time horizon and the necessary control to establish a high quality mint. At the same time, the creation of money greatly eased and benefited the authorities' fiscal position, as well as much reducing transactions costs for the general public. This may have been so even at the very outset of coinage; as Redish (1992) notes (also see Grierson, 1977):

> Numismatists believe that the earliest coins were produced at Lydia (now Western Turkey) in the mid-seventh century BC. The coins were made of electrum, a naturally occurring alloy of gold and silver. They had a design on one side and were of uniform weight but had a highly variable proportion of gold. In an influential article, Cook (1958) argued that these coins were introduced to pay mercenaries, a thesis modified by Kraay (1964) who suggested that governments minted coins to pay mercenaries only in order to create a medium for the payment of taxes. Both interpretations stress the role of the government in the introduction of coinage. [19]

[18] Thus, Craig (1953) (p. 12), writes that:

> Mints run by ecclesiastics, on the other hand, were proprietary. Only two are known to have survived from the earliest primitive period. The archbishop of Canterbury has two units.... The single unit of the abbot of St Augustine's was merged in this property in or before the tenure of the See by the patron Saint of Goldsmiths, St. Dunstan. The saint's three minters were serfs; he was a hard man of affairs who once shocked his congregation by suspending Easter mass until they hanged certain counterfeiters of his coin, whose trial the people would have delayed till Monday out of respect for the day.

[19] This interpretation has not gone unchallenged, as Redish again notes:

> More recently, Price (1983) has observed that the early electrum coins were privately issued and not issued by states. Further, he argues that the electrum coin, which was of uniform weight but had a highly variable proportion of gold, would have been overvalued if it traded at a uniform value. This he concludes makes it unlikely that mercenaries would have accepted it. Price's interpretation is that the early coins emerged in the context of a gift/exchange economy, and provided a means for standard bonus payments, and that the imprint was used to identify the issuer not to guarantee the coin's value. Only later, according to Price, with the introduction of gold and silver coin, did coin become a means of standardizing payments. However, Price does not explain why individuals accepted overvalued coins as gifts. Indeed, it is not clear whether these coins had a uniform value and at what point the pieces of stamped metal crossed the line between medal and coin.

The linkages between the creation of currency and taxation are multifaceted, [20] and the subject deserves a major study in its own right; (it is largely because of the domination of the M theory's denial of the importance and necessity of such links for the creation of money, that this has not been forthcoming). First, without money, it would be hard to place taxes on anything other than the production, transport and trade of goods, since only goods (or labour time) could be delivered. Once money exists, poll, income, and expenditure taxes, as well as taxes on the production of services become easier to levy. When taxes are received in goods or labour, the balance of goods (and labour) obtained will not be that required for public sector expenditures; so, money reduces the transactions costs of governments, pari passu with that of the private sector. By the same token, taxes payable in monetary form raise the demand for base money. Since a government obtains seigniorage from money creation, this benefits the fiscal position twice over, not only from the taxes levied, but also from the seigniorage resulting from the induced monetary demand. This was, as Lerner (1954) notes, one of the major reasons for the introduction of Confederate currency by the South in the US Civil War:

> Secretary Memminger saw two immediate and indispensable benefits from levying taxes payable in government notes. First, taxes created a demand for the paper issued by the government and gave it value. Since all taxpayers needed the paper, they were willing to exchange goods for it, and the notes circulated as money. Second, to the extent that taxation raises revenue, it reduced the number of new notes that had to be issued. Memminger's numerous public statements during the war show that he clearly realized that increasing a country's stock of money much faster than its real income leads to runaway prices. They also show that he believed that a strong tax program lessens the possibility of inflation. (p. 508).

Indeed, the imposition of taxes, payable only in money (and not in goods or in kind), has been used on numerous occasions in colonial history for the primary purpose of forcing taxpayers out of a (non-monetary) subsistence economy and into a cash economy producing goods for sale in the world economy; the receipt of extra fiscal revenues was in some cases just a subsidiary motive, as recorded by writers such as Ake (1981), Rodney (1981), and Amin and Pearce (1976).

[20] Selgin and White (1996) state that "Government monopoly in issuing currency can thus be understood as part of the tax system." That is certainly one key facet of the relationships between money and government.

There is, indeed, a large literature on the use of taxes, payable in monetary form, as a means of driving peasants into a monetary relationship with a capitalist economy. This is not only to be found in the literature on colonial development, but also in the earlier development of capitalism in Europe, e.g., Hoppe and Langton (1994).

Once the close link between money creation and taxation (and of both to the underlying structure and stability of government) is understood, the move from metallic currency to a fiat, paper, currency becomes much more straightforward to understand. Even if one should accept the M theory of the evolution of metallic coins as money, it is problematic to use that same theory in its pure [21] form to explain why agents should suddenly *all* be willing to jump from using paper notes which were ultimately claims on precious metals (i.e., private or public sector bank notes convertible into such precious metals) to paper notes which were backed by no specific assets. [22] Instead those notes were, and are, backed by the power of government (e.g., legal tender laws) and its ability to impose taxes payable (and often only payable) in that fiat currency (as well as legal tender for the discharge of all other payments within the country).

Thus, the M-form theory has difficulties with explaining the introduction and

[21] Pure in the sense that the move to fiat paper money is also capable of explanation as a private-sector cost-minimisation process. Of course, if M theorists are prepared to accept that government had taken over (usurped) the control of the monetary base by then, the rest is straightforward. The abandonment of convertibility into a real, metallic base was an (unhappy) act of government, (as is clear from history). What remains, perhaps, at issue between the M and C theorists is how much of the subsequent acceptance of fiat money is due to the power of government, e.g., to impose taxes (C theory), or to network factors and inertia encouraging people, without prompting from government, to stay with the existing currency (M theory). I am indebted to correspondence with Professor Kevin Dowd for raising this issue with me, and also sending me his working paper with Selgin (Dowd and Selgin, 1995). Quite a number of economists combine the belief that M-form cost-minimisation search theory explained the initial development of money, but that more recently, the State has clearly taken over the provision of fiat currency. So, whether, or not, they like the result, they accept that the C-form theory is at present, more realistic (see Congdon, 1981).

[22] Ritter (1995) argues that a community could benefit from moving to a fiat money economy if the issuers could commit to limiting the growth of such base money. Quite so, but as Selgin (1997) argues, there is a, probably insuperable, co-ordination problem within society, unless the authorities can *coerce* the residents simultaneously to switch, (as with the introduction of the Euro in 2002). Moreover, fiat currency has, virtually without exception, been introduced at times of war and other crises, when the rate of growth of base money has been high, on many reckonings 'excessive', and certainly *not* subject to any credible limitation commitment.

use of fiat currency. The C-form theory has no such difficulties. [23] The transition was entirely natural. The interesting questions relate, instead, to the factors determining the historical timing of the switch. The growing power of the nation state and the extra seigniorage that could be obtained (particularly the need for such in war-times) pushed for an earlier adoption of fiat currency. Historical inertia, credibility effects (time inconsistency problems were *always* foreseen and legal tender fiat currency invariably had a bad reputation as potentially low quality money), and perhaps at times, concerns about counterfeiting, tended to delay the switch.

Let me conclude this section by pointing out that the M-form theory finds it difficult to account for the role, or existence, of money within a general equilibrium model. Money in the utility function, or cash-in-advance models, are proposed, without much conviction. This difficulty is not surprising given that such models also abstract from the existence and role of government. While it is, of course, the relationship between taxation and the demand for money that the C-form theory emphasizes, it should also be remembered that it is the maintenance of law and order, the form and enforcement of contracts, and the whole infrastructure of regulation within society, that allows the epiphenomena of (organized) (private sector) markets to occur at all.

A disclaimer may, however, also be needed. The purpose of this section was to argue, first, that money frequently played an initial means-of-payment role in inter-personal social and governmental roles *before* it played a major role as a medium-of-exchange in market transactions, and second, that the relationship of the State, the governing body, to currency in all its roles has almost always been close and direct, but I do *not* claim that the private sector cannot, and has not, ever been able to develop monetary systems without the involvement of state authorities. Perhaps the most likely early historical example of purely private sector monetary systems is the Aztec cocoa bean money (Mélitz, 1974) (pp. 129–130), but more recent examples include the cigarette money of POW camps,

[23] Not surprisingly, Smith (1904) understood the relationship between taxation and fiat currency, even before any widespread usage of the latter. Thus, Professor M. Forstater, of Gettysburg College, has brought to my notice:

> ...the following sentence on p. 322 of the justly famous Cannan edition of *The Wealth of Nations*:
>
> A prince, who should enact that a certain proportion of his taxes should be paid in a paper money of a certain kind, might thereby give a certain value to this paper money; even though the term of its final discharge and redemption should depend altogether upon the will of the prince.

Cannan's 'sidebar' (his summary of each paragraph given in the margin) for this paragraph reads:

> A requirement that certain taxes should be paid in particular paper money might give that paper a certain value even if it was irredeemable.

Radford (1945) (pp. 189–201), and the use of vehicle currencies in foreign exchange trading, (Swoboda, 1969; Hartmann, 1994a,b). Several national currencies have in the course of history become widely accepted internationally, e.g., the Byzantine Hperpyron or 'Bezant', the Florentine Guilder, the Venetian Ducat, and more recently, the pound sterling, US dollar and in some countries, the Deutschmark, in some cases against the wishes, and without any involvement, of the issuing government. Indeed, many economic agents voluntarily hold money issued by a state other than their own, e.g., US dollars almost everywhere, Deutschmarks in East Europe, etc. (see Cohen, 1996). Other examples can be added. Moreover, were the state authorities now consciously to choose to abdicate their monetary role, the void would surely be taken up by commercial institutions.

3. The M-form spatial theory, or optimal currency areas

If the use of money can evolve through a (search) process of cost minimisation, without any necessary intervention by a government, then, by analogous reasoning, the spatial domain for any one money [24] can also evolve from such a similar cost-minimisation search process. The optimal currency area analysis has, indeed, followed that approach. It has broadly compared the benefit, in terms of transaction cost minimisation, of having a single currency over a wider area against the costs in terms of adjustment difficulties (Krugman, 1993). Those costs depend in part on market imperfections, whereby there is imperfect flexibility (either spatial, i.e., migration, or in (nominal) wages) in labour markets. The standard litany of factors affecting OCAs then follows, such as size, openness, labour market

[24] Dowd and Greenaway (1993) (pp. 1180–1189), have described how 'network externalities' will tend to limit the use of money for ordinary retail purposes in any area to a single kind of money, (in which, of course, there will be coins/notes of many values exchangeable at fixed, set ratios). When the quality of money in an area declines sharply (debasement, inflation), residents may turn increasingly to a higher quality money (dollarisation). The costs of overcoming such network externalities may make such a switch partly irreversible. The dominance of a single currency in a single area does not, of course, rule out multiple currency holdings near boundaries, nor holdings of foreign currencies by residents for trade, travel and portfolio diversification reasons; on this latter view, see Cohen (1996). The proposed joint usage of national currencies and Euros during the change-over transition period within EMU 1999–2002 is *not* a counter-example, since the ratio of the value of the Euro to the national currency will be absolutely fixed and irreversible. What is, however, new is that this fixed ratio will be highly user-unfriendly, (e.g., 1 Euro = 0.876534 National Units; it has been agreed that the rate will be applied to *six* significant figures), and not the standard user-friendly progression of currency values, e.g., 1, 2, 5, 10, 20, 50.... There will, therefore, be serious additional information and familiarization costs involved in the transition. Note that virtually all prior currency reforms involved knocking zeros off existing currencies, e.g., 1 New Franc = 100 Old Francs. They were often somewhat traumatic for residents; the switch to the Euro will be *much* more so.

flexibility, concentration or diversity of production, nature of and specificity of shocks (whether symmetric or asymmetric), etc.

Note, however, that following M-form theory, the functions and role of government do not necessarily, or even usually, enter this list. Under the (pure) OCA theory (Mundell, 1961) there is no reason why currency domains need to be co-incident and co-terminous with sovereign states. There is no reason why such a state should not have any number of currencies from zero to n, and an optimal currency area, in turn, should be able, in theory, to incorporate (parts of) any number of separate countries from one to n. Under the M-form OCA theory, there should be a divorce between currency areas and the boundaries of sovereign states. Most subsequent OCA applied research has, however, simply taken for granted the initial starting concordance of sovereign governments and currencies, and then applied the standard tenets of OCA theory to the question of monetary union between such countries; but that ignores the 'political economy' factors that made currency areas coincident with countries in the first place, and hence, likely to overlook the crucial political economy factors that will determine the success, or failure, of such unions, including EMU.

Such lack of concern for political economy considerations is not the case with C-form theory. Since under this theory, money is intimately bound up with the stable existence and fiscal functions of government in any area, the sovereign government of that area is predicted to maintain its single currency within the area's boundaries.

Which theory has the better predictive and explanatory power? Si monumentum requiris, circumspice! In a recent paper, Eichengreen (1996), writes:

> Michael Mussa is fond of describing how, each time he walks to the IMF cafeteria, down the corridor where the currency notes of the member states are arrayed, he rediscovers one of the most robust regularities of monetary economics: the one-to-one correspondence between countries and currencies. If monetary unification precedes political unification in Europe, it will be an unprecedented event.

(p. 12).

Yet, the economics profession has taken little notice of this 'robust regularity' in its assessment of monetary theory (national or international), and in its adherence to the M-form theory of private sector evolution. Moreover, it is difficult to see how several large countries, encompassing regions geographically separate, sometimes at very different stages of development, often with regionally concentrated production, could possibly meet the criteria for OCAs, e.g., USSR before its collapse, Brazil, Australia, Canada, and even USA.

In how many countries do we find multiple currencies? Prospectively, there will be, after 1997, one such country, China, where the Special Autonomous Region of Hong Kong will keep its separate currency (for 50 years). Given the political circumstances of the planned arrangements, this could be described as an

exception that proves the rule. [25] In some countries which have suffered hyperinflation, 'dollarisation' has occurred, as in Argentina, Peru and—to some extent—Russia, and similarly with respect to the Deutschmark in Yugoslavia (see Petrović and Vujošević, 1996, on the Yugoslav hyperinflation of the 1990s). What is remarkable in these cases is how high the inflation tax rate on domestic currencies has to climb before the public switches to an alternative foreign currency—although once such a switch has occurred, it does not reverse easily or quickly, and when the public does decide to abandon the inflating domestic paper currency, the alternative, privately chosen, good money can virtually drive out the 'bad' official money, (Bernholz, 1989).

There have, however, been a few historical examples where currencies from several states were treated as equally acceptable in all of them. These included the Latin Monetary (Silver) Union (1865–1914) [26] and the Scandinavian Monetary Union (1873–1914). [27, 28] Cohen (1993) has studied the historical cases of such monetary union, [29] and concludes that the economic factors considered in standard OCA theory have little, or no explanatory or predictive power to explain the varied history of the sustainability of such unions, and that political considerations are over-riding.

Only in one single respect does the M-form, OCA theory have much statisti-

[25] Also, see Kleiman (1994) (pp. 365–369) for a discussion of the agreement on currency usage in the areas of the autonomous Palestinian authority. Andorra and Namibia also have more than one legal tender.

[26] [T]he union managed to hold together until the generalized breakdown of monetary relations during World War I. Following Switzerland's decision to withdraw in 1926, the LMU was formally dissolved in 1927.

(Cohen, 1993) (p. 191).

[27] By the turn of the century, the SMU had come to function, in effect, as a single region for all payments purposes, until relations were disrupted by the suspension of convertibility and floating of individual currencies at the start of World War I. Despite subsequent efforts during and after the war to restore at least some elements of the union, particularly after the members' return to the gold standard in the mid-1920s, the agreement was finally abandoned, following the global financial crisis of 1931.

(Cohen, 1993) (p. 191).

[28] The Gold Standard did *not* represent an example of such a monetary union. While foreign agents could obtain national currencies at relatively low transaction cost by shipping gold in either coin or bar form, the currency circulation within each participating country was as overwhelmingly national as now, (and the gold value of national currencies could, and did, vary between time-varying physical arbitrage points).

[29] Amongst current monetary unions, Cohen also studies the CFA and Eastern Caribbean Currency Area. The CFA has been held together by French political, even including military, and financial support, while the populations of the ECCA are so tiny that the entire region is still too small for anything other than a currency board.

cally significant explanatory power, that is, tiny States (principalities like Liechtenstein, San Marino, Monaco, Andorra, etc.) will generally not have their own currencies; and that there is some (statistical) tendency for larger states to adopt more flexible exchange rates and smaller states pegged exchange rates (see, for example, Al-Marhubi and Willett, 1996); but this is observationally equivalent, to some considerable extent, with the belief that the tiny principalities have very little sovereign power, and are in several cases, effectively vassal subsidiaries of their larger neighbour. Consider, for example, the two small countries that use the US dollar as currency—Panama and Liberia. Do these satisfy the OCA model, e.g., with similar shocks and an integrated labour market with the USA, or is the rationale for such currency usage to be found in political history?

It is certainly true that sovereign states have at times chosen voluntarily (and temporarily) to relax part of their sovereignty by committing themselves to maintaining pegged exchange rates against a precious metal, or against the currency of another state. The gold standard was, perhaps, the best and most successful example; but, as Panic (1992) emphasizes, the countries participating in that did so by independent, voluntary choice, each maintaining, and on occasions utilising, the right to withdraw. Moreover, as Glasner (1989) (p. 39) has emphasized, it can be optimal for a sovereign country to pre-commit to a regime which will ensure price stability (so long as that regime continues), but only if it retains the ability to utilize its independent money creation powers in a crisis. [30]

Perhaps the clearest indication of the relative predictive and explanatory power of the C-form theory comes on the occasion of the break-up of existing federations into separate States, as in the cases of the USSR, Czechoslovakia and Yugoslavia in the 1990s, and Austro-Hungary after World War I, or on the other hand, of the unification of smaller States into a larger Federal State, e.g., the USA, [31] Ger-

[30] One useful and illuminating way of thinking about EMU is to regard this as the monetary symbol of a political pact between the two largest countries of Northern Europe, Germany and France, that there cannot and must not ever in future be a serious crisis, let alone a war, in their bilateral relationships. This line of thought comes naturally to C-team theorists and to politicians such as Kohl. It makes no sense, of course, to M-form theorists who see no necessary or desirable connections between monetary and political relationships.

[31] "When the First Continental Congress met in 1775 in Philadelphia, the first order of business was to establish a national currency" Kohn (1991) (p. 70); but States' note issues were not then banned, and that plus, of course, reliance on the issue of 'Continentals' to finance the War of Independence led to major inflation. This led the Constitutional Convention to establish in Article 1 of the Constitution of 1789 that Congress, and not the States, "shall have power to coin money, regulate the value thereof and of foreign coin", and that "No State shall coin money, emit bills of credit, make anything but gold and silver tender in payment of debts." (Davies, 1994) (p. 466).

many, [32] Italy, [33] etc., on their foundation. The C-form theory predicts that the fragmentation of sovereignty will lead to a fragmentation into separate currencies, and, per contra, that unification into an effective federal state will lead to the unification of previously separate currencies.

The M-form theory has nothing useful to offer on this. If the USSR were an optimal currency area before its break-up, it should have presumably remained so afterwards. If Prussia and Bavaria had been OCAs before the unification of Germany, they should presumably have remained so afterwards.

There is, however, one qualification to the above argument, that is, the acts and existence of a sovereign government in a particular geographical domain may serve to make that domain an OCA, whereas had there been several governments in the same domain, it would not have been an OCA. For example, if the existence of a unified-governmental fiscal system should be helpful in mitigating asymmetric shocks affecting regions in that domain, then, it would be more likely to be an OCA. Again, a sovereign government is likely to impose laws and to encourage behaviour (e.g., use of a single dominant language) that usually serve to make (labour) markets far more flexible within, than between, such countries. Similarly, the actions taken by such governments can be regarded as idiosyncratic shocks. For such reasons, it is possible that some of the explanatory factors determining OCAs could be argued to make them co-incident with sovereign states. Cesarano (1997) proposes that the boundaries of the nation state define an equilibrium currency area. Nevertheless, the speed, and the patent political involvement, attending the association of monetary and sovereign fragmentation or federal

[32] In its pamphlet, entitled *The Reichsbank*, which the Reichsbank published on its 25th anniversary in 1900, the opening paragraphs read as follows:

> The newly established German Empire found in the organization of the coinage, paper money, and bank-note systems, an urgent and difficult task. Probably in no department of the entire national economic system were the disadvantages of the political disunion of Germany so clearly defined as in this; in no economic department were greater advantages to be expected from a political union. Although the customs union (Zollverein) had happily united the greater part of Germany in a commercial union, similar attempts in monetary affairs had met with but modest success, and were absolutely fruitless in banking. The inconvenience most complained of was the multiplicity and variety of the different coinage systems (seven in all) in the different states, also the want of an adequate, regulated circulation of gold coins.

(Reichsbank, 1900).

[33] As reported by Canovai (1911) (p. 26):

> The prior political fragmentation of Italy left the country at the beginning of the 1870s with "...conditions of the institutions of issue and the paper currency [that were] abnormal and unorganized, since there was a mixture of institutions, different in nature and privilege, and a hybrid circulation, partly private and partly belonging to the State, which could not truly serve the economic and monetary conditions of the country."

unification over geographical areas makes it extremely hard to claim that this follows, or was caused by, some kind of private sector evolutionary search process.

What, of course, is remarkable and unique about the move to EMU and the Euro is the absence of an accompanying federalisation of governmental and fiscal functions. This divorce between monetary (federal) centralisation and governmental decentralisation at the level of the nation state, especially with the main fiscal functions remaining at that lower, national level is the source of potential tensions. It was, in part, to address such tensions that the Maastricht fiscal criteria and the subsequent Waigel 'growth and stability pact' were introduced.

We should ask why M-form theory maintains such a grip (as contrasted with the C-form theory) over most economic thought. For the reasons outlined in this, and the previous section, it can hardly be because it provides a positive explanation of observable events. Compared with the success of the C-form theory, the explanatory (or predictive) capacity of the M-form theory is nugatory. As Cesarano (1997) also notes: "The standard theory of optimum currency areas is falsified by the empirical evidence." (p. 57).

One possible rationale is that the M-form theory was never meant to be a positive, explanatory theory, but instead a normative theory, of what should be. As one referee commented: "OCA theory is a normative, not a positive theory." A weak form of this would be to recognize that, in practice, monetary institutions are inherently and au fond associated with considerations of political sovereignty, but that the subsidiary function of M-form OCA theory is to assess the balance of purely economic benefits and costs that this may generate. The problem with this is that the historical record of the association of money creation with the establishment and maintenance of a stable sovereign power is so overwhelming (apart from the case of tiny, and by the same token politically weak, states) that the balance of purely economic benefits and costs entailed by OCA must presumably be of second order importance.

One implication of the C-form theory is that the value of fiat currency will depend on expectations of the future existence of the current government, and the prospective treatment of that currency by a successor government. This suggests that a currency's valuation should be affected both by war 'news' and news on a defeated country's treatment, post-bellum, independently of the past and prospective future rate of expansion of such money supply. This line of thought has been advanced by economists such as Mitchell (1903) and Dacy (1984), but the methodologies used in their exercises could be improved.

A much stronger version of such a normative approach is again to accept that governments have almost always (historically and traditionally) taken over (usurped) the primary role in (high-powered, base) money creation, but to argue, using M-form theory, that this was neither necessary, nor desirable. Governments have often used their money creation powers to support and benefit themselves (via debasement and the inflation tax), though usually when they are weak and/or

threatened, especially by war. Clearly, access to the inflation tax benefits such governments. Whether it has benefited, or harmed, the public depends on the circumstances, e.g., the relative value to them of maintaining their existing government. A properly organized system of privately determined money creation could, so it is argued, provide a monetary system with a superior quality. This is the approach taken by economists such as Hayek, many (but not all) monetarists and the Free Banking School. In the absence of any more radical move in this direction, the separation of the powers of money creation in an independent Central Bank, (which under the Maastricht Treaty is required not to take instructions from government(s)), is (usually) seen as, at least, a step in the right direction by M-form theorists.More generally, there has been an overlap between M-form theorists and those who believe that the intervention of government within the economy is excessive, unnecessary (in most cases) and should be reduced. There is, therefore, a (disguised, but not hidden) agenda of M-form theory in advocating a reduced role for the State in economic affairs. By contrast, C-form theorists tend to believe that government intervention is an inevitable concomitant of the operation and organization of our (political) system, and many worry whether the prospective European Central Bank (ECB) may not suffer from a 'democratic deficit'—a larger issue which we shall not pursue further here.

4. Conclusion

OCA theory has little, or no predictive or explanatory capacity. Unlike the C-form theory, it is unable to account for the close relationship between sovereignty and currency areas—a relationship that tenaciously persists through the course of the creation, and break-up, of federal states. The empirical weakness of OCA theory, the spatial facet of M-form theory, throws further doubts on the ability and value of the latter to explain the evolution and nature of money as well as C-form theory can. The main advantages of the M-form theory appear to be technical, in that it lends itself better to mathematical formalisation, and ideological, in that it is based on a process of private sector cost minimisation, rather than a messier political economy process. It is, however, a pity to suspect that monetary economics may be driven more by technical and ideological purity than by empirical and predictive capacity.

If, then, the key issue is the (political) relationship between control over money and sovereign power, we need to consider carefully what problems this may portend for the future Euro single currency area. In the Euro area, the traditional historical links between money creation and sovereignty will be broken to a unique extent. Money creation will be the responsibility of a federal body, the European System of Central Banks, intentionally made, by the Maastricht Treaty, entirely independent of Government(s), whereas most other fiscal and other powers will remain in the hand of the participating nation states.

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Appendix A. Grierson's views on the societal origins of money

In his pamphlet on *The Origins of Money*, Grierson (1977) (pp. 19–21) writes:

> In any case, the generalized application of monetary values in commodities could scarcely have come about before the appearance of market economies, and monetary valuations were already in existence in what Sir John Hicks has felicitously christened 'customary' and 'command' pre-market societies, *A theory of economic history*, (London, 1969), p. 2 ff. (Hicks, 1969) (rise of the market), pp. 63–68 (origins of money). He has to some extent telescoped the invention of money and the invention of coinage, and in my view, he exaggerates the 'store of value' element in early money. Nor, if my argument that money antedated the development of the market is correct, it is the case that the standard "should be something that is regularly traded". In such societies, they provide a scale of evaluating personal injuries in the institution which the Anglo-Saxons termed the wergeld, and it is in this institution that the origin of money as a standard of value must, I believe, be sought. The practice of wergeld, that of paying a compensation primarily for the killing of a man, but the term by extension covering compensations for injuries to himself or his family and household, is most familiar to us in its Indo-European setting... The general object of these laws was simple, that of the provision of a tariff of compensations which in any circumstances their compilers liked to envisage would prevent resort to the bloodfeud and all the inconvenient social consequences that might flow therefrom.... The object of the laws is that of preventing retaliation by resort to force, and the principle behind the assessments is less the physical loss or injury suffered, than the need to assuage the anger of the injured party and make good his loss in public reputation. It would cost one four times as much to deprive a Russian of his moustache or beard as to cut off one of his fingers.... Karl Menger, in an impressive article on the origins of money published many years ago, argued ingeniously that one would expect monetary standards to be based on the commodities most commonly and easily exchanged in the market, since these would have the maximum saleability. The law codes suggest that while this may be true of money substitutes, it is not true, or at

> least is not necessarily true, of the commodities used as standards themselves.

[nota bene, for detailed references see the original.]

Appendix B. Limits to the ability of early mints to guarantee the quality of coins

Although the development of mints provided a major advance in identifying and guaranteeing the quality and weight of coins, several problems however remained. Until a process was found to give coins milled edges, coins could be clipped, and thereby lose weight. Also, as Mélitz (1974) (p. 71) notes:

> Through most of the Middle Ages, many individual coins of the same issue differed substantially in weight and fineness. Indeed, prior to the 13th century, coinage methods hardly permitted less than a 5 to 10 percent variation in weight between individual coins struck from the same plate. Thus, accounting prices of different coins belonging to the same denomination and issue often varied. Differences in weight and fineness, along with a host of other factors, like varying admixtures, ordinary wear, clipping, and sweating, continued to produce differences in accounting prices of money units of the same denomination and issue all the way down to the 17th and 18th centuries.

With coins of varying weight, but of a known, given fineness, transactors would have to make a difficult choice between weighing coins, a time-consuming exercise, (or of getting a specialist to assess them), or accepting them as equivalent, without weighing, e.g., by tale, which carried the risk that some (underweight) coins would not be subsequently acceptable. See, for example, Sargent and Smith (1995).

Kleiman (1987a) notes that a defrauded party, when overcharged, could revoke a deal within a certain time span.

> Ascertaining the 'right' price of an article was thus supposed to be a matter of, at most, several hours. The only exception was deficient coins, of which it was said: Until when is one permitted to revoke [the deal]? In cities, until one can show [the coin] to a moneychanger; and in villages—until [the following] Sabbath eve. To understand, we have to remember that the coinage circulating in the Roman world of the first two centuries AD was most variegated.

Moreover, it was sometimes difficult to check whether the fineness of the coin was as stated, without complex, and destructive, metallurgical testing. During the

Tokugawa Shogunate in Japan, not only was the fineness of the coins never published, (see Ueda et al., 1996), but also:

> In spite of enormous differences in the fineness of the Kobans created by a series of recoinages, the color of the surface did not deteriorate much and the surface generally shines with a golden color. The Kobans of low fineness, namely the Genroku Koban and the Gembun Koban do look slightly inferior in the surface color to other types of Kobans, but other Kobans minted in and after the Bunsei era show just as beautiful a golden color as the high fineness Keicho and Kyoho Kobans even though their fineness is even more inferior. This phenomenon is produced by the last process in the minting of the Koban called 'color dressing' (color improvement or coloring). This process dissipates the silver element on the surface of Koban by heating it after coating the surface with chemical substances. This process seems to be unique to Japan in the history of minting and we have not heard of any similar instances in other countries....

Appendix C. MacDonald's description of the monetary disorders after the fall of Rome

In his book on *The Evolution of Coinage* (1916), MacDonald describes the monetary consequences of the collapse of the Roman Empire in the following terms (pp. 29–31):

> When Rome fell, the triumphant invaders took over the institution of coinage from the rulers whose power they had destroyed. The earliest money of the new nations was entirely composed of direct, and not always very skilful, imitations of the imperial currency. This was partly because the barbarian chiefs sometimes chose to maintain the fiction that they were merely the vassals of the Emperor of the East, partly because they were aware that their own issues were more likely to be readily accepted if they conformed in outward appearance to what the mass of the population had for generations been accustomed to use. Even after a certain amount of independence had been developed, the confusion that the Empire had bequeathed showed no sign of passing away. On the contrary, once the restraining hand of a centralized control had been removed, the evil tended to become more and more sharply accentuated. The number of persons in whose names coins were struck multiplied rapidly... Delegation of authority was the pivot on which the whole of that system turned, and the multiplication of mints by which its development was attended did not, therefore, imply—in theory at least—any breach of the cardinal principle that the right of striking money was an attribute of the sovereign power. In point of fact, the penalties that

waited on transgressors were more severe now than at any other period of the world's history... A similar desire for self-assertion was unquestionably operative in the case of the feudal lords generally, but in the majority of instances, there was a baser motive present too. The business of minting could be made personally profitable, if one chose to play fast and loose with the responsibility which the possession of the right implied. The usual practice was to call in the current issues from time to time, or to collect a supply of pieces struck by a neighbour, and adulterate the metal or reduce the weight, and then give out a larger number of coins than had been originally received, the nominal value of each being the same but the intrinsic worth considerably less. This money the people had perforce to use, except in so far as they were able to transact business, as they did to a certain extent, through exchanging actual commodities. The hardships they endured in consequence are testified to by many contemporary witnesses. And there were various aggravations. Minting authorities often made exorbitant charges under the guise of dues. Again, bad as the money was, worse was frequently imported from abroad. Lastly, there was 'clipping', a species of fraud which consists in paring the edges of coins in circulation, in order to accumulate silver.

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[20]

MONEY AS A CREATURE OF THE STATE

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A favorite pastime at the London School of Economics, where I was first introduced to the subject of economics, was the cruel baiting and tearing to pieces of Professor Knapp's *State Theory of Money*. The chief performer in this sport was Professor Gregory who spent several lectures at the beginning of his course on money in ridiculing Knapp's notions that the value of money derives in some metaphysical manner from the sovereign authority of the state. Gregory held with the classics that the value of money derives from the scarcity of gold and that this scarcity is impervious to declarations by government officials.

Later in the course the state managed to creep back quietly and unobtrusively through its power, via the banking system which it could control, to mitigate the scarcity of gold by economizing in the monetary demand for it. This was done by the substitution of currency and bank credit for gold thus reducing the demand for gold in relation to the supply. There was considerable development of the devices for such economies. Fiduciary issues of currency in addition to that which was backed 100 per cent by gold; fractional backing of currency which stretched gold further; the development of the banking system with the pyramiding of bank money on fractional currency reserves which were in turn backed less than 100 per cent by gold; the use of foreign exchange standards which permitted currency to be used instead of gold as reserves for central banks; and so on through a long list culminating with the temporary issue of "fiat" money, without proper backing, to deal with crises involving an urgent need for liquidity.

But the lesson of the first lectures on Knapp was never entirely forgotten. The money created or expanded by state action was made to recognize its inferiority to gold. It was merely a substitute for gold. Its value depended in the last resort on the gold backing or at least on the ability of the authorities to keep their promises to redeem the notes in good solid gold.

Since then we have been emancipated theoretically from the fetishism of gold. Nearly everybody who defends the use of gold in modern currency systems guards himself by saying that he is doing so only in order to be kind to somebody else's unreasonable prejudices. It is no longer a paradox to declare that the value of gold depends on the possibility of getting dollars for it rather than the other way round. And it is only from inferior textbooks that students are still getting

the impression of some mysterious influence that gold exercises at a distance on the value of the currency backed by it. Even for those who have got no further from gold than to rest their emphasis on the quantity of money, it seems hardly more essential to explain the value of currency in terms of gold backing than to explain the value of gold in terms of its being backed by some still more primitive form of money, such as cattle or fish.

Money, as I have said in an article of that name in the *Encyclopaedia Brittanica,* is what we use to pay for things. The basic condition for its effectiveness is that it should be generally acceptable. Its transformability into gold and the guarantee of this possibility of gold backing (or any other kind of backing) are nothing but historical accounts of how acceptability came to be established in certain cases. These were possibly the only ways in which general acceptability could be established prior to the development of the well-organized sovereign national states of modern times. General acceptability had to be transferred in some such way from something which had already acquired it in the course of history. But if general acceptability could be established in any other way these historical methods would no longer be necessary or relevant.

This is just what has happened. The modern state can make anything it chooses generally acceptable as money and thus establish its value quite apart from any connection, even of the most formal kind, with gold or with backing of any kind. It is true that a simple declaration that such and such is money will not do, even if backed by the most convincing constitutional evidence of the state's absolute sovereignty. But if the state is willing to accept the proposed money in payment of taxes and other obligations to itself the trick is done. Everyone who has obligations to the state will be willing to accept the pieces of paper with which he can settle the obligations, and all other people will be willing to accept these pieces of paper because they know that the taxpayers, etc., will accept them in turn. On the other hand if the state should decline to accept some kind of money in payment of obligations to itself, it is difficult to believe that it would retain much of its general acceptability. Cigarette money and foreign money can come into wide use only when the normal money and the economy in general is in a state of chaos. What this means is that whatever may have been the history of gold, at the present time, in a normally well-working economy, money is a creature of the state. Its general acceptability, which is its all-important attribute, stands or falls by its acceptability by the state.

But there is another and much more serious sense in which the state is the responsible creator of money. The second most important problem

that modern civilization has to solve if it is to survive the totalitarian threats to its existence is the prevention of severe inflations and depressions. (The first problem is, of course, the establishment of world peace before we slip into an atomic war by way of appeasement and/or preparedness.)

Depression occurs only if the amount of money spent is insufficient. Inflation occurs only if the amount of money spent is excessive. The government—which is what the state means in practice—by virtue of its power to create or destroy money by fiat and its power to take money away from people by taxation, is in a position to keep the rate of spending in the economy at the level required to fill its two great responsibilities, the prevention of depression, and the maintenance of the value of money.

Up till now governments have shirked these responsibilities, seeking refuge in an alibi of helplessness. The extraordinary complacency both of the government and of its critics in the face of the recent rise in prices can be appreciated only if one imagines what would have been the reaction to a government declaration that it was going to default on say 30 per cent of its interest and repayments to holders of war bonds and other government obligations. An equal despoiling of patriotic subscribers to war loans through the price increases does not prevent the treasury from still advertising government bonds as giving back $4.00 for $3.00. Nobody seems to find this dishonest. And even this denial of responsibility is as nothing compared with the way in which nearly all states have nearly all the time permitted depressions to begin, to grow, and to establish themselves without calling into play their power to create the money demand which would have made the depression impossible.

Before the tax collectors were strong enough to earn for the state the title of creator of the money, the best the state could do was to tie its currency to gold or silver which had a stability of their own that antedated the appearance of the state. By that policy extreme inflations were made impossible, and in a small country even small inflations (relatively to other countries) would be checked by the disappearance of the money in an outward flow of gold. By the same policy a limit was set to depressions. For the world as a whole they could not go below the point at which the available and fairly steady supply of gold-money became so redundant on account of the small volume of business (or possibly because of lower prices) that it spilled out into increased spending by somebody who was supersatiated with liquidity. For individual countries special conditions of foreign trading and lending might lead to much worse depressions, but on the other hand any further depression beyond that determined by these special condi-

tions would be quickly corrected by an inflow of gold-money from the rest of the world.

The return to such methods now can only be proposed by exuberant Republicans who have not yet given a second thought to their meaning. The "margin of adjustment" involved in so crude a mechanism—which stretches from the limits of price rises within a gold standard to the level of depression that corresponds to zero net investment—have become wider still. The United States can carry much more inflation than we have so far had without running out of gold, while the level of unemployment that would be possible before a redundance in the supply of hard money came to the rescue grows greater with our growing productive competence and is now far beyond the limit set by the political conditions for the maintenance of a free society.

No government will be able to sit back and wait for the degree of unemployment which will result in the degree of price fall that will create enough idle money to induce sufficient private investment to start a movement back to prosperity. The New Deal and the war prosperity will have shown enough people that serious depression is dispensable. Some form of functional finance will in fact be practiced by whatever government we have. The only danger is that it will be too little and too late.

Less well worked out is a technique of dealing with the other responsibility of the creator of money—the responsibility for maintaining its value. The key points here are not in the direct supply of money, or even in the regulation of the level of spending. The key points are in the determination of wage rates and in the determination of rates of markup of selling prices over costs.

Wage determination by collective bargaining brought an improvement over the condition of the unorganized worker bargaining with a large employer in time of depression. With the abandonment of severe depression as part of the technique of influencing the determination of wage rates, and with the growth of trade unions to national and international size, the power of the trade unions has become too great for the purpose of determining wages by collective bargaining. Each union is forced to use its power to try to increase the share going to its members even though its more intelligent leaders know that what it gains is not from the employer, who can and will pass any wage increase on in higher prices, but from the population as a whole—which means in the main from other workers and their families. They also know that the other trade unions will have to do the same so that there is nothing left but a general inflation. For any particular trade union to restrain itself in the scramble may merely mean that it is left behind while the inflation continues. So that unless some alterna-

tive mechanism of wage determination is developed, a full employment policy will mean inflation. The acceptance by the government of its responsibility for preventing depression would seem to make it impossible for it to carry out its second responsibility for maintaining the value of money.

On the other hand it seems to be very likely that the Nathan report is right in believing that after the restocking boom the maintenance of adequate spending will be impossible without an increase in real wages; that is, in the ratio of money wages to the prices of finished goods. This is the same dilemma in a different form. Higher wages relatively to prices are necessary for long-run prosperity but raising wages will do no good because they will only lead to higher prices and inflation.

The dilemma can be resolved only by the government going to work on both money wage determination and on markup rates. Both are problems of monopoly and as such are inevitably destructive of a free economy. Markup rates must be reduced by antimonopoly measures of the kind that the government was working on when interrupted by the war. The most important help to the government in this will be the policy of maintaining full employment which will make it profitable for business to work with smaller markups. The effects can be speeded up by the government making the benefits of the full employment more immediately evident to producers by costlessly guaranteeing adequate (or even unlimited) sales of standard goods at moderate prices, releasing the energies and initiative of businessmen from the worries of selling to the concentration on efficiency in production.

The trade union monopolies must be tackled by establishing an artificial free market with compulsory arbitration for wage determination in which both the worker and the employer get a fair deal. Starting from some initial set of wage rates, such as the prevailing rates, wages in general can be raised by 1 per cent about every four months (on account of the secular growth in labor productivity) without the general level of cost and prices having to rise. This would be the basic money wage movement. In areas and industries where the level of unemployment is more than twice the national average the wage increase would not take place. Where the level of unemployment is less than half the national average the wage would be increased 2 per cent instead of 1 per cent.

This would have to be accompanied by measures to maximize the mobility of labor, removing all restrictions on entry to any occupations. The appearance of twice the national average of unemployment would then be evidence that workers consider the existing conditions in the area of industry more attractive than elsewhere, so that it would be

fair for the increase to be forgone. Workers who insisted on the increase would in effect be claiming the retention of an advantage over workers in general.

Less than half the average of unemployment would be evidence that workers in general considered the conditions less attractive than elsewhere. A refusal of employers to raise wages by the required 2 per cent would then be seen as an attempt to maintain substandard conditions. In the end there would emerge a set of wage rates which would correspond to the workers' own estimates of the necessary compensation for differences in net advantages.

I have no time to defend these proposals. They are only intended as an indication of the direction in which solutions to these most pressing problems might be found. I will only make two remarks.

The side-stepping of collective bargaining will undoubtedly be denounced as an attack on labor. It is important to note that it will appear so only to those who in their thinking have completely substituted the labor unions for the workers, raising these instruments for improving the economic welfare of labor to the status of ends in themselves. We should remember that an end in itself is nearly always a means for some end which one does not like to mention aloud, such as the maintenance of the position, prestige, and salary of a union bureaucrat.

The second remark is addressed to another professional group—monetary theorists. I have gone quite a way from the traditional field of monetary theory. I find that this is inevitable if we are to begin to take seriously a slogan which we have been repeating for quite a while now. The problem of money cannot be separated from the problems of economics generally just as the problems of economics cannot be separated from the larger problems of human prosperity, peace, and survival.

[21]

Money and Taxes: The Chartalist Approach

INTRODUCTION

In conventional analysis, money is used to facilitate exchange; its value is supposed to have been long determined by the value of the precious metal it represented, although under a fiat money system its value is said to be determined by the quantity of commodities it can purchase. This, in turn, is a function of the rate of inflation, which is presumed to be under the control of the central bank. In this view, monetary policy has to do, primarily, with control of the money supply, while fiscal policy has to do with government spending, taxing and borrowing.

This is quite different from the Chartalist approach, which can be traced from Adam Smith through to John Maynard Keynes. Rather than restricting our focus to the better-known Chartalists, in this chapter we choose instead to bring out the related ideas of Smith, Knapp and Keynes, and the later ideas of the theorists who follow the 'endogenous money approach', as well as related work by Hyman Minsky, Abba Lerner and Kenneth Boulding. This is the view that informs the analysis of money presented in this book, which we will call the 'taxes-drive-money' view, but which we might as well call the Chartalist approach.

In the Chartalist approach, money is a creature of the state; at least in the case of modern money, examples of stateless money are hard to come by.[1] The state defines money as that which it accepts at public pay offices (mainly in payment of taxes). This has important policy implications. Once the state imposes a tax on its citizens, payable in a money over which it has a monopoly of issue, it can influence the value of that money by setting the conditions under which the population can obtain it. The government does not 'need' the public's money in order to spend; rather, the public needs the government's money in order to pay taxes. This means that the government can 'buy' whatever is for sale in terms of its money merely by providing that money. As we discuss in Chapter 4, because the public will normally wish to hold some extra money, the government will normally have to spend more than it taxes; in other words, the normal requirement is for a government deficit. Government deficits do not require 'borrowing' by the

government (bond sales); rather (as we show in Chapter 5), the government provides bonds to allow the public to hold interest-bearing alternatives to non-interest-bearing government money. Thus the Chartalist view of money, if fully understood, would lead to a very different view of appropriate monetary and fiscal policy goals. Most notably, it would be recognized that rather than striving for a balanced budget, deficits would be accepted as the 'norm'. And rather than trying to use monetary policy to achieve stable prices, monetary policy would recognize that its role is to establish the short-term interest rate, while fiscal policy would be used to increase stability of the value of the currency.

SMITH ON MONEY

Let us first examine Adam Smith's views of money. Smith's views – particularly on bank creation of money and on the determination of the value of an inconvertible currency – are quite similar to views presented below (especially in Chapter 5). It is thus worth the effort to explore the arguments of the 'father' of economics in detail; our exposition later might then be easier to follow.

According to Smith, convertible banknotes can substitute for commodity money:

> When the people of any particular country have such confidence in the fortune, probity, and prudence of a particular banker, as to believe that he is always ready to pay upon demand such of his promissory notes as are likely to be at any time presented to him; those notes come to have the same currency as gold and silver money . . . (Smith [1776] 1937; p. 277)

At this point, the bank can 'create (bank) money' by lending its own notes. In most countries, banknotes enter the economy as banks discount bills of exchange; however, in Scotland, banks had gone one step further:

> They invented, therefore, another method of issuing their promissory notes; by granting, what they called, cash accounts, that is by giving credit to the extent of a certain sum . . . to any individual who could procure two persons of undoubted credit and good landed estate to become surety for him . . . (Ibid., pp. 282–3)

In other words, banks issued notes and held IOUs of borrowers, with the 'surety' of two creditworthy persons. These banks would then accept their own notes in payment of bank loans. This ensured demand for banknotes by merchant sellers in order to make payments on loans ('cash accounts').

> The banks, when their customers apply to them for money, generally advance it to them in their own promissory notes. These the merchants pay away to the manufacturers for goods, the manufacturers to the farmers for materials and provisions, the farmers to their landlords for rent, the landlords repay them to the merchants for the conveniences and luxuries with which they supply them, and the merchants again return them to the banks in order to balance their cash accounts, or to replace what they may have borrowed of them; and thus almost the whole money business of the country is transacted by means of them. (Ibid., p. 283)

Because notes circulate as if they were money, the banker need hold only a fractional reserve against them.

> Though he has generally in circulation, therefore, notes to the extent of a hundred thousand pounds, twenty thousand pounds in gold and silver may, frequently, be a sufficient provision for answering occasional demands . . . [T]he whole circulation may thus be conducted with a fifth part only of the gold and silver which would otherwise have been requisite. (Ibid., p. 277)

Thus in Scotland, 'The business of the country is almost entirely carried on by means of the paper of those different banking companies, with which purchases and payments of all kinds are commonly made' (ibid., p. 281).

Banknotes 'free up' specie, which is not needed domestically, to go abroad

> in order to seek that profitable employment which it cannot find at home. But the paper cannot go abroad; because at a distance from the banks which issue it, and from the country in which payment of it can be exacted by law, it will not be received in common payments. Gold and silver, therefore. . . will be sent abroad, and the channel of home circulation will remain filled with . . . paper . . . (Ibid., p. 278)

Not only does the paper money substitute for gold and silver, it actually increases the volume of trade. 'By means of those cash accounts every merchant can, without imprudence, carry on a greater trade than he otherwise could do' (ibid., p. 283). This is because the merchant with a 'cash account' (or credit line) can safely keep nearly zero precautionary balances. 'The merchant in Edinburgh . . . keeps no money unemployed for answering such occasional demands. When they actually come upon him, he satisfies them from his cash account with the bank, and gradually replaces the sum borrowed with money or paper which comes in from the occasional sales of his goods' (ibid., p. 284). This does not mean that the volume of paper money will exceed the volume of gold and silver that would be necessary to circulate the same output. 'Should the circulating

paper at any time exceed that sum, as the excess could neither be sent abroad nor be employed in the circulation of the country, it must immediately return upon the banks to be exchanged for gold and silver' (ibid., p. 284).

Occasionally, however, banks do issue too much paper money. This could occur because a bank did not actually require its loans to be repaid; for example, a bank might allow a customer to deliver a bill of exchange rather than either commodity money or banknotes. Further, these were often 'fictitious' bills with no commodities circulating behind them.

> [T]he value which had been really advanced upon the first bill, was never really returned to the banks which advanced it; because, before each bill became due, another bill was always drawn to somewhat a greater amount . . . than the bill which was soon to be paid; and the discounting of this other bill was essentially necessary towards the payment of that which was soon to be due. This payment, therefore, was altogether fictitious. (Ibid., pp. 295–6)

This process would increase interest owed (due to compounded discounts on the bills submitted for payment) beyond the ability to pay. Further, excessive note issue would increase reflux, draining reserves and forcing the bank to increase its reserve holdings – which earn less interest – lowering its profitability. Thus, for the most part, market pressures would ensure that there would be a tendency to issue the 'correct' amount of paper – which would be equivalent to the quantity of gold and silver required for circulation – but more than the amount that would have been circulated if specie were actually used in circulation (because the volume of trade would be larger).

So long as paper money is redeemed on demand for gold (or silver), it circulates at par with the gold coin. 'Whatever is either bought or sold for such paper, must necessarily be bought or sold as cheap as it could have been for gold and silver' (ibid., p. 308). If it is not redeemable on demand, then it may circulate at a discount. He discussed the case where redeemability might be uncertain, or might require a wait: 'Such a paper money would, no doubt, fall more or less below the value of gold and silver, according as the difficulty or uncertainty of obtaining immediate payment was supposed to be greater or less; or according to the greater or less distance of time at which payment was exigible'[2] (ibid., p. 309).

As an example, Smith offered the case of the American colonies, which typically offered conversion only after a wait of several years and did not pay interest on the paper for the waiting period. Still, these colonies passed legal tender laws 'to render their paper of equal value with gold and silver, by enacting penalties against all those who made any difference in the price

of their goods when they sold them for a colony paper, and when they sold them for gold and silver . . .' (ibid., p. 311). Smith decried such regulations as 'tyrannical' and ineffectual, for the colony currency would fall relative to the English pound. However, he also noted that Pennsylvania 'was always more moderate in its emissions of paper money than any other of our colonies. Its paper currency accordingly is said to never to have sunk below the value of the gold and silver which was current in the colony before the first emission of paper money' (ibid., p. 311). Here there is some ambiguity, for he had not previously argued that the depreciation of a non-convertible currency was a function of the quantity of the currency issued, but now he seemed to argue that the more moderate emission of Pennsylvania forestalled depreciation.

In the following paragraph he seems to have solved the puzzle. If a paper money whose redeemability is uncertain (or is subject to conditions – such as a waiting period) is accepted in payment of taxes, and if it is not excessively issued relative to the tax liability, then it need not depreciate relative to specie.

> The paper of each colony being received in the payment of the provincial taxes, for the full value for which it had been issued, it necessarily derived from this use some additional value, over and above what it would have had, from the real or supposed distance of the term of its final discharge and redemption. This additional value was greater or less, according as the quantity of paper issued was more or less above what could be employed in the payment of the taxes of the particular colony which issued it. It was in all the colonies very much above what could be employed in this manner. (Ibid., p. 312, emphasis added)

Thus the depreciation noticed in the colonies occurred precisely because the note issue was well above what was required in payment of taxes.

A wiser government could not only prevent depreciation, it might even cause paper money to carry a premium over specie!

> A prince, who should enact that a certain proportion of his taxes should be paid in a paper money of a certain kind, might thereby give a certain value to this paper money; even though the term of its final discharge and redemption should depend altogether upon the will of the prince. If the bank which issued this paper was careful to keep the quantity of it always somewhat below what could easily be employed in this manner, the demand for it might be such as to make it even bear a premium, or sell for somewhat more in the market than the quantity of gold or silver currency for which it was issued. (Ibid., p. 312)

In summary, an essentially non-redeemable paper money could actually circulate above par even under a gold standard if it was legally required by

the state in payment of taxes, and if the quantity issued were kept 'somewhat below what could easily be employed in this manner'.[3] The key, then, is not really redeemability, nor is it 'legal tender laws' that attempt to 'render their paper of equal value with gold and silver'; rather, it is the acceptance of the paper money in payment of taxes and the restriction of the issue in relation to the total tax liability that gives value to the paper money. Importantly, Smith recognized that this paper money need not be government fiat currency, for his argument was predicated upon the recognition that the paper money is the liability of the banking system. All that mattered was that the state accepted these banknotes in payment of taxes, in which case they could circulate at par, or even at a premium, relative to specie. Note also that this is the real reason that 'paper' remains at home while 'specie' can go abroad. If there are gold or silver standards abroad, then specie will always be accepted outside the country since it can be 'monetized' and accepted in payment of taxes in the foreign country. On the other hand, paper money is denominated only in the domestic unit of account and cannot be 'monetized' or accepted for tax payments abroad.

Finally, while Smith did not explicitly recognize it, payment of taxes is a form of reflux that removes paper money (and specie) from circulation just as bank money (notes or deposits) is refluxed when notes and cheques are presented for payment or clearing. It is not really convertibility, but rather reflux that removes 'unwanted' paper money.

In the next section, we will examine Knapp's more general theory of money, which is consistent with, but expands significantly upon, the observations of Smith.

KNAPP AND THE STATE THEORY OF MONEY

Georg Friedrich Knapp put forward a state theory of money similar to, but more general than, what is now known as the Chartalist approach. This approach is opposed to the metallist view, according to which the value of money derives from the value of the metal standard (for example, gold or silver) adopted. More generally, according to Knapp, metallists try to 'deduce' the monetary system 'without the idea of a State'. This, he believes, is 'absurd' for 'the money of a state' is that which is 'accepted at the public pay offices' (Knapp [1924] 1973, pp. vii–viii; see also Goodhart, 1989). It is thus impossible to separate the theory of money from the theory of the state. Knapp's exposition is quite complex and required the creation of a classificatory scheme with hundreds of terms. We will try to keep our summary simple; to some extent we will have to paraphrase rather than use

extensive quotes, for otherwise we would have to define the numerous terms he coined.

According to Knapp, debts are expressed in a unit of value, 'the unit in which the amount of the payment is expressed' (ibid., p. 8) and discharged with means of payment 'a movable thing which has the legal property of being the bearer of units of value' (ibid., p. 7). What, then, determines which things will act as means of payment to discharge debts? Knapp noticed that means of payment are occasionally changed; sometimes one type of material (say, weighed or coined gold) has been accepted but 'suddenly' another (say, weighed or coined silver) takes its place. Therefore, while the means of payment may be a definite material, it is not bound to any particular material, for it may be changed (ibid., pp. 8–25). 'A proclamation is made that a piece of such and such a description shall be valid as so many units of value' (ibid. p. 30). 'Validity by proclamation is not bound to any material. It can occur with the most precious or the basest metals . . .' (ibid. p. 30). The fundamental insight was his recognition that these transitions always require that the state announce a conversion rate (say, so many ounces of gold for so many ounces of silver). The debts were always nominal and were never actually 'metallic': all debts are converted to the new metal, which proves that all units of account must be nominal. Hence, the Chartalist, and more specifically, state theory of money, since the proclamation is made by the state.

Knapp examined the transition from use of weights of gold, to stamped coins that are weighed to determine value, to stamped coins that are accepted at face value, and finally to paper money; he found that the state played the major role in much of this transformation – but we shall skip this historical evolution. We will begin with the modern system, where Chartal money has developed.

> When we give up our coats in the cloak-room of a theatre, we receive a tin disc of a given size bearing a sign, perhaps a number. There is nothing more on it, but this ticket or mark has legal significance; it is a proof that I am entitled to demand the return of my coat. When we send letters, we affix a stamp or a ticket which proves that we have by payment of postage obtained the right to get the letter carried. The 'ticket' is then a good expression . . . for a movable, shaped object bearing signs, to which legal ordinance gives a use independent of its material. Our means of payment, then, whether coins or warrants, possess the above-named qualities: they are pay-tokens, or tickets used as means of payment . . . Perhaps the Latin word 'Charta' can bear the sense of ticket or token, and we can form a new but intelligible adjective – 'Chartal'. Our means of payment have this token, or Chartal, form. Among civilized peoples in our day, payments can only be made with pay-tickets or Chartal pieces. (Knapp [1924] 1973, pp. 31–2)

Note that like the tin disc issued by the cloakroom, the material used to manufacture the Chartal pieces is wholly irrelevant – it can be gold, silver or common metal; it can be paper.

> It is, therefore, impossible to tell from the pieces themselves whether they are Chartal or not. This is at once evident in the case of warrants. As to coins, we must always refer to the Acts and Statutes, which alone can give information . . . if the pieces gain their validity through proclamation, they are Chartal. (Ibid., pp. 34–5)

Finally, 'Money always signifies a Chartal means of payment. Every means of payment we call money. The definition of money is therefore a Chartal means of payment' (ibid., pp. 34–8).

Chartalism is often identified with the proposition that legal tender laws determine that which must be accepted as means of payment. However, Knapp's analysis went further.

> If we have already declared in the beginning that money is a creation of law, this is not to be interpreted in the narrower sense that it is a creation of jurisprudence, but in the larger sense that it is a creation of the legislative activity of the State, a creation of legislative policy. (Ibid., p. 40)

And what is the nature of this 'legislative activity' that determines what will be the Chartalist money accepted within the jurisdiction of the state?

> What forms part of the monetary system of the State and what does not? We must not make our definition too narrow. The criterion cannot be that the money is issued by the State, for that would exclude kinds of money which are of the highest importance; I refer to bank-notes: they are not issued by the State, but they form a part of its monetary system. Nor can legal tender be taken as the test, for in monetary systems there are very frequently kinds of money which are not legal tender . . . We keep most closely to the facts if we take as our test, that the money is accepted in payments made to the State's offices. Then all means by which a payment can be made to the State form part of the monetary system. On this basis it is not the issue, but the acceptation, as we call it, which is decisive. State acceptation delimits the monetary system. By the expression 'State-acceptation' is to be understood only the acceptance at State pay offices where the State is the recipient. (Ibid., p. 95)

Thus it is the decision of the state to accept at state pay offices, and not legal tender laws, that creates a Chartal money.

According to Knapp, 'centric' payments, or those involving the state, are decisive; these take the form of either (1) 'payments to the State as receiver; these we call epicentric' or (2) 'payments made by the State, these we will

call apocentric' (ibid pp. 96–7). On the other hand payments between private persons ('paracentric') 'are not so important as is generally supposed, for they mostly, so to speak, regulate themselves' (ibid., p. 96). Indeed, the actions of the state play a large role in determining that which will serve as ('paracentric') means of payment in private transactions.

> In the monetary system of a State there must be one kind of money which is definitive, as opposed to provisional (convertible) money . . . Money is definitive if, when payment is made in it, the business is completely concluded . . . The payer is no longer under an obligation, the recipient has no further rights either against the payer or against the State, if the State has issued the money [ibid., p. 102] . . . That kind of definitive money which is always kept ready and can be insisted on for apocentric payments [payments made by the State] . . . we call *valuta*; all other kinds of money . . . we call *accessory* (p. 105).

The definitive money is that which the state insists it will accept at pay offices, while valuta money is a component of definitive money, namely that which it will provide in payment.[4]

> In Germany our gold pieces were valuta, not because they were made of gold . . . but only because the State, when it made a payment, was ready in the last resort to pay in gold pieces, and, if it found it at all inconvenient, totally to refuse any other means of payment which the recipient might happen to want. (Ibid., p. 107)

However, once the state has decided to declare one type of money as valuta, then that type will become the 'decisive' money used in private transactions.

> So, if from political necessity the State announces that henceforth it will pay in State notes, as fountain of law it must equally allow the State notes to suffice for other payments . . . The consequence is, in a legal dispute the means of payment which the creditor is compelled to accept is always that which the State has put in the position of valuta . . . Apart from friendly agreement, all payments eventually have to be made in valuta money. (Ibid., p. 110)

Thus it is not simply a 'legal tender' law that makes state notes acceptable in private transactions, but it is the fact that the state first decides what it will use or accept as money in its own transactions, and that this must then be acceptable as means of settlement of private debts. 'The laws do not decide what shall be valuta money, they merely express a pious hope, for they are powerless against their creator, the State . . .' (Ibid., p. 111).

Knapp extended his analysis to include bank money. 'The bank makes notes and offers them in payment to its customers. Issuing notes is not a special business . . . but a special way in which the bank endeavours to make its payments . . . . It tries to pay in its own notes instead of in money issued by the State, because then with a comparatively small capital it can make greater profits than it otherwise could' (ibid., p. 131). Acceptability of banknotes in private transactions is not (as was commonly believed) due to the bank promise to convert these to specie. In other words, bank money did not derive its value from the gold reserves or specie coin, or even valuta money, into which it promised redemption. 'A bank-note is a chartal document, which specifies a sum of valuta money; and the bank issuing it is pledged by law to accept it for a payment of that amount' (ibid. p. 134). Whether banknotes are convertible is irrelevant. 'An inconvertible bank-note, then, is not a nullity, but has this in common with the convertible bank-note, that it is a till-warrant of the bank' (ibid.). What is important is that the note 'is a private till-warrant available for payments to the bank . . . but clearly the customers of the bank can use it for payments between themselves, as they are sure it will be taken at the bank. These customers and the bank form, so to speak, a private pay community; the public pay community is the State' (ibid.).

Knapp goes further than Smith in his recognition that banknotes do not derive their value from the reserves (whether gold or government fiat money) held for conversion, but rather from their use in the 'private pay community' and 'public pay community'; this, in turn, is a function of 'acceptation' at the bank and public pay offices. Within the 'private pay community' (or 'giro'), bank money is the primary money used in payments; however, payments in the 'public pay community' require state money. This can include bank money, but note that generally delivery of bank money to the state is not final, or definitive, because the state will present it to banks for 'redemption' (for valuta reserves). Bank money, when used in the public pay community is not 'definitive' unless the state also uses it in its own purchases.

What makes banknotes state money? 'Bank-notes are not automatically money of the state, but they become so as soon as the State announces that it will receive them in epicentric payments [payments to the state]' (Knapp [1924] 1973, p. 135). If the state accepts notes in payment to the state, then the banknotes become 'accessory' and the business of the bank is enhanced, 'for now everybody is glad to take its bank-notes since all inhabitants of the State have occasion to make epicentric payments (e.g. for taxes)' (ibid. p. 137). The banknotes then become 'valuta' money if the state takes the next step and makes'apocentric payments [payments by the State] in bank-notes' (ibid., p. 138). However, states often required that banks make their notes

convertible to state-issued money: 'one of the measures by means of which the State assures a superior position to the money which it issues itself' (ibid., p. 140), and thus maintained banknotes in the role of accessory money (rather than allowing them to become valuta money). If the state accepts banknotes in payment, but does not make payments in these banknotes, then the notes will be redeemed – leading to a drain of 'reserves' of valuta money (indeed, governments and central banks used redemption or threat of redemption to 'discipline' banks).

In times of distress (frequently during wars that required finance provided by banks), however, governments would pass laws ending convertibility, announce that the state would henceforth make payments in terms of the banknotes, and thereby declare that the banknotes were valuta money (Knapp [1924] 1973, p. 143). Usually, this was for one bank only – the bank which became the central bank. Through action of the state, then, paper money can become valuta money. 'At first bank-notes and Treasury notes are employed only as accessory money . . . The mournful hour arrives when the State has to announce that it can no longer pay in the money that was till then valuta [say, coined gold] and that those warrants themselves are now valuta'[5] (ibid., p. 196).

At this point we have a Chartalist, non-convertible, paper money, as do all modern developed countries. Of course, this extreme development came nearly three-quarters of a century after Knapp's book was first published (1905). However, he had recognized that the money of a state did not derive its value from metal, and indeed, that no metal was needed domestically. He did argue, on the other hand, that in the international sphere 'To dispense with specie money altogether would only be possible for very large federations of States [and, therefore, is] probably impracticable. On account of foreign trade specie money is still necessary', (ibid., p. xv) a point similar to that made by Smith. Within a state, however, specie is not necessary, for 'state money may be recognised by the fact that it is accepted in payment by the State'; as Keynes said (see below), the state not only enforces the dictionary (legal tender laws) but writes it (decides what is to be accepted as money).[6]

It can be seen that Knapp's analysis is consistent with Smith's. Most paper money (today, mostly deposits) is privately issued and derives its demand not from a promise of redeemability but rather from state acceptance at pay offices. Knapp goes further, for he argues that the state eventually realizes (usually during a crisis) that it can also make payments in that which it promises to accept. Once freed from domestic convertibility on a metallic standard, the state's spending domestically would not be constrained by the quantity of the metal available. Abandonment of the metallic standard internationally would eliminate metallic constraints on

countries. The state thus moved to a paper money system domestically, making its apocentric payments in central bank notes and accepting epicentric payments in private bank notes (today, deposits) that would have to be redeemed (today, cleared) for the valuta central bank notes (today, reserves). Precious metals were then used only for international purposes until the US finally abandoned the gold standard altogether in the early 1970s.

KEYNES'S *TREATISE ON MONEY*

While Keynes's *General Theory* presented the theory of aggregate effective demand that is now identified as 'Keynesian theory', his earlier *Treatise on Money* provided a more detailed treatment of his monetary theory. The first volume of that work presents definitions of money that would be used in his analysis; a brief examination of these provides insights into the view of money adopted by Keynes.

According to Keynes, the 'money of account' is the 'primary concept' of a theory of money; the money of account 'comes into existence along with Debts, which are contracts for deferred payment, and Price-Lists, which are offers of contracts for sale or purchase' (Keynes, 1930, p. 3). In turn, 'Money itself, namely that by delivery of which debt-contracts and price-contracts are discharged, and in the shape of which a store of General Purchasing Power is held, derives its character from its relationship to the Money-of-Account, since the debts and prices must first have been expressed in terms of the latter' (ibid.). He further clarifies the distinction between money and the money of account: 'the money-of-account is the description or title and the money is the thing which answers to the description' (ibid., pp. 3–4).

Following Knapp, Keynes argued that the state determines what serves as the money of account as well as dictates what 'thing' will be accepted as money.

> The State, therefore, comes in first of all as the authority of law which enforces the payment of the thing which corresponds to the name or description in the contracts. But it comes in doubly when, in addition, it claims the right to determine and declare what thing corresponds to the name, and to vary its declaration from time to time – when, that is to say, it claims the right to re-edit the dictionary. This right is claimed by all modern states and has been so claimed for some four thousand years at least. (Ibid., p. 4)

The 'Age of Chartalist or State Money' had been reached, when the state 'claimed the right not only to enforce the dictionary but also to write the dictionary' (ibid., p. 5). Let us emphasize that Keynes believed the 'Age of State Money' to have begun 'at least' four thousand years ago, as such, the state theory of money would certainly apply to all the 'modern' economies including those living under the gold standard in the last century – even a gold-based commodity money is state money.

Privately issued debt – such as that issued by banks – might be accepted in settlement of transactions even if it is not declared by the government to be money; it can circulate 'side by side' with 'state money' (ibid., p. 6). However, the state might 'use its chartalist prerogative to declare that the [bank] debt itself is an acceptable discharge of a liability' (ibid.). Bank money then becomes a 'Representative Money' (ibid.). 'At the cost of not conforming entirely with current usage, I propose to include as State-Money not only money which is itself compulsory legal-tender but also money which the State or the central bank undertakes to accept in payments to itself or to exchange for compulsory legal-tender money' (ibid.). In a footnote to this passage, he goes on: 'Knapp accepts as "Money" – rightly I think – anything which the State undertakes to accept at its pay-offices, whether or not it is declared legal-tender between citizens' (ibid. pp. 6–7). Therefore, like Knapp, Keynes's analysis goes beyond legal tender laws to identify state 'acceptation' as the key to determining what will serve as money.

Finally, state money may take any of three forms: '*Commodity Money*, *Fiat Money* and *Managed Money*, the last two being sub-species of *Representative Money*' (ibid., p. 7). Commodity money is defined as 'actual units of a particular freely-obtainable, non-monopolised commodity which happens to have been chosen for the familiar purposes of money', or 'warehouse warrants for actually existing units of the commodity' (ibid.). Fiat money is representative money 'which is created and issued by the State, but is not convertible by law into anything other than itself, and has no fixed value in terms of an objective standard' (ibid.). This is distinguished from managed money, which 'is similar to Fiat Money, except that the State undertakes to manage the conditions of its issue in such a way that, by convertiblity or otherwise, it shall have a determinant value in terms of an objective standard'[7] (ibid., p. 8).

Managed money is, according to Keynes, the most generalized form of money, which can 'degenerate into Commodity Money on the one side when the managing authority holds against it a hundred per cent of the objective standard, so that it is in effect a warehouse warrant, and into Fiat Money on the other side when it loses its objective standard' (ibid.). In other words, a full-bodied – say, one ounce – gold coin valued at one

currency unit would qualify as commodity money, while a paper note which is convertible to gold against which a fractional gold reserve is held would qualify as managed money – even if the conversion rate is one currency unit per ounce of gold. Thus a gold standard system can be operated as either a commodity money or as a managed money. On the other hand, a representative money can take the form of either a managed money (a paper note convertible on demand to gold, or even to a foreign currency – for example a currency board system) or a fiat money (no promise to convert at a fixed exchange rate to precious metals or foreign exchange). Note that Keynes argued that even a gold standard, whether a commodity money system or a managed money system, operates as a state money system. In either case, the state can always 'rewrite the dictionary', for example, by adopting a silver standard and a conversion rate (say, one ounce of gold for four ounces of silver).

State money can be held by banks, by the central bank, and by the public.

> The State-Money held by the central bank constitutes its 'reserve' against its deposits. These deposits we may term Central Bank-Money. It is convenient to assume that all the Central Bank-Money is held by the Member Banks – in so far as it may be held by the public, it may be on the same footing as State-Money or as Member Bank-Money, according to circumstances. This Central Bank-Money plus the state money held by the Member Banks makes up the Reserves of the Member Banks, which they, in turn, hold against their Deposits. These Deposits constitute the Member Bank-Money in the hands of the Public, and make up, together with the State-Money (and Central Bank-Money, if any) held by the Public, the aggregate of Current Money. (Keynes, 1930 pp. 9–10)

Any payments to the state using 'Member Bank-Money' will cause member banks to lose 'Central Bank-Money' or 'State Money held by the Member Banks' – that is, reserves.

As we will explore in more detail in Chapter 5, and as Knapp recognized, 'Member Bank-Money' is the primary 'thing' answering to the 'description' – money – used in private transactions (or, within the 'private pay community'). When accepted in payment of taxes, it is also used in the 'public pay community' – but it is not 'definitive' or valuta money from the perspective of member banks because they must deliver reserves (mainly 'Central Bank-Money') whenever taxes are paid using 'Member Bank-Money'.

In summary, with the rise of the modern state, the money of account ('the description') is chosen by the state, which is free to choose that which will qualify as money ('the thing' that answers to the description). This goes beyond legal tender laws – which establish what can legally discharge

contracts – to include that which the state accepts in payment at its 'pay offices'. The state is free to choose a system based on commodity money, fiat money or managed money. Even if it chooses a strict commodity system, the value of the money does not derive from the commodity accepted as money, '[f]or Chartalism begins when the State designates the objective standard which shall correspond to the money-of-account'. (ibid., p. 11). '[M]oney is the measure of value, but to regard it as having value itself is a relic of the view that the value of money is regulated by the value of the substance of which it is made, and is like confusing a theatre ticket with the performance' (Keynes, 1983, p. 402). Once it is recognized that the state may 'write the dictionary', it becomes obvious that the nominal value of a commodity (or managed) money cannot be derived from the value of the 'objective standard'; it is then a small step to a 'fiat money' with no 'objective standard', for in all three cases, the state determines the nominal value of money. This is done when the state establishes what it will accept at public pay offices, as well as the nominal value of the thing accepted.

RECENT CONTRIBUTIONS IN THE CHARTALIST TRADITION

In recent years, many theorists have contributed to the development of an 'endogenous money' approach that is in many respects related to the Chartalist position and to the view presented in this book.[8] There are two fundamental precepts of the endogenous money view: (1) the 'supply' of money generally expands to meet the 'demand' for money; and (2) the central bank has no direct, discretionary, control over the quantity of money. To some extent, all the economists examined here, as well as most economists until the present century, at least implicitly adopt an endogenous money approach. It is only in this century that the majority of economists have come to accept the 'exogenous' money view that the central bank can directly control the quantity of money and that the money stock can be taken to be 'fixed' such that it does not respond to 'money demand'. In this section we examine only briefly contributions directly related to arguments made above. In Chapter 5, we will show that both the 'exogenous' and the 'endogenous' views can contribute to our understanding of the money-supply process, but that to some extent the debate between the two camps has been at cross purposes, for they have each examined different parts of that process.

The view that the 'supply' of money expands to meet the 'demand' for money can be traced back at least to the Banking School in the early nineteenth century (if not to Adam Smith as discussed above), although this terminology was not used (Wray 1990). The Banking School believed that

banknotes are issued to meet the needs of trade (essentially a 'real bills' argument), that banknotes could never be excessive so long as they were redeemable on demand and, thus that no other restrictions on note issue would be required. Their contemporary opponents, the Currency School, wanted to regulate strictly the quantity of notes issued so that it would equal the quantity of coin specie – essentially, a 100 per cent reserve backing – to make the system operate as if all circulation were conducted on the basis of full-bodied coin (Keynes's 'commodity money', with money no more than a warehouse receipt for specie). This, they thought, would tame or eliminate the business cycle, which they believed to be caused by excessive note issue. In contrast, the Banking School concluded that private banknote issue could never be excessive, so long as notes were convertible, because they would reflux to banks (a position quite similar to that of Smith, examined above); however, a non-convertible (government) fiat money could be excessive because it would not reflux.[9]

Others after this controversy similarly held the Banking School view that the supply of credit expands more or less in step with the needs of trade. Marx, for example, argued that during an expansionary phase, credit substitutes for money, functioning as the primary medium of exchange and allowing the volume of transactions to rise. In a crisis, however, only 'narrow money' (Knapp's 'definitive' money) is desired, where it functions primarily as a means of payment to retire debts (and pay taxes) rather than as a medium of exchange. In crisis, 'the circulation of [bank] notes as a means of purchase is decreasing' even though 'their circulation as means of payment may increase' (Marx, 1909, p. 542). 'It is by no means the strong demand for loans . . . which distinguishes the period of depression from that of prosperity, but the ease with which this demand is satisfied in periods of prosperity, and the difficulties which it meets after a depression has become a fact' (ibid p. 532). In other words, banks readily advance loans (creating 'member bank money') in expansion but refuse to grant credit in the downturn.

As discussed above, Keynes also recognized that banks can normally increase loans to finance an increase of spending.[10] Many of his followers later held similar positions. This was developed by Kaldor (1985) into what has come to be known as the 'horizontalist' endogenous money approach (Moore, 1988). A similar, but mainly independent, path led to the modern Circuitiste approach. Before Keynes, Schumpeter had developed a view of dynamic and innovative banks, in which credit expansion was the key to allow entrepreneurs to finance innovation. Indeed, credit was seen as 'essentially the creation of purchasing power [by banks] for the purpose of transferring it to the entrepreneur' (Schumpeter, 1934, p. 107). Building on Schumpeter's views, the Circuitiste approach to money reached

independently many of the same conclusions as did the 'horizontalist' endogenous money approach.[11]

What is important to note is that if money supply responds to money demand, this means that the 'quantity of money' is not 'exogenous' in the sense of being determined either through monetary policy (such as control by the central bank over bank reserves) or by the quantity of a precious metal reserve (as under a 'commodity money' or 'managed money' system).[12] While the state defines money, it does not control the quantity. The state is able to control its initial emission of currency, but this is through fiscal policy rather than through monetary policy. That is, the quantity of currency created is determined by purchases of the state (including goods, services and assets purchased by the Treasury and the central bank); much of this currency will then be removed from circulation as taxes are paid. The rest ends up in desired hoards, or flows to banks to be accumulated as bank reserves. Monetary policy then drains excess reserves, removing them from member bank accounts, and replacing them with bonds voluntarily purchased. As Boulding (1950) had argued, fiscal policy has more to do with the quantity of money issued by the government, while monetary policy has to do with regulation of financial markets (most importantly, with determination of short term interest rates).

Hyman Minsky presented a view of money that was based on the Chartalist approach.[13] His approach emphasized the 'endogeneity' of money, that is, the view that money is created during the normal, and important, processes of a capitalist economy – and is not created and dropped by helicopters (as in Milton Friedman's famous exogenous, helicopter, money story). For the most part, bank money is created as banks 'make loans'.

> Money is unique in that it is created in the act of financing by a bank and is destroyed as the commitments on debt instruments owned by banks are fulfilled. Because money is created and destroyed in the normal course of business, the amount outstanding is responsive to the demand for financing. (Minsky, 1986, p. 249)

A 'loan' is nothing more than an agreement by a bank to make payments 'now' on the basis of a promise of the borrower to 'pay later'. 'Loans represent payments the bank made for business, households and governments in exchange for their promises to make payments to the bank at some future date'[14] (ibid p. 230).

All of this occurs on the balance sheets of banks; the 'money' that is created by a bank is nothing more than a credit to another bank's balance sheet.[15] According to Minsky, there is a pyramid of liabilities, with those of

the central bank at the top. Bank liabilities are convertible on demand into central bank liabilities, which are used for interbank clearing (as well as for conversion of bank liabilities to 'cash' held by the public, resulting in a net reserve drain).

> The payments banks make are to other banks, although they simultaneously charge the account of the customer. In the receiving bank, the payments are credited to a depositor's account.
>
> For member banks of the Federal Reserve System, the interbank payments lead to deposits shifting from the account of one bank to the account of another at Federal Reserve banks. For nonmember banks, another bank – called a correspondent – intervenes, so that the transfer at the Federal Reserve banks are for the accounts of correspondents. (Minsky, 1986, pp. 230–1)

Thus 'payments' among banks occur on the balance sheet of the Fed as banks use 'Fed money' (reserves) to settle net debits from their accounts. 'Whereas the public uses bank deposits as money, banks use Federal Reserve deposits as money. This is the fundamental hierarchical property of our money and banking system' (ibid., p. 231). This is, of course, the same hierarchical arrangement noted by Knapp (in his public and private pay communities) and by Keynes (a point to which we will return in Chapter 5).

In an argument very similar to Knapp's Chartalist view, Minsky explained that people accept bank money in part because they can use it to meet their own commitments to banks. 'Demand deposits have exchange value because a multitude of debtors to banks have outstanding debts that call for the payment of demand deposits to banks. These debtors will work and sell goods or financial instruments to get demand deposits' (ibid.). In other words, according to Minsky, bank money has (nominal) value precisely because it can be used to retire debts to banks – it is, so to speak, accepted at 'bank pay offices'. The 'borrower' retires his/her promise to the bank by delivering bank liabilities at the future date, and the need for bank liabilities to retire one's own liabilities to banks leads one to accept bank liabilities in payment for goods and services delivered. Rather than focusing on money as a medium of exchange, this focus is on money as means of payment – to retire liabilities.

This led Minsky back to the Smith/Knapp recognition that taxes give value to the money issued by the government.[16]

> In an economy where government debt is a major asset on the books of the deposit-issuing banks, the fact that taxes need to be paid gives value to the money of the economy . . . [T]he need to pay taxes means that people work and produce in order to get that in which taxes can be paid. (Ibid.)

And even though most taxes are actually paid using bank money, because of the hierarchical arrangement, Keynes and Minsky emphasize that banks can make these payments to government only by using central bank money, that is, by losing reserves.

Returning to the primary Chartalist theme, Abba Lerner insisted that

> [W]hatever may have been the history of gold, at the present time, in a normally well-working economy, money is a creature of the state. Its general acceptability, which is its all-important attribute, stands or falls by its acceptability by the state. (Lerner, 1947, p. 313)

Just how does the state demonstrate acceptability?

> The modern state can make anything it chooses generally acceptable as money . . . It is true that a simple declaration that such and such is money will not do, even if backed by the most convincing constitutional evidence of the state's absolute sovereignty. But if the state is willing to accept the proposed money in payment of taxes and other obligations to itself the trick is done. Everyone who has obligations to the state will be willing to accept the pieces of paper with which he can settle the obligations, and all other people will be willing to accept these pieces of paper because they know that the taxpayers, etc., will accept them in turn. (Ibid.)

This seems to be about as clear a statement as one can find: even if it has not always been the case, it surely is now true and obvious that the state writes the 'description' of money when it denominates the tax liability in a money of account, and defines the 'thing' that 'answers to the description' when it decides what will be accepted at public pay offices. The 'thing' which answers to the 'description' is widely accepted not because of sovereignty alone, not because of legal tender laws and not because it might have (or have had) gold backing, but because the state has the power to impose and enforce tax liabilities and because it has the right to choose 'that which is necessary to pay taxes' ('twintopt'). This right, as emphasized by Keynes, 'has been so claimed for some four thousand years at least' (Keynes, 1930, p. 3). While Keynes is no historian and while one might quibble over the exact number of years since states first claimed these rights, there can be no doubt but that all modern states do have these rights. As Lerner said 'Cigarette money and foreign money can come into wide use only when the normal money and the economy in general is in a state of chaos' (Lerner, 1947, p. 313). One might only add that when the state is in crisis and loses legitimacy, and in particular loses its power to impose and enforce tax liabilities, 'normal money' will be in a 'state of chaos', leading, for example, to use of foreign currencies in private domestic transactions. In

all other cases, it is state money which is used, and state money is that which the state accepts in payment of taxes.

CONCLUSION

In the Chartalist approach, the public demands the government's money because that is the form in which taxes are paid. It is not a coincidence that the modern state uses the same valuta money in its apocentric payments that it accepts in epicentric payments – it uses taxes as a means of inducing the population to supply goods and services to the state, supplying in return the money that will be used to retire the tax liability. In the modern economy, it appears that taxes are paid using bank money, but analysis of reserve accounting shows that tax payments always lead to a reserve drain (that is, reduce central bank liabilities), so that in reality only the government's money is definitive (finally discharging the tax liability).

We turn next to a history of money before moving on to examine the policy implications of the Chartalist or taxes-drive-money view.

NOTES

1. Some might wonder whether the Eurodollar is an example of a stateless money, as these appear to be stateless dollars. Actually, however, Eurodollars are created when the holder of a US commercial bank demand deposit opens a Eurodollar account, transferring funds (for example, to a London-based commercial bank). This creates a dollar-denominated deposit in a foreign bank offset by an asset which is a dollar-denominated demand deposit held against a US bank. Sometimes these Eurodollars are then lent to the US banking system, causing a shift of reserves among US banks; the Eurodollar market can never be a net source of reserves to the US banking system, because Eurodollars are really just liabilities that 'leverage' US bank reserves and currency (see Chapter 5 for discussion of such leveraging activity). Clearly, however, the Eurodollar derives its value from the US dollar, which itself derives its demand from US tax liabilities. This is not to say that foreigners who demand Eurodollars do so in order to pay US taxes (clearly that is almost never the case), rather, Eurodollars are demanded because the dollar has become an international reserve currency.
2. He went on to give the example of banks in Scotland which adopted an 'optional clause' which allowed them the option of withholding redemption for six months after presentation (in which case they paid interest for the period). These notes typically suffered a discount of 4 per cent relative to specie in trade.
3. In the sidebar to Smith's discussion of the relation between the value of the currency and taxes, Cannan wrote 'A requirement that certain taxes should be paid in particular paper money might give that paper a certain value even if it was irredeemable' (Edwin Cannan, in Smith, 1937, p. 312). Earlier, Cannan had applied 'the theoretical apparatus of supply and demand to units of a currency,' arguing 'Given a certain demand, increase of supply, in case of any article, reduces value, and currency is no exception' (Cannan 1983 [1921], pp. 3, 9). In that article, he recognized that currency is supplied by government 'in exchange for commodities and services', but also 'in doles and pensions without getting any return' (ibid, p. 9); the demand for currency was functionally related to many factors, including population, wealth distribution, introduction of currency economizing practices, uncertainty

about the future, and exchange rate speculation, however, he did not relate demand to the tax liability.

4. A money can be both definitive and valuta if the state makes payments in it and accepts it at pay offices. Note that there is some inconsistency in Knapp's argument, for what is important is 'acceptation' at public pay offices. He should thus define valuta to indicate both acceptation by the state and use by the state in its own payments.
5. This often comes after the bank has purchased government debt and issued notes that promised conversion; in times of war or other distress, the government would 'encourage' banks to issue far more notes (to 'finance' government spending) than they could conceivably convert. Thus suspension of convertibility served the interests of government as well as the bank.
6. Of course, the type of monetary system envisioned by Knapp is similar to the one adopted shortly thereafter by the US: a 'gold standard' without domestic convertibility, but with a specie reserve to satisfy international purposes. Knapp did not foresee the time when metals could be dropped altogether in favour of foreign currency reserves and flexible exchange rates.
7. The employer of last resort programme examined in Chapter 6 below is a managed money system on Keynes's definition.
8. See Davidson (1978), Kaldor (1985), Minsky (1986), Moore (1988), Rousseas (1986), and Wray (1990).
9. Note that neither school appeared to recognize that state fiat money does indeed reflux as taxes are paid – which, as Smith recognized, is the mechanism that can ensure state note issue is not excessive. The Currency School also did not appear to recognize Smith's argument that the volume of real trade would be higher if the quantity of notes issued were to exceed the quantity of gold reserves as its proponents saw the extra money in circulation as excessive given the needs of trade.
10. This is even clearer in his 1937 articles, after publication of *The General Theory*. See Keynes (1973).
11. See Deleplace and Nell (1996). In Chapter 5 we will return to an examination of the theory behind the approach.
12. Note that most 'money' is credit money; here we are using the term 'money' in its broad sense.
13. In private conversation, Minsky acknowledged his intellectual debt to the Chartalists and especially to Knapp.
14. In 1913, Mitchell Innes presented a view quite similar to Minsky's. 'Debts and credits are perpetually trying to get into touch with one another, so that they may be written off against each other, and it is the business of the banker to bring them together . . . There is thus a constant circulation of debts and credits through the medium of the banker who brings them together and clears them as the debts fall due. This is the whole business of banking as it was three thousand years before Christ, and as it is today' (Innes, 1913, pp. 402–3).
15. As the borrower spends the created money, a cheque drawn on the first bank is deposited with another.
16. This has been recognized by Goodhart, who argues that 'The use of such state-issued fiat currency was supported by several factors. First the state levies taxes and can insist that these be paid in state-issued money. This ensures that such fiat currency will have some value' (Goodhart, 1989, p. 36). Similarly, James Tobin argues that 'By its willingness to accept a designated asset in settlement of taxes and other obligations, the government makes that asset acceptable to any who have such obligations, and in turn to others who have obligations to them, and so on' (Tobin, 1998, p. 27).

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The role of the state and the hierarchy of money

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This paper uses Minsky's definition of money as a two-sided balance sheet phenomenon to challenge many common positions on the nature, evolution and role of money. His definition is applied to two opposing theories in the history of monetary debates, and it is shown that the Chartalists (as opposed to the Metallists) developed a *general* theory of money that can be applied equally convincingly to the entire era of state money. This theory is then used to show that the state's power to make and enforce tax laws renders its money the most acceptable form of debt within what can be considered a 'hierarchy' of monies. This leads to some important policy implications as well as a strengthening of the endogenous money position.

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1. Introduction

The purpose of this essay is to analyse more thoroughly what several economists (e.g., Minsky, 1986; Foley, 1987; Wray, 1990) have recognised as a debt-pyramid or 'hierarchy of money', which exists in all modern economies. Because a theory of money is the foundation for an analysis of the 'hierarchy', the paper begins with a definition and discussion of the manner in which money will be treated in the essay. This definition is then applied to an analysis of two opposing theories of money, the Metallist and Anti-metallist (or Chartalist), in order to determine which conforms to the requisite definition of money. The most compatible theory is then used to describe the structure and composition of the hierarchy. Specifically, the Chartalist theory is used to explain why the various monies are denominated in a particular unit of account and why certain monies within the hierarchy are positioned higher than others.

The positioning of the state's money at the top of the pyramid implies an intimate relationship between 'the fiscal, tax-raising, authority on the one hand and money creation on the other' (Goodhart, 1997, p. 1). This relationship, when maintained, enables (or, at

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least, does not preclude) the use of counter-cyclical fiscal policy and may, as Wray (1998) and Kregel (1999) have argued, be the key to maintaining full employment. However, when severed, as for example under European Economic and Monetary Union (EMU), the traditional connection between the Treasury and the Central Bank disappears, leaving member states (even in the absence of deficit-to-GDP and debt-to-GDP limits imposed by the *Growth and Stability Pact*) unable to finance large, counter-cyclical deficits (Parguez, 1999). While these and other important policy implications follow from the analysis contained in this essay, the purpose of the current paper is to elucidate a *theoretical* foundation for an understanding of the 'hierarchy' underlying studies such as these.

2. Money defined

Economists have grappled with the concept of money for centuries. For some, money is a complicated phenomenon which is difficult to define and which, in its modern form, seems almost impossible to explain. After all, what is money—a numeraire, a medium of exchange, a store of value, a means of payment, a unit of account, a measure of wealth, a simple debt, a delayed form of reciprocal altruism, a reference point in accumulation, an institution, or some combination of these? It is important to begin by boldly stating the manner in which 'money' will be defined in this essay: Money is credit (Innes, 1913). It represents a debt-relation, a promise or obligation, which exists between human beings and cannot be identified independently of its institutional usage. It expresses a *social* relation (Foley, 1987; Ingham, 1996) and will, following Keynes (1930), Minsky (1986) and Wray (1990), be treated as a two-sided balance sheet operation.[1]

Thus, the creation of money affects *both* assets and liabilities. As money has been defined as credit, the latter, for clarity, should also be defined. Innes gives a succinct yet unambiguous definition of credit:

> It is simply the correlative of debt. What A owes to B is A's debt to B and B's credit on A. A is B's debtor and B is A's creditor. The words 'credit' and 'debt' express a legal relationship between two parties, and they express the same legal relationship seen from two opposite sides. Whether, therefore, . . . the word credit or debt is used, the thing spoken of is precisely the same in both cases, the one or the other word being used according as the situation is being looked at from the point of view of the creditor or of the debtor . . . credit and credit alone is money. (Innes, 1913, p. 392)

It is because money is at once an asset (credit) and a liability (debt) that it is treated as a balance sheet operation. Keynes also took this approach, noting that '[a] money of account comes into existence along with debts, which are contracts for deferred payment, and price lists, which are offers of contracts for sale or purchase' (1930, p. 3). Thus, when a buyer (debtor) and a seller (creditor) enter into a forward contract, money (or, equivalently, credit and debt) is created. The money represents a promise or IOU held as an asset by the creditor and as a liability by the debtor. The creation of money, then, is simply the balance sheet operation that records this social relation.

Minsky confidently noted that there is nothing special or elusive about money. In fact, he stated, 'everyone can create money; the problem is to get it accepted' (1986, p. 228). Though it is certainly true that anyone can create money, it is somewhat misleading to say that the problem is to get *money* accepted. This is because, based on the notion that the

[1] Implicit in this treatment is the notion that money evolves along with contracts and private property. Balance sheets cannot pre-date money because they are used to record money-denominated assets and liabilities. For a much more detailed analysis of this process, see Wray (1993).

creation of money is a two-sided balance sheet operation, money cannot exist *until* acceptance has occurred. Viewed this way, an offer to go into debt (to add a liability to a balance sheet) does not materialise into money until another party agrees to hold that liability (to add it to the asset side of its balance sheet). Thus, it is more accurate to say that anyone can make promises or offer to go into debt but that the 'problem' is to find someone who is willing to become a creditor (i.e., to hold that promise or debt). Let us now apply the notion that the creation of money requires accepting another's debt to two opposing theories of money in order to determine which of the theories conforms to the treatment of money as a *two-sided* balance sheet phenomenon.

3. Metallists vs. Chartalists

There is no dearth of controversy over the nature and role of money in the history of economic thought. During the 16th and 17th centuries, the Metallists and the Anti-metallists or Chartalists paved the way for successive debates between various schools of thought for centuries to come.[1] The Metallists and Chartalists arrived at markedly different conclusions, primarily as a result of their 'different conceptions of the scope and method of economics' (Ingham, 1996, p. 511). These differences can, almost invariably, be traced to a distinction between 'real' and 'monetary' analyses. Schumpeter described 'real' analysis as:

> [proceeding] 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. This device can no doubt get out of order, and if it does it will indeed produce phenomena that are specifically attributable to its *modus operandi*. But 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. (Schumpeter, 1994 [1954], p. 277)

Monetary analysis, in contrast, is characterised as:

> in the first place, [a] denial of the proposition that, with the exception of what may be called monetary disorder, the element of money is of secondary importance in the explanation of the economic process of reality ... [and] ... In the second place, ... [an abandonment] of the idea that all essential features of economic life can be represented by a barter-economy model. (Schumpeter, 1994 [1954], p. 278)

Now, while one can certainly link the writings of many Metallists to the kind of 'real' analysis described above, it is an adherence to a particular theory of money, not a penchant for 'real' analysis, that places a theorist in the Metallist tradition.

Let us begin with the two main propositions embodied in the theory of money propounded by Aristotle. First, money, though it may come to serve other *functions*, is supposed to have originated as a medium of exchange. Exchange, it is argued, was initially conducted on the basis of barter, with individuals trucking their goods to the local trading venue and attempting to exchange what they brought for what they wanted.[2] Thus, exchange would have required the famous 'double coincidence of wants' so that two-party

[1] Actually, Schumpeter (1954) and Vickers (1959) note that the debates may be traced back to Plato (427–347 BC) and Aristotle (384–322 BC). The debates continued during the early nineteenth century, with the Currency and Banking Schools serving as the primary participants, and have culminated in today's Monetarist–Keynesian debates. Although the classifications of the opponents have changed, the essence of their disputes remains grounded in the early Metallist–Chartalist debates.

[2] This 'real' analysis of barter exchange is conducted despite little evidence that barter-economies ever existed (Heinsohn and Steiger, 1989).

exchange could only occur if each of two individuals wished to exchange that which they possessed for that which was offered by another.[1] Money, then, is said to have arisen spontaneously in the private sector in order to eliminate some of the inefficiencies of barter. Thus, *society* is said to have agreed upon some means of exchange called 'money' in order to mitigate the transaction costs associated with barter.[2]

Secondly, in order to fulfil the medium of exchange function, the thing chosen to serve as money must be 'a thing that is useful and has exchange value independently of its monetary function' (Schumpeter, 1994 [1954], p. 63). That is, society is supposed to have settled on a metallic currency (usually gold or silver) so that the money would have (intrinsic) value.[3] It is not, however, always clear whether the precious metals chosen to serve as a medium of exchange were in an 'unworked' state or whether they had been minted/coined. Most theorists believe that exchange using unworked precious metals would have been extremely rare because of the difficulty involved in *identifying* the quantity and quality of the metal (Goodhart, 1997). This 'identifiability' problem, they argue, usually meant that commodity money required a stamp or guarantee before it could circulate widely.[4] Aristotle's support for the theory of money put forth so far is evident in the following statement:

> [F]or the purpose of barter men made a mutual compact to give and accept some substance of such a sort as being in itself a useful commodity . . . finally . . . impressing on it a stamp in order that this might relieve them of having to measure it; for the stamp was put on as the token of the amount. (quoted in Goodhart, 1996, Appendix B)

But it is not always clear, when reading the Metallist position, who actually performed this minting function—private individuals/institutions or the government/public sector—though most ascribe a limited role to the government. For example, it has been suggested that the money chosen by society is either sanctioned (*ex post*) by the government (Menger, 1892) or that it somehow *evolves* into government-issued currency (Barro, 1990). Questions concerning the government's role in the development of money continue today (e.g., Kiyotaki and Wright, 1987), with arguments suggesting that private individuals, motivated by a desire to minimise search costs, could develop money for use in an economy without a government.

Regardless of the party performing the minting function, the important point remains the same: the minting or coining of precious metals resolved the 'identifiability' problem and enabled metallic coins to circulate widely as media of exchange. Furthermore, any sanction by the authority of the State would have been limited to an '*ex-post* codification of social customs' (Laidler, 1987, p. 21). Thus, governments could encourage the *continued* use of metals by vouching for the integrity of the precious metals (the quality and quantity of metal), but their power would have been limited to supporting the will of private

[1] Innes (1913) recognises that a 'double coincidence of wants' would never have been required and that credit could have (and, he argues, did) allow exchange to occur in the absence of any physical medium of exchange.

[2] Almost any mainstream economics textbook attributes some individual advantage to the use of money in exchange. Specifically, rational maximising agents are said to accept money because there is an individual advantage in doing so. But, as Ingham (1996, p. 515) points out, 'the advantage of money presupposes a monetary system' since the individual can only benefit from the use of money if others decide to use money as well.

[3] The value of the commodity money given in exchange was supposed to have traded against a commodity with equal value. This 'rule of equivalence' in exchange was considered necessary in order for 'real' analysis to proceed.

[4] Goodhart (1996) notes that government has most frequently performed the minting function.

individuals to adopt a particular commodity money. In other words, metallic coins are said to have been accepted because they were themselves valuable commodities with certain properties,[1] which made them a convenient medium of exchange, not because of any influence or encouragement from the state. Although this theory embodies two main propositions, only the latter *necessarily* identifies the Metallist vision. The Metallist theory, then, suggests that 'the money commodity goes by weight and quality as do other commodities' and that the stamp is put on for convenience 'to save the trouble of having to weigh it every time, but . . . is not the cause of its value' (Schumpeter 1994 [1954], p. 63).

The transition to the use of coins with little or no precious metal content or paper representing contracts between the bearer and a bank or government led Menger to ask why 'every economic unit in a nation should be ready to exchange his goods for little metal disks apparently useless as such, or for documents representing the latter' (Menger, 1892, p. 239). The Metallist vision easily adapted to the use of non-'pure' commodity or paper money. It was argued, for example, that non-'pure' metal coins could be substituted for commodity money because their metal *backing* would imbue them with value. Similarly, bank- or state-issued paper currency, under a metal standard, would be accepted because of its gold or silver backing. Thus, the Metallists retained the basic logical structure of their analysis by maintaining a *link* between these (fiduciary) currencies and precious metals (Ingham, 1996). When, from time to time, governments suspended convertibility, and paper continued to substitute for commodity money, the Metallists maintained that the currency retained its value because people *expected* convertibility to be restored.

The next stage poses more of a dilemma for Metallist theory (and for many modern monetary theorists). Specifically, the elimination of a metallic backing appears to have robbed paper currency of its value. That is, while 'the value of commodity money might appear to derive from that of the commodity from which it is made, or into which it is convertible, and the value of credit money from that of the assets which back it, . . . no such factor seems to explain the value of fiat money' (Laidler, 1987, p. 20). Thus, people were supposed to hold commodity money as 'a medium of exchange that also [had] use as a consumption good or a productive input, at least potentially', while fiat money is a 'medium of exchange that will never be used as a consumption good or a productive input' (Kiyotaki and Wright, 1987, p. 5). That the community did continue to accept intrinsically worthless paper currency after the elimination of a metal standard left a problem for Metallists/Monetarists to explain.

Perhaps the most famous 'solution' came from Walras, who suggested that money could be reduced to a pure number, the *numeraire*. Money may be viewed as nothing more than a representation or a symbol of 'real' goods, with its origin/evolution considered irrelevant.[2] As a *numeraire*, money was brought into the analysis only to allow the 'auctioneer' to announce prices (money numbers) in order to bring about market-clearing equilibrium. The goal, it seems, was to maintain the 'integrity' of 'real' analysis though, as Clower notes, there are numerous problems with attempts to 'motivate the holding of money by invoking some kind of transactions cost' (Clower, 1999, p. 407).

The Anti-metallists, or Chartalists were dissatisfied with the Metallists' claim that money derives its value from its precious metal content (or backing). Concerned primarily with bank and state monies, the Chartalists sought to uncover the source of value as more

[1] Divisibility, durability and portability are among the properties usually cited (Clower, 1984).

[2] As one referee pointed out, it may be argued that Walras' numeraire is actually itself a real good, rather than merely a representation or a symbol of real goods. In this case, the Walrasian system becomes not a monetary system but simply a complex barter system.

than simply the representation of precious-metal money. Chartalist theory does not view money as a commodity with exchange value, scarcely different from any other commodity. Thus, unlike the Metallist vision, the Chartalist view is not preoccupied with the medium of exchange function of money. On the contrary, Chartalist theory seeks to uncover the essential properties of money as a unit-of-account and a means of payment. To this end, Chartalist theory is concerned with the social and historical origins of money and, unlike the Metallist vision, provides a non-market-based theory of money. Let us turn to an examination of the Chartalist theory of money.

Under the Metallist vision, the state takes a back seat to the market.[1] Chartalist theory, however, places the state centre-stage. Specifically, Chartalists recognise the power of the state to demand that certain payments are made to it and to determine the medium in which these payments must be made. Chartalist theory has a long history, perhaps dating back to Plato (Schumpeter, 1994 [1954]), but clearly recognised as early as Adam Smith who wrote that:

> A prince, who should enact that a certain proportion of his taxes should be paid in a paper money of a certain kind, might thereby give a certain value to this paper money. (Smith, 1937 [1776], p. 312)

What may appear banal at first glance is, upon further contemplation, extremely sagacious. In one fell swoop, Smith appears to have solved a paradox that the Metallists were unable to convincingly cope with. The paradox—why should paper with no value continue to circulate?

Recall that the early Metallists traced money's value to its precious metal content/backing but that modern money (inconvertible state or bank money) provides no such basis for value. The solution to the paradox, as Smith recognised, is that the paper is *not* without value! His reasoning does not, however, simply fill a gap in the Metallists' thinking; it is a fundamentally different conception of the source of value in certain money. Moreover, Smith's explanation, unlike the Metallists', can be applied *equally convincingly* whether the medium in which taxes (or other payments to the state) are due is fiat money, paper backed by a precious metal, or commodity money. *Whatever* the prince announces he will accept in payment of taxes will immediately be imbued with value, for it will be demanded as a means of discharging the tax liability. Thus, irrespective of any inherent *property* or *function*, it may come to serve, the value of this money depends on its usefulness in settling tax or other liabilities to the state. Though the above quotation is clearly consistent with the Chartalist view, Smith did not develop the theory in any of his writings (and probably did not appreciate the significance of the argument in any case).

The Chartalist theory, in its most general form, is perhaps best described in George Friedrich Knapp's 1924 work, *The State Theory of Money*. As the title suggests, the state plays a central role in the development and establishment of money. Knapp's exposition is not easily summarised owing to the exceedingly complex system of terms he invented for his analysis. His fundamental insight, however, is easily conveyed: '[T]he money of a State is . . . what is accepted at public pay offices', and 'the standard is not chosen for any properties of the metals' (Knapp, 1924, p. viii). Knapp's position is, therefore, directly opposed to the Metallist's. For him, the state determines the money of the economy by declaring what it will accept in payment to itself. Thus, while the Metallists disempowered

[1] The state, if it enters the discussion at all, is usually brought in to enforce contracts and/or to provide the goods and services that profit-seeking private enterprises would not produce. Recall that the 'identifiability' problem was 'resolved' by using the state to provide a 'public good' (stamped money) but that it wielded no real power since the type of money in use had been chosen by society.

the state, relegating it to the power of the market, Knapp argues that the state is *the* central force in the development of a monetary system. Like Smith's prince, the state can make anything it chooses (metal coins, paper backed by some metal or inconvertible paper) generally acceptable by proclaiming that it will be accepted at state pay offices. What makes a currency valid as money is a *proclamation* by the state that it will be accepted at its pay offices; what makes it acceptable to its citizenry is its usefulness in settling these liabilities.

Knapp defined money as 'a Chartal means of payment', the metallic contents of which were 'irrelevant for its validity' (*ibid.*, pp. 31–8). The word 'Chartal' derives from the Latin word 'Charta' and bears the sense of a 'ticket', 'token', or 'Chartal' form (*ibid.*, p. 32). Thus, it is from the Latin 'Charta' that Chartal money, and the Chartalist theory, derive their meaning.[1] Knapp explained the process by which a 'ticket' or 'token' becomes Chartal money:

> When we give up our coats in the cloak-room of a theatre, we receive a tin disc of a given size bearing a sign, perhaps a number. There is nothing more on it, but this ticket or mark has legal significance; it is a proof that I am entitled to demand the return of my coat. When we send letters, we affix a stamp or ticket which proves that we have by payment of postage obtained the right to get the letter carried. (Knapp, 1924, p. 31)

The defining characteristic of a Chartal means of payment, 'whether coins or warrants', is that 'they are pay-tokens, or tickets used as means of payment' (*ibid.*, p. 32). The cloak-room token and the stamp, like the money of the state, gain their validity by virtue of proclamation. The cloak-room attendant proclaims acceptance of the token in exchange for the coat which has been left in his care; the postal service proclaims acceptance of the stamped envelope in exchange for its carrying services; and the state proclaims acceptance of a specified form of currency in exchange for the elimination of certain liabilities. The cloak-room token, the stamp and the currency are Chartal means of payment which 'legal ordinance gives a use independent of its material' (*ibid.*, p. 32).[2]

This is not to suggest that the state was unconcerned with the precious metal content of the coins in circulation. When, for example, gold and silver coins circulated, they were sometimes 'clipped' or 'shaved', reducing their metal content; the shaved metal could then be brought to the mint and coined. The state reacted to this by designing coins with 'ridges' to prevent debasing. To understand why the state objected to the debasement of precious metal coins, we must understand that the purpose of taxation is to get people to work and produce for the state. That is, the state wants bridges, armies, etc. and gets the private sector to produce them by imposing taxes. To pay the taxes, the private sector must acquire the state's money. By debasing coins, gold could be brought to the mint, coined and exchanged against the unit of account in order to reduce one's tax liability. The community, then, would have been able to satisfy their nominal tax liabilities by producing *less* for the state.[3] Thus, the state controlled the extent to which coined gold could be used to reduce tax liabilities.

[1] The term 'Cartalism' is sometimes also used (e.g., Vickers, 1959; Goodhart, 1998). Whereas 'Chartal' derives from the Latin word 'Charta', 'Cartal' derives from the Italian word 'Carta', but both refer to a 'ticket' or 'token'.

[2] Note that Knapp is not suggesting that legal tender laws are responsible for giving value to the state's money but, rather, that the state's authority to impose and collect taxes (and the legal requirement to pay taxes) gives value to the currency. Thus, if the tax collection system were to collapse, 'the value of money would quickly fall toward zero', despite the maintenance of legal tender laws (Wray, 1998, p. 32).

[3] It was rational for the state to object to the debasement not because it prevented it from receiving the gold/silver it needed/wanted but because it interfered with the extraction of goods and services from the private sector. Of course, the state may not have understood this.

When, for example, the state announced that it would accept coined gold in payment of taxes, it also had to announce a *nominal* conversion price for gold. That is, the state had to tell its constituents how much of their nominal tax liability could be eliminated with gold. The state could announce that one ounce of coined gold would eliminate $35 of one's tax liability. The coin, whether stamped 'one ounce' or '$35', would reduce one's nominal tax liability by $35, *regardless of its weight,* at the time it was presented at state pay offices. Thus, it was acceptance at the stated conversion rate, not its precious metal content, which determined its validity as a means of payment at state pay offices.[1] Knapp, therefore, opposed the Metallist view, for he realised that the money of the state did not derive its value from its metallic content/backing; it *originates with the State* and is independent of any need for a medium with which to conduct private exchange.[2] For Knapp, '[m]oney always signifies a Chartal means of payment' and is always a nominal (not a 'real') phenomenon (*ibid.*, p. 38).

Keynes was influenced by Knapp's 'state theory of money'. Indeed, he began the first chapter of *A Treatise on Money* by drawing heavily from Knapp's work. Like Knapp, Keynes was primarily concerned with money as a unit of account and a means of payment. The money of account, he said, was 'that in which debts and prices and general purchasing power are *expressed* . . . [while] . . . money itself [is] that by delivery of which debt contracts and price contracts are *discharged*' (Keynes, 1930, p. 3). Keynes, again like Knapp, recognised the power of the state to determine the money of the economy, calling it a 'right . . . claimed by all modern states and has been so claimed for some four thousand years at least' (*ibid.*, p. 4). For both Keynes and Knapp, proclamation (or, in Keynes' terminology, 'declaration') by the state determines the money of the system. Keynes noted that:

> [T]he age of chartalist or state money was reached when the state claimed the right to declare what thing should answer as money to the current money of account—when it claimed the right not only to enforce the dictionary but also to write the dictionary. Today all civilised money is, beyond the possibility of dispute, chartalist. (Keynes, 1930, p. 4)

Thus, the state determined both the unit of account and the means of payment, or the 'thing' that would 'answer' to debts denominated in the unit of account (*ibid.*, pp. 4–5).

[1] Its precious metal weight was not, of course, irrelevant in this regard. As history confirms, metallic coins, which also have value as commodities, could not circulate at a nominal rate less than their intrinsic value. That is, if the intrinsic value were greater than the nominal conversion price, the coins would be 'at once melted and used as bullion' (Innes, 1913, p. 380). This was not normally a problem, though, for as Innes notes, 'the official values were purely arbitrary and had nothing to do with the intrinsic value of the coins. Indeed when the kings desired to reduce their coins to the least possible nominal value they issued edicts that they should only be taken at their bullion value' (*ibid.*, p. 386).

[2] Although the value of state money is said to derive from its usefulness in settling tax and other liabilities with the state, there have certainly been historical periods in which the value of a state's currency was seriously diminished (e.g., hyperinflations). Do these episodes challenge the soundness of the Chartalist theory? Certainly not. The value of the state's money does, of course, depend upon the state's ability to tax effectively, so that during the Civil War, prices increased 28-fold in the South, where taxes were only 5% of the South's spending, while they merely doubled in the North, where taxes were equal to 21% of total spending on the war effort (Wray, 1998). It should be said, however, that the breakdown of a state's capacity to tax is only a sufficient (not a necessary) condition for hyperinflation. Indeed, countries such as Argentina and Peru have suffered hyperinflation without a breakdown of the tax system, but as Goodhart (1998, p. 421) notes, it 'is remarkable in these cases how high the inflation tax rate on domestic currencies has to climb before the public switches to an alternative foreign currency'. Moreover, there may be other factors not explicitly recognised by (but certainly consistent with) the Chartalist theory, which account for excessive price increases despite successful taxation. For example, the state may pay market prices for the goods and services it purchases, rather than realising that its monopoly issue over 'tax credits' (in addition to its power to tax) gives it the ability to specify (or set exogenously) the prices it pays. Mosler (1997–98) develops this argument.

Finally, we turn to Minsky. Like Smith, Minsky did not treat the Chartalist theory in detail. He was, of course, primarily concerned with the creation of money in order to finance positions in capital and, therefore, focused mainly on the use of bank money to finance the purchase of investment goods. Despite this primary concern, support for the fundamental proposition of the Chartalist theory (that the value of state money derives from its use in payment of certain liabilities to the state) can be found in Minsky:

> In an economy where government debt is a major asset on the books of the deposit-issuing banks, the fact that taxes need to be paid gives value to the money of the economy . . . the need to pay taxes means that people work and produce in order to get that in which taxes can be paid. (Minsky, 1986, p. 231)

By recognising that individuals will need to acquire the means of settling their liabilities to the state (whatever form this means of payment may take), Minsky provides a motivation for the creation of money. If, for example, the state declares that it will accept its own currency in payment of taxes, individuals will accept the state's currency and it will become money. Thus, in conformity with the definition of money given in Section 2, the creation of money involves the acceptance of another's debt. In this case, private individuals agree to hold the debt of the state, and the state's currency becomes money. Like all money, the creation of state money affects *both* sides of the balance sheet; as an asset to the individual citizen (a tax credit), the state's currency is a liability on its own balance sheet (a promise to accept it back in payment of taxes or other liabilities to the state).

In sum, Smith, Knapp, Keynes and Minsky recognised the state's power to demand certain payments from its constituents (taxes, fines, etc.) as well as the power to determine both the unit in which these liabilities are denominated and the means by which they may be discharged. They also understood that the value of the money accepted at state payoffices derives from this power and not from any inherent value within/backing the currency itself. That is, each of these authors displays, to varying degrees, support for the Chartalist vision of money as a 'creature of the state'.

This essay began by defining the creation of money as a two-sided balance sheet operation where acceptance of *another's* debt was critical. From the theory of money underlying the Metallist view, individuals are said to *collectively decide* to use precious metals in order to aid the exchange process. It is important to note, however, that exchange facilitated through the use of a collectively agreed upon commodity (e.g., gold) does not necessarily represent monetary exchange (given Minsky's definition) since the thing chosen to facilitate the exchange process need not exist as both an asset *and* a liability. Thus, while the metal *may* bear a stamp, indicating that it is the debt of its issuer, this is not a *necessary* component of the Metallist story. Indeed, the theory posits (initially) the adoption of what might be *assets only* (unstamped metal) as media of exchange. In short, the Metallist theory need not conform to the definition of money as a two-party debt relation.

In contrast, the Anti-metallists or Chartalists see the creation of certain money as contingent upon the state's proclamation that it will be accepted by the state at face value. Thus, state money is created when the public agrees to hold (as an asset) state-issued currency (a liability to the state) which is required in payment of taxes. The Chartalist vision found in Smith, Knapp, Keynes and Minsky is, therefore, consistent with the definition of money as a two-sided balance sheet operation, where one party agrees to hold the debt of another.

4. The hierarchy of money

In the *Treatise*, Keynes distinguishes between the 'money of account' and 'money' by stating that 'the money of account is the *description* or *title* and the money is the *thing* which answers to the description' (1930, p. 3). He goes on to say that 'if the same thing always answered to the same description, the distinction would have no practical interest. But if the thing can change, whilst the description remains the same, then the distinction can be highly significant' (*ibid.*, p. 3). It is because different 'things' do answer to the 'description' of the money of account that there exists what has been referred to as a hierarchy of monies. The Chartalist theory, found in the previous section to conform to the definition of money given in Section 2, can be used to describe the hierarchy in more detail.

4.1 The money of account

The 'description' or 'title' referred to by Keynes is the *unit* in which all money in the hierarchy is denominated. In the United Sates, the unit of account is the dollar. Thus, all money in the hierarchy is dollar-denominated Chartal money. Why the dollar? That is, why is it the dollar, and not some other unit, which serves as the 'title' or 'description' to which all money in the hierarchy must answer? The Chartalist theory of money as a 'creature of the state' gives us the answer.

Because the government's currency is the only legal means of discharging tax liabilities, and because tax liabilities *recur period-by-period*, the private sector will continuously need dollars. Thus, the ubiquitousness of dollar-denominated tax liabilities makes the dollar the standard unit of account for all money in the hierarchy.[1] Because the private sector will always be indebted to the government in dollars, they will prefer to write all money contracts (make all promises) in terms of dollars. In short, the unit in which state money is denominated and in which taxes are due determines the unit of account for all money in the hierarchy (Keynes, 1930; Lerner, 1947; Wray, 1998).

4.2 Money in the hierarchy

Recall that money represents a promise/IOU and that these promises can be created by anyone. The 'secret' to turning these promises into money is getting other individuals or institutions to *accept* them. Therefore, the 'hierarchy of money' can be thought of as a multi-tiered pyramid where the tiers represent promises with *differing degrees of acceptability* (Foley, 1987).[2] At the apex is the most acceptable or 'ultimate' promise. But if all promises are denominated in the same unit of account, why are some deemed more socially acceptable than others? Whose promises will be the most acceptable? And why would anyone agree to hold the *relatively* less acceptable promises? Let us investigate the different types of money included in the hierarchy.

In Knapp's treatment, all money represents a Chartal means of payment. That is, all money is a 'ticket' or 'pay-token', which gains validity by proclamation that it will be

[1] The reader might wonder whether the extent of taxation (or the size of the government's spending) is relevant in this regard. The answer is no. Unlike other units, such as firms, households and banks, who acquire credits on others (i.e., money) in order to spend, the state makes its purchases by forcing people (through its power to tax) to accept its currency in exchange for goods and services. This is the key to the Chartalist theory of the development of a monetary system, and it is independent of the size of the government. Thus, whatever the government accepts will sit atop the pyramid; a low-tax nation is no less effective in this regard.

[2] Douglas Vickers (1959, p. 72) also recognises the importance of 'acceptability'. The argument developed here differs in one important respect, however, because, in contrast to Vickers' treatment, 'money' is not just that which has generally acceptability (i.e., there is an entire hierarchy of monies, which differ in their degree of acceptability).

accepted as a means of payment. These 'tickets' or 'tokens' which individuals/institutions have proclaimed acceptable as a means of payment do not become money until they have been accepted by another individual/institution. When, for example, the postal service proclaims that a $0·33 stamp will be accepted as payment for delivery of a small envelope, an individual/institution must accept the stamp as the debt of the postal service in order for it to become Chartal money. This is consistent with our requirement that the creation of money involve accepting another's debt and with our conception of money as a two-sided balance sheet operation; the stamp, an asset to its holder, is a liability to the postal service until it is used as a means of payment (affixed to a letter and relinquished for delivery). If this logic were applied to *all* Chartal money, a list of every conceivable form of money could, theoretically, be constructed. Going back to Keynes, then, a great number of 'things' will answer to the 'description' or 'title' of money. That is, every plane ticket, pre-paid phone card, movie ticket, subway token, etc. is a form of Chartal money. It will, therefore, be useful to narrow our focus and to proceed with a simplified discussion of 'the hierarchy'.

The 'simplified hierarchy' can be envisioned as a four-tiered debt pyramid, with the debts of households, firms, banks and the state each representing a single tier. The hierarchy will vary constantly in size and structure; its *volume* will increase when the total amount of new debt created rises faster than the total amount destroyed, while its *composition* will change with the circulation of these debts. All of the money in the hierarchy represents an existing relationship between a creditor and a debtor, but the more generally acceptable debts will be situated higher within the hierarchy.

The debts of firms and households occupy the third and fourth tiers, respectively. This is because there is at least some chance that they will not trade at par with government money (which is needed to pay taxes). For example, a firm may sell bonds to finance the purchase of a new plant. Although the firm promises to pay a certain *nominal* amount to the holders of these bonds, their value may vary over time (for example, with default risk and/or as interest rates change). Thus, as assets to their holders, these bonds will be less liquid than bank money because they cannot necessarily be 'quickly converted into the medium of exchange *with little loss of value*' (Wray, 1990, p. 16; my emphasis). Still, firms' promises are more readily convertible into the medium of exchange (i.e., are more liquid) than households' promises because better secondary markets exist for their resale. To get business and household debts accepted, they might be made convertible into the debt of someone *higher* in the pyramid and may also require interest payments to compensate for the risk associated with holding less liquid assets.

Unlike households and firms, state promises and certain bank promises would be accepted even if they were not convertible into anything else. That is, even though, today, banks make their promises (demand deposits) convertible, on demand, into the state's promises (government money), this is not the reason they are accepted. It is because bank money is accepted at state pay-offices that it, along with state-issued currency, is considered by Knapp to be the 'decisive' money of the system (1924, p. 95). Thus, even if convertibility to state money were suspended indefinitely (except at clearing houses), bank promises, as long as they were accepted in payment of taxes, would continue to be accepted.

Likewise, the state's promises do not depend on convertibility into anything else.[1] As

[1] Here, we are referring specifically to state-issued fiat money. State promises could, of course, also take the form of government bonds, but, while these promises also have a place in the hierarchy, unless they are accepted in payment of taxes, they will be situated below state and bank money.

Foley noted, 'the state does not have to pay its liabilities by transferring something else' (1987, p. 520). Thus, neither the state nor the banks rely on convertibility for acceptance of their promises; what makes them both acceptable is their acceptance at state pay-offices.

Recall that a money's place within the hierarchy depends on the *degree* to which it is accepted by society. As the 'decisive' money of the system, both the state's promises and banks' promises rank high among the monies of the hierarchy. Although bank money is part of the 'decisive' money of the system, its acceptance at state pay-offices really requires its conversion to state money (i.e., bank reserves). That is, bank money is converted to bank reserves so that (ultimately) the state actually accepts only its own liabilities in payment to itself. The debt of the state, which is required in payment of taxes and is backed by its power to make and enforce laws, is the most acceptable money in the pyramid and, therefore, occupies the first tier.[1]

As the most acceptable money in the hierarchy, the state's debts serve as both a means of payment and a medium of exchange in *private* transactions. But, as Lerner recognised, no law requiring that the state's debt be accepted in private transactions is necessary in this regard. Indeed, he stressed the irrelevance of legal tender laws for the establishment of (generally acceptable) money, stating that 'its general acceptability, which is its all-important attribute, stands or falls by its acceptability by the state' (1947, p. 313). Tobin agrees, suggesting that:

> In advanced societies the central government is in a strong position to make certain assets generally acceptable media. By its willingness to accept a designated asset in settlement of taxes and other obligations, the government makes that asset acceptable to any who have such obligations, and in turn to others who have obligations to them, and so on. (Tobin and Golub, 1998, p. 27)

Thus, the legal obligation to pay taxes and the state's proclamation that it will accept its own currency at state pay-offices elevate the state's liabilities to the *top* of the pyramid, rendering them the promises with the highest degree of acceptability.

Although the state's liabilities reign supreme among promises, certain bank promises, as a consequence of their acceptance at state pay-offices, also come to serve as means of payment and media of exchange. In particular, '[d]emand deposits have attained a special status in our economy because of the special role commercial banks have come to play' (Wray, 1990, p. 291). Because the central bank guarantees that demand deposits will trade at par with government currency and because they are accepted in payment of taxes, bank promises (demand deposits) are nearly as liquid as state money and therefore occupy the second tier in the pyramid.

In short, not all money is created equal. Although the government, banks, firms and households can create money denominated in the social unit of account, these monies are

[1] That the state's debts are at the top of the pyramid in all modern monetary systems is easily observed. But one might object that their position follows not from the state's imposition and enforcement of taxes but from the market's identification of these debts as possessing the highest degree of 'moneyness'. This objection might follow, for example, from Menger's theory, as reformulated by Mises (1935 [1881]). For Mises, any commodity has the potential of emerging spontaneously as money, but the one with the highest degree of marketability (the one most likely to be accepted in exchange) would be expected to rise to the top of the pyramid. Thus, the Austrians might contend that the state's debts sit atop the pyramid because of an *ex post* sanctioning of the 'money' selected spontaneously by the market, rather than the state's power to tax. Knapp's 'state theory of money', then, could be viewed simply as a 'special case', which is not necessarily inconsistent with the neoclassical story. But this objection is simply not compelling, for as Wray (1998, p. 43) argues, the Chartalist theory is a general theory, which can be applied 'to the entire era of Chartal, or state, money'. To properly defend the argument, a detailed analysis of the history and evolution of money would be necessary. Since that is not possible here, interested readers should refer to Chapter 3 of Wray's book (*ibid.*).

not considered equally acceptable (Hicks, 1989). Only the state, through its power to make and enforce tax laws, can issue promises that its constituents must accept if they are to avoid penalties. The general acceptability of both state and bank money derives from their usefulness in settling tax and other liabilities to the state. This makes them the 'decisive' money of the hierarchy and enables them to circulate widely as means of payment and media of exchange. The debts of households and businesses are accepted because of their convertibility (at least potentially) into *relatively* more acceptable promises. These debts are not accepted at state pay-offices and, thus, are unlikely to become widely accepted means of payment.

5. Concluding remarks and policy implications

Today's Monetarist–Keynesian debates are grounded in the early Metallist–Chartalist debates of the sixteenth and seventeenth centuries. At issue is the nature and role of money and the inspiration for its use. The 'real' monetary analysis practised today, most notably among Monetarists, derives from early Metallist or commodity money theory (Ingham, 1996). Subsequently, the early Metallists and today's Monetarists bear important methodological similarities. First, both treat money as irrelevant to 'real' analysis.[1] Indeed, Schumpeter notes that 'according to the metallist view, the theory of money derives directly from the logically prior theory of barter' (Schumpeter, 1994[1954], p. 288). This tradition continues in its modern (Monetarist) form, where exchange is analysed as if it occurred in a simple barter economy where money serves only as a lubricant to the exchange mechanism; all that matters are 'real' exchange values derived from highly abstract exchange relations based on rational maximising behaviour.

Secondly, in addition to their *a*social approaches, the methodology of each is plainly *a*historical. Both markets and exchange are said to pre-date the use of money, and money is supposed to have arisen as an aid to market exchange. These beliefs are held with conviction despite little evidence that barter economies ever existed (see e.g., Heinsohn and Stiger, 1989; Wray, 1993), that in some areas early coins were denominated in values too large to have allowed them to function as media of exchange (Kraay, 1964; Ofonagoro, 1979), and that the use of coins in exchange was an accidental consequence of their development, not the reason for it (Crawford, 1970). No attempt is made to account for the unit of account or means of payment features of money, as the primary concern is to show that money developed spontaneously as a means of exchange.

The mainstream has long found it impossible to incorporate money successfully into their analyses (Hahn, 1981). Keynesians, in contrast, have had some success with endogenous money theory and have stressed the importance of money as a unit of account, a means of payment and a store of value, but they often overlook Keynes' own adherence to the Chartalist theory of money. The Chartalist theory found in Smith, Knapp, Keynes, Lerner, Minsky and Tobin offers a useful alternative for both groups.[2]

[1] Recall that for the early Metallists, money was simply a commodity with certain properties that allowed it to serve as a convenient medium of exchange. 'Money', therefore, was a 'real' commodity (or, under Walras, a number representing real commodities). Milton Friedman, remains steadfastly committed to the 'real' analysis of his predecessors. For example, he tells us that the basic reason that individuals agree to hold intrinsically worthless paper money (with no metal backing) is 'to avoid the "double coincidence" of barter' (Friedman, 1969, p. 3). Furthermore, he boldly states that while 'nothing is so unimportant as the quantity of money expressed in terms of the nominal monetary unit ... [t]he situation is very different with respect to the real quantity of money' (*ibid.*, p. 1).

[2] It will not suffice, however, if Friedman simply follows his helicopter drop with an announcement that the paper can be used to pay taxes!

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The Chartalist theory provides not only a better theoretical foundation (one grounded in historical facts) for monetary theory, but its balance sheet approach to money-creation also implies the complex set of financial arrangements, which were important to both Keynes and Minsky. Additionally, some important policy implications follow from the Chartalist theory. First, an understanding of the Chartalist theory of money leads to a fundamentally different vision of government finance. Specifically, as Boulding (1966) recognised, the role of fiscal policy is much more important for the determination of the money supply than is usually recognised (Bell, 1998). This is, of course, antithetical to mainstream theory, which attributes control of the money supply to monetary, rather than fiscal, policy. Secondly, the lender-of-last-resort role of the state must be extended beyond simply the ultimate supplier of liquidity *in times of crises* to include its *ongoing* hierarchical role based on the public's need to pay taxes. Both of these, of course, strengthen the endogenous money position.[1] Thirdly, as Sawyer (1999), Parguez (1999) and Kregel (1999) have recently argued, the relationship between control over money and sovereign power (the focus of the Chartalist theory), which is severed under European EMU, has implications for the future of the Euro. Already, these and other prominent Post-Keynesians (see also Davidson 1997; Goodhart 1998; Wray 1998) have begun to explore the Chartalist approach, but there is much to be done.

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[1] Indeed, it can be shown that the taxing and spending operations of the Treasury leave the monetary authorities with no alternative but to adopt a price (interest rate), rather than a quantity (monetary aggregate) target. For more on this, see Bell (2000).

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Preface

On August 14, 1998, as the ruble sank on the currency markets, Boris Yeltsin arrived in the Russian city of Novgorod. Standing on the runway in front of his helicopter, Yeltsin assured reporters that there would be no devaluation of the ruble.

An unremarkable tableau, typical of any country in the midst of a currency crisis. Take a closer look, though, and it becomes remarkable indeed. The helicopter in the background was an ordinary government helicopter, not Yeltsin's special presidential one. That helicopter was in the shop. Maintenance work had long since been finished, but the government could find no rubles to pay for it. All that the president's staff could offer the mechanics was a less desirable means of payment—trainloads of coal.

The only thing unusual about this story is that the mechanics did not agree to the deal. Beyond the realm of money, to which Yeltsin's words were addressed, lay a vast and complicated world of nonmonetary exchange. Six years after the collapse of the Soviet Union, Russia had built an economy in which rubles were valued and universally accepted. But alternate means of payment such as barter and privately issued quasi monies were extraordinarily common. These exchange practices were not a carryover from the Soviet economy; they had new causes and new consequences. And they spread rapidly. By 1998, industry collected as much as 70 percent of its receipts in nonmonetary form, leaving many firms with too little cash to pay salaries and taxes. Many taxes could be collected only in kind. To the

denizens of lands where money is taken for granted, the situation seemed absurd, incomprehensible, or laughable. An eminent British business weekly titillated its readers with the news that employees of a tire factory in Volgograd had received their wages in dildos. An American talk-show host, amused by similar reports about the humiliations the nonmonetary economy inflicts on Russian workers, went to the trouble of constructing a mock automated teller, trying to maintain a deadpan expression as he "withdrew" rolls of toilet paper.

What was farce to those outside of Russia was tragedy to those within it. In some industries, wage delays reached over a year. Hunger strikes and the blocking of rail lines were only the most visible manifestations of the suffering that such delays brought on. More quietly and significantly, as many as 60 percent of Russians made a complete or partial retreat from the division of labor, using subsistence farming to minimize their need for the cash their regular jobs as doctors, engineers, or mine workers could not be counted on to generate. Provincial governments, reluctantly taking as taxes what local industry produced, struggled with the problem of how to trade the steel (or fish, or cars) they did not need for the medicines (or electricity, or bricks) they most urgently did. In Moscow, meanwhile, bureaucrats launched series after series of increasingly desperate measures to sweep what cash was available into federal coffers, struggling to avoid financial collapse and make payments on debts swelled by the fiscal failures stemming from nonmonetary exchange.

That the emergence of barter in Russia came as such a surprise and appeared so absurd reflected a profound failure of historical perspective. For most outside observers, Russia's primary challenge after the collapse of the Soviet Union lay in implementing market-oriented measures, such as privatization, or reducing inflation through a tight monetary policy. Since these measures were destined to be unpopular, Russia needed leaders able to ignore short-term discontent in favor of the long-term public good, which would be guaranteed by private ownership, competition, and the stability of the currency. Complaints about these policies were inevitable, but also invariably self-serving.

And so the story was told, over and over. New faces appeared in government, new issues arose on the policy agenda, but for too many, these were changes of actors and scenery in a play with a timeless script. Whether Russia had sufficiently committed reformers to enact the necessary tough measures—this was the unending drama, the longest-running show on the world stage. When barter exchange achieved astounding dimensions and finally began to be noticed, it was just the latest set change. Barter, our familiar means of understanding told us, could only be a version of some known threat to market reforms: a means of tax evasion, a nefarious scheme to facilitate graft, or a system of hidden subsidies. In any event, unflinching reformers needed to take tough measures and get rid of it, as soon as pos-

sible. But barter was not just another example of the unending resistance to market reform its advocates were proud to ignore. It was a sign that entirely different issues were at stake.

At the center of the political and economic maelstrom engulfing the Russian Federation in the 1990s is the government's unsuccessful attempt to gain a monopoly over the definition of the generally accepted means of payment. This project of monetary consolidation is not something forced on Russia's leaders by peculiar circumstances. It is a critical but neglected aspect of state building elsewhere. In the developed countries, a monopoly on money is the cornerstone of the economic sovereignty of the national state. We take it so much for granted that only an unusual event, such as the effort to introduce a single European currency, prompts the recollection that the nation-state's monetary powers even have a history. Despite its centrality to economic state building, monetary consolidation has provoked virtually nothing in the way of studies. Yet even a cursory historical investigation of how developed countries achieved monetary consolidation reveals that it is an enormously difficult project of enduring political significance. A unified monetary system is a complicated institution that has vast implications for social actors. Monetary consolidation demands substantial administrative capacities and provokes high-stakes political battles that shape state and society in lasting ways. National integration, and the historic political alliances on which it rests, take on institutional form in the struggle for sovereignty over money.

In the final years of the Soviet Union, the importance of money for national integration became manifest as the creaky financial machinery that had served the country since the 1930s broke down. A spiraling expansion of barter promoted a political and economic fragmentation intimately linked to the breakup of the USSR. When the leadership of the new Russia took power in late 1991, eliminating barter was at the top of its agenda. Yet initial successes were quickly and surprisingly reversed. A new Russian barter emerged in 1994, as changed economic conditions threatened industry with wholesale destruction. Local authorities, in particular, were in no position to tolerate this destruction. They promoted barter to make it possible for industry to continue operation. The result was ongoing monetary disarray and a spread of surrogate monies that federal authorities could do little to stop.

By 1998, Russia's efforts at monetary consolidation were at an impasse. Disagreement between local and national authorities over how to pursue monetary consolidation grew into a stalemate when each proved to have the ability to block the other's preferred solutions in decisive arenas. Instead of an integrated money based on a national political resolution, Russia developed a profusion of barter and quasi-monetary circuits penetrating both the economy and the fiscal system, imperfectly insulated from one another, reflecting local political accommodations among their participants.

Three days after Yeltsin's confident runway assertion, Russia announced a devaluation. Within two weeks, the ruble had sunk by half against the dollar. The banking system, heavily dependent on foreign borrowing, teetered on the edge of collapse. A political crisis of enormous dimensions and uncertain outcome paralyzed policy making. It was unclear under whose leadership the weakened Russian state would return to the dilemma of monetary consolidation. But return it would. The political impasse over monetary consolidation did not promise to be eternal. Before the crisis, political forces with a stake in the national integration that monetary consolidation would promote had begun to coalesce. They proposed different resolutions to the impasse, offering the national state a chance to choose its allies in the battle for sovereignty over money.

The crisis weakened some of these forces and strengthened others. It did not change the underlying political realities. By 1998, six years of the new Russian history had demonstrated what was clear from a long record of world history: sovereignty over money cannot simply be imposed by an ambitious state on a recalcitrant society. Even less is it an automatic by-product of sufficiently disciplined policies aimed at "market reform." Monetary consolidation is a political achievement. It requires political support.

My research on barter has been founded on too many unequal exchanges. To the Russian officials and businesspeople who somehow found time in their hectic schedules to answer my questions and solve my organizational problems, I offer the inadequate recompense of my thanks, without expecting it to cancel the debt.

I would never have written this book if Kiren Chaudhry had not taught me what it might mean to listen for the thunder of world history. My gratitude for her friendship, encouragement, advice, and example is profound.

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To all who have helped me, the usual caveat applies with more than the usual force, for my struggles to incorporate their insightful and pertinent advice have met with success far less often than I would have liked. I must be held doubly responsible for all remaining errors.

And now, finally, the dizzying transition across the supposed divide between the professional and the personal, and the end of a long road. At the start of that road I had the enormous good fortune of Peter Blitstein's intellectual companionship, and I would have been permanently diminished without it. Erik Seeman helped me with Shays, and so much else. Oleg Kharkhordin's intellectual and social alchemy have been constantly enriching. Irina Boiko, Vitalii Ivanov, Natalia Kigai, and Igor Sanachev helped me feel at home far from home as I researched this book. I feel a particular sense of gratitude to my mother, father, and brother, with whom I first started to argue.

Five years ago, the kindest of fates took me to a city to which fate has not been kind: Vladivostok, perhaps the most distressing example of the consequences of Russia's monetary fragmentation. Vladivostok did much to inspire this project—and also gave me the person without whom I could never have finished it. To her this book is dedicated.

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Making Money

> Money becomes increasingly a public institution in the strict sense of the word; it consists more and more of what public authorities, public institutions, and the various forms of intercourse and guarantees of the general public make of money, and the extent to which they legitimize it.
>
> —Georg Simmel

The new Russia was born in the hard autumn of 1991. In August, an abortive coup against Soviet president Mikhail Gorbachev collapsed. In its aftermath, Boris Yeltsin and his allies in the leadership of the Russian Republic quickly seized control of key bureaucracies and dismantled the decaying structures of the Communist Party. When the Soviet Union finally disappeared at the end of 1991, this was a fact of more historical than administrative significance. Russia's leadership had already had time to survey its depressing inheritance: an ephemeral authority over the crumbling remnants of the Soviet command economy. Central control over the allocation of production had all but evaporated, replaced by decentralized barter and regional fragmentation. As nearly ninety provinces claimed control over local resources, it began to appear that the new Russia might only be a way station on the path to further disintegration. Shortages of food and other goods in large cities reached a level unprecedented in decades. The structures ensuring the provision in a tolerable fashion of an industrial society's most basic needs were breaking down. The new government's sovereignty appeared evanescent. In these desperate circumstances, Russia's leaders embarked on twin projects: to create a new basis for economic order and a new foundation for state power.

These two projects met at a single point: money. In the new economic order, the desire to make money would set production in motion and ensure the livelihood of both individuals and society as a whole. In the new political order, effective sovereignty would rest on control of the monetary system mediating the sale of goods and the collection and spending of taxes. The ambition to directive control of the physical output of production through imperative commands would be abandoned. Russian life would revolve around money, generating, in the strange physics of politics, new centripetal forces to draw the country together.

Politicians assumed that making money work would be a simple matter that could be accomplished at a single stroke. On January 2, 1992, a sweeping price liberalization allowed most sellers to name the price of their goods. No longer would they be compelled to insist on barter as compensation for the inadequate prices the command economy permitted them to charge. Freeing prices would promote voluntary, money-motivated, and decentralized transactions—but it was not a program for the devolution of political power. Quite the opposite. In contemporary market economies the voluntary transaction is an exchange for money, and money is defined and managed by national authorities. When politics is focused on the management of a national currency—how much of it to print, how to maintain its value, how to set its exchange rate—it is inevitably national politics. Making money work would give the politics of the new Russian state a solid center.[1] When the ruble became czar, all roads would lead to Moscow.

Yet seven years after the fateful August that spelled the end of the Soviet Union, the project of refounding the state on a new money-driven market economy was very far from accomplished. Initially, barter retreated rapidly. The ruble had achieved universal purchasing power in Russia within months after price liberalization. But its power to command resources never became exclusive. New forms of barter began to spread in the first half of 1994, even as inflation dropped with tighter fiscal and monetary policy. Thenceforth barter became ever more prevalent, taking on new and more ramified forms. Firms and local governments issued their own surrogate monies, closely linked to the barter trade. By 1998, estimates for the share of sales in industry that did not rely on state-authorized money ranged from 50 to 70 percent. For all levels of the Russian state, the consequences were enormous. Caught in a profound fiscal crisis, first provincial governments and then the national government began increasingly to tax in kind. By 1996, on the order of 60 percent of local tax receipts and some 40 percent of federal tax receipts were in kind or in surrogate monies, and efforts

[1] Jacques Sapir, "Marchés régionaux ou régionalisation du marché?" in *La fin de l'URSS*, ed. Robert Berton-Hogge (Paris: La Documentation Française, 1992), 67–84, at 78–79, has made a parallel argument regarding the economic intent of price liberalization.

to switch to exclusively monetary taxation in the subsequent two years were thoroughly unsuccessful.[2] The move to money had stalled.

Russia's experience provides an exceptional opportunity to investigate an important and yet little studied aspect of state building. Alongside the monopoly on legitimate violence, monopolistic control over the definition and creation of money has become one of the powers we take for granted when we speak of the sovereign nation-state. But Russia's descent into barter reminds us that the powers of today's states are the ambitions of state builders of the past. Like any worthy ambition, the consolidation of monetary control is a difficult yet enduring achievement. Only in the second half of the nineteenth century can the central authorities of the most-developed countries be said to have achieved the thorough dominion in the monetary sphere they continue to maintain. This dominion was hard-won, the culmination of a process of organized coercion and political negotiation similar to those that resulted in the other powers defining the modern nation-state.[3]

This book is a study of the politics of Russia's economic transformation as an example of the politics of monetary consolidation. Monetary consolidation is state building in the monetary realm—the process whereby a state acquires a monopoly over the means of payment that is used across the territory it rules. States have good reasons to pursue such a monopoly. A unified monetary system helps a national state to extract and transmit resources, and so represents an enormous fiscal and administrative convenience. Building such a system is a difficult project that cannot be achieved by bureaucrats alone. Money does not just affect the relationship of a state to its citizens: it also affects the relationship of these citizens to one another. Successful monetary consolidation creates an infrastructure of exchange that is attractive not only to agents of the state. A nationally unified money is the paramount instrument of a nationally unified market, and so it speaks to the business interests of those who feel they can flourish in such a market. One can therefore argue, as I do in this book, that monetary consolidation will be completed when a national state's administrative and fiscal

[2] Estimated from OECD data given in Seija Lainela, "Money Surrogates and Regional Financial Markets in Russia" (paper presented at the 29th National Convention of the American Association for the Advancement of Slavic Studies, Seattle, November 21–23 1997). "In kind" is here a shorthand, as these figures include receipts in various sorts of so-called money surrogates that in essence serviced barter circuits. See chapter 5.

[3] On the place of state-defined money in modernity and in the nation-state, I have drawn above all on Georg Simmel, *The Philosophy of Money*, trans. Tom Bottomore and David Frisby from a first draft by Kaethe Mengelberg, 2d enlarged ed. (London: Routledge, 1990) and Karl Polanyi, *The Great Transformation: The Political and Economic Origins of Our Time* (Boston: Beacon Press, 1965). The relatively recent monopolization of money by the state is also stressed by Max Weber, *Economy and Society: An Outline of Interpretive Sociology*, ed. Guenther Roth and Claus Wittich, 2 vols. (Berkeley: University of California Press, 1978), 1:166–167.

interest coincides with business efforts to shape an institutional environment congenial to its commercial interests. Any state's monetary institutions bear the marks of the political accommodation that gave birth to them.

The politics of monetary consolidation is at base a politics of sovereignty. Through establishment of a monopoly on the definition of money, a state asserts its sovereignty vis-à-vis society, replacing societal self-regulation with state regulation in matters of monetary exchange. In Georg Simmel's characteristically beautiful formulation, when two people use money to facilitate exchange, "the pivotal point in the interaction . . . recedes from the direct line of contact between them, and moves to the relationship which each of them, through his interest in money, has with the economic community that accepts the money, and demonstrates this fact by having money minted by its highest representative."[4] Monetary consolidation also involves determination of the territorial locus of monetary authority. National states seeking to monopolize the definition and issue of money have often had to face down, co-opt, or compromise with subnational authorities asserting their own claims to sovereignty in this realm.

Center-regional conflicts over monetary consolidation have been critically important in Russia. They largely explain the explosion in barter and surrogate monies two years after price liberalization. In seeking the fundamental political roots of the failure of Russia's monetary consolidation, my point of departure is Karl Polanyi's classic, *The Great Transformation.* Polanyi focuses on the role of the national state, especially in England, in both making possible the transition to a self-regulating market and ameliorating its effects. On Polanyi's account, the prelude to the effort to create self-regulating markets was the prior concentration of economic power with the national state, which eliminated subnational authorities' ability to control entry to local markets. The national state was then in a position to remove the remaining barriers to the application of the market mechanism to money, labor, and land. However, trying to treat these "fictitious commodities" as if they were any other commodity, governed solely by the price mechanism, resulted in indiscriminate social destruction. As various social groups sought rescue from the devastation caused by self-regulated markets, they looked to the national state, which controlled monetary and customs policy. Market transformation, launched by a national state that had effectively destroyed the powers of subnational governments, wound up confirming the emergence of the national arena as the critical political forum.[5]

[4] Simmel, *Philosophy of Money,* 177. Compare Weber, *Economy and Society,* 636.

[5] My reading of Polanyi has been greatly influenced by the vigorous interpretation in Maurice Glasman, "The Great Deformation: Polanyi, Poland and the Terrors of Planned Spon-

Russia, by contrast, embarked on its market transformation before the groundwork of a unified internal market had been laid and with relatively weak institutional representation of federal authorities in its nearly ninety regional jurisdictions.[6] In particular, the central government was unable to block local creation of alternate means of payment. When the price mechanism threatened to wreak indiscriminate social destruction, the social reaction focused on local authorities, who used nonmonetary exchange to protect industry and maintain critical services. The desperate efforts of local authorities to protect local economies and the weakness of the deliquescing central-planning state inherited by Moscow combined to produce a dynamic unlike that described by Polanyi. The national government launched a market transformation, leading to demands for protection from the price mechanism. But these demands weakened central state institutions, including money, rather than consolidating them.

This dynamic highlighted the intimate connection between forms of exchange and the territorial patterns of economic and political life. Where money promotes national integration and subnational disintegration, barter promotes national disintegration and subnational integration. A national currency knits together a polity and economy national in scope for which the decisions of central authorities are critical. Yet money exchange promotes subnational disintegration as participants in existing organizational structures discover differential opportunities in the world of money. Barter, by contrast, spurs the creation of new coordinating structures on a regional or cross-regional level, due to the organizational difficulties involved in ensuring a "double coincidence of wants" (required since each barter sale must also be a satisfactory purchase). The drive to subnational integration created by barter is accompanied by strains on national integration stemming from both the weak capacity of central authorities to tax in kind and the limited ability of barter exchange to sustain a national market.

How to break through the impasse in monetary consolidation was the central issue of politics in Russia through the second half of the 1990s. It was one whose resolution promised to have a lasting impact on the coalitional basis of the Russian state. Because of money's role in mediating voluntary exchanges, the attainment of monetary consolidation can never and nowhere be a lonely triumph of technocratic political will. As contention

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taneity," in *The New Great Transformation? Change and Continuity in East-Central Europe*, ed. Christopher G. A. Bryant and Edmund Mokrzycki (London: Routledge, 1994), 191–217.

[6] The best sources on the regionalization of the late Soviet economy are Sapir, "Marchés régionaux," and Philip Hanson, "Local Power and Market Reform in Russia," *Communist Economies & Economic Transformation* 5, no. 1 (1993): 45–60.

over the contours of the monetary order mobilized and redefined powerful social forces, the Russian state found itself faced with the need to choose allies and come to an accommodation with them. These choices and accommodations would institutionalize the power and priorities of particular groups. In 1998, when this book was completed, it was too soon to say how monetary consolidation would be accomplished in Russia (and for that matter, whether it indeed would be at all). Vivid contrasts between the coalitions backing different solutions to the problem of monetary order made it obvious, however, that this was a political struggle of enormous stakes and enduring consequence. Thus, as I seek to demonstrate in the concluding chapter, Russia's experience underscores how the deep imbrication of the national state in the structures that sustain a market economy—and in money above all—means that building a market involves conflict over the terms on which the economic and political sovereignty of the national state can be constructed. No resolution of such conflicts can occur without lasting implications not just for the administrative and territorial structure of the state (especially for the division of power among levels of government) but also for its political character.

From "Market Reform" to "Monetary Consolidation"

In this book, I tell the political history of Russia's stalemated effort at monetary consolidation. There was another choice—I could have used the emergence of barter to illustrate the difficulties, or even the failure, of market reform in Russia. My preference for "monetary consolidation" over "market reform" is not just a way of specifying my topic more precisely: it is a choice of narrative frame. Narrative frames make a difference both for research and for explanation. Their significance is analytic, not just stylistic. They direct attention to some facts and not to others and suggest interpretations of those facts. To choose a narrative frame is to make an assertion about where to hearken to what Schumpeter once termed "the thunder of world history."[7]

For some social scientists and for very many journalists, market reform has been the master narrative of the post-Soviet experience. They focus on policies adopted, measuring them against recommended market reforms. What market reform means is somewhat hard to pin down, since the term has been hostage to the changing agendas of international financial bodies. Usually, however, market reform is defined through checklists of measures designed on the one hand to eliminate the differences between the state socialist economy and the textbook market economy, and on the other

[7] Joseph Schumpeter, "The Crisis of the Tax State," in *The Economics and Sociology of Capitalism*, ed. Richard Swedberg (Princeton: Princeton University Press, 1991), 99–140 at 101.

to achieve the "structural adjustment" of the resultant market economy in line with policies developed to deal with third world etatism. Thus (in roughly chronological order), fixed prices must be liberalized, state enterprises must be privatized, inflation controlled, budget constraints hardened, subsidies withdrawn, hopelessly inefficient industries dismantled, resources allowed to flow to their most profitable uses, monopolies broken up, property rights secured, contracts enforced, and taxes rationalized (the last four being somewhat more recent additions to the list).[8]

Whatever its virtues, or vices, as policy advice, the progress of market reform is a dangerous narrative frame for anyone trying to make sense of the course of Russian politics and economics after the collapse of the Soviet Union. It is dangerous because it winds up obscuring the most vital questions facing Russian politicians and the Russian state. To present, and advocate, a checklist of policies that the national government should adopt is to assume that this government has already gathered to itself the sovereign powers, dominance over money among them, that underpin a market economy of national scope. So if there are deviations from the desired policies, they must be explained by the politics of the cash register—conflicts over who gets how much from a general till, contested at the national level.

These assumptions are a fundamental mistake. The politics of the cash register in Russia, to the extent that they are significant, are driven by another, deeper politics: the politics of sovereignty, that is, of rule and control.[9] At stake in this politics of rule and control are issues that don't translate quickly or directly into monetary terms. They involve contests over matters such as in which political arenas are the critical decisions made, who has the capacity to enforce them, and to what extent legal regulations structure interactions in the economy. I hope to demonstrate that as a narrative frame, monetary consolidation does a much better job of capturing these issues. First, though, I want to argue that the focus on market reform has led to a systematic misunderstanding of the nature of politics, the character and political significance of the state's role in a market economy, and the structure of state-society interactions.

The category of market reform impairs understanding of politics by being at once too broad and too narrow. It is too broad because it lumps policies involving distribution of resources already in the hands of the state (such as the revenue from inflationary currency issue) together with the creation of new institutions (such as a unified monetary system) that allow

[8] A convenient summary of the conventional wisdom is World Bank, *From Plan to Market: World Development Report 1996* (London: Oxford University Press, 1996).

[9] The contrast between "rule and control" and "cash register" or "allocation" images of politics is drawn from Stephen Krasner, "Approaches to the State: Alternative Conceptions and Historical Dynamics," *Comparative Politics* 16 (January 1984): 223–246.

successful businesses to benefit from market opportunities. In both cases, wealth or income is allocated, but the administrative capacities on which this allocation rests and the political arenas in which its contours are contested are radically different. These differences cannot be systematically examined once the question is posed as one of how far a country has advanced down the reform agenda. What is left is a narrow, least-common-denominator vision of politics, in which the state is an allocator of resources implicitly (and illegitimately) conceived in monetary terms. (Money only becomes the measure of all things as the result of a process of institutional formation!) On this view, any state that does not implement policies leading to a perfectly competitive market is allocating rents. Since the fundamental political significance of state action is allocation, the politics of market reform either revolve around technocratic efforts to placate losers without placing too great a drag on the entrepreneurial energies of winners, or around the effort to carry out a more complete market reform over the objections of wealthy rent-seeking interests who benefit from less than consistently liberal policies.[10] In either case, the substantive content of government policy is denuded of administrative meaning, reduced to its implications for the transfer of wealth or income.

Throughout this book, I argue that the reasonable materialist focus on the distributive implications of policy should not distract us from looking at the mechanisms through which such distribution takes place. An analysis of the creation of such mechanisms is at the heart of any adequate investigation into the politics of institutional origins. In this regard, the assumption that "what is basically at stake in regulatory processes is a transfer of wealth" (widely used in what has been termed the "positive political economy") is fatal to a study of the creation of the institutional underpinnings of capitalism.[11] Of course it should be no surprise that an approach that compares the results of regulation to what would be produced by an unregulated free market eviscerates investigation into the complex institutional bases of any market that approximates this ideal.

[10] The latter position has been especially popular in the analysis of Russia. See Joel Hellman, "Winners Take All: The Politics of Partial Reform in Postcommunist Transitions," *World Politics* 50 (January 1998): 203–234; Daniel Treisman, "Fighting Inflation in a Transitional Regime: Russia's Anomalous Stabilization," *World Politics* 50 (January 1998): 235–265; and Anders Åslund, *How Russia Became a Market Economy* (Washington: The Brookings Institution, 1995). Though all three exemplify the surrender of the terrain of politics to an externally defined reform agenda, the first two are vastly more sophisticated.

[11] The quotation is from Sam Peltzman, "Toward a More General Theory of Regulation," in *Chicago Studies in Political Economy*, ed. George Stigler (Chicago: University of Chicago Press, 1988), 234–266, at 237 but is representative of a large literature. The programmatic statement of positive political economy in political science is James E. Alt and Kenneth A. Shepsle, eds., *Perspectives on Positive Political Economy* (Cambridge: Cambridge University Press, 1990).

The least-common-denominator vision of politics as allocation resonates with a second concomitant of the focus on market reform. The economic argument for market reform has as a side effect the implication that market reform is a public good. Thus one should expect that no collective action will be produced on its behalf.[12] The benefits of market-oriented reform, it is argued, will be lower prices and a more efficient allocation of resources, benefits that will be experienced by consumers as individuals in the context of their daily transactions. Given the complexity of the economic processes that precede the consumptive transaction, consumers are unlikely to draw the connections between the prices they pay and, say, liberalization of capital markets or the breakup of monopolies. This is all the more true to the extent that these policies take time to bear fruit; they are, after all, predicated on a view of how market processes operate *over time* to consumer advantage. However, even the consumer sophisticated enough to share a liberal economist's view of the benefits of marketization is unlikely to get politically involved in its defense. Prices and the other benefits of market reform are nonexclusionary public goods, so there will always be a temptation to watch the battle for free markets from the sidelines. The cheaper fruits of consumer-oriented markets will only taste sweeter to those who expended no effort to make them possible. But from the ranks of those contemplating such a pleasant "free ride" into the consumer paradise no movement is likely to spring, leaving *für sich* an endlessly unreachable distance from *an sich*. Where the political organization of those who stand to gain from markets is hindered by the nontransparency and universal availability of the eventual benefits involved, the political organization of market opponents is held to be a matter of inevitability. Market-oriented measures such as the withdrawal of subsidies, privatization, demonopolization, and so on are likely to cause immediate pain to a compact group that has no trouble in identifying itself and is likely already to possess organizational form. The political logic suggests that only strong and insulated executive officials deaf to the well-orchestrated howls of anguish of these rent-seeking forces will be able to improve the lot of the multitudinous victims of monopoly, who are apparently no less worthy of such care for all that their selfishness chains them to political passivity.

Thus the view of market reform as a public good gives rise to what might be called a voluntarist vision of the state: If key state apparatuses are staffed by market reformers with the vision and political will to ignore the iron political logic (or the skill to soften it through strategic partial manipulations), economic reform will go forward. But without the presence of such dedicated individuals, the state degenerates into a tool of rent-seeking forces in

[12] Mancur Olson Jr., *The Logic of Collective Action: Public Goods and the Theory of Groups* (New York: Schocken, 1965). Cf. Hellman, "Winners," 206–207.

a bacchanalia of corruption.[13] Voluntarist approaches accordingly analyze policy as stemming from the political views and incorruptibility (neither subject to further analysis) of those who control key institutions.[14]

Both the interpretation of politics as allocation and the voluntarist image of the state conceive society as an assemblage of individuals who can be united only in demanding unwarranted subsidies that reduce social wealth.[15] This is why using market reform as a narrative frame has also proven to promote an exceptionally narrow vision of state-society relations, which are seen as structured above all by the "credibility" of government policy. The roots of this approach grow on the one hand from János Kornai's classic writings on soft-budget constraints, and on the other from the rational expectations research program in economics, which focuses on the effects of economic actors' predictions about government policy on their economic behavior.[16] Analysts writing in this latter school believe that if governments could make a credible commitment to a restrictive monetary policy, economic actors would adapt more quickly, reducing the recessionary costs associated with ending inflation. Developing together with expanded social-scientific interest in game theory, the credibility approach sought to view the relationship between a central policy-making authority and economic actors as a strategic interaction, in which each side sought to predict the other's future actions and act appropriately. In other words, as an authoritative survey put it, credibility school analysts have been motivated by an effort to understand "a leader-follower game of two players—a dominant centralized policy-making body and a private sector consisting of many spatially separated atomistic agents, each of whom, being aware of no perceptible influence on the actions of others, takes as given the behavior of other participants in the game (including that of policy makers)."[17] This image of economic actors abstracts from their institutional

[13] Åslund, *How Russia Became a Market Economy,* is especially symptomatic.

[14] Hellman, "Winners," cleverly moves beyond the good bureaucrats–bad bureaucrats implications of trying to explain "market reform" by arguing that the voting public can become the defenders of the public good against rent seeking, and he thereby suggests democracy as the key institutional feature likely to promote market reform. This analysis (the validity of which depends on the substantive character of the policies democratic electorates were voting for, an issue not adequately investigated), though politically more interesting, in all other respects shares the anemic vision of the state criticized here.

[15] For an exceptionally direct formulation of this viewpoint, which is more often left implicit, see Maxim Boycko, Andrei Shleifer, and Robert Vishny, *Privatizing Russia* (Cambridge: Massachusetts Institute of Technology Press, 1995), 27.

[16] János Kornai, "The Soft Budget Constraint," *Kyklos* 39, no. 1 (1986): 3–30. For a survey of "credibility" in economics, see Keith Blackburn and Michael Christensen, "Monetary Policy and Policy Credibility: Theories and Evidence," *Journal of Economic Literature* 27 (March 1989): 1–45, on which this paragraph draws.

[17] Ibid., 8.

context.[18] It also assumes that any horizontal interactions between actors have no systematic consequences for their macroeconomically relevant behavior. Those analysts who embrace the policy credibility approach have no real way of investigating whether these assumptions are true and are naturally led away from studying the concrete institutional structures within which an economy functions.[19] What will shape behavior in society and economy are predictions by each individual agent about the state's behavior in allocating rents, or, equivalently, judgments on the political will of those presently in government.

In short, all too often, a focus on market reform has led to the assumption that politics is the allocation of rents, unless such is forestalled by political will credibly broadcasted. Reinhard Bendix once argued that in the course of nation building, a key historical passage occurs when "politics ceases to be a struggle over the distribution of sovereign powers [in which he included 'control of the currency'] ... and becomes a struggle over the distribution of the national product and over the policies and the administrative implementation which affect that distribution."[20] The distorting lens of market reform has made it appear that this transition has already taken place, that the heart of Russian politics lies in an endless siege of the cash register, not the acquisition of the power to rule and control.

These assumptions have been especially pronounced in the discussion of monetary matters, where they were given a surface plausibility by the notion that it would be relatively easy to get a state-socialist economy to adopt money as its guiding principle. Before the Russian government launched its radical market reforms, the general and largely implicit assumption was that monetary consolidation was a trivial matter of removing the restrictions on the use and role of money that characterized the Soviet economy. This simple model of how monetary consolidation would come about might be dubbed the "Bender's revenge" approach. In a famous novel published in 1931, *The Golden Calf,* Soviet satirists Ilf and Petrov chart the adventures of their con-man protagonist Ostap Bender as he pursues his dream of becoming a millionaire. Bender finally achieves his goal, just as the first five-year plan is opening, only to discover he has been pursuing a chimera. Bender had sought money in the sense described by Mary Douglas, "general purchasing power over all marketed goods."[21] Yet the luxuries that Bender had imagined money would buy him proved all but inaccessible.

[18] Ibid.

[19] Kornai's work is, in this regard, quite different from what followed it.

[20] Reinhard Bendix, *Nation Building and Citizenship: Studies of Our Changing Social Order,* new enlarged ed. (Berkeley: University of California Press, 1977), 129.

[21] Mary Douglas, "Primitive Rationing: A Study in Controlled Exchange," in *Themes in Economic Anthropology,* ed. Raymond Firth (London: Tavistock, 1967), 119–145, at 120.

Spaces in hotels were reserved for agricultural specialists or others doing useful work, and not simply any paying customers. Meals in dining halls were sold only to members of trade unions. Although money was still a necessary part of these regulated transactions, it was not sufficient to complete them.[22] Despite the monetary riches that he had worked so long and so deviously to obtain, Bender found himself confronted by what Douglas would have described as a system of "primitive rationing," designed to "restrict and channel the purchasing power of money."[23] Ilf and Petrov's use of the curbing of money's power to illustrate the achievements of the Soviet order was typical of an environment in which money was always something of a guilty afterthought, never comfortably integrated into the Soviet ideological self-image.[24]

Bender's frustration in seeking to spend his money in the consumer economy was nothing compared with that felt by the leadership of the Soviet enterprise. The Soviet productive organization existed not to make money, but to make the plan, a plan conceived and drawn up fundamentally *in natura*. Its dealings with money were conditioned primarily by the notion of "control with the ruble," the use of the motions of money in enterprise bank accounts to track mandated transactions, rather than to motivate voluntary ones. When goods had moved, money was supposed to follow (though when for some reason it did not, punishment was usually not ferocious). "Control with the ruble" was accompanied by substantial control *of* the ruble to ensure that enterprises could not make use of their so-called cashless (*beznalichnyi*) account money in ways that would contribute to macroeconomic destabilization. Enterprise money was allocated to accounts dedicated to particular purposes to prevent its use to feed the notorious "investment hunger" of the Soviet enterprise or its conversion into cash money for salaries that could sweep even more goods off barren shop shelves. The strict control over the use of money meant that it did not represent a "bearer of options" for enterprises that held it nor a major goal of productive activity.[25] It is true that under the classical command economy, efforts to use money to stimulate economizing behavior meant that having more money was better than having less, and this did lead enterprises to pursue it. But such pursuit was as likely to involve surreptitious price rises as savings through productive efficiency, and in any event did not

[22] Cf. Richard Ericson, "The Russian Economy since Independence," in *The New Russia: Troubled Transformation*, ed. Gail Lapidus (Boulder: Westview, 1995), 37–78, at 60.

[23] Douglas, "Primitive Rationing," 120. Cf. Caroline Humphrey, "'Icebergs', Barter and the Mafia in Provincial Russia," *Anthropology Today* 7, no. 2 (1991): 8–13.

[24] Gregory Grossman, "Gold and the Sword: Money in the Soviet Command Economy," in *Industrialization in Two Systems*, ed. Henry Rosovsky (New York: Wiley, 1966), 204–236.

[25] The phrase is from Gregory Grossman, "Introduction," in *Money and Plan*, ed. Gregory Grossman (Berkeley: University of California Press, 1968), 1–16.

take the form of tailoring production to the needs of consumers with money.[26] Money remained an adjunct to a system of production and circulation of goods that moved according to entirely different principles.[27] When macroeconomic imbalances grew sharply in the waning years of the Soviet Union, even money's adjunct role began to wither, as enterprises turned to demanding in-kind payment for goods whose sale at fixed prices gave increasingly inadequate returns.[28]

That Soviet authorities erected formidable barriers against the unsanctioned use of money, that nonetheless these barriers often proved porous, and that barter formed so clearly a way around official price restrictions all contributed to the view that monetary consolidation was merely a matter of lifting the limitations on prices and uses that kept money from playing its "natural" role. Indeed, little more than half a year after price liberalization was implemented, its architect, the acting prime minister Yegor Gaidar, was able to hail (quite accurately) the universal acceptance of the ruble in payment and proclaim (quite prematurely) the end of the barter economy.[29] With Bender's revenge complete, it was easy to assume that at issue in Russia was no longer monetary consolidation, but monetary policy.

Monetarist theories of inflation could thus set the agenda for political analysis.[30] Accepting that the causes and cures of inflation can be sought in fiscal and monetary policy set at the discretion of central state authorities, this literature focuses on institutions at the apex of the political system, seeking the circumstances in which iron-willed reformers can insulate the budget and the central bank against what is held to be nearly universal political opposition to stabilization.[31] At stake in the politics of stabilization are

[26] Thus, even Soviet money's tendency to "activization" (cf. Grossman, "Gold," 233–234) as enterprises tried to acquire more of it had little in common with the pursuit of a choosing consumer's money under a market system.

[27] A partial exception to this was the cash in which households received wages. For a fuller discussion of the institutional details of the Soviet monetary system, see chapter 1.

[28] Michael Burawoy and Pavel Krotov, "The Soviet Transition from Socialism to Capitalism: Worker Control and Economic Bargaining in the Wood Industry," *American Sociological Review* 57 (February 1992): 16–38.

[29] Reported in *Svoi Golos*, no. 33 (August 27–September 3, 1992), 5.

[30] On Russia, David Lipton and Jeffrey Sachs, "Prospects for Russia's Economic Reforms," *Brookings Papers on Economic Activity*, no. 2 (1992): 213–283, at 253–260; for a similar analysis of Latin American inflation by political scientists, see Stephan Haggard and Robert R. Kaufman, eds., *The Politics of Economic Adjustment: International Constraints, Distributive Conflicts, and the State* (Princeton: Princeton University Press, 1992). Cf. also Åslund, *How Russia Became a Market Economy*.

[31] Jeffrey Sachs has argued that the relevant actors are even narrower, especially in the first phase of stabilization: "[K]ey progress on stabilization can be achieved at the outset by a very small group of reform leaders centered at the Ministry of Finance and the Central Bank. It is usually possible to achieve a 'temporary stabilization' on the basis of a credit squeeze, and (usually) some foreign exchange reserves, even before fiscal policy is firmly consolidated." Jeffrey Sachs, "Russia's struggle with stabilization: Conceptual issues and evidence," *World Bank Research Observer, Annual Conference Supplement* (1994): 57–80.

whose hand will be on the money valve and how wide it will be opened, as well as how steady this hand will be, since only a credible commitment to monetary restriction can promote restructuring.

The problem with this approach is that it assimilates the Russian experience to a vision of politics drawn from countries with a consolidated monetary order, in which virtually all goods are sold exclusively for state-authorized money. In a consolidated monetary order, a focus on the apex of the political system of the sort just described is analytically appropriate only because of a *prior* political process of the accumulation of power at the center. And, as already suggested, it was just such a centralization of power that was the major challenge facing Russia's government in the uncertain fall of 1991.

The explicit intent of the Russian government would not be a good reason to choose monetary consolidation as a narrative frame over market reform. After all, the government aimed at both, and at the latter far more explicitly than the former. Yet there are compelling analytic reasons for a focus on monetary consolidation. The widespread attainment of monetary consolidation in contemporary nation-states is presumably no accident. There are grounds to suspect that it is driven by powerful confluences of state imperatives and private interests. Because most students of market reform believe it has an extremely tenuous political base, they fear that the market reform agenda is in constant danger of being rendered irrelevant. But no contemporary economy, however far from the market ideal, can avoid pursuing some regulation of the issue of money.

More important, a focus on monetary consolidation takes money seriously as a complicated institution for facilitating voluntary exchanges that is accepted by individuals and administered by the state. It therefore offers the possibility for a richer vision of politics, the state, and state-society relations than that imposed by an analysis of market reform. In the study of monetary consolidation, politics appears as a politics of sovereignty fought out in multiple fora by political actors whose identities are not just revealed but even constituted by the process. The state is not reduced to a collection of actors displaying a greater or lesser degree of devotion to the eternal verities of liberal economics. Instead, it is an actual or potential organization-for-itself.[32] It engages in projects to ensure its fiscal capacity and effective sovereignty against a variety of contenders and attracts allies to the extent these projects appear capable of realization.[33] Society is not a collection of atomized individuals (or at best firms) coming to isolated predictions re-

[32] Theda Skocpol, *States and Social Revolutions* (Cambridge: Cambridge University Press, 1979).

[33] Kiren Aziz Chaudhry, *The Price of Wealth: Economies and Institutions in the Middle East* (Ithaca: Cornell University Press, 1997).

garding the likelihood of state largess, but rather a "sphere . . . of lively interaction," replete with efforts to put this interaction on a relatively predictable footing, efforts that may contribute to, collide with, or even be shaped by the projects of the state.[34]

The project of the rest of this book is to demonstrate that focusing on monetary consolidation allows proper attention to these issues, and that they are central to the evolution of post-Soviet Russia. The two concluding sections of this introduction are intended to provide provisional security for some the assertions of the preceding paragraph. First I make a brief excursus into the general nature of money as an institution, and then I suggest how money is implicated in center-regional relations in Russia's specific context.

A Sociological-Institutional Approach to Money

Economists reflecting on the reasons money is preferred to barter have generally focused on how money reduces the cost of transacting for individuals. In a version associated with Austrian-school economists such as Menger,[35] stress is placed on the inconvenience of the double coincidence of wants that barter requires. Searching for an exchange partner who not only desires what one has to offer but also offers what one is seeking can be time-consuming. Exchanging first for a widely desired good and using it to acquire the directly desired good speeds up the process. In time, some widely desired good will attain to the status of money as a universal medium of exchange. More recent accounts of why individuals will come to embrace money stress that the quality of goods and therefore their economic value is hard to measure precisely. By making the investments required to become expert in judging the worth of a single good—money—and insisting on conducting exchanges through its medium, individuals can minimize the costs involved with overvaluing poorly known goods.[36]

Economic approaches to money, then, emphasize money's role in conceptually separable transactions between pairs of individuals entered into one at a time. Money arises from individuals' predictions about the form these transactions will tend to take. Money is a medium of exchange, an item acquired with an eye to a future exchange. Economic approaches also assume that humans are endowed with a capacity to calculate economic advantage that simply finds its expression in money exchange, since money arises as a result of individuals' efforts to reduce preexisting transaction

[34] Simmel, *Philosophy of Money*, 101.
[35] Carl Menger, "On the Origin of Money," *Economic Journal* 2 (June 1893): 239–255.
[36] For a summary of such views, see Thrainn Eggertsson, *Economic Behavior and Institutions* (Cambridge: Cambridge University Press, 1990), 231–246.

costs. Competing sociological views of money, by contrast, stress that money is an institution connecting the transactions of many individuals and standardizing their behavior in these transactions, in part by creation of a new capacity for rational economic calculation that is not part of humans' natural mental equipment. The originator of the sociological approach to money was Georg Simmel. Much of his wide-ranging masterpiece *The Philosophy of Money* is devoted to arguing that the use of money does not express numerical calculation but rather allows it. Accepting a broadly Austrian vision of the origin of shared media of exchange, he nevertheless notes that the process can be driven by a relatively diffuse capacity to compare alternatives and a desire to achieve a rough-and-ready sort of equality in exchange. This equality only begins to acquire a numerical interpretation with the spread of precisely divisible monetary units. Thus where one function commonly ascribed to money is "standard of value," Simmel would argue that the gesture at a preexisting value that money merely measures is fundamentally illegitimate.[37] Just as the abstraction of "length" can be defined only after a measure of it is agreed upon, so the abstraction of "value" comes into being only with its measure, money. In a language that would have been anachronistic for him, Simmel's argument can be rephrased as follows: humans are endowed only with an ordinal sense of utility; they attain something like a cardinal sense of utility ("value") only through the habit of making calculations in money.[38]

As a side effect of its creation of a standard of value, money creates a network of obligations between people denominated in *the same units*. The most significant formulation of the implications of this point was attained by Georg Knapp in *The State Theory of Money*. Money, Knapp argues at the conclusion of a discussion in which he develops a number of graceless but exceedingly precise neologisms, is a "chartal means of payment."[39] In conventional usage, a "means of payment" is what settles a legal obligation, as opposed to a medium of exchange, which is acquired with an eye to a later trade. Knapp uses "chartal" to characterize a means of payment that bears a sign indicating its value in nominal units. He distinguishes a chartal from a "pensatory" means of payment, which fulfills an obligation to pay through delivery of a given weight of a given material. This distinction may appear

[37] Simmel's reasoning has great kinship with the viewpoint argued in Philip Mirowski, "Learning the Meaning of a Dollar: Conservation Principles and the Social Theory of Value in Economic Theory," *Social Research* 57 (Fall 1990): 689–717, an essay that decisively influenced the readings presented here of both Simmel and Knapp.

[38] I thank Peter Woodruff for suggesting this formulation.

[39] Georg Friedrich Knapp, *The State Theory of Money*, trans. H. M. Lucas and J. Bonar, Abridged ed. (London: Macmillan, 1924), 38.

just a tedious scholasticism, but in fact it expresses rather precisely the critical idea that makes a sociological approach to money sociological. The unit of value finds its source not in the individual, who wants material things susceptible to material operations such as weighing, for example, but rather in social conventions.

With a pensatory means of payment, Knapp writes, "the unit of value was defined 'really,' i.e. in terms of material." Then a great transition occurs. The law mandates that the old pensatory means of payment be replaced by some new chartal one. Material operations can no longer define the unit of value, which is set by "the declaration by the State how many of the present units (say marks) go to discharge the debt expressed in the former unit (say thaler). To know the means of payment we need, not a mere historical definition, but a special description of the pieces, and a statement of how many units of value each piece is worth. The resulting validity is purely authoritative; a definite content for the pieces is neither demanded nor excluded."[40]

With a materially defined means of payment, transactions can be truly bilateral—one party weighs out the amount of material the other has agreed to accept. Once the means of payment is chartal, however, no transaction is truly bilateral, because all transactions inevitably involve implicit reference to the human institutions defining the means of payment. This is the basis for Knapp's provocative opening claim that "money is a creature of law."[41] Once there is no purely material way to determine whether something proffered in payment is acceptable, then it is only shared, instituted social standards that can allow the determination. To the sociological insight that the "value" money measures is an effect of money itself, Knapp adds the institutional insight that the definition of the unit of value rests on the rules specifying what counts as a means of payment in settlement of a legal obligation.[42]

Monetary Consolidation and Center-Regional Conflict

The sociological-institutional argument that money is a means of payment, finding its definition in legal institutions, rather than a medium

[40] Ibid., 54.

[41] Ibid., 1.

[42] Polanyi, *Great Transformation*, 196, adopts a position identical to Knapp's. See chapter 4. One implication of thinking of money as a means of payment is that there is an important difference between contending variants of the legal means of payment and alternate currencies held as a medium of exchange or store of value, rather than for the purpose of paying legally incurred debts. This is why Russia's fight against dollarization is not formally part of monetary consolidation as I have defined it here, and also why its politics have been so different. Dollarization is not considered in this book.

of exchange whose use is explained by individuals' predictions about their future transactions, reveals the connection between money and state building. Monetary consolidation depends on winning political battles over sovereignty because it involves control over what counts as making a payment of a legally recognized obligation. It further depends on the administrative capacity to enforce these rules. Thus the sociological-institutional view of money suggests an alternate path by which an existing monetary system can lapse into barter. Traditionally, economists have argued that in the course of hyperinflation there can be a "flight from money," because individuals are unwilling to hold a depreciating money long enough to use it as a medium of exchange. This argument resonates with the atomized vision of society criticized earlier, in which individuals qua individuals judge the credibility of a distant and a priori centralized state, gauging how much money the state is likely to issue.

But Russian barter and other varieties of nonmonetary exchange emerged as inflation was falling. The sociological-institutional view of money suggests that the root of this phenomenon was a loss of control over what counts as making a payment. Above all, it was Russian provincial governments that challenged the central state's exclusive claim to monetary sovereignty. Local authorities asserted the power to define nonmonetary means of payment for legal obligations denominated in rubles, both through taxing in kind and encouraging local enterprises to arrange payments among themselves in similar manner.

Provincial governments' willingness to undermine the coherence of the monetary system arose largely from the character of their interactions with the local economy. Simmel argued that the arrival of a money economy simultaneously increased the number of people on whom one is critically dependent while making one independent of any particular person. Independence should thus be characterized as abstract rather than concrete dependence, a dependence on categories rather than the unique. The residents of modern cities with a developed division of labor, "even though they require innumerable suppliers, workers and cooperators and would be lost without them . . . [are] not dependent upon any of them as particular individuals but only upon their objective services which have a money value and may therefore be carried out by any interchangeable person."[43] A person independent in this sense need be concerned only with the earning of money, for money can buy whatever is necessary.

In developed countries, not just individuals but government bodies are largely independent in Simmel's sense. They can adequately provision themselves by purchasing with money taxes what is produced consistent

[43] Simmel, *Philosophy of Money*, 300.

with the demands of money profit. They are abstractly, not concretely, dependent on the economy. The roots of center-regional conflict over the definition of the means of payment lay in the fact that the plausibility of conceiving of dependence on the economy in purely abstract terms was distinctly less for Russia's local governments than it was for central authorities. The cash register image of politics implies that the stakes of politics, like money, have an inherent commensurability. Winnings and losses can be accurately and adequately described by a number; they are dimensional in nature; losses here can be made up in gains there. What this view of politics obscures is the distinction between the formal and substantive senses of "economic" delineated by Karl Polanyi:

> The first meaning, the formal, springs from the logical character of the means-ends relationship, as in *economizing or economical;* from this meaning springs the scarcity definition of *economic.* The second, the substantive meaning, points to the elemental fact that human beings, like all other living things, cannot exist for any length of time without a physical environment that sustains them; this is the origin of the substantive definition of *economic.*[44]

Russian local authorities were unable to take the attitude that the substantive economy will continue to operate as a by-product of the formal one. Like any developed industrial society, the Soviet Union had an incredibly complex substantive economy. It possessed the ever more ramified technological and organizational infrastructures of the sort that have passed rapidly over the last century from the realm of high-tech exotica to that of bedrock necessities, creating patterns of settlement and occupation that simply could not be sustained without the reliable operation of an endless proliferation of railroads, electric power networks, water mains, and the like. Even in capitalist systems, the uniqueness and indispensability of such structures represent a limit to the Simmelian independence of consumers or government bodies. But they are partitioned into independent organizations, which have grown up in the context of a monetized economy.

The parallel structures in the Soviet economy were much more weakly delineated from the rest of the economy. The Soviet economy had no reason to draw distinctions between "public" and "private" infrastructure. Technical systems from sewage plants to heating networks were predicated on the continued existence of *particular* enterprises whose primary activities may have been entirely different. If such enterprises exited the money economy, local authorities were in no position to demand that they return to it. This was even more true of technical systems that were relatively well

[44] Karl Polanyi, *The Livelihood of Man* (Boston: Beacon, 1977), 19.

organizationally partitioned (such as electric power supply in large, but not small, towns), which tended to be even more thoroughly indispensable. Weber once suggested that in-kind taxation retarded the development of capitalism, constraining production to service concrete demands of the state rather than freeing it to pursue money profit.[45] The situation in Russia's regions had the opposite form—a rigid structure of production bound the local state to in-kind taxation. The origins of the uneasy relationship of the Soviet Union's substantive economy to the formal abstractions of money form the topic of the next chapter.

[45] Weber, *Economy and Society*, 1:199.

Part VI
The Social Construction of Money

[24]

The Color of Money and the Nature of Value: Greenbacks and Gold in Postbellum America[1]

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Money measures value in market economies. Money's own value is socially constructed since people attribute worth to a medium whose physical characteristics are essentially irrelevant to its monetary role. Money works best when it can be taken for granted and its social construction is hidden. During the greenback era, two monetary alternatives (gold-based money and paper money) were debated, which raised many questions about the nature of monetary value. Using a "macrocultural" approach, we analyze the rhetoric of greenbacker and bullionist writings to study the social construction and deconstruction of a taken-for-granted institution.

> In money, the social relationships among human beings have been reduced to a thing, a mysterious, glittering thing the dazzling radiance of which has blinded the vision of so many economists when they have not taken the precaution of shielding their eyes against it. (Rudolf Hilferding)

> "I am the Guardian of the Gates, and since you demand to see the Great Oz I must take you to his Palace. But first you must put on the spectacles." "Why?" asked Dorothy. "Because if you did not wear spectacles the brightness and glory of the Emerald City would blind you." (L. Frank Baum)

Money is a central institution of market economies. According to textbook treatments, it functions as a medium of exchange, a measure and store of value, a means of payment, and a unit of account, and it is virtually impossible for market economies to operate without it. Money works best when it can be taken for granted, when its value, negotiability, and neutrality can simply be assumed. Under such circumstances,

[1] An earlier version was presented at the 1993 ASA annual meeting, Miami, Florida. The authors thank Andrew Abbott, Ken Dauber, Wendy Espeland, John Meyer, Arthur Stinchcombe, Richard Swedberg, James Witte, Yuval Yonay, and the *AJS* reviewers for their helpful comments. This research was supported by the MacArthur Summer Research Fund.

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people's interest in money is mostly practical, and they seldom consider it in any abstract or theoretical fashion.

Money's effectiveness depends on people's expectations rather than upon its intrinsic or material characteristics (Smith 1988, p. 30; Appadurai 1986, p. 3; Nussbaum 1950, p. 8; Parkin and Bade 1982, p. 61). Cowrie shells, bars of salt, printed paper, accounting entries, and stamped pieces of metal have virtually nothing in common except that, at different times and places, they have all functioned as money. Money is a social convention, and, as such, people's response to it is determined by what they collectively think everyone else's response will be (Crump 1981, p. 61; Hurst 1973, pp. 34–35; Baumol and Blinder 1994, p. 278).[2] Money's reproduction as an institution depends on how unproblematically it is taken for granted. If people perceive money as "natural," that reproduction can become almost automatic (DiMaggio and Powell 1991).

When money is problematic because of a changing or highly uncertain value, exchange becomes more difficult, and people may revert to barter. Such circumstances are rare in most modern economies, but they can force people to question the value and function of money. Taken-for-granted beliefs are challenged, and people articulate their previously implicit expectations about money and its purpose. The interpretations they advocate are significant, for when settled questions become unsettled, when closed issues get reopened, there is a greater awareness of alternatives and future lines of action.[3] People struggle to make sense of a situation whose complexity and ambiguity suddenly seems much greater than before, and the interpretations they embrace influence what they do. We examine one such circumstance in order to explore how money's function and value are socially and rhetorically constructed.

Our case is that of the postbellum United States. The American Civil War disrupted the economy and compelled radical changes in the monetary system. War-related expenses forced the U.S. government off the gold standard and into fiat money. While these changes were engineered by a desperate government, more careful consideration was called for once the war was over. Today, discussions of "technical" issues like money and banking are monopolized by experts. But in this instance, the dispute was a wide-ranging one. Ordinary citizens considered a number of monetary alternatives: national bank notes, state bank notes, greenbacks, currency convertible into specie, and specie coin. Their discussions focused on federal monetary and debt policy but raised as well some general questions about money.

[2] Money is "typically accepted primarily by virtue of the fact that the recipients estimate that they will, within the relevant time horizon, be able to utilize it in another exchange to procure other goods" (Weber 1978, p. 75).

[3] This is captured by McAdam's (1982) idea of "cognitive liberation."

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For economists, money is an institution that promotes the common good. Without it people depend on barter, and exchange is curtailed because of the need for a "double coincidence of wants" (Pearce 1983, pp. 36, 292).[4] Money facilitates voluntary exchange, leading to Pareto improvements in general welfare (i.e., resources can be reallocated so that at least one person is made better off, and no one is made worse off). As Gordon puts it: "Money is one of the most important inventions in human history, because it allowed society to rise above the cumbersome method of exchange known as the barter system" (Gordon 1987, p. 387). According to this analysis, it is in the general interest to have a monetary system since everyone is made better off by the ease with which they can undertake utility-enhancing exchanges.

Although economists allow that money is a human invention assuming different forms in different times and places, they adopt an evolutionary perspective that de-emphasizes money's contingency and its ultimate foundation in social convention. As capitalist economies became more complex, money "naturally" assumed increasingly efficient forms, culminating in the highly abstract, intangible money of today (Haupert 1994). In emphasizing money's utility, economists overlook one of the most interesting sociological questions: How is it possible for such a convention to become so firmly established? Through what act of social wizardry are people willing to take worthless pieces of paper or accounting entries in exchange for goods and services?

Mary Douglas has considered the problem of how social conventions are transformed into long-standing social institutions. Drawing on Durkheim, she points out that conventions "are likely to be challenged all the time unless their justifying principle can be grounded in something other than conventions" (Douglas 1986, p. 48). That other something is "nature" (see also Douglas 1975, pp. xi, xiv, 280–81; DiMaggio 1994, p. 38). Conventional institutions gain legitimacy and stability when people think they are natural. "Naturalizing" the social thus becomes a crucial basis for institutional stability, but it is ineffectual if people realize what they are doing. They must "forget" their own active participation in the process of naturalization (Douglas 1986, pp. 112–13). Together, naturalization and forgetfulness provide a foundation for institutions.

Both the economists' treatment of money and Douglas's discussion of institutions implicitly assume what Jack Knight (1992, p. 5) calls "the coordination-for-collective-benefits conception of social institutions." In this view, institutions emerge and evolve because they serve the good of all (or at least most) members of the community. In contrast, Knight

[4] For A and B to barter, A has to have something B wants and vice versa.

proposes a conflict perspective of social institutions, which he conceives as the product of conflict among actors with competing interests: institutions have distributive effects that frequently matter more than efficiency.

Following Douglas, we believe that the social construction of monetary value is collectively "forgotten about" in order to ensure its continued functioning. But this collective act of forgetting is in the interests of some groups more than others: like Knight, we conceive of institutions as the product of social conflict, with distributive consequences. When social upheaval or other extraordinary circumstances "remind" people of the socially constructed nature of institutions like money, fierce political and rhetorical battles will be waged: on one side are those who wish to deconstruct the institution and expose its distributive consequences, and on the other, those who wish to reessentialize it and claim its universal benefits.

Our examination of money has considerable precedent in sociology, although the body of current research is relatively small. Marx (1976) and Simmel (1978, 1991) treated money in the context of more general theories of value and brought it under theoretical scrutiny. If commodities are exchangeable because they have value and if they can all be exchanged for money, then what sort of value must money possess? More recently, money has received attention from economic sociologists. Mizruchi and Stearns (1994, p. 317) categorize sociological research on money into "macrostructural" and "microcultural" approaches, using Wayne Baker (1987) to exemplify the former, and Viviana Zelizer (1989, 1993, 1994) to illustrate the latter (see Smelt [1980] and Dodd [1994] for other sociological studies of money).

Baker's quantitative study shows how money is related to the underlying social structure of a national economy: "If money is power . . . then what is used as money and how money is used is determined by those who control economic resources in a society" (p. 110). In contrast, Zelizer's work emphasizes that money can take different forms and functions corresponding to different cultural spheres within a given society. She demonstrates that money is socially differentiated through a careful examination of how people define and earmark "special monies" and how they categorize monies according to particular meanings and uses (Zelizer 1989, 1994).

One of Zelizer's chief concerns is how money acquires meaning and the influence that culture and social structure have upon it. She also considers the connection between money and social control. Charity organizations and public welfare agencies, for example, try to control poor people by issuing them only quasi monies or in-kind assistance (Zelizer 1994, pp. 26, 124, 131, 171). Money thus becomes the focus of a struggle between public authorities and indigent families.

Like Zelizer, we explore money in the context of power and culture by considering a cultural debate over money in its political and economic setting. But unlike her, we investigate monetary institutions at the national level rather than money in specific culturally defined spheres. Furthermore, however much people differentiate money in their everyday lives, during the greenback era, political groups tried to impose their preferred version of uniform money on all others. Our study therefore represents a third approach to the sociology of money, a "macrocultural" perspective, which here focuses on the books and pamphlets that were the "currency" of the monetary debate.[5] Following the Civil War monetary writings poured forth from the printing presses, and their voluminous and powerful rhetoric both shaped and reflected the deeply conflicted beliefs that Americans had about money. In order fully to understand these theoretical debates about value, we must consider related arguments about public policy. We analyze literature from the 1860s and 1870s that addressed the issues of greenbacks, national bank notes, the national debt, and the gold standard. Our analysis covers materials published until 1879, when the return to the gold standard effectively ended the debate.

In our analysis, we will discuss how the greenbackers—who opposed the gold standard—formulated their strategy on two levels: first, they collectively "remembered" the social construction of money, thus raising the possibility of alternative monetary arrangements; second, they questioned the assumption of the collective benefits of this institution, arguing that money entailed important distributive consequences. Their adversaries, the bullionists, followed the opposite strategy, trying in their peculiar way both to reessentialize and recollectivize the institution of money.

THE CIVIL WAR MONETARY LEGACY

The debate over money and value was extraordinarily wide-ranging, and participation was not restricted to experts. The monetary system was among the most significant issues facing voters and politicians in the postbellum era, and numerous ideal and material interests were brought to bear on it (Zelizer 1994, p. 14). How could an issue like the monetary system become so politically controversial? Its significance derived from

[5] Other "macrocultural" analyses of economic phenomena with which we are sympathetic include Dobbin (1993, 1994). The use of popular literature as a source of data is unusual for economic sociology. Schumpeter, for one, acknowledged that popular literature frequently contains valid economic knowledge, even as compared to academic economics (Schumpeter 1994, pp. 9, 53). Thanks to Richard Swedberg for pointing out this reference.

the centrality of money in a market economy, and, to understand the debate, we must first consider the political economy of money in the mid-19th-century United States.

Before the Civil War, the United States was on a bimetallic system with both gold and silver serving as the basis for money. Practically, however, gold was the de facto standard since very little silver coin was in circulation (Nugent 1968, p. 7). American currency consisted of bank notes and coin, with the bank notes convertible on demand into specie: paper money was thus "backed" by gold. The federal government issued no paper currency of its own and there were no federally chartered banks; state banks issued their own bank notes. Thus, in the 1850s the domestic monetary system was comprised of many hundreds of different state banks, each issuing its own paper currency. This was problematic since the market value of a bank note (as opposed to its face value) depended on the financial status of the issuing bank (Myers 1970, p. 121), and, with so many different banks, it was hard to know what money was worth (Gorton [1992, p. 6] discusses how people solved this problem). Furthermore, there were no deposit insurance programs and no central bank. In contrast to the state banking system, the international gold standard served the United States well since its biggest trading partner and creditor, Great Britain, was also on the gold standard. The Civil War led to the demise of both specie convertibility and the system of state banks.

Civil War Measures

With the outbreak of the war, the U.S. economy was severely disrupted, and U.S. government revenues plunged as Union military expenditures soared. The fiscal crisis of the Northern state meant that it could not pay its suppliers and contractors. Moreover, speculators hoarded gold and there was a general liquidity crisis. By the end of 1861, Northern banks had to suspend convertibility and cease to exchange specie for their bank notes (Myers 1970, p. 152; Hammond 1970, pp. 131–63). Thus, the United States went off the gold standard.

The problem facing Salmon Chase, then secretary of the treasury, was a daunting one: how to fund public spending with a huge deficit and an inconvertible currency. The first step toward a solution began in early 1862 when the government issued greenbacks, inconvertible paper money that by law was a legal tender.[6] By the end of the war, issuance of $450

[6] Greenbacks were acceptable payment for all public and private debts, except for import duties and interest on the national debt, which remained payable only in gold. See Nussbaum (1950, pp. 45–46).

million of greenbacks had been authorized, and the total currency more than doubled between 1861 and 1866 (U.S. Department of Commerce 1975, p. 993). The government also raised new taxes (including tariffs and an income tax) and borrowed to cover the deficit (U.S. Treasury Secretary 1862, pp. 6–7; Hammond 1970, p. 202).[7] Thus, federal revenues expanded thirteenfold between 1861 and 1866, but, even so, over the war the national debt grew from $65 million to $2.7 billion (Brown 1990, p. 233; U.S. Department of Commerce 1975, p. 1104).[8]

To encourage loans to the government, a new system of nationally chartered banks replaced the old one of state-chartered banks. The National Banking Act of 1863 mandated the creation of national banks whose notes were backed by government bonds. Upon deposit of federal bonds with the comptroller of the currency, investors could establish a private bank and issue national bank notes up to 90% of the value of the bonds (Unger 1964, p. 18). In combination with a tax on state bank notes, this made it profitable to organize national banks and thus to loan money to the government by purchasing its bonds (Davis 1910, pp. 102–3). From 1860 to 1870 the number of state banks declined from 1,579 to 261, while the number of national banks went from zero to 1,612 (James 1978, p. 25). National bank notes were legal tender in the same way that the greenbacks were: payable for all public and private debts, except for import duties and interest on the national debt. The new national banking system also helped standardize the currency, although that was not its primary intent.

Unfortunately, the national banking system failed to eliminate all the problems of the old system and added a few new ones of its own. Like their predecessors, national banks were unevenly distributed across the country: banks and banknotes were concentrated in the Northeast, and consequently both the West and South suffered from a scarcity of money (Bensel 1990, pp. 269, 274; Eichengreen 1984, p. 88).[9] The absence of money made market exchange more difficult. Furthermore, the national banking system encouraged a "pyramiding" of funds in New York City that made the system vulnerable to financial panics. National banks were subject to reserve requirements but could deposit a portion of their reserves with another bank and thus earn interest (James 1978, pp. 97–

[7] The income tax was abolished after the war, but high tariffs were continued as a protectionist concession to manufacturing interests in the Northeast (Patterson 1954, p. 127).

[8] Over the same period, consumer prices rose about 60% (U.S. Department of Commerce 1975, p. 211). Despite this substantial rise in prices, most of the increase in government spending and indebtedness was real, not nominal.

[9] In 1869, the per capita amount of national bank notes in Boston was $97.86, while in the free-state West it was $3.45, and in the South, $1.31 (Bensel 1990, p. 271).

99). Rural national banks would deposit their reserves with a reserve city bank, and reserve city banks would deposit theirs with a central reserve city bank, which formed the "apex" of the pyramid (James 1978, p. 37). These bankers' balances accumulated in New York City and were loaned out on the stock market as call loans. Thus, a strong connection formed between the banking system and the stock market (James 1978, p. 103). Any tightening of credit could quickly spread throughout both the banking system and the stock market, and, in the absence of a central bank, there was no "lender of last resort" to react to financial crises.[10]

For all its problems, the national banking system fulfilled its original purpose of selling government bonds and funding the war. In addition to would-be bankers, government bonds were sold directly to the public, an innovation promoted by the financier Jay Cooke. By enlisting a large sales force, advertising in newspapers, and appealing to patriotism, Cooke was able to sell hundreds of millions of dollars worth of bonds (Larson 1936, pp. 116–27).[11]

Resumption

After the war, the issue of whether to return to the antebellum financial status quo arose almost immediately. Many politicians and most bankers and financiers agreed that the United States should return to specie payments, although there was some disagreement about whether gold and silver or gold alone should back paper money. The practical difficulties involved with resumption were, however, enormous. Wartime inflation had depreciated greenbacks in relation to gold, and so, for example, the value in gold of $100 of greenbacks averaged $96.60 during February 1862 but was down to $35.09 by July 1864 (Mitchell 1908, p. 6). If greenbacks were convertible to gold, enterprising persons could buy them cheaply on the market, "sell" them at face value to the Treasury, and thus make a profit. Hundreds of millions of dollars worth of greenbacks were in circulation, and had the government declared these paper notes convertible into specie, the Treasury would have soon exhausted its entire gold supply.

In order to resume specie payments, it was first necessary to raise the market value of greenbacks. The most direct way to do this was to reduce

[10] The Federal Reserve System was not established until 1913.

[11] Although before and after the war the United States borrowed from France and especially from Britain, during the war this was not possible (McCulloch 1889, p. 184). There was considerable sympathy in both countries for the Confederacy, and U.S. government relations with Britain were damaged by the Trent affair (Sharkey 1959, p. 26).

the supply of greenbacks by removing them from circulation.[12] This measure was undertaken by Treasury Secretary Hugh McCulloch, a former banker, who had the misfortune to begin just as the economy went into a recession. Money was tight and interest rates high, which was especially hard on debtor groups like farmers, and so opposition to contraction grew rapidly. Eastern bankers were strong supporters of contraction but faced additional opposition coming from various manufacturing groups, labor, and Western Democrats (Sharkey 1959, pp. 111, 196, 241). As a result, in 1868 Congress repealed the Contraction Act of 1866 and rescinded the power to retire greenbacks it had given to the secretary. McCulloch was forced to stop after retiring only about $48 million worth of greenbacks (Myers 1970, pp. 176–77).

Resistance to McCulloch's hard money policy raised the larger question of whether a return to gold was desirable and whether resumption was a suitable goal for monetary policy. Related to this was the issue of how to repay the national debt, for although the law required that interest be paid in coin (and not greenbacks), it was unclear whether the principal also had to be repaid in coin. To do so seemed particularly unfair to some since in the darkest days of the war the government sold its bonds for greenbacks. As a result, speculators could buy, for example, $100 in greenbacks on the market with only $35.09 in gold, and with these greenbacks purchase $100 in government bonds, hoping that both the interest and principal would be repaid in gold.

GREENBACKERS AND BULLIONISTS

Although there were nuances and intermediate stances, we can distinguish two basic positions on the money question. The "hard money" (bullionist) perspective called for a return to the gold standard by retiring the greenbacks and contracting the money supply. It considered greenbacks to have been an unfortunate necessity of wartime finance and urged that the national debt be repaid in gold, both principal and interest. The "soft money" (greenbacker) position advocated inflationary measures: retention of greenbacks, nonconvertibility of notes into specie, rejection of the gold standard, and repayment of the national debt in paper currency. Many greenbackers drew inspiration from Edward Kellogg, an antebellum writer on economic matters (see Destler 1965, pp. 50–77; Dorfman 1946, pp. 678–81). Hard money advocates, on the other hand, followed the orthodox doctrines of British economic writers, who earlier in the 19th century had discussed the gold standard at length (Houghton 1991).

[12] One bullionist made an even more dramatic proposal to burn greenbacks in a weekly conflagration (Wells 1875, p. 5).

Republicans tended to support hard money, and so long as they held the White House, there would be resistance to soft money policies.[13] Among Democrats and politicians from the South and West, there was more support for soft money, but Democrats were internally divided over money questions. Farmers and other agrarian groups were heavily reliant on credit and so were hurt when money became tight. Thus, the ideas of the greenbackers found a receptive audience in American farmers, who would later support the Populist movement. Greenbackism also enjoyed a brief popularity among mercantile traders, insurance brokers, capitalists of the Pennsylvania steel industry, and certain sectors of the labor movement. Bullionism, on the other hand, found support among bankers, financiers, bondholders, and importers, all of whom stood to lose from inflation and gain from appreciation of the currency.

Soft and hard money advocates waged a fierce political battle lasting from the end of the war until the resumption of specie payments in 1879.[14] While the controversy focused on specific proposals and policy measures, the debate was often cast in very general terms. Proponents on both sides entered into a discussion of the nature of money, of why things possessed economic value, and of the relation between democratic polities and markets. As one of the greenbackers insisted, "we must discover the nature of value" (Heywood 1874, p. 3).

To say that greenbacker and bullionist ideologies were based in economic interest is not particularly original: among the historians who have noted the connection between ideology and interest in the monetary debates are Goodwyn (1978), Unger (1964), and Sharkey (1959). We do claim, however, that greenbackism and bullionism were more than just manifestations of self-interest. Indeed, who had what economic interests was one of the contested issues, for interests were not entirely self-evident, even to those who had them. We suspect that these debates played out a conflict that went beyond vested interest since they embod-

[13] Not until 1885 was there a postbellum Democratic president. Republicans were not uniformly in favor of hard money, for some radical Republicans embraced soft money (Sharkey 1959, pp. 131, 279; Unger 1964, p. 44).

[14] The repeal of the Contraction Act in 1868 was a victory for the greenbackers, while the Public Credit Act of 1869 (which refinanced the war debt and required the Treasury to pay both principal and interest in gold) was a win for hard money (Unger 1964, p. 43). The Coinage Act of 1873, which demonetized silver, was uncontroversial at the time but came to assume mythological importance during the Populist era when it was condemned as the "Crime of '73." Congress passed an Inflation Act in 1874 but failed to override President Grant's veto. The Resumption Act of 1875, another victory for hard money, mandated the return to the gold standard by 1879. After resumption in 1879, monetary questions receded and did not resurface until the Populist era. But in this period, each legislative victory and defeat kept the issue of money alive and renewed conflict between hard and soft money supporters.

ied conflicting conceptions of both money and the economy, and the role democratic government should have in the capitalist market. Although it is unclear how much the books and pamphlets reflected the true beliefs of their authors, they were trying to build a political constituency and so needed to appeal to extant beliefs and ideologies. The textual materials they created accurately portray some popular and powerful ideas.

A RHETORIC OF MONEY

It is especially appropriate to focus on rhetoric because money depends upon people's expectations, and the chief goal of rhetoric is to shape these.[15] Money, perhaps more clearly than other economic institutions, is a cultural construct. It lacks the simple materiality of an open-hearth steel plant or the unequivocal nature of crop yields. Instead, money is a self-fulfilling collective prophecy, and its viability depends on people's beliefs. To investigate the substance of the money debates, we coded the contents of 92 books and pamphlets and did some simple frequency counts of ideas and themes (see the appendix for the list of encoded materials), in addition to a traditional textual analysis. Our sample is composed of books and pamphlets from Regenstein Library at the University of Chicago, supplemented by materials from the Northwestern University Library. J. Laurence Laughlin, a professor of political economy at the University of Chicago who was active in the silver debates of the 1890s (see Laughlin 1886), gathered a large collection of materials from both the greenback and Populist eras and donated them to the university library. There is probably an overrepresentation of Midwestern materials (although many were published outside Chicago). But since both hard and soft money advocates were based in Chicago, it still fairly represents the diversity of opinion (45 of the 92 items took the greenback position, 43 took the bullionist position, and 4 were somewhere in the middle).

Money and Value

Perhaps the most central and interesting disagreement between bullionists and greenbackers concerned the relationship between money and value.[16] As part of a more general belief in the "naturalness" of markets

[15] Although the goal of rhetorical literature was to shape beliefs, we do not consider how much this rhetoric determined political outcomes. The fate of greenbackism was shaped by many factors, including political rhetoric, but that is a topic for another paper.

[16] Our analysis does not exhaust the richness of monetary literature. Others have explored racial themes (see O'Malley 1994) and the relation between greenbackism and other social movements (see Thomas 1988).

and their governance by laws of supply and demand, bullionists argued that true money had to possess *intrinsic value*. This argument was typically made by analogy: just as a ruler had to possess length in order to measure length, so money had to possess value in order to measure value. Bartley, for example, claimed that "the yardstick becomes the measure of length by having length within itself. So the bushel and quart measures become the measures of bulk by the capacity of holding bulk. . . . So metallic money having intrinsic value is made a measure of value by its coinage based on its metallic value" (Bartley 1879, p. 9; see also, e.g., Garfield 1879, p. 15.) Thus, gold and silver were superior to paper money because they possessed value (Mercator 1868, pp. 26–27). The value of specie was not legislated or artificial; it was intrinsic and natural. The fact that gold and silver were mined out of the ground, coming from nature itself, bolstered such arguments. Value "inheres in the quality of a material thing, and not in mental estimation" (U.S. Monetary Commission 1877, p. 40).

Gold was an evocative symbol that bullionists fully exploited. It was solid, secure, tangible, substantial, and stable. The value of gold and silver as commodities made them suitable as the media for money. A government stamp on a coin merely certified value, it did not create or bestow it (Johnston 1878, p. 8). At times, the bullionists adopted a distinctly social Darwinist tone, for as Wilson put it: "Gold and silver are money by the action of the law of the survival of the fittest" (Wilson 1878, p. 9; see also U.S. Monetary Commission 1877, p. 39). With a specie currency, people could have confidence in the value of money since that value was inherent; it was determined by the "natural" laws of supply and demand. Specie money also possessed, by the bullionist argument, a relatively stable value that would neither rise nor fall precipitously (Groesbeck 1877, p. 8). This ensured that money could play its proper role in facilitating exchange.[17]

Bullionists contrasted irredeemable greenbacks with gold by noting that countries the United States traded with would only take gold for payment. Gold was the traditional monetary standard, while paper money was associated with inflation (Delmar 1863, pp. 30–31). Bullionists recognized that convertible paper money had largely supplanted gold coin before the Civil War but argued that such currency possessed value

[17] The bullionist postulate of the intrinsic value of gold did not entail pricelessness (for a fuller discussion of the meanings and consequences of intrinsic worth, see Espeland [1992]). Frequently, things that are believed to be "intrinsically valuable" are also thought to possess no monetary equivalent, and so to be priceless. Children are a good example (see Zelizer 1985). In contrast, the intrinsic value of gold was in the eyes of bullionists precisely the quality that made it suitable as the central measure of price.

only because it *represented* real money. Convertibility allowed paper money to enjoy or acquire the sterling qualities of gold: solidity, tangibility, value, and stability. But it would be a grave mistake, asserted the bullionists, to confuse the symbol with the thing it represented: "Bank notes or government notes, are of local value only, as instruments of exchange. They are promises to pay money, not money. They are sometimes as good to the holder as the money, except to hoard for an indefinite time. So an elevator receipt for wheat may be as good to the holder as the wheat itself, except to eat; but it is not wheat" (Wilson 1878, p. 8).

One could take a paper dollar to the bank and receive on demand a dollar's worth of gold. Paper money was effectual only when it *symbolized* real money, that is, when it was convertible into gold. General Garfield waxed positively semiotic when he said, "If we shall once get the thought fairly and fully into our minds of the difference between a thing and the representative of a thing, we will be comparatively safe. There is all the difference between true money, real money, and paper money, that there is between your land and a deed for it. Money is a reality, a weight, of a certain metal, of a certain fineness. But a paper dollar is simply a deed, the legal evidence of the title that I hold to a dollar" (Honest Money League 1879, p. 8). Greenbacks were not convertible into specie and hence did not symbolize or represent anything. Greenbacks were like a promise waiting to be broken: they pretended to stand for something when in fact they did not. The difference between signified and signifier is illustrated beautifully in figure 1: Thomas Nast's cartoon "Milk-Tickets for Babies, in Place of Milk" from *Robinson Crusoe's Money* (Wells 1876*b;* p. 97).[18] Nast contrasted the reality of the signified with the merely symbolic quality of the signifier. A milk ticket is not milk, no matter what Congress says.

Greenbackers found these bullionist ideas specious and denied the superiority of gold or convertible currency. This core argument derived from Edward Kellogg, for whom the value of money was conferred by government: "The laws making gold and silver coins a public tender,

[18] Greenbackers also considered money as a signifier when arguing "that whenever the law declares that paper in a certain form, upon being stamped with authoritative and distinguishing marks and devices, shall be invested with the money function, each piece of paper so stamped becomes not a debt, nor a credit, nor a promise, dishonored or otherwise, nor a representative of gold or silver, nor of any one thing, but of all things; that it becomes the thing signified, nor a sign, and to all intents and purposes lacking no quality, but possessing all, becomes money, pure, simple, and unadulterated, with a value not less real because not mixed with an intrinsic value, than the money-value conferred in the same manner and by the same authority on gold and silver, nor less real than the intrinsic value of those commodities" (U.S. Monetary Commission 1877, p. 42). For more on the semiotics of money, see Klinck (1991).



FIG. 1.—From *Robinson Crusoe's Money,* by David A. Wells (1876, p. 97)

impart to dead masses of metal, as it were, life and animation. They give them certain powers, which, without legal enactment, they could not possess" (Kellogg 1849, p. 54). Greenbackers attacked the bullionist "yardstick" idea that a measure of value must have the substance of the thing measured. Alexander Campbell, a Kellogg follower, argued that "it matters not whether the yard-stick and pound weight be of wood, iron or gold; length and weight are the only properties necessary to be expressed by them, and possessing the standard limits their material is a matter of indifference" (Campbell 1864, p. 8). Greenbackers even extended the analogy to turn it against the bullionists: "True money is not wealth any more than the deed for a farm is the farm itself; and there is

no more use in having our money made of gold than in having our deeds drawn upon sheets of gold" (O.P.Q. 1873, p. 2).[19]

For greenbackers, coin or paper money possessed value only because the government made it a legal tender. Many greenbackers adopted Kellogg's distinction between "legal" and "actual" value, which upheld their belief that real commodities have intrinsic value but contradicted the idea that money, used to exchange commodities, must be made of an intrinsically valuable material: money needs only to have legal value, conferred by the government. Indeed, greenbackers claimed that most of the value ascribed to gold was "artificially" created by the government; if gold were to be demonetized, it would lose most of its value: "All money, whether it be gold, silver or paper, derives its chief value from the fact that government and governments do enact arbitrary laws declaring it money for the payment of debts, thereby creating the chief demand for it" (Ensley 1877, p. 5; see also Lockwood 1875, p. 15). Given that the government could impart value to anything, why not use paper notes, a more convenient and plentiful medium?

The ability to appeal to the status quo ante and the orthodox practices of other nations provided the bullionists with a significant advantage over their opponents. The specie basis was tried and true, whereas greenbacks were an unknown quantity; the historical importance of specie money was taken as proof of the superiority of gold. Bullionists also noted that Great Britain, the United States' most important trading partner, insisted on gold for payment. Bullionists considered resumption necessary to return the United States to the ranks of civilized Christian nations. The gold standard was a sign of "a great nation's moral qualities, as a shining exemplification of its progress in civilization, as a marked indication of its possession of that first of Christian values, upright and downright honesty" (Cowdin 1876, p. 32).[20]

[19] Similarly, Taylor argued that "it is the price of a given quantity of gold that is the standard of value. The price of 24.7 grains of gold is a dollar;—the unit of value for the United States. The price not the gold. Gold is the material of the standard of value, as brass, or iron, or copper, may be the material of the pound weight. The common error is the confounding of the material and the price of it. . . . Upon this fallacy—that gold is the standard—is based the absurdity of conversion of all money into gold" (Taylor 1876, pp. 15–16).

[20] Public finance was occasionally discussed in religious terms. McCulloch claimed that gold and silver were "prepared by the Almighty" to function as money (McCulloch 1889, p. 201), and consider Edward Walter Hamilton's tract on British public finance, piously entitled *Conversion and Redemption*. The subtitle was "An Account of the Operations Under the National Debt Conversion Act, 1888, and the National Debt Redemption Act, 1889." On the role of Protestant churches in addressing the moral side of monetary issues, see Unger (1964, pp. 28, 35, 121–25). Ministers almost always took a hard money line.

For greenbackers, such rhetoric only proved that bullionists were living in the past. Gold was like the aristocracy: an anachronistic relic whose purpose had long since disappeared: "But despotism, confronted in the church, and resisted in politics, yet holds sway in finance, scoffing at dissent as puerility, and patronizing equity as the whim of visionary reformers" (Heywood 1874, p. 14).[21] If abandoning specie, "the currency of kings," meant renouncing royalist Britain, so much the better. Greenbackers disputed the idea that gold was somehow inherently suited to be money and criticized bullionists as "gold fanatics and idolators" (Shuckers 1876, p. 14).

Greenbackers argued that convertibility was irrelevant and that it did not matter whether one could take paper notes to the bank and exchange them for specie. What mattered was whether paper money could be exchanged for goods and services, and by this test inconvertible notes were perfectly satisfactory. True money represented what it could purchase, not the specie into which it could be converted. The gold standard was primitive and idolatrous, a product of backward thinking: "In savage communities, where distrust prevails, direct barter is usually insisted on; and bricks of tea, codfish, pig-iron, bullets, tobacco, gold and silver, or other materially valuable commodities, have been used as money. But, in proportion as reason dispels superstition, brute force yields to free will, distrust to faith, an ideal value currency usually displaces these material-value devices, and paper certificates of credit become the money of civilization" (Heywood 1874, pp. 5–6). In contrast to the bullionists' appeal to natural law and long-standing tradition, the greenbackers embraced Enlightenment ideals of reason, progress, and the defeat of anachronistic prejudices.

Both greenbackers and bullionists recognized that paper money could not function unless people were confident it would be valued by others, but they disagreed sharply over how to instill such confidence. For the bullionists, convertibility into specie would do it. With convertibility, all holders of paper dollars knew their paper represented something of "real" value. Greenbackers saw exchangeability as the basis for confidence. Anyone would accept a paper dollar in payment if she knew it could be used later to buy whatever the person wanted. The way to enhance exchangeability was for the government to grant full legal tender powers to paper money.

The role of government in the creation of money was a recurrent greenbacker theme. Over half of the greenback books and pamphlets in our

[21] Some greenbackers contested the traditional importance of gold, especially for international trade. Taylor pointed out how frequently bills of exchange, a paper instrument, were used in international commerce (Taylor 1876, p. 33).

sample (26 of 45) explicitly stated this idea: "Money is a creature of law, it is created and upheld by law" (Wolcott 1876, p. 6). In a democracy, this meant that through their elected government, the people controlled the monetary system: "We, the people, make the government. We give the government power to make, provide and issue money under proper rules and regulations. . . . We make our own money, we issue it, we control it. We regulate it, and no single man or company of men have any right to make or issue any kind of money" (Wolcott 1876, p. 21).[22]

Bullionists were highly critical of the role attributed to government by greenbackers. Like the greenbackers, they were concerned that the money supply might be dominated by a self-interested few; handing control of the currency to the government, they believed, realized just such a threat. All of the 18 bullionist writings that mentioned government suggested that it was untrustworthy, incompetent, or corrupt. Since the monetary system was governed by "natural" economic laws, it was unrealistic to suppose that the government could do as it pleased: "We may invent, and devise, and try to circumvent the natural laws on this subject to the end of time, and we shall end just where we began. There can be but one universal standard of value, and the attempt to substitute anything else for it will inevitably fail; . . . In spite of every effort, in defiance of every law to prevent it, there will be for every commodity of trade, and to every financial engagement, an actual, positive, and irresistible specie value (Pike 1868, pp. 24–25; see also Groesbeck 1877, pp. 29–30).[23] The inherent value of gold, like the law of gravity, could not be

[22] When government was discussed by greenbackers, it was mostly mentioned in favorable terms. Eleven greenback items from the sample stressed the positive fact that government was controlled democratically by the people, and only one suggested that government was corrupt or incompetent.

[23] On this point, some bullionists wittily critiqued the greenbackers. General Garfield, e.g., said, "In the first place, it is a very great misfortune that scientific questions are sometimes by necessity submitted to a town meeting to be voted on. For example, I should be very sorry myself to leave the truth of the multiplication table to be voted on by the trustees of some townships, or by some city councils, or by some party caucus, or by some State Legislature, or by some Congress" (Honest Money League 1879, p. 6). Greenbackers accused bullionists of fetishizing gold, but the bullionists turned the charge around, using a racist argument: "This worship of government, ascribing 'inherent sovereignty' to it, and thinking that by the exercise of its power it can create a thing which will prevent panics, financial disturbances, and do many wonderful works, when examined is found to be precisely the same idea as idolatry. An African barbarian finds a strange-looking stick, perhaps rudely resembling a man. He carves it a little, and puts marks on it with paint, and calls it his fetich. He thinks this thing, partly the work of his own hands, can keep him from having a pain when he has eaten too much; can produce wealth by making his crops grow. It has a mysterious power to do almost anything. So the Absolutists think about government" (Wilson 1878, p. 17).

repealed. Bullionists like Treasury Secretary McCulloch felt that there was little government could do about the value of money: "It was just as powerless to make them [greenbacks] the equivalent of real money by declaring them to be a legal tender, as was the Continental Congress to give to the Continental notes, and the French Government to give to assignats, intrinsic and reliable value" (McCulloch 1889, p. 176).

The indisputable price gap between gold dollars and greenbacks was a surprisingly ambiguous fact, subject to conflicting interpretations. According to bullionists, it obviously reflected the inferiority of paper currency. In contrast, greenbackers explained the discrepancy between greenbacks and gold in terms of the limited legal tender powers granted to greenbacks: wicked politicians handicapped paper money by making it ineligible for payment of import duties and interest on the national debt:

> Said Senate, by its majority, seemed to act as if following a carefully devised plan or plot . . . of which the immediate steps were . . . To cramp the legal tender of the people by depriving it of the power and attributes of the legal tender of the oligarchs (gold), and . . . of pointing at the progress of the two rivals in the race, and constantly asserting that the greater purchasing power of gold was solely ascribable to its inherent excellence, and carefully suppressing the fact that it (gold) as the creature of law was a full legal tender, while its competitor, the greenback, was, by the same creative power, most wickedly and cruelly crippled. (Drew 1874, p. 12)

Gold enjoyed monetary powers denied to greenbacks, which accounted for its higher value.[24]

In summary, the greenback debates contested the nature of monetary value and the proper role of democratic government in finance. While bullionists attributed intrinsic worth to gold, greenbackers saw monetary value as the result of a collective decision to bestow value on some thing or medium. Thus, greenbackers felt that economic value could and should be subject to conscious, democratic control.[25] If people believe that a paper dollar has value, if they have faith in it, then that alone is sufficient for it to be money. In greenbacker eyes, the fundamental mis-

[24] Greenbackers also denounced the bullionists in the government for revoking the privilege of converting greenbacks into government bonds (Myers 1876, p. 4). The ability to exchange paper currency for government bonds was thought by greenbackers to make the money supply "elastic" and hence able to deal with seasonal restrictions in credit (see Kellogg 1849, pp. 267–71, 274, 280; Myers 1876, p. 6).

[25] A eulogy given for Salmon Chase expressed this idea: "The great Secretary [Chase] was the first to issue successfully values based *wholly upon faith*, and the time is not far distant when the honor of our people will make this ideal dollar of America rank with the gold dollar in every market in the world" (*Chicago Legal News*, May 17, 1873, p. 399; emphasis added).

take of bullionists was that they bestowed value on gold and then fetishized it, denying that gold's value was anything but intrinsic: they deliberately refused to recognize the extent of their own power over value. Bullionists, on the other hand, regarded value as belonging to the autonomous sphere of the economy. Value was determined by "natural" laws and to try to control it was to court disaster.

Mary Douglas (1975, 1986) notes that both religious and "scientific" arguments get used to institutionalize social conventions. The bullionists founded their arguments in nature and "true" value; they tried to renaturalize what the greenbackers had exposed as a social construct. It was fitting that the greenbackers utilized the language of the Enlightenment, with its rhetoric of questioning long-unquestioned traditions and institutions, such as the divine right of kings. The greenbackers wished to induce a collective "remembering" of the fact that monetary value was based in social convention, not in nature or God, and so could be controlled by society.[26]

Costs and Benefits of Gold and Greenbacks

In addition to the nature of value, bullionists and greenbackers also debated the more concrete advantages and disadvantages of monetary alternatives. Neither side posed money simply as a question of abstract principle but also as a matter of economic interest. It was not obvious, however, what everyone's interests were.

One danger that worried greenbackers was the possibility that a small coterie might seize control of money and manipulate it for their own ends. Under the gold standard, greenbackers suggested, this was exactly what had happened, for the bankers and financiers who controlled the gold also controlled the money supply for the entire nation: "This gold and silver gives power to the banks, the Board of Brokers, and a few large capitalists, to compel the people to cultivate the earth, and to gather and market its productions mainly for their use, reserving for themselves of the poorer kinds a bare subsistence" (Kellogg 1849, p. 224).

For greenbackers, rejection of the gold standard was one way to correct the unjust distribution of economic resources within the United States, as well as to improve America's position in the world economy. A tenet of the greenback philosophy was that debtors were always subject to the control of creditors (see, e.g., *Equality* 1849, p. 27; Heywood 1874, p. 9),[27] and since the United States was a debtor nation, the gold standard

[26] This is not to say that greenbackers did not believe in "nature" but only that their nature looked very different from bullionist nature.

[27] In contrast, the bullionist McCulloch claimed that borrowers could control lenders (McCulloch 1889, p. 196), an old idea that goes back at least as far as Plutarch.

held it in thrall to Britain. By going off of gold, "we severed the last shred of that old umbilical cord which bound us to Europe, and . . . substituted wealth for poverty, success for defeat, national independence for provincial subserviency" (Drew 1874, p. 21).

Monetary reform would also affect domestic debtor-creditor relations. Greenbacker doctrine held that creditors such as banks possessed too much power. Not only did they lend money to individuals, but through the national banking system they loaned it to the government. Both ordinary citizens and their government were therefore under the thumbs of the usurers (Campbell 1864, p. 26–27), and banks were able to extract far more than their fair share of the social product: "Our present system of banking is a swindle upon the people, . . . For the banks to be permitted to filch from the people twenty-four million dollars per annum is an outrageous villainy which, if comprehended by the people in its true light, could not exist another year" (Woodhull 1871, p. 16).

Eastern banks were especially culpable in greenback eyes. Interest rates were higher in the South and West than in the Northeast, and yet through the pyramiding of national bank reserves, money flowed into New York City where it fueled stock market speculation and financial crises (see James 1978, pp. 14, 96). Bank reserves were exported out of the regions of the country where credit was most needed and into areas where credit was already plentiful. For greenbackers, the national banking system magnified the gap between credit rich and credit poor regions of the country.

According to greenbackers, the Civil War experience had several positive aspects. Wartime greenbacks created an ample money supply and low interest rates, and the national debt was a loan from the American people to their own government rather than one from usurious foreigners. Greenbacks were money controlled by democratic government rather than monopolistic private banks, and they liberated domestic debtors just as they helped the nation in relation to its foreign creditors. To have a permanent, uniform, government-run national banking system based on inconvertible currency at low interest rates was the major goal of most greenbackers.

At the same time, however, such a currency was the bullionists' worst nightmare. What they wanted was money based on free-market principles, specie based and safe from government interference. The sharp conflict greenbackers posed between debtors and creditors was downplayed by bullionists who argued that both groups were injured by an inconvertible currency: "A financial system, if good, is good for all alike; if bad, it is bad for all alike. As well talk of one kind of atmosphere being healthy for the rich and unhealthy for the poor, as of one kind of money being for the benefit of the rich and injurious to the poor" (Nichol

1878, p. 56). Paper money led to inflation, which was not in the interests of bankers, farmers, or workers (Johnston 1878, pp. 10, 32–33).[28] The greenbacker argument only turned citizens against one another and fanned the flames of class warfare (Schurz 1879, p. 41).

Twenty-nine of the 43 bullionist tracts in our sample discussed the detrimental effects of inflation and why it inevitably resulted from irredeemable paper. Inflation is "corrupting the public morals. It is converting the business of the country into gambling, and seriously diminishing the labor of the country" (McCulloch 1889, p. 202). Stability of monetary value was considered one of the chief advantages of the gold standard, for when paper money was not convertible, the government set the total volume of paper currency. Bullionists considered governments to be weak-willed, corruptible institutions easily seduced by the temptations of soft money: "They [bullionists] urge that the power to increase or decrease the volume and value of money at will by legislation, and, consequently, to hold at will the fortunes of individuals and the prosperity of nations, would be a most dangerous one, and that the ever-present necessities of governments would be a constant temptation to its abuse" (U.S. Monetary Commission 1877, p. 40). Democratically elected governments could not resist spending policies that required them to print money and inflate the currency. Such temptations were removed under the gold standard, as were their deleterious long-term effects. Printing money could stimulate the economy in the short run, but "if society, by the artificial stimulant of paper money, is made to effect unusual results for ten or twenty years, and is then left in a state of prostration for an equal period, we may fairly question what is gained by it" (Delmár 1863, pp. 30–31).

In contrast, some greenbackers argued that inflation was actually good for the economy because it made people spend their money faster. Plentiful money was to the economy like a vigorous circulatory system was to the body, and the more quickly it flowed, the better (Carey 1866, pp. 11, 15). Greenbackers asserted that contraction was a disaster, for it deprived the country of the currency necessary for commerce (Wolcott 1876, p. 1). On the other side, bullionists often argued that deflation was painful in the short run but beneficial in the long run. The path of financial rectitude might be hard, but it was better for the long-term health of the economy (Chamber of Commerce of New York State Select Committee 1867, p. 4).

The issue of the gold standard was closely related to that of payment

[28] Wells took a different approach by contesting the idea that most Americans were debtors and hence opposed to resumption. Rather, most people were creditors (Wells 1875, p. 14).

of the national debt. Greenbackers argued that repayment in gold of both the principal and interest due on government bonds would benefit bondholders, who were undeserving of such a windfall (having paid for the bonds in greenbacks). In response, bullionists underscored the need to maintain national honor by living up to what they considered to be a contractual duty (McCulloch 1879, pp. 25–26). They believed the government morally obliged to repay the debt in gold.[29] Part of the disagreement centered around who owned the government bonds. For greenbackers, it was banks, bankers, financial capitalists, and foreigners, all of whom were unsavory, undeserving creditors. Bullionists drew a very different picture: "Probably not one of the original bonds is now in the hands of the original holder. Insurance companies own them largely, and every man whose life is insured for the benefit of wife and children is interested in them, is a bondholder. The Eastern banks doing an exclusively savings business, are resting almost solely on them. Every laborer, every working-woman, who deposits his or her earnings in one of those savings banks, is a bondholder; probably the most numerous class" (Wilson 1878, p. 70). To repay the bonds in greenbacks would be to hurt common people, women and children, widows and orphans.

The competing monetary alternatives were understood to involve costs and benefits, although the two sides disagreed about their incidence. Bullionists generally argued that a monetary system had few redistributive effects: inconvertible paper money led to inflation, which was bad for everyone, while convertible money or specie money, was good for all. Repayment of government bonds in gold was necessary to uphold national honor and to remain within the ranks of advanced nations. Ownership of the bonds was widespread, and so many groups would be hurt if repayment were in greenbacks. For bullionists, there truly was a general interest that recommended return to the gold standard.

Greenbackers perceived matters in much more conflictual terms. Society was divided into groups with competing interests, and monetary policy had important redistributive effects. The gold standard gave disproportionate power to those with the gold, namely bankers, financiers, and foreign capitalists. To use an inconvertible paper money was to take control back from these special interests and return it to the people. Similarly, repayment of the national debt in gold unfairly benefitted banks and finance capitalists. Having paid for the bonds with greenbacks, what right did bondholders have to be repaid in gold at the taxpayers' expense?

[29] McCulloch also argued that it was in the national interest to repay all debts in gold since national credit-worthiness was key for a nation's ability to wage war: "Money is the war-power of the age" (McCulloch 1889, p. 205).

When the bullionists argued that a currency was either good or bad "for all alike," they essentially espoused the coordination-for-collective-benefits theory of institutions (Knight 1992). The greenbackers were not only unmasking money as a social construct, they were also exposing its distributional consequences, arguing that existing monetary arrangements were not, in fact, good for everyone. The task of the bullionists, therefore, was to recollectivize a divisive social institution.

CONCLUSION

Whatever the merits of the rhetorical battle, the bullionists won the political war. Specie convertibility resumed in 1879, and both principal and interest on the national debt were repaid in gold. The money question reopened in the Populist era, but later debates were neither as vehement nor as disruptive of the status quo as the greenback conflict had been. The Populists proposed the monetization of silver as their alternative to the gold standard; Populists did not doubt that specie possessed intrinsic worth or that inconvertible paper money was dangerous.

Little compromise was possible in the postbellum debates over gold versus paper money, for the two alternatives were inconsistent and had radically different distributive consequences.[30] Nor could they both operate along the lines described by Zelizer, in which separate but coexisting monies are culturally defined in terms of source or purpose (e.g., gift money or pin money). Only one of gold or paper could serve as the basis for the U.S. national monetary system. It was a choice between commodity money, on the one hand, and fiat money, on the other.

The difficulty of reconciling the two monies stemmed partly from their different effects on economic groups. Conflicting economic interests meant that hard choices had to be made and that, no matter which money was selected, there would be winners and losers. Given the eventual outcome, it is easy to see whose preferred alternative won out. Financial capitalists, who wanted to return to the gold standard, won out over greenbackers and their agrarian and labor supporters in the South and West.[31] Despite the ambiguity of economic interests, Northern financiers (and most Northern industrialists) wanted to return to monetary orthodoxy, convinced that the European investors whom the United States

[30] Some traditional African societies have multiple monies, each functioning within its own "sphere of exchange" (Bohannan 1955, 1959).

[31] The reasons for this are quite complicated, having to do with the place of financial capital within the postbellum Republican coalition and the discrediting of the Democratic Party over the issue of slavery. For a detailed analysis, see Bensel (1990, chaps. 4 and 5).

needed for capital were unlikely to loan money unless they were repaid in specie. Those with more power won out over those with less. In this sense, the disposition of the postbellum monetary system reinforced and reflected the structure of economic and political power in American society.

Economic interests notwithstanding, the incompatibility of gold and greenbacks also followed from competing understandings of the nature of value and the role of democratic government in the free market. More was at stake than just money, for both sides perceived the monetary system to be a kind of condensed distillation of social relations. Thus, an argument about money also became an argument about society. We have seen how the intrinsic value of money was a quality asserted by bullionists and denied by greenbackers. As part of a larger ideological system that attributed "natural laws" to the economy, "intrinsic value" in bullionist thought was a significant marker that distinguished what was "off limits" to conscious political control. It was a compelling way to assert that there were some arenas into which the polity should not venture by arguing that there it could not venture. Intrinsic worth was something the government could not control or dictate, try though it might. Greenbackers challenged this reification of gold, arguing that such limits should not exist and that economic institutions like money should be subject to explicit political control because, in a democratic society, it represented the will of the people.[32]

Attributing inherent, immutable characteristics to social phenomena provides a way for groups to support and justify social institutions and then "deny" or "forget" their own agency and complicity. Thus, 19th-century racism was justified using elaborate phrenological explanations that "proved" that blacks were less intelligent; women's inferiority was explained with reference to their wombs. Similarly, economic value was not seen by bullionists as the result of a *social process* but rather was perceived as an objective characteristic, as a *thing* (Smith 1988, p. 40). All sense of the contingency of value was lost, and value was simply taken for granted.

Through their arguments, the bullionists applied at least two of the general ideological operations identified by John Thompson: universalization, in which "institutional arrangements which serve the interests of

[32] Greenbackers took umbrage at the idea that democracies were too irresponsible to be entrusted with the money system: "They [greenbackers] claim that every argument against investing with the money function a material not possessing intrinsic value is, when analyzed, an impeachment of the integrity and capacity of the people and of their fitness for self-government, and a claim that the regulation of the most important institution of civilization can be more safely remitted to the edicts of chance than to the guidance of human wisdom" (U.S. Monetary Commission 1877, p. 46).

some individuals are represented as serving the interests of all," and reification, which portrays social arrangements as "permanent, natural, outside of time" (Thompson 1990, pp. 60–66). In response, the greenbackers applied yet another of Thompson's operations, expurgation of the other, when an enemy is constructed and "demonized."

Cultural debates become especially fierce when one side wishes to problematize what the other takes for granted, or "remember" what the other has "forgotten." Bullionists argued that economic value was not socially constructed and that it belonged to an autonomous and natural sphere—the market—in which it was perilous for a polity to intervene. The greenbackers claimed that what bullionists took for granted was in reality subject to dispute. Thus, in a way they anticipated the social constructionist arguments of Berger and Luckmann that "the objectivity of the institutional world, however massive it may appear to the individual, is a humanly produced, constructed objectivity" (Berger and Luckmann 1966, p. 78). Berger and Luckmann also note that people are "capable of producing a world that [they] then experience as something other than a human product," which certainly was true of the bullionists.

Indeed, when collectively people recognize how much of their world is socially constructed, social institutions that are based on convention—including relations of domination—become particularly vulnerable.[33] Through their rhetoric, greenbackers hoped to unleash a collective realization that would lead to a new democratic era, one in which the economy was controlled by the people rather than by the wealthy few. Bullionists worried that if democratic control were established over the monetary system and economic value, then nothing else would be safe. It required only a small step beyond greenbackism to claim that other economic institutions and other "social facts" should also be controlled politically: property, wealth, capital (Kline 1879, p. 8). Not coincidently, greenbackism was accused of being "rank, sheer communism" (Honest Money League 1879, pp. 11–12; see also Wells 1876*a*, p. 6).

Once the perception that economic reality is socially *constructed* takes hold, the potential for radical *reconstruction* becomes much greater. When people realize that taken-for-granted social arrangements can be rearranged, they become "cognitively liberated" in McAdam's (1982) sense.[34] This dangerous potential explains why bullionists and other sup-

[33] Orléan poses the issue as "what effect knowledge of the conventional nature of a convention will have on its stability. To put the question more precisely, we may ask whether the stability of the convention can be guaranteed by the agents' knowledge of the fact that they have to use conventional objects to solve their coordination problems" (Orléan 1992, p. 125).

[34] In *The Wizard of Oz,* citizens of the Emerald City continued to wear green-colored glasses and thus believe that their city was emerald colored even after the Wizard's

porters of the status quo were so threatened by the greenback alternative, for it could easily have turned the economic world upside down. A convention is by definition something that could be otherwise, and comprehending the alternatives is an important first step toward change.[35] The bullionists' "collective amnesia" of intrinsic worth was therefore anything but innocent, for like the Freudian conception of *Verneinung,* social forgetfulness is not a haphazard or coincidental process. Bullionist-led "repression" of the social construction of value was deeply implicated in the protection of vested economic interests.

Bullionist assertions about gold exemplified Mary Douglas's claim that social institutions need to appear grounded in "something other than conventions" in order to avoid challenges to their legitimacy (Douglas 1986, p. 48).[36] Arbitrary social conventions must be grounded in immutable characteristics and so the social becomes naturalized.[37] What made the greenbackers particularly interesting is that they challenged the naturalness of such rules by emphasizing that money was socially constructed and scorned bullionist's claims that money was governed by "intrinsic value" and "natural laws."[38] But they refrained from simply naturalizing the monetary system they proposed to construct. Greenbackers also exposed the distributional consequences of money, leading bullionists to try to recollectivize the benefits of money.

Collective perceptions are seldom as easily shaped as in *The Wizard of Oz,* that allegory of 19th-century monetary politics, for it is scarcely a matter of putting green-tinted glasses on in order for everything to seem green. But the linkage between collective perceptions and the Wizard's ability to rule the Emerald City suggests a connection between political

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departure. They were reluctant to forgo a collective delusion that stabilized the status quo.

[35] A simple example is the convention that all people drive on the right-hand side of the road. People could just as easily drive on the left, and in fact some countries have switched conventions (and thus sides of the road).

[36] Douglas pays less attention to the role "naturalization" can play in social conflict.

[37] It seems likely that bullionists simultaneously naturalized the social and socialized nature, although we cannot explore that important possibility here. Ideological work involves the coconstruction of both society and nature. For a provocative analysis of how early modern natural scientists used social categories to interpret nature, see Hadden (1994).

[38] Bullionists were not the only ones who thought that economic institutions were natural. As Mirowski (1989) argues, much of neoclassical economics was built upon an explicit analogy between the economy and nature to encourage economists to borrow concepts, equations, and mathematical techniques from physics. This does not mean, however, that all 19th-century academic economists were unequivocal supporters of the gold standard (see Schumpeter 1994, p. 1075). The extent of the parallel between bullionism and academic economics is an important topic, which we cannot, unfortunately, deal with here.

interests and the maintenance of monetary conventions. In contemporary American society, monetary issues have little of the popular salience they possessed in the greenback era. Family values loom larger in the political consciousness than specie values, and the monetary system is largely taken for granted albeit without an international gold standard. Money is once more perceived to be an apolitical, neutral device that facilitates trade. The greenback era offered a moment of acute, collective, and contested reflection on the nature of money. Many people, although not the bullionists, believed that monetary institutions had significant distributional consequences and created distinct groups of winners and losers. The greenback era attested to the fact that when a social institution becomes problematic and is no longer taken for granted, there is great potential for radical change. Political rhetoric plays an important role in both exposing and repressing (or "forgetting") the social construction of important economic institutions. That economic value is a social construct may be a sociological truism, but on this occasion such a claim was taken up by common people in a political challenge to the status quo.

APPENDIX

Political Pamphlet Data Set

The following materials were found in the Regenstein Library of the University of Chicago (R) or Northwestern University Library (N).

An American Citizen. 1874. *A System of Money and Finance for the United States*. Chicago: Charles L. Hindle. (R)

An American Citizen. 1877. *The Future Currencies of the United States*. Chicago. (N)

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[25]

The Social Meaning of Money: "Special Monies"[1]

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Classic interpretations of the development of the modern world portray money as a key instrument in the rationalization of social life. Money is reductively defined as the ultimate objectifier, homogenizing all qualitative distinctions into an abstract quantity. This paper shows the limits of such a purely utilitarian conception of "market money." A model of "special monies" is proposed to examine the extraeconomic, social basis of modern money. The article argues that, while money does indeed transform items, values, and sentiments into numerical cash equivalents, money itself is shaped in the process. Culture and social structure mark the quality of money by institutionalizing controls, restrictions, and distinctions in the sources, uses, modes of allocation, and even the quantity of money. The changing social meaning and structure of domestic money, specifically married women's money in the United States, 1870–1930, are examined as an empirical case study of a special money.

In Rossel Island, a small traditional community in the southwestern Pacific, the gender of money was tangibly identified—separate lower-value coins were reserved exclusively for women. And in Yap, one of the Caroline Islands in the west Pacific, mussel shells strung on strings served as women's money, while men monopolized the more desirable large stones (Baric 1964, pp. 422–23; Sumner [1906] 1940, p. 140). In contrast to the money in these primitive societies, modern money seems starkly

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homogeneous and surely genderless. Yet, camouflaged by the physical anonymity of our dollar bills, modern money is also routinely differentiated, not just by varying quantities but also by its special diverse qualities. We assign different meanings and designate separate uses for particular kinds of monies. For instance, a housewife's pin money or her allowance is treated differently from a wage or a salary, and each surely differs from a child's allowance. Or a lottery winning is marked as a different kind of money from an ordinary paycheck. The money we obtain as compensation for an accident is not quite the same as the royalties from a book. Not all dollars are equal.

But while there is an extensive literature dealing with primitive currency, the sociological bibliography on money remains remarkably sparse. Money is ignored, Randall Collins (1979, p. 190) has suggested, "as if it were not sociological enough."[2] Significantly, the *International Encyclopedia of the Social Sciences* devotes over 30 pages to money but not one to its social characteristics. There are essays on the economic effect of money, on quantity theory, on velocity of circulation, and on monetary reform but nothing on money as a *"réalité sociale,"* using Simiand's apt term (1934). As a result, money remains confined primarily to the economists' intellectual domain; its noneconomic aspects have not been systematically explored.

The dominant utilitarian understanding of money is hardly surprising. It is a by-product of what Bernard Barber (1977) has called the "absolutization of the market": the illusory yet pervasive assumption that market exchange is free from cultural or social constraints.[3] And money, as the most material representation of market exchange, seems eminently exempt from extraeconomic influences. To be sure, Veblen ([1899] 1953) alerted us to the social meaning of what money buys, and others have significantly furthered the social, cultural, and historical analysis of consumerism (see, e.g., Parsons and Smelser 1956; Rainwater 1974; Sahlins 1976; Douglas and Isherwood 1979; Horowitz 1985; Schudson 1984; Ap-

[2] For some exceptions, see Turner (1986), Smelt (1980), and Cheal (1988). To be sure, sociologists have recognized the symbolic and social meanings of money in various empirical settings but only in an ad hoc, nonsystematic way. Goffman (1961) remarked on the absence of any framework for understanding differences and similarities between coercive, economic, and social payments.

[3] Granovetter (1985) chides sociologists for implicitly accepting the economists' assumptions that market processes are invulnerable to social influences and therefore unsuitable objects of sociological study. On recent theoretical and empirical advances of the "new economic sociology," see Swedberg (1987). While Granovetter focuses on structural constraints of markets, Sahlins (1976) presents a powerful cultural critique of market determinism. For a provocative, historically grounded alternative to "market culture" and utilitarian conceptions of money, see Reddy (1984, 1987). Brown (1959) offers a psychoanalytical critique of the rational model of money.

padurai 1986; Miller 1987). But the "freedom" of money itself is not directly challenged.

My article will argue that the utilitarian approach to money is a theoretical and empirical straitjacket. Money belongs to the market, but not exclusively so. And while money is indeed an objective means of rational calculation, it is not only that. I turn first to the traditional interpretation of money, that is, as "market money," and then propose an alternative model of "special monies" that incorporates the social and symbolic significance of money. In the third part of the article, I present a historical case study of domestic money as one example of a special money. I will argue that domestic money—which includes wife's money, husband's money, and children's money—is a special category of money in the modern world. Its meanings, uses, allocation, and even quantity are partly determined by considerations of economic efficiency, but domestic money is equally shaped by changing cultural conceptions of money and of family life as well as by power relationships, age, and gender. And while in certain respects domestic money transcends social class differences, I will show how class profoundly marks not only its quantity but its quality.

More specifically, my discussion will focus on the changing meaning of married women's money between the 1870s and 1930s, showing how this money, whether given by the husband or earned in the household or in the labor market, was marked as a different form of currency from an ordinary dollar. It was obtained in special ways, used for designated purposes, and even had a special vocabulary: allowance, pin money, "egg money," "butter money," spending money, pocket money, gift, or "dole," but seldom wage, salary, paycheck, or profit.

MARKET MONEY: A UTILITARIAN APPROACH TO MONEY

To be sure, money occupies a central place in classic interpretations of the development of the modern world. But what kind of place? For Simmel and Weber, money was a key instrument in the rationalization of social life. On purely technical grounds, the possibility of money accounting was essential for the development of rational economic markets. As "the most abstract and 'impersonal' element that exists in human life," as Weber ([1946] 1971, p. 331; [1922] 1978, p. 86) defined it, money became "the most 'perfect' means of economic calculation." It transformed the world, observed Simmel ([1908] 1950, p. 412), into an "arithmetic problem."

Presumably, the fundamental and revolutionary power of money came from its complete indifference to values. Money was perceived as the prototype of an instrumental, calculating approach; in Simmel's ([1900]

1978, p. 211) words, money was "the purest reification of means." It was also the symbol of what, in his *Philosophy of Money,* Simmel (1978, p. 280) identified as a major tendency of modern life—the reduction of quality to quantity: "which achieves its highest and uniquely perfect representation in money." Unlike any other known substance or product, money was the absolute negation of quality. Only money, argued Simmel, "is free from any quality and exclusively determined by quantity." And therefore, only with money, "we do not ask what and how, but how much" (1978, pp. 279, 259).

That "uncompromising objectivity" allowed money to function as the "technically perfect" medium of modern economic exchange. Free from subjective restrictions, indifferent to "particular interests, origins, or relations," money's liquidity and divisibility were infinite, making it "absolutely interchangeable" (1978, pp. 373, 128, 441). The very essence of money, claimed Simmel, was its "unconditional interchangeability, the internal uniformity that makes each piece exchangeable for another." Money thus served as the fitting neutral intermediary of a rational, impersonal market, "expressing the economic relations between objects . . . in abstract quantitative terms, without itself entering into those relations" (1978, pp. 427, 125).

Noneconomic restrictions in the use of money were unequivocally dismissed by Simmel as residual atavisms: "The inhibiting notion that certain amounts of money may be 'stained with blood' or be under a curse are sentimentalities that lose their significance completely with the growing indifference of money" (1978, p. 441). As money became nothing but "mere money," its freedom was apparently unassailable and its uses unlimited. Thus, for Simmel, money's "purely negative quality" guaranteed its unbounded flexibility and indiscriminate intrusiveness. With money, all qualitative distinctions between objects were equally convertible into an arithmetically calculable "system of numbers" (1978, p. 444).

This quantification of quality was perceived to be a morally dangerous alchemy. In his early essay "The Power of Money in Bourgeois Society," Marx ([1844] 1964, p. 169) had warned that the transformational powers of money subverted reality: "confounding and compounding . . . all natural and human qualities . . . [money] serves to exchange every property for every other, even contradictory, property and object: it is the fraternization of impossibilities." As the "god among commodities" (Marx [1858–59] 1973, p. 221), money emerged as the ultimate objectifier, obliterating all subjective connection between objects and individuals and debasing personal relations into calculative instrumental ties.

Indeed, money fetishism, argued Marx in the *Grundrisse* (1973, p. 222) and in *Capital* ([1867] 1984, p. 96), was the most "glaring" form of commodity fetishism. The "perverted" (Marx [1858] 1972, p. 49) process by

which social relations between individuals were transmuted into material relations between things peaked with money. For other commodities might retain their more "natural" value or "use value" and therefore some distinctive quality. But as pure exchange value, money necessarily assumed an "unmeaning" (Marx 1984, p. 103) form, which in turn neutralized all possible qualitative distinctions between commodities. In their money form, noted Marx (1984, p. 111), "all commodities look alike." And more incongruously still, money turned even intangible objects devoid of utility—such as conscience or honor—into ordinary commodities. Thus the priceless itself surrendered to price. "Not even the bones of saints . . . are *extra commercium hominum* able to withstand the alchemy" (Marx 1984, pp. 132, 105).

For Marx (1984, p. 132), money was thus an irresistible and "radical leveler," invading all areas of social life. By homogenizing all qualitative distinctions into an abstract quantity, money allowed the "equation of the incompatible" (Marx 1973, p. 163). Echoing Marx's vocabulary half a century later, Simmel (1950, p. 414) dubbed money a "frightful leveler," perverting the uniqueness of personal and social values: "With its colorlessness and indifference . . . [money] hollows out the core of things . . . their specific value, and their incomparability." And in his essay "Religious Rejections of the World," Weber (1971, p. 331) noted a fundamental antagonism between a rational money economy and a "religious ethic of brotherliness."

In an essay published in 1913 in the *American Journal of Sociology*, Cooley submitted a dissenting argument in defense of the dollar. While acknowledging the extension of the cash nexus in modern society, Cooley refused to see money as a necessary antagonist of nonpecuniary values. Instead, sounding much like the 18th-century advocates of what Hirschman (1986) calls the *"doux commerce"* thesis of the market as a moralizing agent, Cooley (1913, p. 202) argued that "the principle that everything has a price should be enlarged rather than restricted . . . pecuniary values are members of the same general system as the moral and aesthetic values, and it is their function to put the latter upon the market." Progress, concluded Cooley (1913, p. 203), lay not in depreciating monetary valuation but in assuring the moral regulation of money: "The dollar is to be reformed rather than suppressed." But Cooley's outlook was exceptional. For most contemporary observers, the dollar was an invulnerable transformer, not a morally reformable currency.

The prevailing classic interpretation of money thus absolutized a model of market money, shaped by the following five underlying assumptions:

1. The functions and characteristics of money are defined strictly in economic terms. Money, maintained Simmel (1978, p. 101), was the "incarnation and purest expression of the concept of economic value." As a

qualityless, absolutely homogeneous, infinitely divisible, liquid object, money is a matchless tool for market exchange.

2. All monies are the same in modern society. What Simmel called money's "qualitatively communistic character" (1978, p. 440) aborts any distinctions between types of money. Differences can exist in the quantity of money but not in its meaning. Thus, there is only one kind of money—market money.

3. A sharp dichotomy is established between money and nonpecuniary values. Money in modern society is defined as essentially profane and utilitarian in contrast to noninstrumental values. Money is qualitatively neutral; personal, social, and sacred values are qualitatively distinct, unexchangeable, and indivisible.

4. Monetary concerns are seen as constantly enlarging, quantifying, and often corrupting all areas of life. As an abstract medium of exchange, money has not only the freedom but also the power to draw an increasing number of goods and services into the web of the market. Money is thus the vehicle for an inevitable commodification of society. As Simmel put it, money "intervenes in the totality of existential interests and imposes itself upon them . . . [it] has the power to lay down forms and directions for contents to which [it is] indifferent. . ." (1978, p. 442).

5. The power of money to transform nonpecuniary values is unquestioned, while the reciprocal transformation of money by values is seldom conceptualized or else is explicitly rejected. Unfettered by "objective or ethical considerations," money, insisted Simmel, was exempt from extraeconomic "directives [or] obstacles" (1978, p. 441).[4]

In this context, to speak about the distinctive "quality" of modern money seems anachronistic. After all, how can money have special meanings if its very essence is the absolute homogenization and objectivization of qualitative distinctions?

A link, an interdependence, is missing from the traditional approach to money. Impressed by the fungible, impersonal characteristics of money, traditional social thinkers emphasized its instrumental rationality and apparently unlimited capacity to transform products, relationships, and sometimes even emotions into an abstract and objective numerical equivalent. But money is neither culturally neutral nor morally invulnerable. It may well "corrupt" values into numbers, but values and sentiment recip-

[4] In fact, the only recognized limits to the commodification process is the preservation—albeit precarious—of selected items outside the cash nexus. This "singularization" of certain goods, as Igor Kopytoff (1986) describes it, does not, however, seem to include money. Instead, culture "marks" certain items as special and unexchangeable precisely by depriving them of a price tag (see Radin 1987). Within this framework, money acts as a "contaminator" of market values, immune to extraeconomic values and thus incapable of being itself marked as singular, unique, or unexchangeable.

rocally corrupt money by investing it with moral, social, and religious meaning. We need to examine more carefully how cultural and social structural factors influence the uses, meaning, and even quantity of money. What is the relationship of money as a medium of exchange and measure of utility to money as a symbol of social value?

SPECIAL MONIES: EXPLORING THE QUALITY OF MODERN MONEY

Significantly, even when the symbolic dimension of modern money has been recognized, the analysis stops short of fully transcending the utilitarian framework. Parsons (1971*a*, p. 241; 1971*b*, pp. 26–27), for instance, explicitly and forcefully called for a "sociology of money" that would treat money as one of the various generalized symbolic media of social interchange, along with political power, influence, and value commitments. In contrast to Marx's (1973, p. 222) definition of money as the "material representative of wealth," in Parsons's media theory money was a shared symbolic language; not a commodity, but a signifier, devoid of use value. Yet Parsons restricts the symbolism of money to the economic sphere. Money, Parsons (1967, p. 358) contends, is the "symbolic 'embodiment' of economic value, of what economists in a technical sense call 'utility.' " Consequently, the symbolic meaning of money outside the market, money's cultural and social significance beyond utility, remains uncharted in Parsons's media theory.

Anthropologists provide some intriguing insights into the extraeconomic, symbolic meaning of money but only with regard to primitive money. For instance, ethnographic studies show that, in certain primitive communities, money attains special qualities and distinct values independent of quantity. How much money is less important than *which* money. Multiple currencies, or "special-purpose" money, to use Karl Polanyi's (1957, pp. 264–66) term, have sometimes coexisted in one and the same village, each currency having a specified, restricted use (for purchase of only certain goods or services), special modes of allocation and forms of exchange (see, e.g., Bohannan 1959), and, sometimes, designated users. Certain currencies, for instance, may be limited to specified social classes or else assigned by gender (see Einzig 1966).

Special monies are often morally or ritually ranked: certain kinds of money may be good for obtaining food but not for purchasing a wife; other monies are appropriate only for funeral gifts or marriage gifts or as blood money; still other monies serve exclusively for paying damages for adultery or insults, for burial with the dead, or for magical rites. In this context, the "wrong" quality or lesser-quality money, even in large quantities, is useless or degraded. This qualitative categorization of monies

was also noted by Thomas and Znaniecki ([1918–20] 1958, pp. 164–65) in their analysis of the traditional Polish peasant culture: "A sum received from selling a cow is qualitatively different from a sum received as a dowry, and both are different from a sum earned outside." Different monies were used differently and even kept separately. Indeed, Thomas and Znaniecki (1958, p. 166) remarked that a peasant who set a sum aside for a designated purpose, and then needed some money for a different expense, would prefer to borrow it "even under very difficult conditions, rather than touch that sum."

These special monies, which Mary Douglas (1967) has perceptively identified as a sort of primitive coupon system, control exchange by rationing and restricting the use and allocation of currency. In the process, money sometimes performs economic functions by serving as a medium of exchange, but it also functions as a social and sacred "marker," used to acquire or amend status or to celebrate ritual events. The point is that primitive money is transformable, from fungible to nonfungible, from profane to sacred.

But what about modern money? Has modernization indeed stripped money of its cultural meaning, establishing, as Simmel (1978, p. 276) saw it, an "unconditional identity of money with sum"? Economic development, suggested Thomas and Znaniecki (1958, p. 65), "tends to abolish all [the] distinctions and . . . make money more and more fluid." Influenced by economic models, most interpretations thus establish a sharp dichotomy between primitive, restricted "special purpose" money and modern "all-purpose" money, which, as a single currency unburdened by ritual or social controls, can function effectively as a universal medium of exchange. Curiously, when it comes to modern money, even anthropologists seem to surrender their formidable analytical tools. For instance, more than 20 years ago, Mary Douglas (1967), in an important essay, suggested that modern money may not be as unrestricted and "free" after all. Her evidence, however, is puzzlingly limited. Modern money, argues Douglas (p. 139), is controlled and rationed in two situations: in international exchange and at the purely individual personal levels, where "many of us try to primitivize our money . . . by placing restrictions at the source, by earmarking monetary instruments of certain kinds for certain purposes, by only allowing ourselves or our wives certain limited freedoms in the disposal of money." "Money from different sources" observes Douglas (p. 139), "is sometimes personalized and attracts distinctive feelings which dictate the character of its spending."

Surely, these restraints, which, as Douglas (1967, pp. 119–20) notes, "resemble strangely . . . restraints on the use of some primitive monies," are more than purely individual "quirks" or a "clumsy attempt to control the all too liquid state of money," as she suggests (pp. 138, 140). Yet

Douglas, who (Douglas and Isherwood 1979) significantly advances a cultural theory of consumption, does not go far enough with the cultural analysis of money. Likewise, Thomas Crump (1981, pp. 125–30) refers to the existence of what he calls "bounded sub-systems" in modern societies: separate spheres of exchange with special currencies. But his focus is on economic distinctions between types of monies, such as the simultaneous yet separate use of a national and a foreign currency (usually the dollar) by a country, the selective use of specie versus "scriptural" money for certain goods and services, or the separate economy of credit cards versus cash payments, and includes even the chips used by a poker school as a separate form of currency (see also Melitz 1970).

Economic psychologists have recently challenged the purely rationalistic economic definition of modern money, particularly the idea of fungibility, by suggesting the concept of "mental accounting": the ways individuals distinguish between kinds of money. For instance, they treat a windfall income much differently from a bonus or an inheritance, even when the sums involved are identical (see, e.g., Thaler 1985; Kahneman and Tversky 1982; for an excellent review and analysis of the psychological literature on money, see Lea, Tarpy, and Webley 1987, pp. 319–42).

But mental accounting cannot be fully understood without a model of "sociological accounting." Modern money is marked by more than individual whim or the different material form of currencies. As François Simiand, one of Durkheim's students, argued (1934), the extraeconomic, social basis of money remains as powerful in modern economic systems as it was in primitive and ancient societies.[5] Indeed, Simiand warned against an orthodox rationalist approach that mistakenly ignores the persistent symbolic, sacred, and even magical significance of modern money.

My general theoretical purpose, then, is to apply the concept of special money to the modern world and examine in what ways culture and social structure mark modern money by introducing controls, restrictions, and distinctions that are as influential as the rationing of primitive money. Special money in the modern world may not be as easily or visibly identifiable as the shells, coins, brass rods, or stones of primitive communities, but its invisible boundaries emerge from sets of formal and

[5] Sorokin (1943) made the same argument in his brilliant analysis of the persistence of qualitative distinctions in modern conceptions of time and space. Taussig (1980), an anthropologist, deals with the social meaning of modern money but within the particular context of a South American peasant culture's being transformed by capitalist modes of production. The peasants construct magical rituals that mark modern money as "dirty money": an evil currency obtained in illicit ways and restricted in its uses. Taussig interprets these morally stigmatized monies as part of the peasants' resistance to the commodification of their world. From this perspective, however, real modern money in a fully commoditized society would presumably lose such qualitative distinctions and thus attain moral indifference.

informal rules that regulate its uses, allocation, sources, and quantity. How else, for instance, do we distinguish a bribe from a tribute or a donation, a wage from an honorarium, or an allowance from a salary? How do we identify ransom, bonuses, tips, damages, or premiums? True, there are quantitative differences among these various payments. But, surely, the special vocabulary conveys much more than diverse amounts. Detached from its qualitative differences, the world of money becomes undecipherable.

The model of special monies thus challenges the traditional utilitarian model of market money by introducing different fundamental assumptions in the understanding of money:

1. While money does serve as a key rational tool of the modern economic market, it also exists outside the sphere of the market and is profoundly shaped by cultural and social structural factors.

2. There are a plurality of different kinds of monies; each special money is shaped by a particular set of cultural and social factors and is thus qualitatively distinct. Market money does not escape extraeconomic influences but is in fact one type of special money, subject to particular social and cultural influences.

3. The classic economic inventory of money's functions and attributes, based on the assumption of a single general-purpose type of money, is thus unsuitably narrow. By focusing exclusively on money as a market phenomenon, it fails to capture the very complex range of characteristics of money as a nonmarket medium. A different, more inclusive coding is necessary, for certain monies can be indivisible (or divisible but not in mathematically predictable portions), nonfungible, nonportable, deeply subjective, and therefore qualitatively heterogeneous.

4. The assumed dichotomy between a utilitarian money and nonpecuniary values is false, for money under certain circumstances may be as singular and unexchangeable as the most personal or unique object.

5. Given the assumptions above, the alleged freedom and unchecked power of money become untenable assumptions. Culture and social structure set inevitable limits to the monetization process by introducing profound controls and restrictions on the flow and liquidity of money. Extraeconomic factors systematically constrain and shape (*a*) the *uses* of money, earmarking, for instance, certain monies for specified uses; (*b*) the *users* of money, designating different people to handle specified monies; (*c*) the *allocation* system of each particular money; (*d*) the *control* of different monies; and (*e*) the *sources* of money, linking different sources to specified uses.

Even the quantity of money is regulated by more than rational market calculation. For instance, in *The Philosophy of Money,* Simmel (1978, pp. 273, 406) suggests that money in "extraordinarily great quantities" can

circumvent its "empty quantitative" nature: it becomes "imbued with that 'super-additum,' with fantastic possibilities that transcend the definiteness of numbers." The apparent objectivity of numbers, however, is escaped not only by large fortunes. Small sums of money can attain similar distinction. For example, in civil law countries that permit monetary compensation for the grief of losing a child in an accident, legal scholars advocate the *"franc symbolique"* (Mazeaud, Mazeaud, and Tunc 1957). A token sum of money is perceived as the only dignified equivalent for such a purely emotional loss. Thus, determining a proper amount often involves not only an instrumental calculus but a cultural or social accounting. (For an example of the connection between quantity of money and its social and symbolic meaning, see Geertz [1973], pp. 425–42.)

Even identical quantities of money do not "add" up in the same way. A $1,000 paycheck is not the same money as $1,000 stolen from a bank or $1,000 borrowed from a friend. And certain monies remain indivisible—an inheritance, for instance, or a wedding gift of money intended for the purchase of a particular kind of object. The latter is a qualitative unit that should not be spent partly for a gift and partly for groceries.

Exploring the quality of special monies does not deny money's quantifiable and instrumental characteristics but moves beyond them, suggesting very different theoretical and empirical questions from those derived from a purely economic model of market money. Domestic money raises some of those questions. What kind of money circulates within the family? How is it allocated, and how is it used? How do changing social and power relationships between family members affect the meaning of the domestic dollar?

In terms of data, studying money in the family is entering largely uncharted territory. Although money is the major source of husband-wife disagreements and often a sore point between parents and children, curiously, we know less about money matters than about family violence or even marital sex.[6] Not only are families reluctant to disclose their private financial lives to strangers; husbands, wives, and children often lie, de-

[6] There is a body of literature that deals with the relationship between gender, class, money and the distribution of family power (see, e.g., Blood and Wolfe 1965; Komarovsky 1961, 1967; Safilios-Rothschild 1970; Rubin 1976; Ostrander 1984; Blumstein and Schwartz 1985; Hertz 1986; Mirowsky 1985). Interestingly, much of this literature retains an instrumental framework by usually focusing on the market meaning of money and its effects on domestic power relationships. Contemporaneous and historical studies of English households provide a rich source of data on intrafamily accounting systems (see, e.g., Ross 1982; Oren 1973; Stearns 1972; Wilson 1987; Pahl 1980; Whitehead 1984; Ayers and Lambertz 1986). (For France, see Sullerot 1966; for French and English working-class households, see Tilly and Scott 1978.) Gullestad (1984) provides some wonderful data on working-class mothers in urban Norway, and Luxton (1980) does the same for Canada.

ceive, or simply conceal information from each other as well. Perhaps more fundamentally still, the model of what Sen (1983) calls the "glued-together family" has meant that questions about how money is divided between family members are seldom even asked. Once money enters the family, it is assumed to be somehow equitably distributed among family members, serving to maximize their collective welfare. How much money each person gets, how he or she obtains it, from whom and for what, are rarely considered. And yet, as Michael Young (1952) suggested more than 30 years ago, the distribution of money among family members is often as lopsided and arbitrary as the distribution of national income among families. Therefore, argues Young (1952, p. 305), we should stop assuming that "some members of a family cannot be rich while others are poor" (see also Hartmann 1981; Wong 1984; Delphy and Leonard 1986).

The period between 1870 and 1930 provides some unusual glimpses into this traditionally secret world of family money. As the consumer society was being established, Americans wrote about and studied money matters in an unprecedented manner. Household-budget studies richly documented how the working class and lower-middle class spent their money. And in anonymous, "confessional" articles published in popular magazines, middle-class Americans disclosed their own domestic budgets, transforming the spending of money into a public issue. In that same period, as Daniel Horowitz (1985) has shown, social critics and social scientists presented their versions of the "morality of spending," discussing with passion and in detail the usually dreaded noneconomic contours of a commoditized American society. Thus, at the turn of the century, the renegotiation of the domestic economy broke through the usually closed doors of individual households and entered the public discourse.

I now turn to an analysis of the changing meanings, allocation systems, and uses of married women's money between 1870 and the 1930s, showing how definitional disputes over this category of domestic money, while partly a rational response to a new economic environment, were also deeply shaped by extraeconomic, social, and cultural factors. The battle over the purse strings was regulated by notions of family life and by the gender and social class of its participants.[7]

[7] This article is based on a qualitative analysis of an extensive and diversified set of documentary sources. Among the primary sources consulted were (1) household-budget studies; (2) women's magazines, including feature articles, letters to the editor, fiction, advice columns, and occasional survey data; (3) newspapers, including news articles, editorials, and letters to the editor (mostly from the *New York Times*); (4) legal records, including court cases, law review articles, laws and regulations, and legal casebooks; (5) home-economics literature, including leading textbooks on home management, popular household manuals, and the *Journal of Home Economics;* (6) a foreigner's memoirs; (7) etiquette manuals; (8) social workers' investigations of working-class communities and reports on the conditions of working women, such as Rus-

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The Domestic "Fiscal Problem": 1870–1930

During the late 19th century, the domestic "fiscal problem" went public, as an appealing news story in magazines and newspapers, in poignant letters to the editor and advice columns, and as the topic of conferences in women's clubs. By 1928, one observer concluded that "More quarrels between husband and wife have been started by the mention of money than by chorus girls, blond waitresses, dancing men with sleek hair, [or] traveling men" (Kelland 1928, p. 12). Indeed, the battle over the purse strings often ended in court. Between 1880 and 1920, money quarrels increasingly became a grounds for divorce among affluent as well as poor couples (May 1980, p. 137; Lynd and Lynd 1956, p. 126). And domestic money raised legal issues even in unbroken marriages. Did a wife have a right to an allowance? If she saved money from her housekeeping expenses, was that money hers? Was a wife a thief if she "stole" money from her husband's trousers? Could a wife pledge her husband's credit at any store? There was also the matter of women's earnings. When was a woman's dollar legally her own? Slowly, but steadily, court decisions began to overturn the common law dictum that a wife's earnings belonged to her husband.

Why did domestic money become such a controversial currency at the turn of the century? Certainly money conflicts between family members had existed earlier. For instance, in her study of New York working-class women, Stansell (1986, p. 29) tells of one—albeit extreme—1811 case in which a husband beat his common law wife to death after she took four shillings from his pockets. Yet these disputes remained private, rarely entering the public discourse as a major issue of collective concern (Stansell, personal communication). A consensus of sorts existed about the proper regulation of family income, and it varied by class. Among middle- and upper-class households, money matters seem to have been estab-

sell Sage's West Side Studies; and (9) selected government documents such as the U.S. Department of Labor reports on the conditions of working women and children. To be sure, as with many such qualitative historical data, the precise representativeness of the documentary materials cannot be established. However, the reliability of the data is strengthened by corroborating the findings with very different and independent types of documentary evidence. For instance, a few magazines' surveys of readers or other audiences are used, despite their being methodologically weak by modern standards, but only as an additional, albeit imperfect, illustration of trends in the allocation and uses of family money. Thus, the changes in the domestic economy described here are not based simply on one set of data but are amply confirmed by the different primary sources. In addition, a rich set of secondary sources has been consulted, including recent studies on the rise of the consumer culture, the history of leisure, and the literature on family history and women's history that includes discussions of families' changing economic strategies.

lished largely as the husband's business. In her (1841) landmark *Treatise on Domestic Economy,* Catherine Beecher noted how, particularly among businessmen, a family's expenses were "so much more under the control of the man than of the woman" (p. 176). Likewise, Mary P. Ryan's (1984, p. 33) study of family life in early 19th-century Oneida County, New York, found men in charge of money matters (see also Norton 1979, p. 145; Cowan 1983, pp. 81–82). After all, the 19th-century "cult of domesticity" established home life as an alternative to the dominance of the market: its guardian, the "true" Victorian woman, was a specialist in affect, not finances (Welter 1966; Cott 1977). A woman might handle the housekeeping expenses, but "serious money" was a man's currency. Working-class households, on the other hand, managed their limited and often uncertain incomes by appointing wives the family's cashier. Husbands and children handed their paychecks over to the wives, who were expected to administer the collective income skillfully. Most of these monies, to be sure, were limited to housekeeping expenses.

But at the turn of the century, a rise in real income and the increasing monetization of the American economy forced a reevaluation of family finances. Making more money and spending it required not only skillful bookkeeping; they also raised a new set of confusing and often controversial noneconomic quandaries. How should money be allocated in the family? How much money should a wife receive and for which expenses? Was an allowance a "good" mechanism of allocation for wives? What about children's allowances; should they be given one, or was it their duty to earn it through household chores? Should husbands hand over all their salaries to their wives, or how much could they keep for themselves?

Proper uses of money also baffled novice consumers: What did it mean to spend money well? How, for instance, should a family's extra income be used? How much should be saved, how much given to charity, how much for vacations, how much for clothing? And, most important, how was it to be determined how much each member of the family was entitled to spend? As the amount of disposable income increased and as the consumer economy and culture became more firmly established, family money was increasingly differentiated into husband's money, wife's money, and children's money.

This new "tightened competition for the family income," as Robert Lynd (1932, p. 90) described it, was to a certain extent a "fixed" dispute, for the various competitors started with culturally assigned "handicaps." Indeed, turn-of-the-century wives, even those married to wealthy men, often found themselves without a dollar of their own. As Lucy M. Salmon, professor of history at Vassar College, explained in 1909, "Men are still for the most part those whose wages are paid in hard cash, who

have a bank account and carry a cash-book, and who therefore consider that they have the right to decide in regard to the way the money they earn shall be spent" (p. 889).

The relative poverty of married women became increasingly untenable. For the 20th-century version of the 19th-century moral guardian was expected to serve as the household's purchasing agent and budget expert. To be sure, the frugality and financial wisdom of wives had been a concern in the 18th century as well (Beecher 1841, pp. 175–86; Jensen 1986, pp. 119–28). But the expansion of the consumer economy made proper spending skills a dominant and visible parameter of domestic expertise. The "good housekeeper" was responsible "for the care of her husband's money, and she must expend it wisely" (*New York Times*, Dec. 23, 1900, p. 10). After all, as one exemplary housewife explained in the same article, "a man does not understand the regulation of the household and its expenses."

But "Mrs. Consumer's" (Frederick 1929) increased financial role and responsibility came without a salary and most often without even a fixed and dependable income. Women were thus caught in the strange predicament of being cashless money managers expected to spend properly but denied control over money. The success of the home-economics movement, which urged women to run their homes like a business, further intensified the contradiction in women's economic lives.

Women's strategems to extract some cash from their unforthcoming husbands were the subject of jokes and a staple of late 19th-century vaudeville routines. But the domestic fiscal problem turned serious, forcing a difficult and controversial reevaluation of women's household money as well as of their earned income.

A Dollar of Her Own: Defining Women's Household Money

American women, even those whose husbands could afford it, never had a legal claim to any portion of domestic money. As long as spouses lived together, the author of a 1935 *Law Review* article explained, "the wife's right to support is not a right to any definite thing or to any definite amount. . . . Whether the wife will get much or little is not a matter of her legal right but is a matter for the husband to decide" (Crozier 1935, p. 33).[8] As a result, the allocation of domestic money depended on unofficial

[8] The concept of a family wage—a salary that would support a male wage earner and his dependent family—further increased married women's dependence on their husband's wages. The doctrine of necessaries, however, provided wives with some legal recourse by making a husband directly responsible to a merchant for the purchases made by his wife. Yet even this entitlement to pledge a husband's credit was restricted.

rules and informal negotiation. At the turn of the century, married women—the majority of whom depended on their husbands' paychecks or incomes—obtained their cash in a variety of forms or special monies.

Upper- and middle-class wives received an irregular dole or, more rarely, a regular allowance from their husbands for housekeeping expenses, including household goods and clothing. Sometimes women relied almost entirely on "invisible" dollars, crediting their expenses and rarely handling cash at all. Working-class wives, on the other hand, were given their husbands' paychecks and were expected to administer and distribute the family money.

These official monies, however, were supervised and even, in the case of working-class women, ultimately owned and controlled by the husbands. Sometimes, husbands openly took over all monetary transactions. In a letter to the advice column of *Woman's Home Companion* in 1905, a 30-year old woman complained that John, her husband, although "liberal in a way . . . keeps the pocketbook himself, buys the provisions, prefers to purchase the dry-goods, the shoes, the gloves . . . and does not see that I need any money when he gets whatever I want" (Sangster 1905, p. 32).

Even if a woman managed to save some money from her housekeeping expenses, the law ultimately considered that money as her husband's property. For instance, in 1914, when Charles Montgomery sued his wife, Emma, for the $618.12 she had saved from the household expenses during their 25 years of marriage, Justice Blackman of the Supreme Court, Brooklyn, ruled for the husband, arguing "that no matter how careful and prudent has been the wife, if the money . . . belonged to the husband it is still his property, unless the evidence shows that it was a gift to his wife" (*New York Times,* Dec. 16, p. 22). Thus, a wife's channels to additional cash were limited to a variety of persuasion techniques: asking, cajoling, downright begging, or even practicing sexual blackmail.

If these techniques failed, there was also a repertoire of underground financial strategies, ranging from home pocket picking to padding bills. In 1890, an article in the *Forum* denounced the "amount of deceit, fraud, and double dealing which grow out of the administration of the family

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Necessaries were so ambiguously defined that merchants were reluctant to risk extending credit to a wife for goods that might not be considered necessaries. Moreover, a husband was entitled to determine where necessaries should be purchased and could terminate a wife's authority to pledge his credit by demonstrating that he had provided the necessaries or a sufficient allowance to obtain them (see Weitzman 1981; Salmon 1986; Clark 1968). The law, in fact, was explicitly concerned with protecting husbands from the "mad" expenditures of extravagant wives (see, e.g., Ryan v. Wanamaker 116 Misc. 91; 190 N.Y.S. 250 (1921); Saks et al. v. Huddleston 36 F. (2d) 537 (1929); and W.A.S. 1922).

finances." Just to obtain "a few dollars they can call their own," women routinely engaged in systematic domestic fraud: some "get their milliners to send in a bill for forty dollars, instead of thirty, the real price, in order to take the extra ten to themselves . . . [others] overtax their tired eyes and exhausted bodies by taking in sewing without their husband's knowledge; and . . . farmers' wives . . . smuggle apples and eggs into town" (Ives 1890, pp. 106, 111).

Other methods were even riskier. In 1905 Joseph Schultz was taken to the police court of Buffalo by Mrs. Schultz. It seems that Mr. Schultz, determined to stop his wife's nocturnal thefts of the change left in his trousers, set a small rattrap in the trouser pocket. About 2:00 A.M. the trap was sprung, and next morning the husband was taken to court. *Bench and Bar,* a New York legal journal, reported with some satisfaction that the judge turned down the wife's complaint and upheld the right of husbands to maintain rattraps for the protection of their small change (3 *Bench and Bar* 6). In another case, Theresa Marabella, 40 years old, was sentenced to four months in a county jail for stealing $10 from the trousers of Frank Marabella, a laborer and her husband. She had spent the money on a trip to New York (*New York Times,* July 14, 1921).

But "stolen" dollars were not taken only by the wives of poor men. Indeed, one observer was persuaded that "the money skeletons in the closets of some nominally rich women may be as gruesome as are those in the closets of the nominally poor" (Salmon 1909, p. 889). While poor women rifled their husbands' trousers looking for some change, the affluent cashless wife used a variety of fraudulent techniques. Mrs. Gray, a grandmother married for 20 years but without any money "she could call her own," "adopted a systematic policy of deceit and fraud toward her husband. . . . When she wants to give a little money to help buy a stove for a poor family, or to assist some sick or starving creature to pay his rent, she tells her husband that the flour is out, or that the sugar is low, and so gets the needful amount." Thus, paradoxically, this "strict church member," who never told a falsehood, "cheats and deceives" the man "she has solemnly sworn to love and obey" (Ives 1890, p. 110).

There were other ways to "circumvent the holder of the purse" (Salmon 1909, p. 889). Women bargained with dressmakers, milliners, and shopkeepers to add extra items to their bills so that, when the bill was paid, "the rich man's wife may get a rake-off and possess a few dollars" (Peattie 1911, p. 466). In search of cash, some women even turned to their servants, selling them their old furniture (O'Hagan 1909). A Japanese visitor to the United States in the 1910s was shocked to hear from "men and women of all classes, from newspapers, novels, lecturers, and once even from the pulpit . . . allusions to amusing stories of women secreting

money in odd places, coaxing it from their husbands, . . . or saving it secretly for some private purpose" (Sugimoto [1926] 1936, p. 176).[9]

As the consumer economy multiplied the number and attractiveness of goods—many of them targeted at a female audience—the demand intensified for a more definite and regular housekeeping income for the wife and increasingly for her "private purse," a free sum of unaccounted money to spend for the home, for entertainment, or on clothes, cosmetics, perfumes, or gifts. (On the sales strategies of department stores, 1890–1940, aimed at an almost entirely female middle-class clientele, see Benson [1986]; on the commercialization of the beauty industry in the early 20th century, see Banner [1983], pp. 202–25.)

Dole versus Allowance: The Allowance as a Solution

The traditional doling-out method of supplying women with money came under attack by the late 19th century in a battle that continued during the first three decades of the 20th century. Anonymous letters to the editors of women's magazines conveyed the money troubles of housewives. "What Should Margaret Do?" asked one woman whose husband in 1909 gave her only $50 a month (from his $300 salary) to run the house, pay all bills, and clothe herself and a baby girl. When she asked for more, "John . . . gets very angry and accuses her of being dissatisfied . . . [and tells her] she is always wanting something" (*Good Housekeeping* 1909, p. 50).

Condemning a system that forced women to play the "mendicant before a husband," the well-known and widely syndicated columnist Dorothy Dix (1914, pp. 408–9) remarked on the irony of a man who "will trust [a] wife with his honor, his health, his name, his children, but he will not trust her with money." The availability of credit was no solution, since it was simply another form of gift money supervised by the husband. Indeed, observers noted the "anomalous" situation in which men willingly paid "large bills . . . [of] wives and daughters" yet were unwilling "to trust them with the smallest amount of ready money" (Salmon 1909, p. 889). The rich wife, remarked the widely read writer and theologian Hugh Black (1921, p. 58), could order "anything from countless stores where they had a charge account. . . ." But often, "she could not give ten cents to a beggar."

A better system was needed to assure women, as one commentator put it, "the divine right . . . to the pay envelope" ("Family Pocketbook" 1910,

[9] In her best-selling autobiography, Sugimoto (1936) recalled her puzzlement at this strange American custom that departed so radically from the Japanese arrangement, where, regardless of class, wives controlled the purse strings. I thank Sarane Boocock for this reference.

p. 15). Even the courts occasionally agreed, refusing to treat domestic stealing as real theft. In a 1908 case of a wife charged with robbing her husband of small change, Judge Furlong of a Brooklyn court supported the "thief," declaring that "a wife has a perfect right to go through her husband's pockets at night and take his money if he fails to provide for her properly" (15 *Bench and Bar* 10).

But what was a proper money income for wives? For some, the best solution for "penniless wives" was a dowry for every daughter (Messinger et al. 1890). Wives seemed to prefer a regular weekly or monthly allowance. A 1910 *Good Housekeeping* survey of 300 wives found that 120 supported the allowance system ("Family Pocketbook"). By 1915, according to *Harper's Weekly,* some young brides, "of the ultra-modern type," required the promise of an allowance "before vowing to love, honor and obey" ("Adventures in Economic Independence," p. 609).

Women's magazines increasingly endorsed the allowance in their articles and even in their fiction. In "Her Weight in Gold," for instance, a short story that appeared in the *Saturday Evening Post* in 1926, Mrs. Jondough, the wealthy female protagonist, declared "that all the gowns and diamond pins in the world were not compensation for even a tiny personal allowance of her very own" (Child 1926, p. 125). That same year, the Women's Freedom League of St. Louis went further, sponsoring a bill that would make a dress allowance for wives legally compulsory (*New York Times,* Oct. 11). Home-economics experts were in agreement. Mary W. Abel (1921, p. 69), an editor of the *Journal of Home Economics,* assailed the dole system, arguing that "to achieve the best results in the spending of the family money, the mother should have such control of the income as will ensure her efficiency as manager and buyer." Even Emily Post certified the allowance with her stamp of approval (Post 1928, p. 110).

Still, converting female currency from dole to allowance was not easily achieved. A 1928 survey of 200 upper-class men and women found that, while 73 used the allowance system, 66 still relied on the "old-fashioned system of husbands taking charge of all money, paying all bills and doling out funds to the wife as she asks for them" (Hamilton and MacGowan 1928) (the remainder had a more progressive joint bank account or an undefined arrangement).[10] Husbands, it seems, were less enthusiastic than their wives about the allowance. As Dix (1914, p. 409) pointed out: "One question that is fought out in a battle that lasts from the altar to the grave, in most families, is the question of an allowance for the wife. She

[10] As described in *Harper's Monthly Magazine,* this survey of financial arrangements was part of a larger study of different aspects of married life conducted under the auspices of the Bureau of Social Hygiene. Using a prepared set of questions, the survey takers interviewed 200 respondents individually over a period of two years.

yearns for it. The man is determined that she shall not have it. . . ." As late as 1938, when the *Ladies Home Journal* conducted a major national survey on "What Do the Women of America Think about Money?" and asked, "Should a wife have a regular housekeeping allowance?" they found that 88% of female respondents answered affirmatively, regardless of marital status or geographical location. And 91% of younger women (under 30) were for it. Yet only 48% of the wives actually received an allowance (Pringle 1938, p. 102).

Husbands resisted the allowance because it officially carved out a separate portion of their income and made it "hers," thereby increasing a woman's financial control. But the allowance created an additional sort of confusion. What kind of money was it? If the allowance was no longer supposed to be a dole or gift, neither could it become real money or a wage. Indeed, supporters of the allowance were careful to distinguish it from a wage. "To the man who says, 'But I cannot pay my wife like a servant,' " recommended a writer in the *Forum,* "the answer must be 'Certainly not. She is a partner and as such is entitled to a share in the dividends' " (Ives 1890, p. 113).

If the allowance was difficult to define, it was also hard to regulate. Since it was not a payment, the actual amount of money involved could not depend on the performance of wifely duties. While usually it was expected to be "proportioned to the earnings of her husband," in practice, as a *New York Times* editorial pointed out, it remained a "delicate question," often creating a "sharp difference of opinion about [its] size" (*New York Times,* Jan. 30, 1923). The uses of the allowance remained unclear as well. Was it exclusively for the household? Who "owned" the surplus, if there was one? Did it cover women's personal needs?

The Allowance versus a Joint Account: The Allowance as a "Bad" Money

In February 1925, Reverend Howard Melish, rector of the Holy Trinity Church of Brooklyn, addressing the New York Women's City Club on the importance of a wife's economic independence, related an anecdote that backfired. "Yesterday," Melish told his audience, "I asked an old lady . . . what her idea was of a happy marriage. Without an instant's hesitation she replied 'An allowance.' " The next day, in an editorial entitled "They Want More than That," the *New York Times* expressed the new critical view on allowances: "Admitting . . . the equality of service rendered by wife and husband in . . . the family unit, why should the one rather than the other have an 'allowance' and . . . why should the 'allowance' be determined by the husband and be granted as a favor?" Allowances, concluded the editorial, "are for inferiors from superiors" and

therefore an inappropriate currency for the modern woman (*New York Times,* March 2, March 3).

In the 1920s, even as popular support for allowances intensified, there was also a growing criticism of the allowance system from those who saw it as an inequitable and even degrading form of domestic money. Christine Frederick (1919, p. 269) proclaimed it a "relic of some past time when women were supposed to be too inexperienced to handle money." Frederick, a leader of the popular household-efficiency movement, rejected the allowance as an "unbusinesslike" scheme that undermined the modern goal of running the home as rationally as a factory or an office. The "anti-allowance" advocates supported a democratic "joint control of the purse" (Kyrk 1933, pp. 182–83). The new improved domestic money was to be shared, thus minimizing gender as well as age inequality. Families were urged to "hold a periodic council around a table, with frank and courteous discussion of its ways and means, and with due consideration of how, and how much, each member can contribute in work, in money, in cooperation, toward . . . this whole business of the home." The father and mother would act as a board of directors, allocating money according to the diverse needs (Winter 1925, p. 185; Friend 1930, p. 112). The new financial system would also include a specified sum for personal expenses for each family member, to be considered as a budgetary entitlement and not as a gift.

But how many couples actually adopted the new domestic dollar? *Harper's* 1928 study "Marriage and Money" found that, of 200 respondents, only 54 had what the magazine described as the more "feminist" financial arrangement: a joint bank account or common purse (Hamilton and MacGowan 1928, p. 440). In 1929, in *Middletown,* the Lynds (1956, p. 127, n. 24) reported that most couples depended on "all manner of provisional, more or less bickering" financial arrangements. And some two decades later, *Crestwood Heights,* studying suburban life, discovered that, despite democratic norms dictating cooperative spending of the husband's income, "the wife does not know, even roughly, how much her husband earns." Wives still had to "manipulate their household allowances" to obtain "unreported" personal funds (Seeley, Sim, and Loosley 1956, pp. 184–85). Yet, even though the actual finances of housewives did not significantly improve, it is clear that, by 1930, the symbolic meaning of a wife's allowance was changing from a sign of independence and domestic control to a form of financial submissiveness.

A Husband's Allowance: Domestic Money in the Working Class

Domestic money was not defined only by gender but also by the social class of the household. The working-class wife, suggested one home-

economics textbook, could well be envied by wealthier women. While the latter seldom have "ready money in hand," the wife of a workingman often "determines the . . . financial policy of the family and has control of the necessary funds" (Abel 1921, p. 5). Indeed, in her 1917 study, Mary K. Simkhovitch found that as a family's income increased "the proportion controlled by the wife diminishes till often she becomes simply a beneficiary of the husband." Paradoxically, class—in most ethnic groups—seemed to reverse the gender power structure of domestic money. In her 1910 study of Homestead, Margaret F. Byington (1910, p. 108) discovered that the men "are inclined to trust all financial matters to their wives." On payday, workmen turned over their wages to the wife, asking "no questions as to what it goes for."[11]

In working-class families, the allowance was usually for husbands and children, not wives. Louise B. More's (1907) analysis of wage earner's budgets found that an allowance for "spending-money" was made in 108 of the 200 families she investigated: 94 men received all or part of the amount given, and in 29 families one or two children had an allowance. In most cases, it seems to have been the wife who "doles out spending money according to the needs and the earnings of each" (True 1914, p. 48). Leslie Tentler's (1982, p. 177) study of working-class women from 1900 to 1930 concludes that this financial arrangement of working-class families granted a great deal of economic power to wives, making the home their "fief." Indeed, to contemporary middle-class observers, it appeared that husbands "who accept a daily dole from their purse-keeping wives are usually subject beings" (*New York Times,* Jan. 30, 1923).

But these studies and observations may have idealized and thus overestimated the economic clout of working-class wives. To be sure, administering the family income involved women actively in domestic finances, allowing them a degree of managerial control. What remains unclear, however, is their actual discretionary power.[12] In the first place, money management in families with limited money incomes was an arduous task. Although working-class standards of living improved at the turn of

[11] The available evidence suggests that different ethnic groups operated with similar domestic financial arrangements (see, e.g., True 1914; di Leonardo 1984; Bodnar 1987; research material from Morawska 1985, and personal communication). Lamphere (1986), however, suggests possible ethnic variations. Further research should better illuminate the effect of ethnicity on domestic money.

[12] Determining the effect of a particular intrahousehold financial arrangement on the relative power of family members is a difficult task. Not only can power be measured in a number of ways, but all the dimensions of monetary power within the family—whether consuming, saving, investing, or managing—have very special meanings that are culturally and socially constructed. More research is needed to define and understand the relative degree of power of the "cashier" working-class wife.

the century, family budget studies show the precariousness and uncertainty of their financial lives. Husbands' and children's wages went almost exclusively for food, clothing, shelter, and insurance. And being the cashier put a heavy burden of responsibility on wives: household money troubles could be conveniently blamed (by family members as well as outsiders) on female mismanagement rather than on a tight budget or an irregular labor market (Horowitz 1985, p. 60).

More important, as soon as there was any surplus income, a wife's apparent grip on the purse strings quickly loosened. While the ideal good husband was indeed expected to turn over all his wages intact to his wife, receiving one or two dollars a week for his personal use, many did not. Studies of New York's West Side conducted in 1914 found that while "there is a current belief that the American workingman turns his wages over to his wife on Saturday night and allows her to apportion all expenditures," in fact how much the wife received from the husband's wages and what he kept back "depends on the personal adjustment between them and not on a recognized rule" (Anthony 1914, pp. 135–36). Evidence on precisely how the money was allocated is very limited. But the West Side study suggests that the outcome was usually rigged in favor of the husband. As one Italian wife explained: "Of course they don't give all they make. They're men and you never know their ways" (Odencrantz 1919, p. 176). A study of unskilled Chicago wage earners in 1924 found that, when asked about their husbands' weekly earnings, over two-thirds of the wives gave lesser amounts than the actual earnings found on the payroll. The investigator concluded that the man "may not give his entire earnings to his wife, but may simply give her the amount he thinks she should spend for the family" (Houghteling 1927, p. 37).

Thus, the idealized view of a solidary family economy coordinated and controlled by the wife concealed competing internal claims for money. The husband's pay envelope was not always intact on arrival. Neither were the children's. Tantalized by the attractions of a consumer culture, children increasingly withheld or manipulated their earnings. David Nasaw (1985, pp. 131–32) found that, in the early part of this century, wage-earning children "who were obedient in every other regard did what they had to to preserve some part of their earnings for themselves. They lied, they cheated, they hid away their nickels and dimes, they doctored their pay envelopes" (see also Zelizer 1987, pp. 97–112). While working girls were more likely than their brothers to hand their wages over intact, not all of them did. Italian working girls on the New York West Side told investigators how easy it was to "knock down" a paycheck when they made overtime: "Whatever you make is written outside in pencil. . . . That's easy to fix—you have only to rub it out, put on whatever it usually is, and pocket the change" (True 1914, p. 49; on the

increased individualization of children's income, especially after the 1920s, see Smith 1985; Ewen 1985).

Even the portion of money that the wife did receive and control was limited to housekeeping money. As with wealthier women, the working-class wife had no right and much less access to a personal fund. Pocket money for personal expenses was a male prerogative or a working child's right. The working-class husband's allowance was thus a very different kind of money from the allowance of middle-class wives. Although partly allocated for useful expenses, food or clothing or transportation, it was also a legitimate fund for personal pleasures. Indeed, Kathy Peiss's (1986) study of leisure among working-class women in turn-of-the-century New York clearly shows that while men could afford to pay for their amusements, drinking in saloons, attending movies and the theater, or buying tobacco, their wives had no money left for personal recreation. Thus, women's money retained a collective identity, while men's and children's money was differentiated and individualized.[13]

As home-economics experts began to encourage joint control of the domestic dollar, the working-class allowance system lost its legitimacy. Studies of English working-class families suggest that there was a shift to the middle-class system of housekeeping allowances for wives (Oren 1973, p. 115; Sterns 1972, p. 116; Pahl 1980, pp. 332–33). Limited data make it difficult to determine whether the same was true for the United States. In the 1920s, when the Lynds (1956, p. 127, n. 24) studied Muncie, Indiana, they reported that it was rare for a husband to turn over his paycheck and allow his wife control over the household economy (see also Friend 1930, p. 108). But class differences seem to have persisted; by 1938, according to the *Ladies Home Journal* national survey on money, only 38% of women in income groups under $1,500 received an allowance, compared with 62% of those in groups over $1,500 (Pringle 1938, p. 102).

Pin Money versus Real Money: Defining Women's Earnings

What happened when women's money did not come from their husbands' paychecks? When women worked for nonrelatives, whether at home or

[13] If a working-class wife needed more money, her options were limited. With little access to credit accounts, she often turned to pawnbrokers and moneylenders (see Ross 1982, p. 590; Tebbutt 1983; Ayers and Lambertz 1986, pp. 203–4). Sometimes women relied on their younger children for extra cash. During a government investigation of industrial home work conducted in 1918 ("Industrial Home Work of Children" 1924, p. 22), one mother explained that her little boy helped her wire rosary beads at home because she needed "some money of her own." Another mother needed false teeth and "thought the children might just as well help to buy them."

for wages, the boundary between that income and real money was still preserved, only in different ways. In the working class, for instance, a married woman's income, usually earned by caring for boarders, taking in sewing or laundry, or, among farm families, by selling butter, eggs, or poultry, did not have the same visibility as her husband's paycheck (Jensen 1980; Ulrich 1983, pp. 45–47; Morawska 1985, pp. 134–35). As her labor was part of a woman's traditional repertoire of domestic tasks, the money she made was merged into the family's housekeeping money and usually spent on home and family, for clothing or food. Legally, in fact, until the early decades of the 20th century, those domestic earnings belonged to the husband. And the courts staunchly opposed converting a wife's money into her tangible property.[14] In a growing number of personal injury cases, where the law had to decide whether the husband or the wife was entitled to recover for a woman's inability to work, as well as in claims brought up by creditors, the courts insisted on distinguishing between the domestic dollar and an earned wage. If a wife worked at home, even if her labor was performed for strangers, caring for a boarder or nursing a neighbor, that money was not a real earning and therefore belonged to her husband. Ironically but significantly, in some states a wife's domestic earnings could become her property but only as her husband's gift (Thorton 1900; Rodgers 1902; Warren 1925).

Thus, earned domestic money, much like the allowance, retained a separate identity as a gift, not as real money. Money earned by married women in the labor force was also special and different. It even had its own name. The term "pin money," which in 17th-century England had meant a separate, independent income for a wife's personal use—and was included as a formal clause in upper-class marriage contracts—lost its elitist British origins in turn-of-the-century America and now meant the supplementary household income earned by wives (Stone 1977, p. 244; Gore 1834). Still it was treated as a more frivolous, less serious earning than the husband's. As a 1903 article in *Harper's Bazaar* aptly remarked: "No man works for pin-money. The very idea makes one smile" (Leonard 1903, p. 1060).

The boundary between women's earned income and the husband's salary was also marked by their differential uses. John Modell (1978, p. 225), for instance, suggests that among late 19th-century, native-born American families, "all dollars were not equal" and women's income (as

[14] Starting in the mid-19th century, Married Women's Property Acts granted wives the right to own and control their property but focused primarily on inherited property. Married women's rights to their earnings were excluded by the acts and were incorporated only slowly and with much resistance by amendments or in later statutes (see Edwards 1893; Rodgers 1902; Warren 1925; Crozier 1935, pp. 37–41; Shammas, Salmon, and Dahlin 1987, pp. 88–89, 96–97, 163).

well as children's) was spent differently and less freely than the husbands'. Among farm families, women's egg money and butter money were distinguished from husbands' wheat money or corn money (Thornton 1900, p. 188; Atkeson 1929).[15] Jensen (1980) suggests that there existed a dual economy, with women and children providing for living expenses while husbands paid for mortgages and new machinery (see also Whitehead 1984, p. 112). For middle-class women, discreet forms of earning pin money at home (making preserves, pickles, or pound cake, knitting shawls or sweaters, or raising poultry or Angora cats) were approved, but, again, only for certain types of expenses: charity, for example, or "a daughter's lessons in music or art" (Sangster 1905, p. 32).

In the 1920s and 1930s, as more married women entered the labor force, their earnings, regardless of the sums involved, were still defined as pin money, categorized as supplementary income, used for the family's extra expenses, or earmarked by more affluent couples as discretionary "fun" money. For instance, one women told an *Outlook* reporter that she reserved her income exclusively for buying clothes. Another explained: "We blow my money on extra trips abroad, antiques, anything extravagant." Others used their salary to pay the maid's wages and saved the rest (Smith 1928, p. 500). A story in the *Saturday Evening Post,* four years later, reported on the persistent "wife-keeps-all-theory" of wives' earnings. Couples in which the wife was employed were asked what her money was used for: "Keeps it all for herself . . . saves it, spends it, just as she likes," was a common response. "The important thing [is] . . . she mustn't help her husband out" (Ray 1932, p. 11).

CONCLUSION

Domestic money is thus a very special kind of currency. It would be difficult to understand its changing meanings, allocation, and uses in the United States between the 1870s and the 1930s without an awareness of the new cultural "code" and accompanying social changes. In the case of married women, their money was routinely set apart from real money by a complex mixture of ideas about family life, by a changing gender power

[15] The relative importance of gender vs. the source of income in distinguishing between the two kinds of money remains unclear. For instance, Thomas and Znaniecki (1958, p. 165) suggested that the qualitative difference between the money a peasant got from selling a cow and the money his wife obtained from selling eggs and milk was not marked by gender but by the "different sort of value" represented by each type of money: the cow was property, while eggs and milk were income. Each type of money was set aside for different types of expenses. However, since, within the peasant economy, property belonged to a "higher economic class" than income, it is clear that gender did intervene in the social marking of the two monies; lower-value money was assigned to women.

structure, and by social class. Normative expectations of the family as a special noncommercial sphere made any overt form of market intrusion in domestic affairs not only distasteful but a direct threat to family solidarity. Thus, regardless of its sources, once money had entered the household, its allocation, calculation, and uses were subject to a set of domestic rules distinct from the rules of the market. Family money was nonfungible; social barriers prevented its conversion into ordinary wages.

But family culture did not affect its members equally. Thus, gender introduced a further type of nonmarket distinction in the domestic flow of funds: a wife's money was not the same kind of money as her husband's. When a wife did not earn wages, gender shaped many things.

1. *The allocation of her money.*—In the hierarchically structured family, husbands gave wives part of their income. To obtain additional money, wives were restricted to asking and cajoling or else stealing.

2. *The timing of this allocation.*—It either had no prescribed timing (dole method), so that to obtain money a wife had to ask each time, or it followed a weekly or monthly pattern (allowance).

3. *The uses of her money.*—Wives' money meant housekeeping money, a necessary allotment restricted to family expenses and excluding personal spending money. Pocket money was a budgetary expectation for husbands and children, but not for wives. Ironically, it appears that even shoplifting by married women was often collectivity oriented, as women stole from department stores "ribbons or laces to adorn the babies' clothes . . . or often little gifts for [their husbands]" ("Husband Who Makes His Wife a Thief" 1915).

4. *The quantity of her money.*—Wives usually received small sums of money. The amount of an allowance was not determined by the efficiency or even the quantity of a wife's domestic contributions but by prevalent beliefs of what was a proper amount. Therefore, a larger paycheck for the husband need not translate into a raise in the housekeeping allowance. On the basis of gender economics, it might in fact simply increase a husband's personal money (Oren 1973, p. 110; Land 1977).

Changes in gender roles and family structure influenced the meaning and methods of allocation of married women's money. The traditional dole or "asking" method became, as women's consumer role expanded, not only inefficient but also inappropriate in increasingly egalitarian marriages. The allowance, praised as a more equitable method of allocation in the early part of the century, was in turn condemned by home-efficiency experts of the 1920s and 1930s as an unsatisfactory payment for modern wives. The joint account emerged as the new cultural ideal. (For some recent changes in the allocation system of domestic money, see Blumstein and Schwartz [1985]; Hertz [1986]; Treas [1989].)

What about the uses of married women's money? In contrast to the

variability of allocation methods, the earmarking of a wife's housekeeping income for collective consumption remained remarkably persistent. Despite the increasing individualization of consumption patterns and the encouragement by home-economics experts to allot personal funds for each family member in the domestic budget, personal spending money for wives was still obtained by subterfuge or spent with guilt. (For some recent evidence of the enduring division between wives' collective money and husbands' personal spending money, see Wilson [1987].)

Gender marked women's money even when their income was earned. Women's wages were still earmarked as separate and treated differently. A wife's pin money, regardless of its quantity, and even when it brought the family a needed income, remained a less fundamental kind of money than her husband's wages. It was either collectivized or trivialized, merged into the housekeeping fund and thus undifferentiated from collective income or else treated as a supplementary earning designated either for family expenses (a child's education or a vacation) or for frivolous purposes (clothing or jewelry). (For contemporary evidence on restricted uses of wives' earnings, see Hood [1983, p. 62].) The trivialization of women's earnings extended beyond the private domestic economy. For the opponents of women's labor, pin money was a socially irresponsible currency, a luxury income that threatened the wages of the real provider (see Kessler-Harris 1982, pp. 100–101). Thus, despite strong statistical evidence that pin money was often in fact a "family coupling pin, the only means of holding the family together and of making ends meet," women's earnings were systematically stigmatized as "money for trinkets and trifles" (Anderson 1929, p. 921).

But the circulation of domestic money was not shaped by gender alone. Social class added a further set of social restrictions on the liquidity of money. The middle-class method of allocating household money was reversed in the working class, where wives handed out allowances instead of receiving them. The working-class wife's managerial power was thus greater than that of her middle-class counterpart, although her discretionary power may not have differed significantly.

Domestic money thus shows the limits of a purely instrumental, rationalized model of market money, which conceals qualitative distinctions among kinds of money in the modern world.[16] Domestic money is a

[16] Ironically, Max Weber's own family of origin provided evidence against his rational conception of money. According to Marianne Weber (1975, p. 141), Weber's father "was typical of the husbands of the time [1860s] . . . who needed to determine by themselves how the family income was to be used and left their wives and children in the dark as to how high the income was." Helene, Weber's mother, had no housekeeping allowance, "nor a special fund for her personal needs." I thank Marta Giel for this reference.

special money, not just a medium of economic exchange but a meaningful, socially constructed currency, shaped by the domestic sphere where it circulates and by the gender and social class of its domestic "money handlers." Age also marks domestic money. In fact, between the 1870s and 1930s, children's money was the subject of much controversy within families and among educational experts. The allowance emerged as the proper money income for children. But it had a different meaning, method of allocation, and uses from the allowances of middle-class wives or working-class men. Closely supervised by parents, it was defined primarily as educational money, teaching children proper social and moral values, as well as consumer skills (see Zelizer 1987).

The cultural and social "life" of domestic money also challenges the allegedly irrevocable dominance of the "cash nexus" in the modern world. To be sure, Marx and Engels ([1848] 1971, p. 11) were partly correct when they accused the bourgeoisie of reducing family relations "to a mere money relation." Money concerns did increasingly permeate the American household. In fact, in the 1920s, some observers ironically predicted that the national enthusiasm for rationalized housekeeping and budget making would turn "Home, Sweet Home" into "Home, Solvent Home," with "Ma and Pa a couple of cash registers, and the kiddies little adding machines" (Phillips 1924, p. 15). Yet, such nightmare visions of a commercialized world failed to capture the complexity and reciprocal aspects of the phenomenon of monetization. Money came into American homes but it was transformed in the process, as it became part of the structure of social relations and the meaning system of the family.

The case of domestic money is only one example, an empirical indicator of a complex social economy that remains hidden in the dominant economic paradigm of a single, qualityless, and rationalizing market money. This article attempts to lay some of the preliminary groundwork for a richer, alternative sociological model of special monies, one that argues for a plurality of qualitatively distinct kinds of money in the modern world, with each special money shaped by different networks of social relations and varying systems of meanings. No money, including market money, escapes such extraeconomic influences. For instance, at the turn of the century, not only the domestic dollar but other kinds of monies created different yet equally significant cultural and social dilemmas for American society. "Charitable money" raised questions about the proper uses and allocation of money as a gift among strangers or between kin, whether in the form of charity, wills, "ritual" gifts (for weddings, birthdays, bar mitzvahs, and Christmas), or even tipping, while "sacred money" provoked discussions about the moral quality of money: Under what conditions did money acquire sacred religious or moral value, and when did it become dirty money, defined as collectively or individually

demeaning? Or consider the definitional problems of "institutional money." How should money be allocated, regulated, and defined in the separate social world of a prison, a mental asylum, or an orphanage?

But an inventory of monies, however revealing, provides only a descriptive catalog. To develop a social theory of money, we must then explain the sources and patterns of variation among special monies, exploring how various structures of social relations and cultural values shape and constrain the qualitative life of different monies by (*a*) earmarking specified uses of money, (*b*) regulating modes of allocation, (*c*) designating proper users, and (*d*) assigning special symbolic meanings. The concept of multiple monies thus raises fundamental questions about the characteristics of social and cultural boundaries, such as: (1) What are the origins of boundaries between monies? What, for instance, are the differences between special monies imposed by a central authority (as in a prison) and monies defined through social interaction (as in the family)? (2) How do the social statuses of transactors affect the formation of special monies? (3) What determines the relative rigidity or permeability of boundaries between special monies? (4) What are the patterns of conversions between special monies? (5) Is there a moral ranking between special monies, as has been suggested for primitive monies (see Bohannan 1959)? (6) When and how do boundaries between special monies break down?

Developing a sociological model of multiple monies is part of a broader challenge to neoclassical economic theory. It offers an alternative approach not only to the study of money but to all other aspects of economic life, including the market (see Zelizer 1988). As I show in this article, economic processes of exchange and consumption are one special category of social relations, much as is kinship or religion. Thus, economic phenomena such as money, although partly autonomous, are interdependent with historically variable systems of meanings and structures of social relations.

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