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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 pay-offices 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!

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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