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THE HIERARCHY OF MONEY

by

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Economists have grappled with the concept of money for centuries. For many, 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? I will follow Minsky and treat the creation of money as a balance sheet operation² (1986). Money represents a debt-relation or a promise to pay that exists between human beings. It cannot be identified independently of its institutional usages, for money expresses a *social* relation (Foley 1987, Ingham 1996). 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 individuals enter into a forward contract, they are creating money. More specifically, "[m]oney is privately created when one party is willing to go into debt and another is willing to hold that debt" (Wray, 1990, p. 14). This debt (promise or IOU) is 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. It is because money is at once an asset and a liability that Minsky suggests treating it as a balance sheet operation. For Minsky, there is nothing special or elusive about money. In fact, he says, "everyone can create money; the problem is to get it accepted" (1986, p. 228). Let us 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 Minsky's treatment of money as a two-sided balance sheet phenomenon.

METALLISTS V.S. 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 come³. The Metallists and Chartalists arrive at markedly different conclusions, primarily as a result of their "different conceptions of the scope and method of economics" (Ingham, 1996, p. 511). Fundamentally, the distinction is one of 'real' versus 'monetary' analysis. Let us begin with an analysis of the Metallist vision.

For the Metallists, money, though it may come to serve other functions, 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 wanted⁴. Thus, barter exchange required the famous 'double coincidence of wants' so that two-party exchange could only occur if each of two individuals wished to exchange that which they possessed for that which was offered by another. Money is said to arise spontaneously in the private sector in order to eliminate some of the inefficiencies of barter. Thus, *society* ⁵ agrees upon some means of exchange called 'money' in order to overcome some of the transaction costs associated with barter.

The Metallists maintained that society settled on a metallic currency (gold, silver, etc.) so that the money would

have (intrinsic) value. They believed that money's ability to fulfill the medium of exchange function depended "on its being a commodity with an exchange value independent of its form as currency" (*ibid* , p. 512). This, it was argued, was necessary in order for 'real' analysis to proceed; that is, there had to be an independent exchange ratio for every commodity (including money) with every other commodity. As a producible commodity, money was really no different from any other commodity; it merely represented the exchange of any producible commodity for any other producible commodity (Davidson, 1997). Thus, the Metallist theory suggests that problems in coordinating trade within a barter economy naturally led society to settle on precious metals as a medium of exchange.

It is not always clear whether the precious metals used in exchange were in an 'unworked' state or whether they had been minted/coined; however, Goodhart notes that exchange using unworked precious metals is more like barter exchange than monetary exchange and that payments in this form have been extremely rare because it would be difficult to 'identify' the quantity and quality of the metal (1996). This 'identifiability' problem usually meant that commodity money required a stamp or guarantee before it could circulate widely. Aristotle clearly supported the Metallist theory put forth so far, claiming that:

"for 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 who performed this minting function - private individuals/institutions or the government/public sector. Goodhart points out that the minting function has most frequently been performed by government (1996).

That the State might play a role in the development of coinage is not troublesome to the Metallists' analysis. For them, the State's role 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 the private sector. With the 'identifiability' problem resolved, metallic coins were accepted as a medium of exchange because their precious metal content gave them value independent of their form as currency. In other words, metallic coins were accepted because they were themselves valuable commodities with certain properties⁶ which made them a convenient medium of exchange.

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" (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 the modern Metallists or Monetarists). Specifically, the elimination of a metallic backing appears to rob 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 was to be viewed as nothing more than a representation or a symbol of 'real' goods; its development was irrelevant. 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.

The early Metallists and modern Metallists (or Monetarists) bear important similarities. Both treat money as irrelevant to 'real' analysis⁷. In fact, "'real' monetary analysis derives from 'metallist' or 'commodity' theory" (Ingham, 1996, p. ??). In its modern form (Monetarist), exchange can be analyzed as if it occurred in a simple barter economy where money is neutral, serving only as a lubricant to the exchange mechanism; all that matters are 'real' exchange values derived from highly abstract exchange relations based on rational maximizing behavior. In addition to this *a* social treatment, the methodology of each is plainly *a* historical.

Both markets and exchange are said to predate 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 proof that barter economies ever existed (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 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 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's 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 market⁸. The Chartalist theory, however, places the State on center-stage. Specifically, Chartalists recognize the power of the State to demand that certain payments be made to it and to determine the medium in which these payments must be made. Chartalist theory has a long history, recognized at least 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" ([1776] 1904, p. 312).

What may appear banal on 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 recognized, 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. Smith's theory, unlike the Metallists', can be applied equally convincingly whether the medium in which taxes 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 imbue this medium with value for it will be demanded as a means of discharging the tax liability. Thus, irrespective of any inherent *property* or *function* they may come to serve, the value of these monies depends on their usefulness in settling tax or other liabilities to the State. Though the above quote is clearly consistent with the Chartalist view, Smith did not fully develop the theory in any of his writings.

The Chartalist theory, in its most general form, is perhaps best described in 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 summarized due 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 theory. For him, the State determines the money of the economy by declaring what it will accept in payment to itself. Thus, while the Metallists dis-empowered 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. 31-38). 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. 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" (*ibid*, 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).

Recall the Metallist story that, before they could circulate widely, early coins often required a stamp or guarantee indicating their precious metal content. Knapp referred to the weighing of coins *prior* to their use in payment as 'ponderal production'; this, of course, is a practice that continues with modern coinage (*ibid*, p. 28). When the coins are initially struck, and for some time thereafter, they will retain their original metal weight. After some time in circulation, however, they will begin to wear down and their weight will diminish. Knapp points out that if their continued use requires "weighing *at the time of payment*" in order to establish their validity", then this is evidence of a "pensatory practice" and these pieces are not Chartal (*ibid*, p. 28; *my emphasis*). If, however, their validity is retained *after their wearing down has been noticed*, then their continued use is in accordance with proclamation and they are Chartal.

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 objected to this, and designed coins with 'ridges' to prevent debasing. To understand why the State objected to the debasement of precious metal coins, we must understand the reason for taxation. 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 State⁹. Thus, the State controlled the extent to which coined gold could be used to reduce tax liabilities.

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 will eliminate \$35 of one's tax liability. The coin, whether stamped 'one ounce' or '\$35', will reduce one's nominal tax liability by \$35, *regardless of its weight*, at the time it is presented at State pay offices. Thus, it is the conversion rate, determined by proclamation, not its precious metal weight, that determines its validity as a means of payment at State pay offices. Knapp, therefore, opposed the Metallist view, for he realized 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. 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* " (1930, p. 3). Keynes, again like Knapp, recognized 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

"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" (*ibid* , p.4).

Thus, the State determined the unit of account and the means of payment, or the 'thing' which would 'answer' to debts denominated in the unit of account (*ibid* , pp. 4-5).

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" (1986, p. 231).

By recognizing 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 his own definition, 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; the State's currency is an asset to the individual citizen (a tax credit) and a liability to the State itself.

In sum, Smith, Knapp, Keynes and Minsky recognized 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 certain money derives from its acceptance at State pay-offices, not from any inherent value within/backing the currency itself. That is, support for the Chartalist vision of money as a 'creature of the State' can be found in each.

This paper began by defining the creation of money as a two-sided balance sheet operation where acceptance of *another's debt* was critical. Under the Metallist vision, individuals are said to *collectively decide* to use precious metals in order to aid the exchange process. Thus, the balance sheet operation that Minsky had in mind is not applicable. That is, accepting precious metal (collectively agreed on as a medium of exchange) does not require accepting the debt of another. These metals are simply producible commodities and do not represent the debt of the State (or other entity). Furthermore, exchange using collectively agreed upon metals is not monetary exchange since money, which is at once an asset and a liability, has not been created. Thus, under the Metallist conception, the collective decision to adopt precious metal as a medium of exchange is inconsistent with Minsky's view that money represents a debt-relation.

In contrast, the 'Anti-Metallists' or Chartalists see the creation of money as contingent upon the State's proclamation that a certain currency 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 supported by Minsky is, therefore, consistent with his treatment of money as a two-sided balance sheet operation.

THE HIERARCHY OF MONEY

In the Treatise on Money, 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 Minsky referred to as a "hierarchy of monies" (1986, p. 228). Let us examine the structure/composition of the hierarchy using the Chartalist theory supported by Minsky.

The 'description' or 'title' referred to by Keynes is the unit in which all money in the hierarchy is denominated. In the US, 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 the dollar, and not some other unit, 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 in the US makes the dollar the standard unit of account for all money in the hierarchy. 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, 1997).

Recall that money represents a promise to pay/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). 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 examine 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 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 \$0.32 stamp will be accepted as payment for delivery of a small envelope, an individual/institution must agree to hold the stamp (to 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 used as a means of payment (affixed to a letter and relinquished for delivery). If we apply this logic to all Chartal money, we could, theoretically, construct a list of every conceivable form of money. 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. One could anticipate the disaster ahead if we were planning to describe the 'hierarchy of money' in detail. It will, therefore, be useful to narrow our focus and to proceed with a general discussion of 'the hierarchy'.

We can consider the group of potential promise-makers to be: the government, banks, firms (non-bank) and households. When a firm makes a promise (issues, say, commercial paper), it promises to convert this promise, on some specified date, into a bank's promise, a demand deposit. Likewise, when a household makes a promise (issues debt to, say, a credit card company), it promises to convert its promise into a bank's promise. In the above, the "secret" to getting household and business debts accepted is a proclamation that they are convertible - at least potentially - into the promise of someone higher in the pyramid¹⁰. Commercial paper, bonds, and credit card debt will (assuming the issuer does not default) be retired by delivering the promise of a bank. This condition does not, however, apply to all money in the hierarchy.

Unlike households and firms, State promises and certain bank promises would be accepted even if they were not convertible into anything else. 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. Referring to the money of the system, he notes that:

"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 acceptance delimits the monetary system. By the expression "State acceptance" is to be understood only the acceptance at State pay offices where the State is the recipient" (Knapp, 1924, p. 95).

James Tobin also recognizes the ability of creditors to influence acceptability, stating that "[i]f my creditors will take marbles in settlement of my debts to them, why should not I in turn take marbles from my debtors?" (Tobin, 1998, p. 27). Similarly, though focusing on bank deposits, Minsky realized that acceptance might depend on the willingness of creditors to accept bank money, stating that, "[t]he exchange value of deposits is determined by the demands of debtors for deposits needed to fulfill their commitments"¹¹ (1986, p. 231). Thus, bank promises (demand deposits) will be accepted by the public not because they are convertible into anything else but because they are accepted in payment to creditors. Likewise, the State's promises do not depend on convertibility into anything else¹². As 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 not convertibility into something else but acceptance in payment to one's creditors (in particular, the State).

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. We can, however, think of the State's promises as the 'ultimate' promise in the pyramid. The State's money, which is backed by the power of the State to make and enforce laws, is the most acceptable money in the pyramid. Since it is the law that individuals must pay taxes, they must (assuming they wish to avoid punishment) acquire the State's money. In a sense, the State, unlike any other issuer of promises, can 'force' the acceptance of its liabilities; in order for the taxpaying population to settle their obligations to the State, they must accept the State's money¹³.

It is fairly easy to see how the State's liabilities/promises may come to serve as a means of payment and a medium of exchange in *private* transactions. As Lerner recognized, the modern state can, by accepting it at its pay-offices, "make anything it chooses generally acceptable as money" (1947, p.313). He stressed that it is not

their status as legal tender but their acceptance in payment of taxes that makes the State's promises the most acceptable/liquid money in the hierarchy. He maintained that it is not enough for the State to simply declare that something is money (i.e. to define it as legal tender) for "its general acceptability, which is its all-important attribute, stands or falls by its acceptability by the state" (*ibid*, 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" (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.

The promises 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 can not necessarily be "quickly converted into the medium of exchange *with little loss of value*" (*ibid*, 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.

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 not considered equally acceptable. Only the State, through its power to make and enforce tax laws, can issue promises which its constituents must accept if they are to avoid penalties. Acceptance of both State and bank money depends on 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. All other money gains acceptance by virtue of its convertibility (at least potentially) into *relatively* more acceptable promises. These monies are not accepted at State pay-offices and, thus, are unlikely to become widely accepted means of payment.

CONCLUSION

Throughout the history of economic thought, many economists have devoted themselves to the study of money. Today's debates are grounded in the early Metallist v.s. Chartalist debates of the sixteenth and seventeenth centuries. At issue is the nature of money and the inspiration for its use. The Metallists argue that money evolved as a means of reducing some of the inefficiencies of barter. Precious metals, they maintain, were collectively settled upon as a convenient medium of exchange, and money's value derived from its precious metal content. In contrast, the Chartalists argue that the use of money is based primarily on the power of the State and that its value derives from its usefulness in settling certain obligations to the State (in particular, tax liabilities). The Chartalist view found in Smith, Knapp, Keynes and Minsky suggests that the State determines the relevant money of the system. It does so not only by determining the unit in which nominal tax liabilities will be denominated, but also by proclaiming what 'thing(s)' will be accepted in payment of these debts.

Minsky viewed money as a two-sided balance sheet operation where its creation depends on the acceptance of another's debt. Applying this definition of money to the Metallist and Chartalist views, we find that only the Chartalist view is consistent with Minsky's treatment of money. That is, only the Chartalist theory views the creation of money as a two-sided balance sheet operation where the acceptance of another's debt is possible. All Chartal money gains validity by proclamation that it will be accepted as a means of payment. Thus, the proclamation immediately creates a potential debtor. Acceptance of this proclamation implies the creation of money and gives rise to a creditor. In contrast, under the Metallist vision, the collective decision to accept precious metals as media of exchange does not imply the acceptance of another's debt and, thus, does not signify the creation of money. That the Chartalist view is consistent with Minsky's treatment of money as a balance sheet operation is not surprising since support for the Chartalist theory can be found in Minsky.

Many economists have noted the existence of a 'hierarchy of money' or a 'debt pyramid' in all modern societies (Minsky, 1986; Foley, 1987; Wray, 1990). An understanding of the structure/composition of the hierarchy can be gained by an application of the Chartalist theory. Specifically, the unit in which the State chooses to denominate nominal tax liabilities determines the unit in which all money in the hierarchy is denominated. For example, if the State declares that taxes are due in dollars, the dollar will be the 'title' or 'description' to which all relevant money must answer. The most relevant or 'decisive' money in the hierarchy is that which is accepted at State pay-offices. In the US, the 'decisive' money of the system is State-issued currency (fiat money) and bank money (demand deposits). Both are, by virtue of their acceptance in payment of taxes, situated high among the monies of the hierarchy. But the State's liabilities reign supreme as the only promises in the hierarchy which cannot be refused (by the State's pay offices or by taxpayers wishing to avoid punishment).

References

Clower, R. W. 1984. "A Reconsideration of the Microfoundations of Money." Money and Markets: Essays by Robert W. Clower, edited by D.A. Walker, Cambridge: Cambridge University Press, pp. 81-89.

Crawford, Michael. 1970. "Money And Exchange In The Roman World." Journal of Roman Studies, Vol. 60, pp. 40-48.

Davidson, Paul. 1997. "Can Money Be Neutral Even In The Long Run? Chartalism V.S. Monetarism." Unpublished paper.

Foley, Duncan. 1989. "Money in Economic Activity." The New Palgrave: Money, edited by John Eatwell, Murray Milgate, and Peter Newman. New York and London: W.W. Norton, pp. 519-525.

Friedman, Milton. 1969. "The Optimum Quantity of Money," The Optimum Quantity of Money and Other Essays, London: Macmillan, pp. 1-50.

Goodhart, Charles. 1996. "The Two Concepts of Money and The Future of Europe." Unpublished paper.

Heinsohn, G. and Steiger, O. 1989. "The Veil of Barter: The Solution to the 'Task of Obtaining Representations of An Economy in Which Money Is Essential.'" Inflation, Income Distribution and Capitalist Crisis, edited by J.A. Kregel. London: Macmillian, pp. 175-204.

Ingham, Geoffrey. 1996. "Money is a Social Relation." Review of Social Economy, Vol. LIV, No. 4, pp. 507-529.

Keynes, J.M. 1930. A Treatise on Money. New York: Harcourt Brace.

Kiyotaki, N. and R. Wright. 1987. "Acceptability, Means of Payment and Media of Exchange." The New Palgrave: Money, edited by John Eatwell, Murray Milgate, and Peter Newman. New York and London: W.W. Norton, pp. 3-5.

- Knapp, G.F.** 1905. The State Theory of Money. Abridged and trans. By H.E. Batson, London: Routledge and Kegan Paul.
- Kraay, C.M.** 1964. "Hoards, Small Change and the Origin of Coinage." Journal of Hellenic Studies, Vol. 84, pp. 76-91.
- Laidler, David.** 1987. "Fiat Money." The New Palgrave: Money, edited by John Eatwell, Murray Milgate, and Peter Newman. New York and London: W.W. Norton, pp. 20-21.
- Lerner, Abba P.** 1947. "Money As A Creature Of The State." American Economic Review, Vol. 37, No. 2, pp. 312-317.
- Menger, Karl.** 1892. "On The Origin of Money." Economic Journal, Vol. 2, No. 6, pp. 239-255.
- Minsky, Hyman P.** 1986. Stabilizing An Unstable Economy. New Haven: Yale University Press.
- Ofonagoro, Walter.** 1979. "From Traditional to British Currency in Southern Nigeria: Analysis of a Currency Revolution, 1880-1948." The Journal of Economic History, Vol. 39, No. 3, pp. 623-654.
- Tobin, James and Stephen S. Golub.** 1998. Money, Credit, and Capital. New York: Irwin/McGraw-Hill.
- Wray, L. Randall.** 1990. Money and Credit in Capitalist Economies: The Endogenous Money Approach. Aldershot: Edward Elgar.
- , 1993. "The Origins of Money and the Development of the Modern Financial System." Levy Working Paper #86, The Jerome Levy Economics Institute of Bard College.
- , 1997. Unpublished book manuscript.
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Notes

2. Implicit in this treatment is the notion that money evolves along with contracts and private property. Balance sheets cannot predate money because they are used to record money-denominated assets and liabilities. For a much more detailed analysis of this process, see (Wray, 1993).
3. These debates continued between the 'Currency' and 'Banking' schools in the early nineteenth century and have culminated in the 'Monetarists' v.s. 'Keynesian' debates today. Although the classifications of the opponents has changed, the essence of their disputes remains grounded in the early 'Metallist' v.s. 'Chartalist' debates.
4. This 'real' analysis of barter exchange is conducted despite little evidence that barter-economies have ever existed (Heinsohn and Steiger, 1989).
5. Almost any mainstream economics textbook attributes some individual advantage to the use of money in exchange. Specifically, rational maximizing agents are said to accept money because there is an *individual* advantage in doing so. But, as Ingham 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 (1996).
6. Divisibility, durability and portability are among the properties usually cited (Clower, 1984).
7. 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" (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).

8. 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.

9. 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.

10. We can think of Chartal money which is not strictly dollar-denominated as 'potentially convertible' into a dollar-denominated promise. For example, the cloak-room token is technically coat-denominated money. That is, the cloak-room is promising the return of a coat, not the payment of some amount of money. If, however, the attendant should accidentally lose, damage, etc. a coat, the holder of the token may be compensated for the monetary value of the coat. Thus, the token is *potentially* convertible into a State or bank promise (cash or check).

11. Although Minsky was primarily concerned with situations where the bank was the creditor, the same argument can easily be extended to the State. That is, once bank money becomes accepted in payment of taxes (or other liabilities to the State), the State becomes the creditor, and debtors will demand bank money in order to fulfill their obligations to the State.

12. 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.

13. It might be objected that because bank money is accepted in payment of taxes, citizens needn't accept/acquire the State's money. This is not true. The State accepts bank money because of its 'special' relationship with banks. Specifically, all depository institutions in the US must hold a designated fraction of legal reserves (State money!) against demand/specified time deposits. When an individual pays her taxes with bank money (draws on her checking account), a conversion to State money occurs (though the clearing process). Thus, while it may appear that the government accepts bank money in payment of taxes, it ultimately accepts only its own currency.