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## Working Paper No. 252

### Modern Money

by

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What is money and where did it come from?

We all know the traditional answers to these questions. Our homogenous-globule-of-desire forefathers<sup>1</sup> were inconvenienced by barter until they spontaneously hit upon the idea of using tobacco, furs, huge rocks, landmarks, and wives as media of exchange.<sup>2</sup> Over time, greater efficiency was obtained as homo economicus coined precious metals, and market efficiency was enhanced by free banks, which substituted paper money backed by precious metal reserves.<sup>3</sup> All would have been fine and dandy except that evil governments came along, monopolizing the mints, creating central banks that debased the currency, and interfering with the invisible hand of the market. This finally resulted in abandonment of commodity money, substitution of a fiat money, and central bank-induced inflation. If only we could return to that Peter Pan and the Lost Boys, Never-Never (Laissez-Faire) Land, free of Captain Hook and the Crocodile (Central Bank and Government), with privately supplied free bank money greasing the mighty wheels of entrepreneurial commerce!

The problem is that the Never-Never land imagined by the Paul Samuelsons and George Selgins simply never, ever, existed. There is no evidence of barter-based markets (outside trivial prisoner-of-war cases), and all the evidence about the origins of money points to state involvement. This is not to say that there have never been private monies, nor is it my intention to claim too much of a role for government in the evolution of the financial system. However, what I will argue here is that from the beginning, government played an important role in determining what would function as unit of account, which, as Keynes argued, is "what really counts". I will be brief on the historical account of the origins of money, not because this is uninteresting, but rather because it is tangential to the main concern—modern money. Even if the Samuelsonian story about the origins of money were true (which it is not), all modern states operate with a fiat money, rather than with Samuelson's "tobacco, furs, and wives" as money. However, some knowledge of history does provide illumination on the nature of what could be called modern, or state, money.

### A Brief History of Money

Anthropological evidence is often used in an attempt to support the conventional story. For example, exchange among tribes, or "purchase" of wives through exchange of primitive valuables within tribes, is offered in support of the story of barter-based market exchange, while use of cowry shells or huge stone wheels (as in the case of the Uap islanders<sup>4</sup>) as "media of exchange" is supposed to demonstrate the ancient origins of money. However, on closer inspection, it becomes obvious that these examples do not support the Samuelsonian hypothesis about the origins of markets and money. Exchanges in tribal society were ceremonial in nature, an outgrowth of the practice of reciprocity, and were designed to bring tribal members closer together rather than to maximize the advantage of the "transactors". Indeed, the parties to the "transaction" usually had no choice as to the items to be exchanged, and the purpose of many such exchanges was to equalize wealth. (Polanyi 1971, Dalton 1982, Malinowski 1921) "Relative prices" were never subject to the "higgling and haggling" of market forces but were set by custom. (Polanyi 1971) Similarly, one finds on close examination that there was no "universal equivalent" or "numeraire" in which prices could be quoted, and the "primitive monies" turn out to be at most "single purpose money" or, better, "primitive valuables" rather than generalized media of exchange. (Neale 1976, Dalton 1982, Malinowski 1921) It appears quite unlikely that markets developed out of tribal

ceremonial exchange, and improbable that "general purpose" money could have evolved from primitive valuables.

It is more likely that the practice of measuring value came from the elaborate compensation schedules developed to prevent blood feuds; these required measuring the debt one owed for injuries--actual and imagined--inflicted on others. The wergeld, bridewealth, cumhal, and so on, were specific and were established in public assemblies--they were not the result of individual higgling and haggling.<sup>5</sup> However, there was not much reason to standardize wergeld payments, since the compensation schedules fixed payment in items commonly available. It is far more likely that standardization occurred with the development of upper classes and the temple communities, and later, the palace communities. All the evidence points to the common origins of money, debts, and writing in the tax levies of the palaces. In the beginning the temples might have simply demanded that each village provide ten percent of everything produced, but with the development of the palace and the expansion of its domain, tax payments became standardized in terms of quantities of wheat or barley grain. These grain standards formed the basis for all the early money-of-account units, such as the mina, shekel, lira, and pound. Money, then, originated not as a cost-minimizing medium of exchange, but as the unit of account in which debts to the palace (tax liabilities) were measured. As the area over which taxes were imposed increased, palaces found it useful to "farm-out" tax collections to private tax farmers. The first evidence of lending at interest comes from the practice of payment of taxes by the tax farmers, who then took bond servants and charged interest on the village tax debts. With interest rates normally running at thirty-three percent, interest was capitalized and the wealth and power of the tax farmers grew until the debts were cancelled by the emperor in a periodic "redemption" or "year of jubilation"--normally in the thirtieth year of his reign, or upon his death when a new emperor began with a "clean slate". Of course, much of the terminology (redemption, forgiveness, hallelujah) as well as the attitudes toward interest (labelling it usury) carried through to religious beliefs and civil practice.<sup>6</sup>

The clay shubati ("received") tablets record these and other debts. (Innes 1913) Each tablet indicated a quantity of grain, the word shubati, the name of the person from whom received, the name of the person by whom received, the date, and the seal of the receiver. The tablets were either stored in temples where they would be safe from tampering, or they were sealed in cases which would have to be broken to get to the tablet. Unlike the tablets stored in temples, the "case tablets" could and did circulate. A debt could be cancelled and taxes paid by delivering a tablet recording another's debt, whereupon the case which recorded the cancelled debt could be broken to verify the debt terms.

And so it went for several thousand years before King Pheidon of Argos issued the first coin in the seventh century BC.<sup>7</sup> In other words, taxes, debts, and price lists existed for thousands of years, with "fiat money" clay tablets circulating before anyone had the bright idea of reducing transactions costs by creating money through stamping precious metals as coins. Were coins the first money? Were they created to reduce transactions costs in markets? Did they reduce transactions costs? Were coins important in market exchanges? No! Markets got along just fine without coins both before and after their invention. From the earliest times, markets operated on the basis of credits and debits--even the smallest sales to consumers took place on credit, which would be carried on the books of the merchant for years before being cleared.<sup>8</sup> Furthermore, if anything, coins increased market transaction costs, as we shall see in a moment.

Let us skip forward a couple of thousand years to medieval Europe, where coins were certainly well-known, but little used. As Mitchell Innes said: "For many centuries, how many we do not know, the principal instrument of commerce was the tally." (Innes, 1913, p. 394) This was a stick of hazelwood, notched to indicate the amount of the purchase or debt, created when the "buyer" became a "debtor" by accepting a good or service from the "seller" who automatically became the "creditor". The date and the debtor's name were written on two opposite sides of the stick, which was then split so that the notches were cut in half with the name and date on both pieces of the tally. The split was stopped about an inch from the base of the stick so that one piece, the "stock" was longer than the other, called the "stub". The creditor would retain the stock (from which our terms capital and corporate stock derive) while the debtor would take the stub (a term still used as in "ticket stub") to ensure that the stock was not tampered. When the debtor retired her debt, the two pieces of the tally would be matched to verify the amount of the debt. Of course, wooden tallies were not the only records as there was nothing unique about hazelwood. There appear to be copper tallies from Italy from 1000 to 2000 years B.C., purposely

broken at the time of manufacture to provide a stock and stub. And, really, the encased shubati tablets were nothing more than tallies, with the case resolving the tampering problem so that no stub was required.

A merchant holding a number of tally stocks against customers could meet with a merchant holding tally stocks against the first merchant, "clearing" his own tally stub debts. In this way, great medieval "fairs" were developed to act as "clearing houses" allowing merchants to settle their mutual debts and credits without the use of a single coin. While textbooks teach that these fairs were great, early, markets, the retail trade probably originated as a sideline to the clearing house trade.<sup>9</sup>

There are, then, several problems with the textbook, marketplace story. First, the tally debts (in the form of clay tablets) are at least 2000 years older than the oldest known coins. Second, the denominations of all the early precious metal coins (even the least valuable) were far too high to have been used in everyday exchanges. For example, the most common denomination of the earliest electrum coins would have had a purchasing power of about ten sheep.<sup>10</sup> They might have sufficed for wholesale trade of large merchants, but they could not have been used in day-to-day retail trade. It is also quite unlikely that coins would have been invented to facilitate trade, for Phoenicians and other peoples with sophisticated trade managed without coins for many centuries.

Indeed, the introduction of coins would have been a less efficient alternative in most cases. While we are accustomed to a small number of types of coins (always issued by government, with perhaps one coin for each denomination) the typical case until recently was a large variety of coins, sometimes including many with the same face value but different exchange value, issued by a wide variety of merchants, kings, feudal lords, barons, and others. Indeed, in Gaul at one point there were 1200 different coinages.<sup>11</sup> Note that the textbook story relies on choice of a particular precious metal precisely to reduce the transactions costs of barter. However, in reality, the poor consumer was faced with a tremendous number of coins of varying weight, denomination, alloy, and fineness. Indeed, it is difficult to believe that the typical member of these societies would have been more able to assess the value of a coin than she would be able to assess the value of, say, a cow. Rather than reducing transactions costs by using precious metals, it would likely have reduced transactions costs to use cows! Note it does no good to argue that cows are less divisible, because the coins were far too valuable to have been used in daily transactions, anyway. In other words, lower-cost alternatives to coin were already in use. Surely hazelwood tallies or clay tablets had lower non-monetary value than did precious metals. Thus, it is unlikely that metal coins would be issued to circulate competitively (for example, with hazelwood tallies) unless their nominal value were well above the value of the embodied precious metal. So it is not surprising that the value of early coins was almost always well above the value of the embodied precious metal.

What then are coins, what are their origins, and why are they accepted?

Coins appear to have originated as government "pay tokens" (in G.F. Knapp's colorful phrase<sup>12</sup>), as nothing more than evidence of debt. Given the large denomination of the early coins and uniform weight (although not uniform purity--which probably could not have been tested at the time), coins were most likely invented by kings to make a large number of uniform payments in the form of precious metal to reduce counterfeiting. (Cook 1958, Redish 1987) Indeed, according to R.M. Cook (1958), coins were probably invented to pay mercenaries. It was likely recognized from the very beginning that the purpose of the coin was to give the population a convenient means for paying taxes. Use of these early coins as a medium of exchange was probably an "accidental consequence of the coinage"<sup>13</sup>, and not the reason for it.<sup>14</sup> So from the very beginning, coins were intentionally minted to provide "state finance". This explains the relatively large value of the coins, which were evidence of the state's debt to "soldiers and sailors".<sup>15</sup> The coins were actually nothing more than "tallies" as described above--evidence of government debt.

Coins, then, were mere tokens of the crown's debt, like the tally. But why on earth would the crown's subjects accept hazelwood tallies or token coins? Innes supplies the answer:

The government by law obliges certain selected persons to become its debtors. This procedure is called levying a tax, and the persons thus forced into the position of debtors to the government must in theory seek out the holders of the tallies and acquire from them the tallies by selling to them some commodity in exchange for which they may be induced to part with

their tallies. When these are returned to the government treasury, the taxes are paid. (Innes, 1913, p. 398)

Indeed, until recent times, the vast majority of revenues collected by inland tax collectors in England as well as the majority of government spending were in the form of the tallies. Each taxpayer did not have to individually seek-out a crown tally, for matching the crown's creditors and debtors was accomplished "through the bankers, who from the earliest days of history were always the financial agents of government". (Innes, op. cit., p. 399) Note, also, that use of the hazelwood tallies continued in England until 1826 when they literally went out in a blaze of glory. After 1826, when tallies were returned to the exchequer, they were stored in the Star Chamber and other parts of the House of Commons. In 1834, in order to save space and economize on fuel it was decided that they should be thrown into the heating stoves of the House of Commons. "So excessive was the zeal of the stokers that the historic parliament buildings were set on fire and razed to the ground." (Davies, 1997, p. 663)

The inordinate focus of economists on precious metal coins and market exchange then appears to be misplaced. The key concept is debt, and specifically, the ability of the state to impose a tax debt on its subjects; once it has done this, it can choose the form in which subjects can "pay" the tax. Certainly the government's tokens can also be used as a medium of exchange, but this derives from its ability to impose taxes, and indeed is necessitated by imposition of the tax (if one has a tax liability but is not a creditor of the crown, one must offer things for sale to obtain the crown's tokens). Private coinage (such as that of Gaul), then, like the government coins, are tokens of private indebtedness. These could be issued for example by feudal lords or ecclesiastics, as their debt which they then accepted as payment of feudal rent or tithes. (Innes 1913, MacDonald 1916) Clearly, acceptability of these private coins in "private pay communities" was not contingent on the nonmoney value of the coins (for example, by the precious metal contained in them, or even by the promise of redeemability for precious metal or royal coins—see the discussion below).

There are other matters that we could go into, such as the wide-spread belief that evil kings purposely debased their coins by reducing gold content to obtain seigniorage. However, the value of the coins was not generally determined by the gold content anyway.<sup>16</sup> The coins were nothing but evidence of the crown's debt, hence, it would make no sense to debase them (by reducing precious metal content). Instead, kings periodically "cried-down" the nominal value of their token coins as a well-recognized method of taxation; rather than delivering one coin to pay a tax, one had to deliver two. I could also go into the relatively recent (eighteenth and nineteenth centuries) development of the gold standard, which occurred partly in response to the crying-down but also due to a great deal of confusion and mystification that came to see gold as the guardian of the value of the currency. This is quite interesting because it is only after the purposeful and visible hand of government imposed the gold standard (in the nineteenth century) that we finally achieved anything like the sort of monetary system that the orthodox economists imagine to have sprung from the minds of atomistic globules of desire. However, let us turn to the nature of modern money in the next section.

## **The Chartalist or State Money Approach**

The Chartalist or State Money approach can be traced from Adam Smith through to John Maynard Keynes. In this approach, money is a creature of the state. The state defines money as that which it accepts at public pay offices (mainly, in payment of taxes). Let us briefly examine the views of Smith, Knapp, and Keynes and some related arguments (primarily, of Minsky and Lerner) before we turn to the policy implications of this approach. (See Wray 1998 for a detailed treatment.)

Adam Smith observed that paper money often circulated at a discount to specie, especially if its redeemability for specie were uncertain or subject to a waiting period. However, according to Smith, if a paper money is accepted in payment of taxes, and if it is not excessively issued relative to the tax liability, then it will circulate at par with specie. Thus, a wise government could not only prevent depreciation of its paper currency, it might even cause paper money to carry a premium over specie!

A prince, who should enact that a certain proportion of his taxes should be paid in a paper money of a certain kind, might thereby give a certain value to this paper money; even though the term of its final discharge and redemption should depend altogether upon the will of the prince. If the bank which issued this paper was

careful to keep the quantity of it always somewhat below what could easily be employed in this manner, the demand for it might be such as to make it even bear a premium, or sell for somewhat more in the market than the quantity of gold or silver currency for which it was issued. (Smith 1937:312)

An essentially non-redeemable paper money could actually circulate above par even under a gold standard if it was legally required by the state in payment of taxes, and if the quantity issued were kept "somewhat below what could easily be employed in this manner". According to Smith, the key, then, is not really redeemability, nor is it "legal tender laws" that attempt to "render their paper of equal value with gold and silver" (Smith, 1937, p. 311); rather, it is the acceptance of the paper money in payment of taxes and the restriction of the issue in relation to the total tax liability that gives value to the paper money. Importantly, Smith recognized that this paper money need not be government fiat currency, for his argument was predicated upon the recognition that the paper money is the liability of the banking system. All that mattered was that the state accepted these bank notes in payment of taxes, in which case they could circulate at par, or even at a premium, relative to specie.

Georg Friedrich Knapp put forward a state theory of money, similar to, but more general than, what is known as the chartalist approach. This approach is opposed to the metallist view, according to which the value of money derives from the value of the metal standard (eg, gold or silver) adopted. More generally, according to Knapp, metallists try to "deduce" the monetary system "without the idea of a State". This, he believes, is "absurd" for "the money of a state" is that which is "accepted at the public pay offices". (Knapp 1924: vii-viii; see also Goodhart 1989) It is thus impossible to separate the theory of money from the theory of the state.

Chartalism is often identified with the proposition that legal tender laws determine that which must be accepted as means of payment, however, Knapp's analysis went further.

What forms part of the monetary system of the State and what does not? We must not make our definition too narrow. The criterion cannot be that the money is issued by the State, for that would exclude kinds of money which are of the highest importance; I refer to bank-notes: they are not issued by the State, but they form a part of its monetary system. Nor can legal tender be taken as the test, for in monetary systems there are very frequently kinds of money which are not legal tender... We keep most closely to the facts if we take as our test, that the money is accepted in payments made to the State's offices. Then all means by which a payment can be made to the State form part of the monetary system. On this basis it is not the issue, but the acceptation, as we call it, which is decisive. State acceptance delimits the monetary system. By the expression 'State-acceptation' is to be understood only the acceptance at State pay offices where the State is the recipient. (Knapp 1924:95)

Thus, it is the decision of the state to accept at state pay offices, and not legal tender laws, that creates a chartal money.

In Knapp's view, a chartal money is a "pay-token".

When we give up our coats in the cloak-room of a theatre, we receive a tin disc of a given size bearing a sign, perhaps a number. There is nothing more on it, but this ticket or mark has legal significance; it is a proof that I am entitled to demand the return of my coat. When we send letters, we affix a stamp or a ticket which proves that we have by payment of postage obtained the right to get the letter carried. The "ticket" is then a good expression....for a movable, shaped object bearing signs, to which legal ordinance gives a use independent of its material. Our means of payment, then, whether coins or warrants, possess the above-named qualities: they are pay-tokens, or tickets used as means of payment.... Perhaps the Latin word 'Charta' can bear the sense of ticket or token, and we can form a new but intelligible adjective—'Chartal.' Our means of payment have this token, or Chartal, form. Among civilized peoples in our day, payments can only be made with pay-tickets or Chartal pieces. (Knapp 1924:31-32)

Note that like the tin disc issued by the cloakroom, the material used to manufacture the Chartal pieces is wholly irrelevant—it can be gold, silver, or common metal; it can be paper. In any case, "Money always signifies a Chartal means of payment. Every means of payment we call money. The definition of money is therefore 'a Chartal means of payment'". (Knapp 1924:38)

According to Knapp, acceptability of bank notes in private transactions is not (as was commonly believed) due to the bank promise to convert these to specie. "A bank-note is a chartal document... and the bank issuing it is pledged by law to accept it for a payment of that amount.... An inconvertible bank-note, then, is not a nullity, but has this in common with the convertible bank-note, that it is a till-warrant of the bank." (Knapp 1924:134) What is important is that the note "is a private till-warrant available for payments to the bank....but clearly the customers of the bank can use it for payments between themselves, as they are sure it will be taken at the bank. These customers and the bank form, so to speak, a private pay community; the public pay community is the State." (Knapp 1924:134)

What makes bank notes state money? "Bank-notes are not automatically money of the state, but they become so as soon as the State announces that it will receive them in epicentric payments [payments to the state]." (Knapp 1924:135) If the state accepts notes in payment to the state, then the business of the bank is enhanced "for now everybody is glad to take its bank-notes since all inhabitants of the State have occasion to make epicentric payments (e.g. for taxes)." (Knapp 1924:137) In times of distress (frequently during wars that required finance provided by banks), however, governments would pass laws ending convertibility, announce that the state would henceforth make payments in terms of the bank notes, and accept payment in the form of the bank notes. (Knapp 1924:143) Usually, this was for one bank only—the bank which became the central bank.

Keynes's account was quite similar. According to Keynes, the "money of account" is the "primary concept" of a theory of money. (Keynes 1930:3) In turn, "Money itself, namely that by delivery of which debt-contracts and price-contracts are discharged, and in the shape of which a store of General Purchasing Power is held, derives its character from its relationship to the Money-of-Account, since the debts and prices must first have been expressed in terms of the latter." (Keynes 1930:3) He further clarified the distinction between money and the money of account: "the money-of-account is the description or title and the money is the thing which answers to the description." (Keynes 1930:3-4)

Following Knapp, Keynes argued that the state determines what serves as the money of account as well as dictates what "thing" will be accepted as money.

The State, therefore, comes in first of all as the authority of law which enforces the payment of the thing which corresponds to the name or description in the contracts. But it comes in doubly when, in addition, it claims the right to determine and declare what thing corresponds to the name, and to vary its declaration from time to time—when, that is to say, it claims the right to re-edit the dictionary. This right is claimed by all modern states and has been so claimed for some four thousand years at least. (Keynes 1930:4)

The "Age of Chartalist or State Money" had been reached, when the state "claimed the right not only to enforce the dictionary but also to write the dictionary". (Keynes 1930:5) Let us emphasize that Keynes believed the "age of State money" to have begun "at least" four thousand years ago, as such, the state theory of money would certainly apply to all the "modern" economies including those living under the gold standard last century—even a gold-based commodity money is state money.

Privately issued debt—such as that issued by banks—might be accepted in settlement of transactions even if it is not declared by the government to be money; it can circulate "side by side" with "State Money". (Keynes 1930:6) However, the state might "use its chartalist prerogative to declare that the [bank] debt itself is an acceptable discharge of a liability". (Keynes 1930:6) "At the cost of not conforming entirely with current usage, I propose to include as State-Money not only money which is itself compulsory legal-tender but also money which the State or the Central Bank undertakes to accept in payments to itself or to exchange for compulsory legal-tender money." (Keynes 1930:6) In a footnote to this passage, he goes on: "Knapp accepts as "Money"—rightly I think—anything which the State undertakes to accept at its pay-offices, whether or not it is declared legal-tender between citizens." (Keynes 1930:6-7) Therefore, like Knapp, Keynes identified state "acceptation" as the key to determining what will serve as money.

As Keynes and Knapp recognized, "Member Bank-Money" is the primary "thing" answering to the "description"—money—used in private transactions (or, within the "private pay community"). When accepted in payment of taxes, it is also used in the "public pay community"—but it is not "definitive" from the perspective

of member banks because they must deliver reserves (mainly "Central Bank-Money") whenever taxes are paid using "Member Bank-Money". Similarly, Hyman Minsky argued "payments" among banks occur on the balance sheet of the Fed as banks use "Fed money" (reserves) to settle net debits from their accounts. "Whereas the public uses bank deposits as money, banks use Federal Reserve deposits as money. This is the fundamental hierarchical property of our money and banking system." (Minsky 1986:231) This is, of course, the same hierarchical arrangement noted by Knapp (in his public and private pay communities) and by Keynes.

Further, in an argument very similar to Knapp's, Minsky explained that people accept bank money in part because they can use it to meet their own commitments to banks. "Demand deposits have exchange value because a multitude of debtors to banks have outstanding debts that call for the payment of demand deposits to banks. These debtors will work and sell goods or financial instruments to get demand deposits." (Minsky 1986:231) In other words, according to Minsky, bank money has (nominal) value precisely because it can be used to retire debts to banks--it is, so to speak, accepted at "bank pay offices". The "borrower" retires his/her promise to the bank by delivering bank liabilities at the future date, and the need for bank liabilities to retire one's own liabilities to banks leads one to accept bank liabilities in payment for goods and services delivered. Rather than focusing on money as a medium of exchange, this focus is on money as means of payment--to retire liabilities.

This led Minsky back to the Smith/Knapp recognition that taxes give value to the money issued by the government.<sup>17</sup>

In an economy where government debt is a major asset on the books of the deposit-issuing banks, the fact that taxes need to be paid gives value to the money of the economy.... [T]he need to pay taxes means that people work and produce in order to get that in which taxes can be paid. (Minsky 1986: 231)

And even though most taxes are actually paid using bank money, because of the hierarchical arrangement, banks can make these payments to government only by using central bank money, that is, by losing reserves.

Returning to the primary state money theme, Abba Lerner insisted that

[W]hatever may have been the history of gold, at the present time, in a normally well-working economy, money is a creature of the state. Its general acceptability, which is its all-important attribute, stands or falls by its acceptability by the state. (Lerner 1947:313)

Just how does the state demonstrate acceptability?

It is true that a simple declaration that such and such is money will not do, even if backed by the most convincing constitutional evidence of the state's absolute sovereignty. But if the state is willing to accept the proposed money in payment of taxes and other obligations to itself the trick is done. Everyone who has obligations to the state will be willing to accept the pieces of paper with which he can settle the obligations, and all other people will be willing to accept these pieces of paper because they know that the taxpayers, etc., will accept them in turn. (Lerner 1947:313)

This seems to be about as clear a statement as one can find: even if it has not always been the case, it surely is now true and obvious that the state writes the "description" of money when it denominates the tax liability in a money of account, and defines the "thing" that "answers to the description" when it decides what will be accepted at public pay offices. The "thing" which answers to the "description" is widely accepted not because of sovereignty alone, not because of legal tender laws and not because it might have (or have had) gold backing, but because the state has the power to impose and enforce tax liabilities and because it has the right to choose "that which is necessary to pay taxes". This right, as emphasized by Keynes, "has been so claimed for some four thousand years at least".

As Lerner said "Cigarette money and foreign money can come into wide use only when the normal money and the economy in general is in a state of chaos." (Lerner 1947:313) Of course, when the state is in crisis and



loses legitimacy, and in particular loses its power to impose and enforce tax liabilities, "normal money" will be in a "state of chaos", leading, for example, to use of foreign currencies in private domestic transactions. In all other cases, it is state money which is used as the ultimate means of settlement, and state money is that which the state accepts in payment of taxes. All other monies used domestically are denominated in the state money, with their liquidity and acceptability related to (although not strictly determined by) the ease with which they can be converted to state money. In the Chartalist approach, the public demands the government's money because that is the form in which taxes are paid. The state uses taxes as a means of inducing the population to supply goods and services to the state, supplying in return the money that will be used to retire the tax liability. In the modern economy, it appears that taxes are paid using bank money, but analysis of reserve accounting shows that tax payments always lead to a reserve drain (that is, reduce central bank liabilities), so that in reality only the government's money finally discharges the tax liability.

### **Policy Implications Deriving from this View of Money**

The Chartalist or State Money view has important policy implications. Once the state imposes a tax on its citizens, payable in a money it creates, it does not "need" the public's money in order to spend; rather, the public needs the government's money in order to pay taxes. This means that the government can "buy" whatever is for sale in terms of its money merely by providing its money. Because the public will normally wish to hold some extra money, the government will normally have to spend more than it taxes; in other words, the normal requirement is for a government deficit. Nor are deficits to be feared. As Lerner argued, the implication is that all the conventional wisdom about government finance is confused and must be replaced with a "functional finance" approach. According to Lerner,

The central idea is that government fiscal policy, its spending and taxing, its borrowing and repayment of loans, its issue of new money, and its withdrawal of money, shall all be undertaken with an eye only to the results of these actions on the economy and not to any established traditional doctrine about what is sound or unsound. (Lerner 1943, p. 39)

He went on to list two "laws" of functional finance:

The first financial responsibility of the government (since nobody else can undertake that responsibility) is to keep the total rate of spending in the country on goods and services neither greater nor less than that rate which at the current prices would buy all the goods that it is possible to produce. (ibid)

When spending is too high, the government is to reduce spending and raise taxes; when spending is too low, the government should increase spending and lower taxes.

An interesting corollary is that taxing is never to be undertaken merely because the government needs to make money payments.... Taxation should therefore be imposed only when it is desirable that the taxpayers shall have less money to spend... (ibid p. 40)

If the government is not to use taxes to "make money payments", then how are these to be made? According to Lerner, the government should not turn to borrowing for the purposes of spending, because

The second law of Functional Finance is that the government should borrow money only if it is desirable that the public should have less money and more government bonds. (ibid)

In other words, the purpose of taxes and bonds is not really to finance spending as each serves a different purpose (taxes remove excessive private income while bonds offer an interest-earning alternative to money). Instead, the government should meet its needs "by printing new money" whenever the first and second principles of functional finance dictate that neither taxes nor bond sales are required. Government deficits do not require "borrowing" by the government (bond sales), rather, the government provides bonds to allow the public to hold interest-bearing alternatives to non-interest-bearing government money.

In summary, Lerner argued

Functional Finance rejects completely the traditional doctrines of "sound finance" and the principle of trying to balance the budget over a solar year or any other arbitrary period. In their place it prescribes: first, the adjustment of total spending (by everybody in the economy, including the government) in order to eliminate both unemployment and inflation, using government spending when total spending is too low and taxation when total spending is too high; second, the adjustment of public holdings of money and of government bonds, by government borrowing or debt repayment, in order to achieve the rate of interest which results in the most desirable level of investment; and third, the printing, hoarding or destruction of money as needed for carrying out the first two parts of the program. (ibid p. 41)

In this view, then, the supply of government money (or, base money) is determined by government purchases (including goods, services, and assets purchased by the treasury and the central bank); much of this currency (and reserves) will then be removed from circulation as taxes are paid. The rest ends up in desired hoards, or flows to banks to be accumulated as bank reserves. Thus, fiscal policy determines the quantity of base money supplied. Monetary policy then drains excess reserves (mainly as a result of government bond sales by the treasury, but also through open market sales by the central bank), removing them from member bank accounts, and replacing them with bonds voluntarily purchased (to earn interest).

As Boulding (1950) had argued, fiscal policy has more to do with the quantity of money issued by the government, while monetary policy has to do with regulation of financial markets (most importantly, with determination of short term interest rates). Once monetary policy has set an overnight interest rate (fed funds rate in the US or bank rate in the UK) target, it has no choice but to supply reserves when banks are short, or to drain reserves when banks have excess reserve positions (for otherwise, deficient reserves would drive the overnight rate up and excess reserves would drive it down, in either case, forcing the central bank to miss its targets). In other words, reserves are not discretionary from the point of view of monetary policy--the central bank must always accommodate--and neither is the supply of privately-issued money. The only policy instrument available to the central bank is the short-term interest rate.

Keynes said that the two outstanding features of the monetary economy are its tendency to generate an arbitrary and inequitable distribution of income and its failure to provide for full employment.<sup>18</sup> In large part, the arbitrary and inequitable distribution of income result from an interest rate that tends to be too high. Keynes argued that interest rewards no genuine sacrifice, and compounding ensures that the distribution will go to the rentier. He linked unemployment to the desire for liquidity; only monetary economies have unemployment. By definition, whatever is technically feasible in a nonmonetary economy can get done. If the pharaoh observes there are some idle men about, he puts them to work to build a pyramid. Financing can never get in the way of pyramid-building, although insufficient quantities of real resources or lack of technical know-how can act as real barriers. It is only the modern economy that appears to be financially unable to do what is technically possible. The US and Japan and Germany are supposed to have to suffer unemployment because they all are too poor to put the unemployed to work because their governments are "broke"--they simply do not have the money to employ those without jobs.

As the state or chartalist approach to money demonstrates, this is nonsense. Governments issue money to buy what they need; they tax to generate a demand for that money; and then they accept the money in payment of the tax. If a deficit results, that simply indicates the population wishes to hoard some of the money. The deficit is of no consequence to the government; it merely allows the population to save in the form of government money. If the government wants to, it can let the population trade the money for interest earning government bonds, but the government never needs to borrow its own money from the public. Taxes and bonds, therefore, have nothing to do with financing a government's spending, and, indeed, are after the fact as they necessarily follow spending rather than precede it.<sup>19</sup>

This does not mean that the deficit cannot be too big, that is, inflationary; it can also be too small, that is deflationary. At the end of the twentieth century, most of the developed capitalist countries have deficits that are so small that there is real danger of a massive, world-wide deflationary spiral. There are tens of millions of people who need jobs--by some accounts, there are more idle workers now than there were at the depths of the Great Depression. In a monetary economy, unemployment is de facto evidence that the deficit is too small. Any

modern economy can hire all those unemployed at some announced fixed wage, letting the deficit float as high as necessary, without worrying about inflation since by setting the wage, the government sets the price. In a very real sense, those employed in such a program become a labor "buffer stock" which will serve as a price-stabilizing "reserve army" of the employed. I have called this the employer of last resort program, and it is very similar to what Wendell Gordon, Bill Mitchell, Hyman Minsky, and Philip Harvey have all (independently) advocated in recent years.<sup>20</sup>

Sweden used to have something like this, and interestingly, justified its full employment program on the argument that Sweden was too small and too poor to afford unemployment, thus, it needed to have everyone working in order to compete. This, it seems to me, has got the thing the right way around. No economy that operates on the basis of a chartal money needs to accept unemployment either because it cannot "afford" to give jobs to the unemployed, or because full employment would be "too inflationary". Full employment can always be afforded (indeed, any rational analysis would argue that unemployment cannot be afforded), and if it is achieved through something like an employer of last resort program, it will actually be less inflationary than the current system--which relies on unemployment and waste of resources to reduce inflation pressures. Again, any rational analysis would conclude that a system that wastes resources must be more inflationary than a system which puts resources to work. As Keynes argued three-quarters of a century ago, on the precipice of the Great Depression,

The Conservative belief that there is some law of nature which prevents men from being employed, that it is 'rash' to employ men, and that it is financially 'sound' to maintain a tenth of the population in idleness for an indefinite period, is crazily improbable--the sort of thing which no man could believe who had not had his head fuddled with nonsense for years and years.... Our main task, therefore, will be to confirm the reader's instinct that what seems sensible is sensible, and what seems nonsense is nonsense. We shall try to show him that the conclusion, that if new forms of employment are offered more men will be employed, is as obvious as it sounds and contains no hidden snags; that to set unemployed men to work on useful tasks does what it appears to do, namely, increases the national wealth; and that the notion, that we shall, for intricate reasons, ruin ourselves financially if we use this means to increase our well-being, is what it looks like--a bogey. (Keynes 1972, pp. 90-92)

One can only hope that before the next great depression, the policy implications of modern money are understood.

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## Endnotes

1. The terminology comes from one of the most famous statements in the history of economic thought: "The hedonistic conception of man is that of a lightning calculator of pleasure and pains, who oscillates like a homogenous globule of desire of happiness under the impulse of stimuli that shift him about the area but leave him intact... Self-imposed in elemental space, he spins symmetrically about his own spiritual axis until the parallelogram of forces bears down upon him, whereupon he follows the line of the resultant. When the force of the impact is spent, he comes to rest, a self-contained globule of desire as before." (Veblen 1919, pp. 73-4)

2. According to Paul Samuelson, Inconvenient as barter obviously is, it represents a great step forward from a state of self-sufficiency in which every man had to be a jack-of-all-trades and master of none....If we were to construct history along hypothetical, logical lines, we should naturally follow the age of barter by the age of commodity money. Historically, a great variety of commodities has served at one time or another as a medium of exchange: ...tobacco, leather and hides, furs, olive oil, beer or spirits, slaves or wives...huge rocks and landmarks, and cigarette butts. The age of commodity money gives way to the age of paper money.... Finally, along with the age of paper money, there is the age of bank money, or bank checking deposits. (Samuelson, 1973, pp. 274-276)

3. See, for example, Selgin and White (1987) for an account of "free banking" in Never-Never Land.

4. See Furness (1910).

5. "The general object of these laws was simple, that of the provision of a tariff of compensations which in any circumstances their compilers liked to envisage would prevent resort to the bloodfeud and all the inconvenient social consequences that might flow therefrom.... The tariffs for damages were established in public assemblies, and the common standards were based on objects of some value which a householder might be expected to possess or which he could obtain from his kinsfolk. Since what is laid down consists of evaluations of injuries, not evaluations of commodities, the conceptual difficulty of devising a common measure for appraising unrelated objects is avoided." (Grierson 1977, pp. 19-21)

6. Michael Hudson, "How the debt overhead led to fiscal crises in antiquity: From Babylonia to Leviticus, financial tensions between tax collectors and creditors", lecture given at the Jerome Levy Economics Institute, 6 March 1998.

7. See Ines (op.cit.) and Heinsohn and Steiger (1983).

8. See McIntosh (1988, p. 557).

9. "The clearing houses of old were the great periodical fairs, whither went merchants great and small, bringing with them their tallies, to settle their mutual debts and credits.... At some fairs no other business was done except the settlement of debts and credits... Little by little as governments developed their postal systems and powerful banking corporations grew up, the value of fairs as clearing houses dwindled..." [Innes, op. cit., pp. 396-397].

10. See, for example, Cook (1958, pp. 257-262).

11. See MacDonald (1916, pp. 29-35).

12. See Knapp (1924).

13. See Crawford (1970 p. 46).

14. See also Cook (op. cit.).

15. See Innes (op. cit. p. 399).

16. "[T]he general idea that kings wilfully debased their coinage in the sense of reducing their weight and fineness is without foundation." (Innes, op. cit., p. 386)

17. This has been recognized by Goodhart, who argued "The use of such state-issued fiat currency was supported by several factors. First the state levies taxes and can insist that these be paid in state-issued money. This ensures that such fiat currency will have some value." (Goodhart 1989:36) Similarly, James Tobin argues "By its willingness to accept a designated asset in settlement of taxes and other obligations, the government makes that asset acceptable to any who have such obligations, and in turn to others who have obligations to them, and so on." (Tobin 1998:27)

18. Again, see Chapter 24 of Keynes's General Theory.

19. See Wray (1998).

20. See especially Gordon (1997) and Wray (1997).

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