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Tax-Driven Money: Additional Evidence from the History of Thought, Economic History, and Economic Policy

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TAX-DRIVEN MONEY: ADDITIONAL EVIDENCE FROM THE HISTORY OF THOUGHT, ECONOMIC HISTORY, AND ECONOMIC POLICY*

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I arrived as a new graduate student in the Economics Department at the Graduate Faculty of the New School for Social Research in the autumn of 1987. Nicholas Kaldor had passed away in 1986, and the Department organized a conference in collaboration with the then-new Jerome Levy Economics Institute of Bard College, to celebrate Kaldor's life and contributions. I received a small grant from the Levy Institute to assist Edward Nell and Willi Semmler in assembling the papers and editing the conference volume, *Nicholas Kaldor and Mainstream Economics: Confrontation or Convergence?* (Nell and Semmler, 1991). The all-star line-up included a super-session on endogenous money and credit and exogenous interest rates with James Tobin, Paul Davidson, Hyman Minsky, Marc Lavoie, and Basil Moore (Moore, 1991). When Basil Moore's book, *Horizontalists and Verticalists* (1988), appeared the following year, it was all the rage. The notions of endogenous money and exogenous interest rates appealed not only to those working within the Post Keynesian framework, but to Sraffians, Marxists, and Institutionalists as well. Soon thereafter, I assisted Nell in organizing another conference at the Levy Institute focusing on money, bringing together the Post Keynesians and the French and other Europeans working on the theory of the monetary circuit. Once more, I assisted in the conference volume, *Money in Motion: The Post Keynesian and Circulation Approaches* (Deleplace and Nell, 1996). Again, Basil Moore attended the conference and contributed to the volume (Moore, 1996).

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I met Basil and Sibs again at the Levy Institute in 1992, at the memorial conference for Tom Asimakopulos, and at the Fifth International Post Keynesian Summer Workshop in Knoxville, Tennessee in 1998. By that time, I was a Visiting Scholar at the Levy Institute, working with Randy Wray, another important contributor to the endogenous money approach, on the revival of the Chartalist approach to money. Chartalism acknowledges the endogeneity of money and exogeneity of interest rates, but with a slight modification. Under a modern money system (no gold standard or fixed exchange rates), bank money comprises the horizontal component of the money supply process, and short term interest rates are certainly exogenous, but the creation and destruction of money by the sovereign State constitutes the 'vertical' component of the money supply process (Mosler and Forstater, 1999; Wray, 1998).

The revival of the Chartalist concept of "tax-driven money" (TDM) has inspired a number of authors to go back to the classic (and not so classic) texts in the history of economics to find evidence of the perspective. We now know that the list of those expressing something of the TDM view includes Adam Smith and John Maynard Keynes from the gallery of all-time greats (see Wray, 1998); Georg Friedrich Knapp of the German Historical School (Knapp, 1924 [1905]); a little-known author by the name of Mitchell Innes (1913; 1914; see also Wray, 2004); and, more recently, Abba Lerner (1947), Kenneth Kurihara (1950, pp. 34-39), Hyman Minsky (1986), Charles Goodhart (1998; 1989, p. 36; see also Bell and Nell, 2003), and James Tobin (1998, p. 27). This note intends to add to this list John Stuart Mill, Karl Marx, William Stanley Jevons, Philip H. Wicksteed, and Fred M. Taylor (plus an interesting tit-bit from Jean-Baptiste Say). A heretofore overlooked but important citation from Abba Lerner will also be introduced.

The paper also reveals some instances of the TDM perspective from economic policy discussions in history, in particular from the speeches of John C. Calhoun, one-time U. S. Senator and Vice President of the United States of America in the 19th century. Additional evidence in support of the view is offered from economic history, in particular from pre-colonial (and colonial) Africa. Finally, some newly discovered contemporary occurrences of the TDM view in conventional neoclassical economics, as well as from political science and history, are cited.

Tax-Driven Money in Classical Economics

One of the clearest and earliest references to the idea that a state-issued currency not tied to gold or any other commodity or currency can be managed through taxation and the declaration of public receivability is the now oft-quoted passage from Adam Smith's *An Inquiry into the Nature and Causes of the Wealth of Nations*:

> A prince, who should enact that a certain proportion of his taxes should be paid in a paper money of a certain kind, might thereby give a certain value to this paper money; even though the term of its final discharge and redemption should depend altogether on the will of the prince. (Smith, 1776, 312)

Cannan's "sidebar" (his summary of each paragraph given in the margin) for this passage reads: "A requirement that certain taxes should be paid in particular paper money might give that paper a certain value even if it was irredeemable" (*ibid*.; see Wray, 1998, for a discussion). We may now add to this, a remark from J. B. Say's *A Treatise on Political*

Economy, Book I, "Of the Production of Wealth," Chapter XXII, "Of Signs or Representatives of Money," Section IV, "Of Paper-Money," to the effect that:

> In the first place, a paper, wherewith debts can be legally, though fraudulently, discharged, derives a kind of value from that single circumstance. Moreover, the paper-money may be made efficient to discharge the perpetually recurring claims of public taxation. (Say, 1803 [1964], p. 280)

We get a longer discussion of the subject from J. S. Mill's *Principles of Political Economy*, in Book III, Chapter XIII, paragraph III.13.1, "Of an Inconvertible Paper Currency,":

> 1. After experience had shown that pieces of paper, of no intrinsic value, by merely bearing upon them the written profession of being equivalent to a certain number of francs, dollars, or pounds, could be made to circulate as such, and to produce all the benefit to the issuers which could have been produced by the coins which they purported to represent; governments began to think that it would be a happy device if they could appropriate to themselves this benefit, free from the condition to which individuals issuing such paper substitutes for money were subject, of giving, when required, for the sign, the thing signified. They determined to try whether they could not emancipate themselves from this unpleasant obligation, and make a piece of paper issued by them pass for a pound, by merely calling it a pound, and **consenting to receive it in payment of the taxes**. And such is the influence of almost all established governments, that they have generally succeeded in attaining this object: I believe I might say they have always succeeded for a time, and the power has only been lost to them after they had compromised it by the most flagrant abuse.
>
> In the case supposed, the functions of money are performed by a thing which derives its power for performing them solely from convention; but convention is quite sufficient to confer the power; since nothing more is needful to make a person accept anything as money, and even at any arbitrary value, than the persuasion that it will be taken from him on the same terms by others. The only question is, what determines the value of such a currency; since it cannot be, as in the case of gold and silver (or paper exchangeable for them at pleasure), the cost of production.
>
> We have seen, however, that even in the case of a metallic currency, the immediate agency in determining its value is its quantity. If the quantity, instead of depending on the ordinary mercantile motives of profit and loss, could be arbitrarily fixed by authority, the value would depend on the fiat of that authority, not on cost of production. The quantity of a paper currency not convertible into the metals at the option of the holder, can be arbitrarily fixed; especially if the

> issuer is the sovereign power of the state. The value, therefore, of such a currency is entirely arbitrary. (Mill, 1848, pp. 542-543; emphasis added)

Once again, we see that many authors understood the possibility of a tax-driven currency, under certain institutional arrangements. This is not to say that they viewed all money as such, or that they understood all the details. But one fact seems certain: many more authors than previously believed considered the workings of a tax-driven currency.

Taxes and the Rise and Development of Capitalism: Tax-Driven Money in Marx

Marx is well-known to have commodity money in *Capital* and other writings. Like many other authors, Marx also considered tax-driven money, and it was a key to the development of wage-labor and therefore the rise and development of capitalism, particularly in the colonies (see Forstater, 2003b). In the *Grundrisse,* Notebook I, "The Chapter on Money," Marx recognized that "Prussia has paper money of forced currency. (A reflux is secured by the obligation to pay a portion of taxes in paper.)" (Marx, 1857, pp. 132). Furthermore, Marx viewed this as part of the larger transition associated with money and the role of the State:

> (To be further developed, the influence of the transformation of all relations into money relations: taxes in kind into money taxes, rent in kind into money rent, military service into mercenary troops, all personal services in general into money services, of patriarchal, slave, serf and guild labour into pure wage labour.) (Marx, 1857, pp. 146)

> In the period of the rising absolute monarchy with its transformation of all taxes into money taxes, money indeed appears as the moloch to whom real wealth is sacrificed. (Marx, 1857, p. 199)

This same theme was brought out in *Capital*, where Marx discussed the "primitive accumulation" necessary for capitalist development:

> The different moments of primitive accumulation can be assigned in particular to Spain, Portugal, Holland, France, and England, in more or less chronological order. These moments are systematically combined together at the end of the seventeenth century in England; the combination embraces the colonies, the national debt, the modern tax system, and the system of protection. These methods depend in part on brute force, for instance the colonial system. But, they all employ the power of the state, the concentrated and organized force of society, to hasten, as in a hot-house, the process of transformation of the feudal mode of production into the capitalist mode, and to shorten the transition. Force is the midwife of every old society which is pregnant with a new one. It is itself an economic power. (Marx, 1990 [1867]: 915-916)

And again:

> The modern fiscal system, whose pivot is formed by taxes on the most necessary means of subsistence...thus contains within itself the germ of automatic progression. Over-taxation is not an accidental occurrence, but rather a principle. In Holland, therefore, where this system was first inaugurated, the great patriot, DeWitt, extolled it in his Maxims as the best system for making the wage-labourer submissive, frugal, industrious…and overburdened with work. Here, however, we are less concerned with the destructive influence it exercises on the situation of the wage-labourer than with the forcible expropriation, resulting from it, of peasants, artisans, in short, of all constituents of the lower middle-class. There are no two opinions about this, even among the bourgeois economists. Its effectiveness as an expropriating agent is heightened still further by the system of protection, which forms one of its integral parts. (Marx, 1990 [1867]: 921)

Marx's understanding of the role of taxation in the creation of wage-labor expanded after 1861 during his study of the Russian peasantry and their proletarianization (White, 1996, p. 247). In particular, he was influenced by his reading of N. Flerovsky's *The Condition of the Working Class in Russia* (Flerovsky was the pseudonym of V. V. Bervi (White, 1996, p. 247). Marx wrote to Engels that "this is the most important book which has appeared since your *Condition of the Working Class*" (White, 1996, p. 248):

> Flerovsky made it plain that…not all Russian peasants were on the same economic level…While rich peasants…could earn their living entirely from the land, the poorer ones could not because 'the amount of taxes levied on the peasantry is so great that they cannot pay it without earning wages.' (White, 1996, p. 248)

According to Flerovsky, “The main reason which compels the worker to resort to the capitalist is to pay his taxes” (White, 1996, p. 249). As White reports, “Marx was delighted with Flerovsky’s book and as he wrote to Engels: ‘What I like, among other things, in Flerovsky is his polemic against direct taxes exacted from the peasants” (White, 1996, p. 249):

> Flerovsky’s book had a lasting significance for Marx’s studies of Russian economic development, because the picture it presented was not contradicted by any of the other sources which Marx used, and indeed, the statistical materials which he consulted served only to add substance to what Flerovsky had said. (White, 1996, p. 249)

Marx’s extensive study of the *Reports of the Fiscal Commission* “served to substantiate Flerovsky’s opinion that the system of taxation in Russia…was responsible for turning workers into proletarians” (White, 1996, p. 249).

The influence of Flerovsky seems to be present in Engels’ analysis, inserted in chapter 43 of Capital, Vol. 3, where he refers to “Russian and Indian peasants succumbing to the screws of taxation”:

> the lands of the Russian and Indian communistic communities, which had to sell a portion of their product, and an ever-growing one at that, to get money for the taxes exacted by a merciless state despotism—often enough by torture. These products were sold with no regard to their costs of production, sold at the price which the dealer offered, because the peasant absolutely had to have money at the payment date. (1981 [1891], p. 860)

Marx’s TDM-related work is interesting because it focuses on the roles that taxation and the declaration of public receivability played, not only in monetization but also the creation of wage-labor and marketization, indeed, in the development of capitalism. The implications for the theory of the state and economic history are potentially quite significant.

Tax-Driven Money in Early Neoclassical Economics

Some of the early neoclassical authors also displayed an understanding of tax-driven money. One of the founders of the neoclassical approach, William Stanley Jevons, in Chapter XVIII of his *Money and the Mechanism of Exchange*, "Methods of Regulating a Paper Currency" referred to the *"The Revenue Payments Method."*: "Inconvertible paper money may be freely issued, but an attempt may be made to keep up its value by receiving it in place of coin in the payment of taxes" (Jevons, 1875, p. 214).

The most elaborate discussion, however, is found in Chapter VII of Book II of Philip H. Wicksteed's *The Common Sense of Political Economy*, on "BANKING. BILLS. CURRENCY":

> The Government has, however, a further resource. It has the means of maintaining a perpetual recurrence of persons thus desiring money at its face value, for the Government itself has more or less defined powers of taking the possessions of its subjects for public purposes, that is to say, enforcing them to contribute thereto by paying taxes. Ultimately it requires food, clothing, shelter, and a certain amount of amusement and indulgence for its soldiers and all its officials; and it requires fire-arms, ammunition, and the like. And in proportion to its advance in civilization it may have other and humaner purposes to fulfil. Now, as long as gold has any application in the arts and sciences it exchanges at a certain rate with other commodities, just as oxen exchange at a certain rate against potatoes, pig-iron, or the privilege of listening, in a certain kind of seat, to a prima donna at a concert. The Government, then, levying taxes upon the community, may say: "I shall take from you, in proportion to your resources, as a tribute to public expenses, the value of so much gold. You may pay it to me in actual metallic gold or you may pay it to me in anything which I choose to accept in lieu of the gold. If you do not give it me I shall take it from you, in gold or any other such articles as I can find, and which would serve my purpose, to the value of the gold. But if you can give me a piece of paper, of my own issue, to the face value of the gold that I am entitled to claim of you, I will accept that in payment." Now, as these demands of the Government are recurrent, there will always be a set of persons to whom the Government paper stamped with a unit weight of gold is actually equivalent to that weight of gold itself, because it will secure immunity from

requisitions to the exact extent to which the gold would secure it. This gives to the piece of paper an actual power of doing the work that gold to its face value could do, in the way of effecting exchanges; and therefore the Government will find that the persons of whom it has made purchases, or whom it has to pay for their services, will not only be obliged to accept the paper in lieu of payments already due, and which it chooses to say that these papers discharge, but will also be willing to enter into fresh bargains with it, to supply services or to surrender things for the paper, exactly as if it were gold; as long as it is easy to find persons who, being themselves under obligation to the Government, actually find the Government promise to relinquish their claim for gold as valuable as the gold itself. The persons who pay taxes constitute a very large portion of the community and the taxes they have to pay form a very appreciable fraction of their total expenditure, and consequently a very large number of easily accessible persons actually value the paper as much as the gold up to a certain determined point, the point, to wit, of their obligations to the Government. Thus it is that a limited demand for paper, at its face value in gold, constitutes a permanent market, and furnishes a basis on which a certain amount of other transactions will be entered into. The Government, in fact, is in a position very analogous to that of an issuing bank. An issuing bank promises to pay gold to any one who presents its notes, and to a certain extent that promise performs the functions of the gold itself, and a certain volume of notes can be floated as long as the credit of the bank is good. Because bank promises to pay are found to be convenient, as a means of conducting exchanges. After this number has been floated the notes begin to be presented at the bank, and presently it has to redeem its promises as quickly as it issues them. The limit then has been reached and the operation cannot be repeated. After this people will decline to accept the promises of the bank in lieu of the money, or, which is the same thing, they will instantly present the promise and require its fulfillment. The amount of notes in circulation may be maintained, but it cannot be increased. The issuing Government does not, without qualification, say that it will pay gold to any one who presents the note, but, in accepting its own notes instead of gold, it says, in effect, that it will give gold for its own notes to any *of its own debtors;* and as long as there is a sufficient body of these debtors to vivify the circulating fluid the Government can get its promises accepted at par. Any Government which, even for a short time, insists on paying in paper and receiving in gold, that is to say, any Government that does not honour its own issue when presented by its debtors, will find that its subjects decline to enter into voluntary contracts with it except on the gold basis; and if its paper still retains any value whatever, it will only be because of an expectation of a different state of things hereafter that gives a certain speculative value to the promise. In fact a Government which refuses to take its own money at par has no vivifying sources to rely on except the very disreputable and rapidly exhausted one of proclaiming to debtors, and persons under contract to pay periodic sums, that they need not do so if they hold a certificate of immunity from the Government. Such immunity will be purchased at a price determined, like all other market prices, by the stock available (qualified by the anticipations of the stock likely to be available presently) and the nature of the services it can render.

> The power, then, of Governments to make their issues do exchange work depends on their power to make a note of a certain face value do a definite amount of exchange work; and this they can effect by giving it a definite primary value to certain persons, and then keeping the issue within the corresponding limits. It does not consist in an anomalous, and, in fact, inconceivable, power of enabling an indefinite issue to perform a definite work, and arriving at the value of each individual unit by a division sum. (Wicksteed, 1910, pp. 620-622)

The pre-twentieth century history of economic doctrine is filled with references to and discussions of tax-driven money. Theorists as diverse as J. S. Mill, Marx, and Jevons all recognized the possibility of a State currency managed under certain institutional arrangements, that is, through taxation and declaration of public receivability (what Wray, 1998, calls 'twintopt': 'that which is necessary to pay taxes').

Tax-Driven Money in Twentieth Century Economic Thought

Chartalism in the twentieth century is associated most closely with Georg Friedrich Knapp and John Maynard Keynes (see Wray, 1998). Another important discussion of the idea can be found in Section 2 ("Principles") of Chapter 3 ("Monetary Principles") of Fred M. Taylor's, *Some Chapters on Money: Printed for the Use of Students in the University of Michigan*:

> Principle 1. Under modern conditions in most civilized countries the full and continuous circulation of any kind of money in any particular country commonly requires a measure of legal authorization from the government of that country. (Taylor, 1906, p. 86)

Here we have a statement that appears to be closer to a "legal," rather than "tax," brand of chartalism. Taylor continues, however, making it clear that legal tender laws may not be enough to drive a currency:

> Principle 2. Under modern conditions representative money which is not redeemable, directly or indirectly, in either standard money or goods, seems

> generally to require, as a condition of currency, that it should be a valid tender in some important relation, e.g., payments to government. (Taylor, 1906, p. 89)

It is the ability to settle the tax and other obligations to the State that drives the currency.

As the sub-title suggests, this work was specifically designed as a text-book for Taylor's students at the University of Michigan. The discussion contains some additional insights relevant to the present discussion. Taylor goes on to suggest that:

> standard coins which fall much short of legal requirements in respect to weight will not commonly remain in circulation, unless, though short in weight, they continue to be a valid tender in some important relation, particularly in payments to government. (Taylor, 1906, p. 90)

This insight supports the thesis that even metallic currency under certain conditions can be "chartal" money. On the one hand, acceptance at government pay offices can keep up the value of underweight coin, while on the other refusal to accept can result in a money's termination:

> in repeated instances governments have found it easy to expel an obnoxious money from circulation by depriving it of all legal tender status, i.e., relieving creditors of the obligation to receive it in payment of debts, and refusing to accept it for public dues. (Taylor, 1906, p. 90)

The issue of acceptability was emphasized by another of the great 20th century contributors to chartalist thought, Abba Lerner. While Lerner's contributions to chartalism and functional finance have been outlined elsewhere (see Forstater, 1999; 2003a), his entry on "Money" in the *Encyclopedia Britannica* has heretofore been overlooked:

> Any particular seller will accept as money what he can use for buying things himself or for settling his own obligations. This seems to say that a means of payment will be generally acceptable if it is already generally acceptable, and it looks like a circular argument. But it only means that general acceptability is not

> easily established. General acceptability may come about gradually. If a growing number of people are willing to accept payment in a particular form, this makes others willing to accept that kind of payment. General acceptability may be established rapidly if very important sellers or creditors are willing to accept payment in a particular form of money. For example if the government announces its readiness to accept a certain means of payment in settlement of taxes, taxpayers will be willing to accept this means of payment because they can use it to pay taxes. Everyone else will then be willing to accept it because they can use it to buy things from the taxpayers, or to pay debts to them, or to make payments to others who have to make payments to the taxpayers, and so on. (Lerner, 1946, p. 693)

Lerner's 1946 entry was subsequently replaced with one by Milton Friedman.

The chartalist notion that taxes-drive-money and related ideas such as the role of taxation and the declaration of public receivability in the creation of wage-labor can be found in Classical, Marxist, early Neoclassical, and twentieth century economic thought. The claim is not that this is the only or even the predominant theory of money, but rather simply that the ideas were put forward by many more economists (and of all theoretical persuasions) than was once commonly understood. Likewise, many more historical instances of tax-driven money can be identified. We now turn to one particularly fascinating case, the West African cowrie.

The Tax-Driven Cowrie

Chartalism forces a reconsideration of virtually all of the received wisdom coming out of traditional monetary theory and history. The cowrie currency used in parts of Africa and Asia, for example, is often cited as an example of "primitive" money (see, e.g., Friedman, 1972, p. 927). A brief examination of the history of the cowrie, however, shows it to be tax-driven. We would do well to take seriously Polanyi's admonition that

"A warning is in order against the ethnocentric bias that so easily takes hold of us on economic subjects that arise outside of our own Western culture" (1966, p. 177):

> We are used to ranging cowrie with the other shells as a sample of primitive money in a supposed evolutionary perspective of the "origins and development of money." Historical research removes this evolutionary bias. Cowrie currencies emerged on the Middle and Upper reaches of the Niger at a time when metal currencies and, indeed, coined money were long established in the Mediterranean heartlands. This is the background against which the emergence of a new nonmetallic currency in Islamic West Africa should be viewed. It will then not be erroneously regarded as part of a general evolution of money, but rather as a feature in the spread both of *centralized government* and of food markets in the early [African] empires which left its imprint on the local history of money. (Polanyi, 1966, p. 178, emphasis added)

The use of the cowrie as money in West Africa began between 1290 and 1352, and gold and metallic coin had long been in use prior to that time in the region (Polanyi, 1966, pp. 179-180). According to Polanyi, "Dahomey's cowrie was definitely not primitive money" (1966, p. 189); rather, it is an example of "the launching of a currency as an instrument of taxation" (1966, p. 186). Even the local legend regarding the cowrie's origin supports the thesis that cowrie money is a creature of the state (1966, p. 186).

Evidence from other areas and authorities snow exists to support the thesis of the tax-driven cowrie. Lovejoy reports that in precolonial Nigeria

> Dependencies of such emirates as Nupe paid their levies in cowries as well, so that the taxation system effectively assured that people participated in the market economy and used the currency, a policy remarkably similar to the one which the later colonial regimes pursued in their efforts to see their own currencies accepted. (Lovejoy, 1974, p. 581)

Law confirms the thesis for other areas of West Africa, such as Bornu in the nineteenth century:

> The apparent preference to the payment of taxes in money—cowries or gold—is especially interesting. It must be assumed that the spread of the use of cowry shells as money in West Africa depended upon state initiative—this was certainly the case with the introduction of the cowry currency in Bornu in the 1840s. (Law, 1978, p. 49)

One of the factors that sustained the widespread misunderstanding of the origins and nature of the cowrie was the myth that the cowrie was freely available in virtually unlimited quantities. On the contrary, the cowrie was not native to West Africa; the state "guarded against its proliferation by preventing shiploads from being freely imported" (Polanyi, 1966, p. 189); and the *stringing* of cowries "was a monopoly of the palace" (Law, 1978, p. 49; see also Polanyi, 1966). This latter refers to strings of specific numbers of cowries, and specific numbers of strings collected in a "head" (Law, 1977, p. 209).

The cowrie's geographical occurrence in West Africa supports the state money thesis and refutes any evolutionary explanation: "cowrie using areas and areas where it was not accepted for payment were as if their boundaries were drawn by administrative authority" (Polanyi, 1966, p. 190):

> This was a place of multiple currencies, while Dahomey and Ashanti had succeeded in keeping their monetary systems separate in the face of what must appear to the modern mind as insuperable obstacles. Dahomey used cowrie exclusively, in elaborate, never-changing division, maintained at an unvarying exchange rate of 32,000 cowries to one ounce gold—an amazing feat. (Polanyi, 1966, p. 29)

The "compulsory monetization of sale-purchase" meant that nothing was available for sale except in cowrie, and there was no barter whatsoever (Polanyi, 1966, p. 84). It now seems likely that the cowrie was also tax-driven in other areas of the world where it served as money. Elwin reported in 1942 that in parts of India, "There are still many of the older generation who remember the days when the cowrie was used as currency and was accepted in the payment of taxes" (Elwin, 1942, p. 121).

The cowrie was clearly tax-driven over most if not all of precolonial West Africa, and elsewhere. Much more research is required, of course, but it appears that many more monies in history may have been tax-driven than was previously believed.

Tax-Driven Money in the History of Economic Policy: The Case of John C. Calhoun

In addition to tax-driven money in the history of economic thought and economic history, the idea can be found in the history of economic policy discussions. One interesting instance is the case of John C. Calhoun, a U. S. Senator and Vice President of the United States of America in the 19th century. In several speeches in the U.S. Senate in the 1830s, Calhoun spoke of the idea and made references to a number of additional historical cases.

In an 1838 speech in reply to Daniel Webster on the Subtreasury bill, Calhoun argued that:

> I now undertake to affirm positively, and without the least fear that I can be answered, what heretofore I have but suggested-that a paper issued by the government, with the simple promise to receive it in all its dues..., would, to the extent that it would circulate, form a perfect paper-circulation. (1981 [1838], p. 220)

Earlier, in 1837, in a speech on a bill authorizing the issue of treasury notes, Calhoun cited the case of North Carolina in support of a tax-driven currency:

> North Carolina, just after the Revolution, issued a large amount of paper, which was made receivable in dues to her. It was also made a legal tender; which, of

> course, was not obligatory after the adoption of the federal constitution. A large amount, say between four and five hundred thousand dollars, remained in circulation after that period, and continued to circulate for more than twenty years, at par with gold and silver the whole time, with no other advantage than being received in the revenue of the State, which was much less than one hundred thousand dollars per annum. (Calhoun, 1980 [1837], p. 566)

In a speech the next month on his amendment to separate the government and the banks, Calhoun added the case of Russia:

> We are told there is no instance of a government paper that did not depreciate. In reply, I affirm that there is none assuming the form I propose [notes receivable by government in payment of dues] that ever did depreciate. Whenever a paper receivable in the dues of government had anything like a fair trial, it has succeeded. Instance the case of North Carolina referred to in my opening remarks. The drafts of the treasury at this moment, with all their incumbrance, are nearly par with gold and silver; and I might add the instance alluded to by the distinguished senator from Kentucky [Henry Clay], in which he admits, that as soon as the excess of the issues of the Commonwealth Bank of Kentucky were reduced to the proper point, its notes rose to par. The case of Russia might also be mentioned. In 1827 she had a fixed paper-circulation in the form of bank-notes, but which were inconvertible, of upward of $120,000,000, estimated in the metallic ruble, and which had for years remained without fluctuation; having nothing to sustain it but that it was received in the dues of government, and that, too, with a revenue of only about $90,000,000 annually. (Calhoun, 1980 [1837], p. 607)

Both Calhoun's ideas and the cases he identifies must be subject to further investigation. It is clear from his remarks, however, that he was speaking of the advantages of a tax-driven currency.

Tax-Driven Money in Contemporary Thought: Walrasian Neoclassical and Interdisciplinary Occurrences

There are a number of interesting contemporary occurrences of the TDM view, in both orthodox neoclassical economics, as well as works in political science and history. In neoclassical economics, there has long been a question of the place of money within the modern Walrasian general equilibrium framework. In a 1974 paper in *Econometrica* that even cites Lerner's 1947 article, Starr investigates the "possibility of the price of money being zero in equilibrium and the role of taxes (payable in money) in preventing a zero price" (1974, p. 45).

> How can we eliminate the possibility of the price of money being zero in equilibrium? In order to do this we must arrange that there be a positive excess demand for money when the price of money is zero. One way to achieve this is to guarantee that money can always be used in payment of taxes...Taxes can be used to create a demand for money independent of its usefulness as a medium of exchange, thereby ensuring that its price will not fall to zero. (1974, p. 46)

More recently, Starr has similarly argued that "Government issued fiat money has a positive equilibrium value from its acceptability for tax payments" (2003, p. 455; see also, Starr, 2002a; 2002b).

Harvard University political scientist David Woodruff argues that a chartalist perspective assists in the understanding of recent economic events in Russia and Argentina. In *Money Unmade* (1999), Woodruff uses the chartalist framework to understand the ruble's decline. More recently, Woodruff employs his chartalist-inspired "institutional-sociological" approach to money to look at the spread of "monetary surrogates" in Argentina after going off the dollar-peg (Woodruff, forthcoming).

Recent work by UCLA historian Richard von Glahn discusses the chartalist (he uses "cartalist") monetary theorists of early modern China. In *Fountain of Fortune* (1996), Von Glahn documents state monetary policies from the Song, Ming, and Qing dynasties, and the theoretical traditions that informed them and through which they may be understood. As Von Glahn's work makes clear, the debate between the chartalists and the metallists is not unique to the West.

Conclusion

The notion of tax-driven money can be found throughout the history of economic thought, in the works of a remarkable range of authors representing various time periods and schools of thought. The idea also appears in policy discussions and in fields outside economics, such as political science and history. Neither is the idea unique to the West, as Von Glahn's work demonstrates. It also appears that monies previously thought to be "primitive," such as the cowrie, were actually tax-driven. Nevertheless, the idea is conspicuously absent from textbooks and works on monetary theory and history.

One possible explanation for the silence concerning the notion may have something to do with the implications of the TDM idea for the relation of the economy and the state. Orthodox and even many heterodox approaches view the economy as relatively 'autonomous' and theory often assumes a 'pure' economy with no government. The TDM perspective implies that not only is money a creature of the state, but that much else about the economy is as well. The traditional distinction between "endogenous" and "exogenous" factors may need to be re-examined, or even discarded. There may, then, also be important methodological implications of the TDM view. More research needs to be conducted in all these areas.

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