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Modern money: fiat or credit?

> Even today, textbooks on Money, Currency, and Banking are more likely than not to begin with an analysis of a state of things in which legal tender "money" is the only means of paying and lending. . . . But logically, it is by no means clear that the most useful method is to start from the coin—even if, making a concession to realism, we add inconvertible government paper—in order to proceed to the credit transactions of reality. It may be more useful to start from these in the first place, to look upon capitalist finance as a clearing system that cancels claims and debts and carries forward the differences—so that "money" payments come in only as a special case without any particularly fundamental importance. In other words: practically and analytically, a credit theory of money is possibly preferable to a monetary theory of credit. [Schumpeter, 1954, p. 717]

L. Randall Wray's *Understanding Modern Money: The Key to Full Employment and Price Stability* (1998) is many things. The main title encourages us to read the book as a treatise on money. In such a reading, chapter 7, "The Logic of the Taxes-Drive-Money View," appears to be the central one. Alternatively, the subtitle suggests that we read the book as policy advocacy, focusing our attention instead on the "Employer of Last Resort" proposal presented in chapter 6. In yet a third reading, if we ignore the title and dive right in at the beginning, the book feels like a textbook summary and synthesis of recent discussions within Post Keynesian circles, discussions concerned largely with understanding the significance of Knapp's (1905) state theory of money and Lerner's (1943) theory of functional finance (Wray's chapters 2 and 4, respectively).

In what follows I read the book in all three ways, but also in a fourth way that makes chapter 5 more central. In that fourth reading, the book represents the encounter of Keynesianism, a world view that arose out of depression and world war in order to explain and rationalize the expansion of the nation-state to fill the vacuum left by collapsing private mar-

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Journal of Post Keynesian Economics / Spring 2000, Vol. 22, No. 3 397

kets, with the reality of the modern financially sophisticated world where private markets are apparently in ascendance. This is the world we live in and must understand, not the world of Keynes or Lerner, and certainly not the world of Knapp. We can learn from these older authors, to be sure, and we might even emulate their work as a model of the kind of economics we want to be producing ourselves. The greatness of these authors stems from their engagement with the problems of their time. I read chapter 5 as the beginning of an engagement with the significant facts of our own time. Though not all of it can be accepted as sound (as I shall elaborate), in my view it contains the most forward-looking ideas of the book.

"Taxes-drive-money"

All monetary theories (at least all those of which I am aware) build from some underlying parable about the nature of money. Wray's parable concerns a hypothetical governor who finds herself in charge of a primitive colony that has yet to be introduced to money, prices, and markets (pp. 54–57). She is therefore unable to buy the things she needs with the money she has brought with her from the mother country, until she hits upon the idea of imposing a tax on the local populace, a tax payable in money. Since she is the monopoly supplier of the money, that means the population has to work for her in order to obtain "that which is necessary to pay taxes." Thus, she is able to buy the things she needs by paying out money, and the money returns to her in tax payments. If she wants to buy more things, she need only raise taxes in order to create demand for more money and so supply of more goods. Alternatively, and equivalently, she need only reduce the money price of the things she buys so that the local population has to provide more service in order to earn the money to pay their taxes.

In this simple economy, the following relation holds:

$$P^G G = M = \text{Taxes},$$

where $P^G G$ is government spending, M is money creation, and Taxes represent money destruction. Because the government is the only buyer of goods, this relationship characterizes macroeconomic equilibrium in the simple economy. It is a kind of equation of exchange relating the flow of goods with the flow of money for the colonial economy.[1]

[1] It is important to emphasize that this is a relationship between flows. For a "taxes-drive-money" theory that emphasizes stocks, and hence an intertemporal government budget constraint, see Woodford (1996).

The central proposition of the book, that there are no financial constraints to government spending, follows from this setup. If the government wants to spend more, it can do so by creating more money and then absorbing that money by raising taxes. Alternatively, and equivalently, it can leave nominal taxes and money creation alone and lower the price it offers for the goods it buys. (Note here a secondary proposition of the book that the government controls the price level by fixing the money prices of the goods it buys.) Either way, it might be difficult to collect the higher real taxes, but that is a real constraint on spending, not a financial constraint, and we hear no more about it. Instead, attention focuses on the question whether the lessons from this simple model carry over to our modern, financially sophisticated economy.

Wray asserts that they do, and he backs that assertion with the following arguments. First, the simple story applies even when the local population holds some of the money aside for future tax payments. In this case, the flow of money creation can exceed the flow of money destruction (taxes), and the macroeconomic relationship becomes:

$$P^G G = M = \text{Taxes} + \Delta H,$$

where ΔH is money hoarding. Since hoarding is equivalent to the government deficit, Wray concludes that deficit spending ($P^G G > T$) is nothing to fear, and is in fact a requirement for macroeconomic equilibrium.

This leads to the introduction of government bonds as a kind of interest-bearing currency that the government may issue if it so desires (perhaps because the populace prefers buying bonds to paying taxes). Since government bonds strictly dominate currency, there is never any problem getting them accepted so long as the bonds pay even a little interest. The relation that applies to an economy in which some money bears interest is:

$$P^G G + rB = \text{M} = \text{Taxes} + \Delta H + \Delta B,$$

where rB is bond interest and ΔB is bond hoarding. Here, just as in the simplest case, there is no financial obstacle to greater government spending. Indeed, the government seems to be able to choose the interest rate it pays on its bonds, so long as the equation is satisfied, and this is yet another of Wray's secondary propositions.

All these propositions are asserted to go through also in an economy with private production for private markets in which households and businesses issue and trade their own financial assets. "Once households have a demand for government fiat money to pay taxes, it is easy to see why fiat money might also serve households as a medium of exchange, a means of payment and a unit of account" (p. 162). "As private markets

expand, it is possible that government purchases become relatively small as a percentage of total GDP, but this changes none of our conclusions" (p. 168). Actually it does change one thing, because, once the government is less than the entire economy, we need a theory of aggregate income. For this purpose, Wray relies on the simple Keynesian multiplier idea. The result is that government decision still determines the price level and the rate of interest directly, and its spending decision determines the size of GDP.[2]

Do all these propositions continue to hold once we introduce banking? Wray argues that they do. His story about the development of banking (p. 163) is, essentially, equivalent to the goldsmith parable of which textbook writers are so inordinately fond, except that it is government-issued currency rather than gold that people deposit in the bank to get the thing started. In any event, eventually we get fractional reserve banking and everything goes through so long as we think of the government creating bank reserves when it spends, and destroying bank reserves when it receives tax payments.

The point of the whole exercise seems to be to provide a theoretical framework to support a proposal that the government should act as employer of last resort (ELR), hiring all comers at a fixed nominal wage, paying the workers by expanding bank reserves, and absorbing any excess reserves by issuing bonds at a fixed nominal interest rate.[3] Full employment and stable prices are the promised outcome. Best of all, according to the "taxes-drive-money" view, it is not going to cost us anything. "ELR becomes a difficult programme to sell, except in special cases, unless one understands the principles of functional finance and Chartal money" (p. 180).

The macroeconomic relationship that applies to an economy under ELR is:

$$wL^G + rB = M = \text{Taxes} + \Delta H + \Delta B,$$

where wL^G is ELR employment. This equation is similar to the previous ones, but the causal interpretation is rather different. The colonial governor chose real spending G and then fixed prices P^G and taxes T (so fixing the real tax burden) in order to stimulate the desired labor supply.

[2] There is, however, an unresolved tension between Wray's colonial theory of the price level and the "demand gap" theory of inflation associated with the Keynesian story which he also sometimes asserts (p. 83).

[3] Wray's plan is an elaborated version of a proposal put forward by Minsky (1986, p. 308). Unlike Wray's version, Minsky's ELR is largely independent of his monetary theory.

The ELR modern government is supposed to fix the price of labor w, absorb all the labor supplied at that price L^G, finance the spending by printing money M, and absorb any excess money by issuing bonds, *not* by raising taxes. Thus the argument has shifted from a world where there is no financial constraint on spending, only a real constraint, to a world in which there is not even a real constraint on spending.

Critique

If it sounds too good to be true, that's because it is. The trick is done with fiat money that costs no real resources to produce and poses no financial burden because it is inconvertible. Since government bonds are payable in fiat money, they too are supposed to pose no real or financial burden. But this is just wrong. The fact that the modern state arrogates to itself the right to determine what is and what is not money does not give it the alchemical power to create something from nothing, to turn paper into gold. Further, the fact that the modern state has the power to tax does not mean that it faces no budget constraint.

That doesn't mean that there is no truth in what Wray says. There is a kind of alchemy involved in banking, since banks create deposits by making loans, but that is so-called inside money because deposits remain a liability of the bank. What truth there is in Wray's conclusions about modern money comes from the fact that state money is not a fiat outside money (as he claims) but, rather, an inside credit money because it is the liability of the central bank. Further, there is a kind of power involved in taxing authority, but it is a power we understand better when we treat it as an asset on the government's balance sheet. What truth there is in Wray's conclusions about government finance comes from the fact that modern states typically have unused taxing authority that can be mobilized to meet pressing national purposes. Unfortunately, Wray's penchant for consolidating the balance sheets of the Treasury and the Fed tends to obscure both these points by conflating money and state finance.

Put another way, the problem is not so much with ELR, a proposal that may well be worth trying in some form, but with the underlying parable about the nature of money. Not only does it miss the credit nature of modern money (more on that below), but it also misconstrues the nature of the modern state that issues modern currency. So far as I can see, the government of a country like the United States bears very little resemblance to a colonial governor who imposes taxes in order to monetize a primitive economy. For most of its history, the United States has been

characterized by a rather strong private economy and a rather weak central government, punctuated by moments of increased government power during national crises such as wars. It is no accident that we did not achieve a permanent central bank until 1913. Wray recounts some of this history (pp. 61–69, 98–102) but misses its significance. The significant point is that our government is our creation. It is only able to tax us to the extent that we allow it to do so. Its taxing authority arises not from its raw power but from its legitimate authority. Further, our state arises out of a thriving private civil society, not the reverse, as the colonial parable would have it. Our state is not a king demanding bounty, and consequently the argument that the power to tax is the source of money's value does not seem very compelling.

Finally, Wray's argument *ab origio* (in chapter 3) that the historical development of money followed more or less the logical sequence outlined above does not provide any significant support for the theory. It is speculative history at best, and would not bear much on the matter at hand, even if the history were more convincing. Lest this point be misunderstood as antihistory, I hasten to add that I have gained much from Fernand Braudel's (1982) historical account of primitive monetary arrangements in Europe, and accordingly build my own understanding of modern money on private business finance not palace finance. The point is not that modern money has its historical origins in private money (though I believe a convincing case could be made that it has), but that private finance is a better logical place to start when trying to understand modern money, or so I have come to believe.

An alternative view

For monetary theory, so it seems to me, the significant point about the modern state is not its coercive power but the fact that it is the one entity with which every one of us does ongoing business. We all buy from it a variety of services, and the price we pay for those services is our taxes.[4] Just as we are each individually willing to extend temporary credits to individual business associates to whom we expect to be making payments in the future, so too we are all willing to extend credit to the

[4] To avoid possible confusion, it is worth adding that government spending is not limited in any simple way by its current taxation, nor even by the present value of all future expected taxes. The principle asset on the government's balance sheet is its taxing authority, much of which remains unused in normal times and gets mobilized only in wars or other national crises. This taxing authority does give the state some leverage over the economy, but this is a point about government finance, whereas the main text is largely concerned with money.

government. It is the universality of our dealings with the government that gives government credit its currency. The point is that the public "pay community," to use an apt phrase from Knapp that Wray likes, is larger than most any private pay community, not that the state is more powerful than any other private entity. Consequently, the state is ideally placed to be the issuer of the ultimate domestic money.

The fact that the state is the issuer of the ultimate domestic money does not mean that it has the ability to set the price level or the rate of interest as an exogenous policy datum. In modern economies where state money is the ultimate money, the state borrows at the lowest rate of interest, but its debt must compete with privately issued debt. Having emphasized also that the modern state is not all-powerful (*contra* Wray and Knapp), I must also emphasize that it is not powerless. The fact that state money is the ultimate means of payment does seem to give the state some leverage over the economy, leverage that shows up as a measure of control over the money rate of interest. To understand the extent of and limits on that leverage, it is helpful to have in mind an idealized, purely private financial system, both so that we can see how the state might potentially improve on it, and so we can see the next best alternative that waits in the wings should the state overplay its hand. In the space remaining, it is only possible to skecth the outlines of such a system, and so to hint at a possible alternative direction for constructing monetary theory.

Monetary systems are always hierarchical, with the best quality debts circulating as money to clear lesser-quality debts. The important point is that "quality" in this context is *not* primarily about default risk, but rather about the pattern of payments. Liabilities that are default-free may make good investments for the risk-averse, but they do not make very good money unless a large number of people need to make regular payments to the issuer of the liabilities. The problem that there may be no such individual in the economy is the principle obstacle standing in the way of a purely private monetary system. It is this obstacle that banking overcomes. The significant truth of the real bills doctrine is not that commercial bills are the safest bank asset or that a banking system made up of such banks is self-regulating—indeed, both statements are false—but that a bank holding a portfolio of self-liquidating bills is an entity whose own liabilities are suitable to serve as money.[5] Thus, money can and does easily arise out of private financial arrangements in private pay communities. Furthermore, the fact that a certain private pay

[5] To avoid possible confusion, it is worth adding at this point that a bank holding a portfolio of Treasury bills is also an entity to which a large number of people need to make regular payments, though more indirectly since the tax payments that are the

community accepts a certain private money will tend to make that money acceptable also to members of other overlapping pay communities whose own money is something else.

Inevitably there is the problem that the bilateral flow of payments from one pay community to another does not balance, perhaps not even on average, and this is where the debate between the chartalists and metallists comes in. Metallists argue for using a metal such as gold to keep track of clearing balances, and the argument is that gold is universally acceptable. Chartalists argue for using tokens, agreed upon by all, that cannot be produced by any of the individual pay communities. One practical reason for preferring the chartalist view is that it economizes on real resources. Another practical reason is that in a crisis more tokens can be created. For both reasons, practical chartalism is fairly universally accepted economic doctrine these days. Indeed, the nation-state has been instrumental in creating and enforcing the agreement across internal domestic pay communities to use state-issued tokens, rather than metal, as a private bank reserve.

From this point of view, Wray's soybean futures parable of money (p. 113) contains more wisdom than the colonial governor parable, though it needs closer examination and more development than he has so far provided. In the soybean market there is a cash market for the existing inventory of physical soybeans, and there is also a futures market consisting of longs (who agree to buy soybeans) and shorts (who agree to sell soybeans). The significant points are that the longs and shorts exactly offset each other, that the open interest can easily exceed physical inventory by a large multiple, and that open interest fluctuates independent of inventories. The analogy to money is that bank deposits are long positions in fiat money, while loans are shorts, and the outstanding stock of fiat money is the inventory. It is this vision of the nature of money, not the colonial parable vision, that seems to underlie statements such as the following: "The central bank never has controlled, nor could it ever control, the quantity of money" (p. 98).[6]

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source of the government's credit are financed through the Treasury in the first place. The liabilities of such a bank are also suitable to serve as money. The point is not that private loans are better bank assets than Treasury bills. Rather, the point is to demonstrate that Wray's assertion that it is "impossible to separate the theory of money from the theory of the state" (p. 23) is, if not completely false, at least much too strong.

[6] Compare Fischer Black (1987, p. 89): "I believe that in a country like the U.S., with a smoothly working financial system, the government does not, cannot, and should not control the money stock in any significant way."

The point that bank money can be viewed as a derivative security in zero net supply is, at one level, nothing more than the familiar Gurley-Shaw (1960) point that bank money is an inside asset. But there is more going on here than updated semantics. Viewing the bank money supply as the open interest in currency tends to shift our attention away from reserve requirements and money multipliers, and forces us instead to confront head-on the credit character of modern money, and its consequent elasticity. For this reason, the parable strikes me as worth developing further, mainly by broadening the focus to include not just banks but also the money market more generally (see Stigum, 1990).

Three suggestions toward that end: First, instead of seeing banks as purely intermediary, linking the longs and shorts, it is probably more helpful to see banks as themselves taking the short positions that correspond to the long positions of their depositors, and hence themselves facing the prospect of a short squeeze. In this conceptualization, the role of the central bank as lender of last resort enters naturally. Second, it is probably more helpful to see bank loans as the bank's long positions corresponding to the private borrowers' shorts. In this conceptualization, the role of bank lending enters naturally into the theory of money. Third, instead of seeing government-issued currency as an outside asset analogous to an inventory of soybeans, it is probably more helpful to view it as the liability of the central bank. Not only does this practice guard against potentially fallacious alchemical reasoning, but it also provides a natural entry point for international monetary considerations. Viewed globally, the collection of nation-states is a collection of overlapping payment communities that face the same problem of tracking clearing balances that state money solves for the overlapping domestic private pay communities. We see that international problem better when we view national currencies as promises to pay.

Conclusion

Historically, the chartalist idea that money is a token has has a natural affinity with a number of other related but not equivalent ideas. One is the quantity theory of money. This affinity emerges in the formulae that express Wray's state theory of money, but it exists in resolved tension with his nascent theory of money as nothing more than the open interest in fiat money. Another affinity is for managed money. This affinity emerges in Wray's strong views on the possibility of controlling prices, the interest rate, and employment, but this too exists in unresolved tension with his views on the endogeneity of money and passive reserve

management. His heroes, Knapp and Lerner, admitted no such tensions, which accounts for their dogmatic force and persuasive power, but it is exactly that force and that power that we need to resist. Whether for better or for worse, our world is not their world. We advance toward an understanding of modern money by embracing the tensions and finding our own resolutions for our own times. One way to do this is to view the chartalist token not as fiat money but as a promise to pay.

REFERENCES

Black, Fischer. *Business Cycles and Equilibrium*. New York: Basil Blackwell, 1987.

Braudel, Fernand. *The Wheels of Commerce: Civilization and Capitalism, 15th–18th Century*, vol. 2. New York: Harper and Row, 1982.

Gurley, John G., and Shaw, Edward. *Money in a Theory of Finance*. Washington, DC: Brookings Institution, 1960.

Knapp, Georg Friedrich. *Staatliche Theorie des Geldes* [1905]. English trans. by H.M. Lucas and J. Bonar, *The State Theory of Money*. London: Macmillan, 1924.

Lerner, Abba. "Functional Finance and the Federal Debt." *Social Research*, 1943, *10*, 38–51.

Minsky, Hyman P. *Stabilizing an Unstable Economy*. New Haven, CT: Yale University Press, 1986.

Schumpeter, Joseph A. *History of Economic Analysis*. New York: Oxford University Press, 1954.

Stigum, Marcia. *The Money Market*, 3d ed. Homewood, IL: Business One Irwin, 1990.

Woodford, Michael. "Control of Public Debt: A Requirement for Price Stability." NBER Working Paper no. 5684, Cambridge, MA, 1996.

Wray, L. Randall. *Understanding Modern Money: The Key to Full Employment and Price Stability*. Northampton, MA: Edward Elgar, 1998.