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Keynes's Approach To Money: An Assessment After 70 Years

by

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ABSTRACT

This paper first examines two approaches to money adopted by Keynes in the General Theory (GT). The first is the more familiar "supply and demand" equilibrium approach of Chapter 13 incorporated within conventional macroeconomics in both the ISLM version as well as Friedman's monetarism. Indeed, even Post Keynesians utilizing Keynes's "finance motive" or the "horizontal" money supply curve adopt similar methodology. The second approach of the GT is presented in Chapter 17, where Keynes drops "money supply and demand" in favor of a liquidity preference approach to asset prices. The Chapter 17 approach offers a much more satisfactory treatment of the fundamental role played by money to constrain effective demand in the capitalist economy. In the next section, I return to Keynes's earlier work, namely the Treatise on Money (TOM), as well as the early drafts of the GT, to obtain a better understanding of Keynes's views on the nature of money.

KEYNES'S MONEY SUPPLY AND MONEY DEMAND APPROACH

Chapter 13 of Keynes's GT is devoted to answering the question posed in its first paragraph: what determines the rate of interest? First he narrows the scope by defining the rate of interest as "the inverse proportion between a sum of money and what can be obtained for parting with control over the money in exchange for a debt for a stated period of time." (GT p. 167) It is, thus, "the reward for parting with liquidity." (ibid) This leads rather inexorably to the conclusion that the interest rate is "the 'price' which equilibrates the desire to hold wealth in the form of cash with the available quantity of cash." (ibid) This desire is called "liquidity preference," which he notes is "substantially the same thing" as "propensity to hoard"—so long as that is not confused with "hoarding." (GT p. 174) As he cautions, an increase in liquidity preference cannot increase the quantity of hoards, "[f]or the amount of hoarding must be equal to the quantity of money…and the quantity of money is not determined by the public." (ibid)

All that is left is to work out determinants of the quantity of money and liquidity preference. Regarding the latter, Keynes outlines the "three divisions of liquidity preference," the "transactions-motive," the "precautionary-motive," and the "speculative-motive." (GT p. 170) These motives are discussed in more detail in Chapter 15, where Keynes distinguishes between "two liquidity functions L1 and L2," the first "mainly depends on the level of income, whilst L2 mainly depends on the relation between the current rate of interest and the state of expectation." (GT p. 199) This became the standard approach to money demand. Post Keynesians have put more emphasis on the link Keynes made between his L2 function and uncertainty, rejecting the mainstream conflation of uncertainty and risk. (Chick 1983; Tobin 1958) According to Keynes "[w]e have seen in Chapter 13 that uncertainty as to the future course of the rate of interest is the sole intelligible explanation of the type of liquidity-preference L2 which leads to the holding of cash M2" (emphasis in original, GT p. 201), and he was careful to distinguish between probability and uncertainty, most clearly in his defense of the GT in 1937: "By 'uncertain' knowledge, let me explain, I do not mean merely to distinguish what is known for certain from what is only probable" (CW 14 p. 113)—i.e., insurable risk. Aside from this caveat, there is little in Keynes's explication in chapters 13 and 15 to distinguish it from the usual presentation of "money demand" in postwar textbooks.

What about "money supply"? Here Keynes is less clear, although the usual interpretation is that the GT assumes a given quantity of money while determining the interest rate. There are,

indeed, statements that the money supply is determined by policy, for example: "the quantity of money as determined by the action of the central bank" (GT p. 247); "the quantity of money created by the monetary authority" (GT p. 205); and similar arguments are made elsewhere (GT pp. 84, 167, 174, 230, and 267). On the other hand, in one of the few detailed discussions of the "way in which changes in M [money supply] come about," he discusses three possibilities. "Suppose that M consists of gold coins and that changes in M can only result from increased returns to the activities of gold-miners... . Exactly the same conditions hold if changes in M are due to the Government printing money wherewith to meet its current expenditure;--in this case also the new money accrues as someone's income." (GT p. 200). Both of these can be reconciled with "exogenous" money.

However, he discusses a third case in which money is created by banks: "where the new money can only be issued in the first instance by a relaxation of the conditions of credit by the banking system, so as to induce someone to sell the banks a debt or a bond in exchange for the new cash." (ibid) Further, elsewhere Keynes allowed for "endogenous" variation of the money supply. In A Tract on Monetary Reform, for example, in discussing a proposed reform he argues that "the volume of the paper money [bank notes]….would be consequential, as it is at present, on the state of trade and employment, bank-rate policy and the Treasury bill policy." (Tract p. 153) In the TOM he recognized that a bank "may itself purchase assets, i.e. add to its investments, and pay for them, in the first instance at least, by establishing a claim against itself." (TOMa p. 21) He asserts "it is evident that there is no limit to the amount of bank money which the banks can safely create provided that they move forward in step" so that clearing losses are compensated by gains. (TOMa p. 23) Finally, in his defense of the GT, he argued "my analysis is not based…on the assumption that the quantity of money is constant." (CW 14 p. 232)

This would seem to be a rejection of the textbook presentation of a vertical money supply and interdependence of money supply and demand curves would leave interest rate determination somewhat up in the air. For example, he rejects a "supply and demand" interpretation when he argues that "[t]he short-term rate of interest is easily controlled by the monetary authority, both because it is not difficult to produce a conviction that its policy will not greatly change in the very near future, and also because the possible loss is small compared with the running yield…" (GT p. 203) While he goes on to note that it is more difficult for central banks to determine the whole term structure, this ability "varies in different systems." (GT p. 206) In perhaps his most complete statement he argues: "The complex of rates of interest would simply be an expression of the terms

on which the banking system is prepared to acquire or part with debts; and the quantity of money would be the amount which can find a home in the possession of individuals who—after taking account of all relevant circumstances—prefer the control of liquid cash to parting with it in exchange for a debt on the terms indicated by the market rate of interest." (GT pp. 205-06) Here, central bank policy operates through impacts on expectations of future interest rates and "willingness" of banks to "acquire" debts, rather than through control over money supply. If so, the traditional exposition with a vertical money supply and downward-sloping money demand curve is inappropriate. Keynes also claims "the rate of interest is a highly conventional" phenomenon, and argues that "[a]ny level of interest which is accepted with sufficient convention as likely to be durable will be durable…" (GT 203), undercutting the equilibrium methodology of these chapters.

CHAPTER 17 AND THE LIQUIDITY PREFERENCE APPROACH TO ASSET PRICES

The existence of unemployment is often attributed to short run frictions or to temporary deviations from equilibrium caused by "shocks" or "surprises." Kregel (1976), however, argues that Keynes rejected interpretations that rely on disappointed expectations, or a distinction between ex ante expectations and ex post results, as the cause of temporary unemployment equilibrium. Rather, Keynes could assume "that long-period expectations are constant and that short-period expectations are always realised in order to put expectations into the back seat, giving all emphasis to effective demand. It was this purely static model, divorced from disappointment and shifts in expectations that Keynes finally preferred to use for demonstrating that unemployment was not a short-run disequilibrium phenomenon…" (Kregel 1976 p. 213) The static model adopts one of the three different methodologies used by Keynes in the GT. His second methodology, stationary equilibrium, allows disappointment of short-period expectations without affecting long-period expectations. In his complete dynamic model of shifting equilibrium, "current disappointment may affect the state of general expectations." (Kregel 1976 p. 215) These more complicated models are necessary to examine how entrepreneurs react to differences between ex ante expectations and ex post outcomes, but Keynes did not need to rely on them to explain unemployment. If unemployment can be shown to exist in the simpler model, then it will follow that it will also exist in the others where expectations can be disappointed.

In Chapter 17, Keynes restates and generalizes the definition of the interest rate as "a definite quantity of (e.g.) wheat to be delivered a year hence which has the same exchange value

to-day as 100 quarters of wheat for 'spot' delivery." (GT p. 222) "Thus for every durable commodity we have a rate of interest in terms of itself—a wheat-rate of interest, a copper-rate of interest, a house-rate of interest, even a steel-plant-rate of interest." (GT pp. 222-223) Each of these own rates can be stated in terms of money, which typically carries the "greatest of the own-rates of interest," hence, "rules the roost" because money has special, peculiar, properties. (GT p. 223; see also Kregel 1997)

The expected return on holding any asset measured in monetary terms is q-c+l+a, where q is the asset's expected yield, c is carrying costs, l is liquidity, and a is expected price appreciation. This total return can be used to calculate a marginal efficiency for each asset, including money. The composition of returns varies by asset, with most of the return to illiquid assets such as capital consisting of q-c, while most of the return to holding liquid assets would consist of the (subjectively evaluated) l. If a producible asset's marginal efficiency exceeds that on money, it is produced up to the point that its marginal efficiency falls back into line with the marginal efficiency of money that rules the roost. If an asset that is not producible has a higher marginal efficiency, its price is pushed up until its return falls back in line. Finally, changing expectations about the future have differential impacts on the marginal efficiencies of different kinds of assets. Increased confidence about future economic performance will raise the qs on capital assets while lowering the subjective values assigned to liquid positions (hence, the l falls), so that the marginal efficiency of capital rises relative to that of assets that get much of their return from l. In that case, capital assets will be produced (investment rises, inducing the "multiplier" impact) and the full range of asset prices will adjust. Thus, expectations about the future go into determining the equilibrium level of output and employment—where that is defined as a position in which firms hire just the amount of labor required to produce the amount of output they expect to sell.

Expectations are given a bigger role to play in Chapter 17 in determining the own rates on all assets rather than simply giving rise to a speculative demand for money. There is an own rate for anything that can be held through time, determined as a function of expected yields, carrying cost, subjective returns to liquidity, and expected price appreciation. The return to "cash" is subjectively determined by the value imputed to a liquid position; a premium is required to induce one to "give up" a liquid position. As he put it in 1937, "The possession of actual money lulls our disquietude; and the premium which we require to make us part with money is a measure of the degree of our disquietude." (CW 14 p. 116) But this "disquietude"

affects the demand for the full range of assets, differentially according to each asset's composition of expected returns. Equilibrium of asset prices occurs where the marginal efficiencies are equalized—not simply where money supply equals demand. Finally, the impact of a change in the degree of "disquietude" on employment is direct—through its impact on marginal efficiencies.

Keynes insists that "[t]here is, clearly, no absolute standard of 'liquidity' but merely a scale of liquidity," indeed, "the conception of what contributes to 'liquidity' is a partly vague one, changing from time to time and depending on social practices and institutions." (GT p. 240) While it might seem that an increase of "liquidity" would reduce the value placed on l, raising relative marginal efficiencies of illiquid assets and increasing employment, this might not be so simple. Keynes argues that part of money's peculiarity arises from the fact that it has a very small "elasticity of production," meaning that "the response of the quantity of labor applied to producing it to a rise in the quantity of labour which a unit of it will command" is miniscule. (GT p. 230) This should not be interpreted as a fixed quantity of money in the face of rising demand for money, but rather that an increase of liquidity preference cannot keep labor employed in the production of money. This is why Keynes argues that "[u]nemployment develops, that is to say, because people want the moon;--men cannot be employed when the object of desire (i.e. money) is something which cannot be produced and the demand for which cannot be readily choked off." (GT p. 235)

Keynes argued (even in the static equilibrium model, excluding disappointed expectations) the existence of money is the cause of unemployment, because "in the absence of money…the rates of interest would only reach equilibrium when there is full employment." (GT p. 235) Here he is referring to the spectrum of own rates, equalized (in terms of a numeraire) only at full employment in a non-monetary economy (what he calls a real-exchange economy—see the next section). However, money (or another commodity with similar properties) sets a standard that is too high for full employment. Further, he cautioned that an "increase of the money supply" is not necessarily a solution, as "there may be several slips between the cup and the lip." (GT p. 173) If liquidity preference is rising faster (or, the marginal efficiencies of producible assets are falling faster) than the money supply, it will not be possible to stimulate employment. To analyze the impacts of monetary policy on employment forces Keynes to move beyond the static equilibrium model, to consider how monetary policy will affect short-period and long-period expectations—which he examines in several places in the GT and concludes that

the effects are unpredictable and could be counterproductive. He is thus "somewhat skeptical of the success of a merely monetary policy directed towards influencing the rate of interest….since it seems likely that the fluctuations in the market estimation of the marginal efficiency of different types of capital…will be too great to be offset by any practicable changes in the rate of interest." (GT p. 164) This is why Keynes puts more emphasis on the efficacy of fiscal policy, especially in Chapter 24.

THE FINANCE MOTIVE: COPING STONE OR DIVERSION?

In his GT defense, Keynes proposed a fourth reason to hold money, the finance motive. This addendum served two purposes, first to feature a prominent role for expectations in the L1 demand for money; second, to explain why an increased scale of production *might*, but *need not*, pressure interest rates. The first was in response to critiques by Ohlin and Robertson, while the second was to criticize Hicks's exposition that became the ISLM analysis. Keynes's finance motive was seen as an extension of the analysis of Chapters 13 and 15. It has also been used by some Post Keynesians to resolve Keynes's apparently contradictory exposition of the determinants of the quantity of money. I will argue that this is mostly a diversion.

In his December 1937 response, Keynes suggests a fourth motive for holding money, as a function of expected expenditure:

> I should not have previously overlooked this point, since it is the coping-stone of the liquidity theory of the rate of interest.… Just as an increase in *actual* activity must (as I have always explained) raise the rate of interest unless either the banks or the rest of the public become more willing to release cash, so (as I now add) an increase in *planned* activity must have a similar, superimposed influence. (CW 14, pp. 220-221)

The latter caveat, that an increased demand for money need not raise interest rates so long as banks or others accommodate this demand was stressed in his March 31, 1937 letter to Hicks: "From my point of view it is important to insist that my remark is to the effect that an increase in the inducement to invest need not raise the rate of interest. I should agree that, unless the monetary policy is appropriate, it is quite likely to." (CW 14 p. 80) Thus, an increase of planned spending—as well greater actual spending—raises money demand, which raises interest rates unless money supply increases commensurately.

After the GT Keynes wrote several analyses of the finance process, detailing his objections to the loanable funds approach as well as to Robertson's attempts to marry saving plus bank loans as a hybrid source of finance. Keynes argued that saving is not equivalent to finance, indeed, "Saving has no special efficacy, as compared with consumption in releasing cash and restoring liquidity…There is, therefore, just as much reason for adding current consumption to the rate of increase of new bank money in reckoning the flow of cash becoming available to provide new 'finance', as there is for adding current saving." (CW 14 p. 233) The supply and demand of "loanable funds" are necessarily identical, with no adjustment of the interest rate required: "Increased investment will always be accompanied by increased saving, but it can never be preceded by it. Dishoarding and credit expansion provides not an alternative to increased saving, but a necessary preparation for it. It is the parent, not the twin, of increased saving." (CW 14, p. 281)

Investment, itself, cannot pressure interest rates because it returns to the "revolving fund of finance," creating equivalent saving. (CW 14 p. 208) While investment can never be constrained by lack of saving, it can be constrained by lack of finance during the interim, as money is hoarded to satisfy the finance motive: "unless the banking system is prepared to augment the supply of money, lack of finance may prove an important obstacle to more than a certain amount of investment decisions being on the tapis at the same time. But 'finance' has nothing to do with saving." (CW 14 p. 247) If banks do supply extra finance to satisfy the finance motive, interest rates will not rise as the scale of activity increases. Finally, he notes "to the extent that the overdraft system is employed and unused overdrafts ignored by the banking system, there is no superimposed pressure resulting from planned activity over and above the pressure resulting from actual activity." (CW 14 p. 222-3)

This is an effective critique of both ISLM and loanable funds approaches to the interest rate. Further, Davidson (1965) has argued that the interdependence of money demand and planned spending implies that we cannot dichotomize the real and monetary sectors, thus, money cannot be neutral. If, however, "money supply" responds to "money demand," the two functions cannot be independent and Keynes is left with no convincing explanation of the determination of interest rates along the lines of Chapter 13.

Indeed, a number of Post Keynesians have argued that Keynes's theory is fundamentally flawed for precisely this reason. Further, they have sought an alternative in his discussion surrounding the finance motive. The finance motive is interpreted to formulate money demand as

a function of the flow of planned spending—not as a desire to hold money but rather as a desire to spend it. Adding Keynes's statement about overdrafts, it is presumed that "money supply" accommodates "money demand," thus, rising spending has no impact on interest rates. Moore (1988) has proposed a horizontal money supply curve at a loan rate of interest that is a mark-up over the administered central bank target. Money supply is endogenous, while the interest rate is exogenous. Not only is ISLM vanquished, but there is no role left for liquidity preference, said to rely on a fixed money supply or—even worse—on loanable funds theory. (Lavoie 1985)

However, such arguments are mostly orthogonal to Keynes's Chapter 17 approach. Recall from above the model of static equilibrium. At the point when one takes a decision to invest, the marginal efficiency of a particular capital asset is weighted against the marginal efficiency of money. Whether a higher scale of activity will affect interest rates is neither known (in practice) nor considered (by assumption) by the individual taking the ex ante decision to invest. He will consider his finance costs (and these could be upward sloping, rising as one increases the amount of external financing as in Minsky's theory of investment), but it would be illegitimate to presume that effects on interest rates resulting from greater aggregate spending matter in this decision.

Similarly, the forces that equalize marginal efficiencies do not depend on any particular money supply function—all that matters is the way in which financing terms affect forward-looking marginal efficiencies at the time individual decisions are taken. In discussing movement through time, we must abandon the static equilibrium method so that "realization of error alters the state of expectations and shifts the independent behavioral functions," thus "Keynes's model of shifting equilibrium will describe an actual path of an economy over time chasing an ever changing equilibrium—it need never catch it." (Kregel 1976, p. 217) By contrast, in using the method of static equilibrium, Keynes is able to simplify sufficiently to highlight the role played by liquidity preference in establishing an equilibrium level of effective demand that need not be consistent with full employment. Whether money supply is exogenous or endogenous is not relevant to this analysis. Neither is the finance motive nor the manner in which an increased scale of activity is financed; all that is necessary is that money have "peculiar characteristics" that cause its marginal efficiency to "rule the roost."

This is not to deny that it is important to extend Keynes's theory to incorporate endogenous money. Indeed, even orthodoxy has rejected central bank control of the money supply, and some orthodox approaches explicitly assume that the money supply—broadly

defined to include bank deposits—expands as spending grows, implicitly rejecting the money supply and demand approach to interest rates. However, this rejection does not mean that Keynes's liquidity preference—as presented in Chapter 17—should be discarded. By the same token, disappointment of expectations is important to any analysis of movement of the economy through time, as equilibrium shifts in response. However, unemployment would still be possible even if both short run and long run expectations were always met—all that is necessary is that liquidity preference plays a role in determining asset prices, and that the composition of expected returns vary by asset type—with some obtaining most of their returns due to their liquidity.

How do we reconcile Keynes's liquidity preference theory with the reality that central banks today operate with a short-term rate target? First it should be recognized that Keynes accepted substantial control over short-term interest rates by central banks, but he still promoted the liquidity preference approach. More importantly, even if we accept complete discretionary control over the overnight rate, as well as substantial influence over other longer-term interest rates on instruments such as government bonds, this still leaves a role for liquidity preference in determining all other own rates. Keynes never argued for a mono-causal factor, rather, he singled out the role played by liquidity preference because he believed that to be the ultimate barrier to operation of the economy at full employment. In Keynes's view, even enlightened policy would not successfully adjust relative marginal efficiencies so as to generate full employment. Money can be created, but if marginal efficiencies of producibles are too low, labor won't be employed.

I have previously distinguished between liquidity preference (desire to hold liquid assets) and the demand for money (conceived as a demand for new loans). (Wray 1990) Rising money demand will normally lead to an increase of the money supply (defined as an increase of bank liabilities as banks make loans) by financial institutions. Whether the loan interest rate rises depends on numerous factors, including expected policy and liquidity preference of banks—but a completely elastic supply of loans is unlikely. On the other hand, rising liquidity preference is associated with a reduction of planned spending as marginal efficiencies of producible assets fall relatively to the return to liquid assets. For this reason, money demand (as defined) could fall when liquidity preference rises. Thus, money supply will not normally meet rising liquidity preference; instead, asset prices adjust until wealth holders are satisfied to hold the existing set of assets. Hence, endogenous money is reconciled with liquidity preference, clarifying the finance motive not as a desire for a hoard of money but as a flow demand for finance. The finance motive should then be kept separate from the original three motives to hoard.

THE NATURE OF MONEY

If money is the ultimate cause of unemployment, why are economies organized around its use? Orthodox economists presume that money originated to reduce transactions costs, a position that is at odds with Keynes's proposition that money prevents the economy from operating at its efficient, full capacity, level. Keynes clearly thought that money serves a more fundamental purpose than to "lubricate" the market mechanism. In the GT, he explicitly advanced "the Theory of the Monetary Economy," which is one "of a system in which changing views about the future are capable of influencing the present situation." (GT p. 293) In his preparation of the GT, Keynes spoke of the "monetary theory of production," that would deal "with an economy in which money plays a part of its own and affects motives and decisions and is, in short, one of the operative factors in the situation, so that the course of events cannot be predicted, either in the long period or in the short, without a knowledge of the behavior of money between the first state and the last. And it is this which we ought to mean when we speak of a monetary economy." (CW 13, pp. 408-9) He distinguishes this from a "real-exchange economy" that might use money, but "does not allow it to enter into motives or decisions." (ibid)

Many attribute Keynes's concern with money to the uncertainty of the future. As he said, "partly on reasonable and partly on instinctive grounds, our desire to hold money as a store of wealth is a barometer of the degree of our distrust of our own calculations and conventions concerning the future." (CW 14 p. 116-7) Some Post Keynesians argue that the existence of uncertainty leads to the use of money contracts, and, indeed, argue that money exists because the future is uncertain. According to Davidson, Keynesians recognize "The existence of particular market institutions, organizations, and constraints (for example, money contracts, the legal system, money, and sticky money-wage rates) which exist only because uncertainty is present." (Davidson 1974, p. 91) Dow argues that "[t]he fact that almost every society employs some form of money is in itself a response to uncertainty." (Dow 1993, p. 19) Further, "[t]he uncertainties associated with taking action with respect to an unknown future (actions which cannot be reversed) have historically encouraged the widespread use of money contracts…" (Dow 1993, p. 20) However, this can be taken too far, if interpreted to mean that money exists because of uncertainty. Keynes takes the existence of money for granted while arguing that one would not

hold money as a store of wealth in the absence of uncertainty—indeed, no one "outside a lunatic asylum" would store wealth in money form in a neoclassical world. (CW 14 p. 116) However, this does not mean that use of money requires uncertainty, nor that the origins of money, or even the clues to money's nature, lie in uncertainty.

In the TOM, Keynes argued the "money of account comes into existence along with debts, which are contracts for deferred payment, and price lists, which are offers of contracts for sale or purchase.… [and] can only be expressed in terms of a money of account." (TOMa p. 3) He distinguished between "money and money of account by saying that the money of account is the description or title and the money is the thing which answers to the description." (ibid) Further, the state "claims the right to determine 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. It is when this stage in the evolution of money has been reached that Knapp's chartalism—the doctrine that money is peculiarly a creation of the State—is fully realized." (TOMa p. 4) Finally, "the age of chartalist or State money was reached when the State claimed the right to declare what thing should answer as money to the current money of account—when it claimed the right not only to enforce the dictionary but also to write the dictionary. To-day all civilised money is, beyond possibility of dispute, chartalist." (ibid)

These views can be traced to Keynes's earlier unpublished work on ancient monies as well as to his 1914 review of an article by A. Mitchell Innes. As Keynes argued, "the fundamental weight standards of Western civilization have never been altered from the earliest beginnings up to the introduction of the metric system" (Keynes, CW 28, p. 239). These were taken over for the monetary units, whether the livre, mina, shekel, or the pound (Keynes, CW 28; Innes, 1913, p. 386; Wray, 1998, p. 48). Hudson explains that monetary units, developed in temples and palaces of Sumer in the third millennium BC, were created initially for internal administrative purposes: "the public institutions established their key monetary pivot by making the shekel-weight of silver (240 barley grains) equal in value to the monthly consumption unit, a "bushel" of barley, the major commodity being disbursed" (Hudson, 2004, p. 111). Hence, rather than intrinsic value (or even the exchange value) of metal giving rise to a numéraire, authorities set the monetary value of metal equal to the numéraire that was itself derived from the weight of the monthly grain consumption unit. Along these lines, Keynes approvingly noted Innes's rejection of the story of the evolution of money from early commodity moneys to credit and fiat

money. The value of coins was never determined by embodied metals; rather, they were "all token coins, their exchange value as money differing in varying degrees from their intrinsic value." (Keynes 1914, p. 420)

Like Knapp, Innes had argued that the way the state "enforces the dictionary" is by imposing a tax (or other involuntary) liability in the money of account. The state ensures that the money it issues—denominated in that account—is generally accepted by agreeing to accept it in tax payments. So long as taxes are enforced, this is a sufficient condition to ensure that the state's money will be accepted. As Innes argued:

> The government by law obliges certain selected persons to become its debtors. It declares that so-and-so, who imports goods from abroad, shall owe the government so much on all that he imports, or that so-and-so, who owns land, shall owe to the government so much per acre. 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 or other instrument acknowledging a debt due by the government, and acquire from them the tallies by selling to them some commodity or in doing them some service, 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. (Ibid., p. 398)

The state might also pass legal tender laws, or bank reserve requirements, but these are neither necessary nor sufficient to ensure that the state's money will be accepted. In his review, Keynes concluded "Mr. Innes's development of this thesis is of unquestionable interest…. [T]he main historical conclusions which he seeks to drive home have, I think, much foundation…" (Keynes 1914, p. 421)

In the TOM, Keynes explains that moneys are "derived categories" following from the creation of the unit of account. The two types of derivations are "offers of contracts, contracts and acknowledgments of debt, which are in terms of it, and money proper, answering to it, delivery of which will discharge the contract or the debt." (TOMa p. 5) Individuals discover "that for many purposes the acknowledgments of debt are themselves a serviceable substitute for money proper in the settlement of transactions." (ibid) In modern economies, bank money is the most important, "We thus have side by side State money or money proper and bank money or acknowledgments of debt." (ibid) The state can "use its chartalist prerogative to declare that the [bank] debt itself is an acceptable discharge of a liability." (ibid) Bank money becomes money proper, changing "its character" so that it "should no longer be reckoned as a debt, since it is of the essence of a debt to be enforceable in terms of something other than itself." (ibid)

Innes insisted that even "money proper" is debt, albeit a peculiar kind. While it is true that "fiat" money is not "enforceable" in terms of anything else, it does share with all debt the promise that it must be accepted by its issuer. According to Innes, this is the "very nature of credit throughout the world," which is "the right of the holder of the credit (the creditor) to hand back to the issuer of the debt (the debtor) the latter's acknowledgment or obligation." (Innes 1914, p. 161) Government money—like any liability—must "reflux" back to the issuer.

> The holder of a coin or certificate has the absolute right to pay any debt due to the government by tendering that coin or certificate, and it is this right and nothing else, which gives them their value. It is immaterial whether or not the right is conveyed by statute, or even whether there may be a statute law defining the nature of a coin or certificate otherwise. (1914, p. 161)

Still, government money is different, because it is "redeemable by the mechanism of taxation" (Innes 1914, p. 15): "[I]t is the tax which imparts to the obligation its 'value'…. A dollar of money is a dollar, not because of the material of which it is made, but because of the dollar of tax which is imposed to redeem it." (Innes 1914, p. 152) In other words, what "stands behind" the state's currency is the state's obligation to accept it in payment of taxes. We can call this sovereign power—the power to impose taxes and to issue that which is accepted in payment of taxes.

When a bank makes a loan, it accepts an IOU and issues its own IOU; the bank's debtor clears his IOU by delivering the bank's IOU, which it cannot repudiate. Of course, all modern banking systems include a clearing house so that a bank's debtor can deliver the liability of any bank. Likewise, as Keynes noted, tax liabilities are mostly cleared by delivering bank liabilities, with the central bank clearing accounts for private banks and the treasury. There is a hierarchy of monies, with bank liabilities used by the non-government sector and with government liabilities used for net clearing among banks and with the government. Given this arrangement, banks must either hold some reserves for clearing (as in the U.S.), or must have ready access to them on demand (as in countries like Canada, where banks are allowed to strive for zero net reserve balances). Ultimately, a central bank cannot refuse to provide reserves for clearing if it wishes to maintain an orderly payments system with bank liabilities circulating at par. Further, to hit its interest rate target, the central bank must accommodate the demand for reserves.

KEYNES AND THE INTERNATIONAL MONETARY SYSTEM

According to Keynes, state money may take any of three forms: "Commodity Money, Fiat Money and Managed Money, the last two being sub-species of Representative Money" (TOMa, p. 7). Commodity money is defined as "actual units of a particular freely-obtainable, non-monopolised commodity which happens to have been chosen for the familiar purposes of money," or "warehouse warrants for actually existing units of the commodity" (ibid.). Fiat money is representative money "which is created and issued by the State, but is not convertible by law into anything other than itself, and has no fixed value in terms of an objective standard" (ibid.). This is distinguished from managed money, which "is similar to Fiat Money, except that the State undertakes to manage the conditions of its issue in such a way that, by convertiblity or otherwise, it shall have a determinant value in terms of an objective standard" (ibid., p. 8). Managed money is, according to Keynes, the most generalized form of money, which can "degenerate into Commodity Money on the one side when the managing authority holds against it a hundred per cent of the objective standard, so that it is in effect a warehouse warrant, and into Fiat Money on the other side when it loses its objective standard" (ibid.). Both the gold standard and the Bretton Woods system of fixed but adjustable exchange rates were managed money systems. Most developed countries now have fiat money systems—the dollar system in the U.S., the yen system in Japan, and so on. While the euro is a fiat money in the sense that it is not "convertible by law into anything other than itself," the individual members of the EMU are users, not issuers, of the euro. Hence, the euro nations are operating toward the "commodity money" end of the managed money spectrum.

Keynes put forward an alternative to what became the Bretton Woods system that would have had fixed (but adjustable) exchange rates combined with a mechanism for penalizing both trade deficit as well as trade surplus nations, in order to promote "reflux" of international reserves (this was his "bancor" plan). This would have reduced the "beggar thy neighbor" tendency to accumulate hoards of international reserves that puts a downward bias on global effective demand. After the break-up of the Bretton Woods system, some orthodox economists believed that international market forces would tend to produce balanced trade in floating rate regimes; in fact, not only has trade become more imbalanced, but international exchange rate crises have proliferated. Some Post Keynesians, and others, have returned to Keynes's original plan, calling for reinstatement of some sort of fixed exchange rate system. However, there

appears to be very little political support for the level of international cooperation that would be required to reproduce anything like a Bretton Woods system. Further, the limited experiment in Europe with abandonment of national currencies in favor of the euro, as well as adoption of currency board arrangements by many developing nations—both of which represent extreme forms of fixed exchange rate regimes—might cast some doubt on the wisdom of this strategy. (See Goodhart 1998; Wray1998) Abandoning national currencies severely constrains both fiscal and monetary policy as the government tries to build international reserves to protect exchange rates and to "finance" government spending. It is not surprising that countries that adopt currency boards, or that have adopted the euro, seek trade surpluses and balanced treasury accounts.

Is there an alternative, Keynesian, strategy for the 21st century? In the GT, Keynes concluded that, "under the system of domestic laissez-faire and an international gold standard…there was no means open to a government whereby to mitigate economic distress at home except through the competitive struggle for markets." (GT p. 382) Under such a system, "the City of London gradually devised the most dangerous technique for the maintenance of equilibrium which can possibly be imagined, namely the technique of bank rate [adjusting the interest rate target to achieve the desired trade balance] coupled with a rigid parity of the foreign exchanges." (GT p. 339)

To some extent, one could argue that the world has come full circle since Keynes. In Europe, nations have pegged their fortunes to the euro, abandoning their own currencies. Chronic unemployment is necessary to constrain aggregate demand in a hopeless competitive struggle for export markets. Similarly, many developing nations in Asia and Latin and South America experiment with exchange rate pegs and mercantilists' policies; a few nations have won at this game, but many others have suffered high unemployment, low growth, and periodic exchange rate crises. Most developed countries outside Euroland operate "fiat money" systems based on a sovereign and floating currency, but still use domestic policy to constrain effective demand, as in Keynes's day, to influence both the exchange rate and the trade balance.

However, we do not need to operate policy as if we were still on a gold standard. So long as a sovereign nation lets its currency float, it does have the possibility of using domestic policy to pursue full employment and economic growth: It can set its interest rate target without worrying about effects on exchange rates; and can adopt expansionary fiscal policy without worrying about effects of trade deficits on exchange rates or international reserve balances. In

that case, "[I]nternational trade would cease to be what it is, namely, a desperate expedient to maintain employment at home by forcing sales on foreign markets…but a willing and unimpeded exchange of goods and services in conditions of mutual advantage." (GT pp. 282-3) With a floating rate and domestic policy geared toward full employment, then the "real and substantial" advantages of trade, as Keynes put it, can be enjoyed. On the other hand, if domestic policy is geared to depress demand in order to run trade surpluses, the benefits of trade cannot be reaped.

In short, given current political realities that make international monetary system reform along the lines of Keynes's bancor plan unlikely, sovereign currencies and floating rates are the best ways to promote fiscal and monetary policy independence.

CONCLUSIONS

Keynes's money supply-money demand determination of interest rates offered an alternative to the loanable funds approach and to the quantity theory's use of money supply to determine the price level. However, the Chapter 13 treatment suffered from interdependence of the two functions. Keynes's addition of a finance motive, as well as his introduction of overdrafts and revolving funds of finance only emphasized the weaknesses of the equilibrium approach. Chapter 17 offered a better treatment of asset price determination, singling out the "peculiar" role played by money, when liquidity matters, in setting a standard return that is usually too high to allow for the full employment level of effective demand. In earlier work, Keynes had provided insights into the nature of money and of a monetary production economy. Rather than highlighting the "lubricating" role played by money in exchange, Keynes had emphasized the unit of account, as well as the role played by the state in "writing the dictionary." By imposing tax liabilities in the state's unit of account, payable in its own "money proper," the state establishes not only the conditions required for private creation of monetary contracts, but also for using government spending to raise effective demand. However, on a gold standard—or any other fixed exchange rate system without a method of refluxing international reserves to current account deficit nations—domestic stabilization policy is subordinated to a competitive struggle for international markets. A floating exchange rate system frees domestic policy to pursue full employment, but so long as policymakers continue to act as "slaves of some defunct economist,"

"some academic scribbler of a few years back" (GT p. 383), effective demand will remain chronically too low to allow the economy to operate at its "efficient," full employment, level.

REFERENCES

Chick, Victoria. 1983. *Macroeconomics after Keynes: A Reconsideration of the General Theory*. Cambridge, MA: The MIT Press, Cambridge.

Davidson, Paul. 1974. "A Keynesian View of Friedman's Theoretical Framework for Monetary Analysis." In Robert J. Gordon, ed., *Milton Friedman's Monetary Framework.* Chicago: The University of Chicago Press: 90-110.

———. 1965. "Keynes's Finance Motive." *Oxford Economic Papers* 17 (1) March: 47-65.

Dow, Sheila C. 1993. *Money and the Economic Process.* Aldershot: Edward Elgar.

Gardiner, Geoffrey W. 2004. "The Primacy of Trade Debts in the Development of Money." In Wray, L.R. ed., *Credit and State Theories of Money: The contributions of A. Mitchell Innes*. Cheltenham: Edward Elgar, 2004, pp, 79-98.

Goodhart, Charles A. E. 1998. "Two Concepts of Money: Implications for the Analysis of Optimal Currency Areas." *European Journal of Political Economy* 14: 407-432.

Hudson, Michael. 2004. "The Archaeology of Money: Debt Versus Barter Theories of Money's Origins." In Wray, L. R. ed., *Credit and State Theories of Money: The Contributions of A. Mitchell Innes.* Cheltenham: Edward Elgar: 99-127.

Innes, A. Mitchell. "What is Money?" *Banking Law Journal* 30 (5) month 1913: 377-408. In Wray, L. R. ed. *Credit and State Theories of Money.* Northampton: Edward Elgar 2004: 14-49.

———. 2004. "The Credit Theory of Money." *Banking Law Journal* 31 (2) month 1914: 151-168. In Wray, L.R. ed. *Credit and State Theories of Money.* Northampton: Edward Elgar 2004: 50-78.

Keynes, John M. 1914. "What is Money?" *Economic Journal* 24 (95) September: 419-21.

———. 1964. *The General Theory of Employment, Interest, and Money.* New York and London: Harcourt Brace Jovanovich.

———. *The Collected Writings of John Maynard Keynes,* D. E. Moggridge ed., London: Macmillan and New York: Cambridge University Press for the Royal Economic Society

.1971. Vol. IV. *A Tract on Monetary Reform.*

.1971. Vol. V. *A Treatise on Money*, vol. 1 *The Pure Theory of Money.*

.1971. Vol. VI. *A Treatise on Money vol*. 2 *The Applied Theory of Money.*

.1973. Vol. XIII. *The General Theory and After Part I Preparation.*

.1973. Vol. XIV *The General Theory and After Part II Defense and Development.*

.1982. Vol. XXVIII *Social, Political and Literary Writings.*

Knapp, Georg F. 1973 (1924). *The State Theory of Money.* Reprint, Augustus M. Kelley.

Kregel, J. A. 1976. "Economic Methodology in the Face of Uncertainty: The Modeling Methods of Keynes and the Post Keynesians." *The Economic Journal* 86 (342) month 1976: 209-25.

———. 1997. "The Theory of Value, Expectations and Chapter 17 of *The General Theory.*" In G.C. Harcourt and P.A. Riach eds. *A 'Second Edition' of The General Theory*, Vol 1. London and New York: Routledge: 261-282.

Lavoie, Marc. 1985. "Credit and Money: The Dynamic Circuit, Overdraft Cconomics, and Post Keynesian Economics." In Jarsulic, Marc ed., *Money and Macro Policy.* Boston, Dordrecht, Lancaster: Boston-Dordrecht-Lancaster: p. 63.

Moore, Basil. 1988. *Horizontalists and Verticalists: The Macroeconomics of Credit Money*, Cambridge: Cambridge University Press.

Rousseas, Stephen. 1992. *Post Keynesian Monetary Economics.* Armonk, N.Y.: ME Sharpe.

Tobin, James. 1958. "Liquidity Preference as Behavior Toward Risk." *Review of Economic Studies*, 25 (February): 65-86.

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

———. 1990. *Money and Credit in Capitalist Economies: The Endogenous Money Approach.* Aldershot, UK: Edward Elgar.