The Monetary Macroeconomics of Dudley Dillard

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There is no need to use the modifier "monetary" when describing Dudley Dillard's "macroeconomics"; for Dillard, there could be no other type of economic theory of capitalism. All of his work in macroeconomics was fundamentally concerned with the role played by money as an institution; indeed, Dillard believed that many of the macroeconomic problems faced by capitalist societies could be traced directly to the peculiarity of money. In this paper, I outline three themes that run throughout Dillard's macroeconomics and attempt to integrate these in a way that extends Dillard's macroeconomics without, I hope, moving too far from his beliefs.

Money as an Institution

According to Dillard, money is not a "thing" used as a medium of exchange to reduce transactions costs of nonpersonal exchanges. Rather, money is an "institution" whose value and uses cannot be derived separately from social behavior. Money is "a special form of private property" [Dillard 1988b, 205]; it is "the socially recognized form of private wealth," and "the standard of value in

The author is Resident Scholar, The Jerome Levy Economics Institute, and Assistant Professor, University of Denver. This article was presented at the session titled "The Contributions of Dudley Dillard: A Memorial," sponsored by the Association for Evolutionary Economics, Anaheim, California, January 5-7, 1993. I would like to thank John Henry, Jan Kregel, and Hyman Minsky for useful suggestions.
which contracts are fixed and wages are usually paid" [Dillard 1988b, 215]; it is "abstract wealth," a "device for limiting losses in a profit-and-loss economy" [Dillard 1988b, 227]; and it is "the key institution of contemporary capitalism" [Dillard 1984, 421].

Dillard’s views on money follow from those of Marx, Veblen, and Keynes. From Marx, Dillard borrowed the emphasis on money as "money capital," used to finance the process of "commodity production." This is summarized as Marx’s famous $M \cdot C \cdot M'$, in which money capital is first advanced to purchase the labor power and raw materials that are used to produce commodities that must be sold for money. Commodity production will only be undertaken on the expectation that $M'$ exceeds $M$, or that profits in money form will be realized. From Veblen, Dillard borrowed the distinction between "industrial" and "pecuniary" pursuits; he emphasized that "balance sheets and profit-and-loss statements are kept in monetary terms and are the documents that determine success or failure" [Dillard 1980, 260], thus producing goods (an industrial pursuit) is only incidental to making money (a pecuniary pursuit) in a capitalist society. Following Keynes, Dillard emphasized the "peculiar" properties of money: its elasticity of production is zero (as money demand rises, this does not induce an increase of its supply); its elasticity of substitution is negligible (as money demand rises, this will not induce substitution into other assets); and its elasticity of demand as a store of value is very high (even as the supply of money is increased, this does not reduce its desirability as a store of value). Like Keynes, Dillard argued that "money has the special property of having a liquidity premium most in excess of its carrying cost. This high premium arises from the security and convenience that the power of disposal over money gives to its owner" [Dillard 1988b, 214]. Finally, "money may be viewed as an institutional monopoly" [Dillard 1988b, 215].

When the demand for money rises, this merely raises interest rates because more money will not be supplied. According to Dillard, money as an institution has a different impact in a capitalist system than it does in other types of economic systems—only under capitalist arrangements does the existence of money generate unemployment [Dillard 1988b, 206]. As we shall see, these views on money play an elementary role in Dillard’s monetary theory of production.
The Monetary Theory of Production

Dillard's first major attempt to formulate a monetary theory of production came in *The Economics of John Maynard Keynes: The Theory of a Monetary Economy*, published in 1948. Clearly, the subtitle was carefully chosen; Dillard's book was certainly among the first (and is remembered as one of the best) works that interpreted Keynes's *General Theory* as a monetary theory of production (Dillard 1988a). Indeed, Dillard's preoccupation with Chapter 17 of the *General Theory* at this early date was extremely unusual; most of the profession followed the path that led to ISLM theory in which the important insights of Chapter 17 were dropped. Dillard has not been given sufficient credit by modern Post Keynesians for his early recognition of the essence of Keynes's theory. Throughout his later writings, Dillard continued to clarify and extend his early vision of monetary production, incorporating elements of the theories of Keynes, Marx, Veblen, Mitchell, and later Minsky into his monetary theory of production. Rather than tracing the development of his thinking, I will try to summarize his theory at its mature stage of development.

Dillard began with the Veblenian recognition that "production of goods and services . . . is a byproduct of the expectation of businessmen to 'make money'" (Dillard 1988b, 205). Furthermore, production of commodities often involves a decision by capitalists (who own the means of production) to employ workers (who do not own means of production); workers receive wages for their employment, which means that capitalists must advance wages in the form of money capital before they have received revenues from the commodities to be produced; capitalists will do so only if they expect money receipts to exceed money expenditures, so that profits are realized; commodity production comes to an end only if the commodities can be sold so that they are realized in money form. Clearly, this view of the production process requires a central role for money: "Monetary production means producing and realizing money values" (Dillard 1988b, 206). Unlike neoclassical theory, in Dillard's approach, money is a part of the "production function"; a monetary economy cannot be analyzed as if money is merely used as a medium of exchange to facilitate distribution of goods that are already produced. In neoclassical theory, the important prices are relative prices that determine the exchange ratios between goods and between inputs; money is then added to determine nominal prices, which are inconsequential. In
Dillard's theory, "the terms on which real output is converted into money represent the price and largely determine the profit of the transaction" [Dillard 1988b, 209]. It is the nominal price of inputs (wages, raw materials) and of outputs (commodities) that is important in monetary economies.

Like Keynes, Dillard argued that the explanation for unemployment must lie in the "money market" rather than in the labor market: unemployment results not because wages are sticky but because interest rates are sticky; indeed, flexible money wages would only worsen the unemployment problem. As capitalists cannot know how much revenue will be realized when production is undertaken, there is always uncertainty involved in any decision to hire labor. This uncertainty does not primarily concern technological considerations (the feasibility of the project with regard to the quantity and quality of commodities to be produced), rather, the uncertainty mainly concerns the sale of produced commodities at a price sufficiently high to generate the desired profit rate [Dillard 1988a, 56]. (Of course, capitalists rarely are content with producing commodities and then throwing them upon the market; instead, "systematic advertising is employed to establish and to perpetuate a monopoly of custom and prestige" [Dillard 1988b, 210].) Unemployment results when capitalists suspect that even with their best efforts, commodities to be produced could not be realized in money form at sufficiently high prices. While it is true that lower wages would help to lower the costs of production (and thus lower the initial outlays of money), this would also lower incomes of workers, lower aggregate demand, and lower sales revenue—therefore, even if unemployment does tend to lower wages, due to aggregate demand effects, this only makes matters worse at the aggregate level.

The solution to the unemployment problem cannot be found in lowering wages; higher employment requires higher aggregate demand. Like Keynes, Dillard found the key to higher aggregate demand in investment: if more workers are employed to produce capital goods, this will generate more demand for consumption goods, validating increased production of investment goods. Again, money is the important institution that can prevent the additional investment that is required to move the economy to full employment. Capitalists must evaluate all possible expenditures on the basis of prospective nominal returns; thus, for each asset that might be purchased (whether it already exists or is to be newly
produced), an "own rate of interest" or "marginal efficiency" can be calculated. These marginal efficiencies can be compared with "the" interest rate on money; if a capitalist is using retained earnings, no asset will be purchased unless its expected return exceeds the interest rate, because the capitalist could do as well by simply purchasing a "bond"; if the capitalist is going to use borrowed money to purchase an asset, again, the expected return would have to exceed "the" interest rate before a loan would be negotiated. "The" rate of interest on a "bond" is merely the "own rate of interest" for money: it is the amount that must be paid to obtain use of money today in return for a promise to pay money at a later date. In conclusion, no assets will be purchased unless their marginal efficiencies exceed "the" interest rate. When the expected return from the production of new capital assets exceeds "the" rate of interest, investment can occur, raising employment [Dillard 1960, 198].

Like Keynes, Dillard argued that "the" interest rate sets the standard to which the expected returns of all other assets must adjust. "The" interest rate is relatively sticky, while marginal efficiencies of all other assets tend to fluctuate a great deal due to whirlwinds of optimism and pessimism [Dillard 1960, 200]. As mentioned above, this is because money is peculiar and has special properties. The return to money is primarily liquidity; money is the asset whose liquidity is most in excess of its carrying costs. Liquidity is valuable because the future is uncertain; possession of money provides flexibility, security, and convenience because it is the universally recognized measure of wealth, the standard of value in which contracts are fixed, and the unit of account in which prices and debts are measured. This means that the marginal efficiency of money will always be positive; its actual value will be determined by the value placed on liquidity, or liquidity preference. When liquidity preference rises, given that the "institutional monopoly" over the supply of money prevents it from increasing, interest rates are forced to rise. This sets a new, higher standard that must be reached by the marginal efficiencies of all other assets. Fewer capital assets are able to achieve the higher standard; investment falls, and unemployment is the consequence. Even if the monopoly suppliers do provide more money, this will not lower its marginal efficiency below some minimum, due to the special elasticity of demand for money as a store of value. Thus, when expectations regarding the return of nonmoney
assets collapse, merely increasing the supply of money will not raise aggregate demand because the marginal efficiency of money cannot be pushed sufficiently low [Dillard 1960, 203; 1988a].

Unemployment results because "the" rate of interest sets a standard that is too high. Unlike the return to money, the marginal efficiencies of capital assets tend to fall quickly as their supply increases [Dillard 1988a] because the return to capital is primarily based on its scarcity—the return to capital is a monopoly "rent." If the scarcity of capital is reduced, the return to capital falls; when it falls to equality with the marginal efficiency of money, no more capital can be produced. Thus, the return to capital adjusts to the return to money. If the return to money could be reduced to zero, so much capital would be produced that its return would also fall to zero. At this point, the monopoly rents that accrue to capitalists and rentiers would be eliminated; only the return to labor would remain, and unemployment would be eliminated [Dillard 1984].

Following Minsky, Dillard recognized that assets are frequently purchased using borrowed money. When capital assets are bought in this manner, it means that cash payment outflows are certain (interest and principle payments), but cash revenue inflows are uncertain [Dillard 1988b, 225]. Greater reliance on external finance increases vulnerability to a fall of money inflows and can trigger widespread debt deflation if shortfalls are widespread or if defaults by a few important, heavily leveraged firms bring down their creditors and lead to a cascade of defaults. This outcome becomes even more likely to the extent that firms and households try to "liquidate" assets (that is, sell them to realize money), leading to falling asset prices and compounding the problem. Over time, a fragile financial system naturally evolves as success leads to greater reliance on external financing, which in turn leads to innovations that increasingly leverage equity and prospective income flows. If aggregate demand falls, lowering revenues, or interest rates rise, increasing payment commitments, a debt deflation can result; this eventually eliminates the fragility by "simplifying" balance sheets as debts are repudiated. However, lender of last resort intervention by the central bank allows refinancing, rather than liquidation, and countercyclical government deficits set a floor to aggregate demand, thereby preventing debt deflation.
The Labor Theory of Value

In spite of a less than enthusiastic response by Post Keynesians and institutionalists alike, Dillard's promotion of the labor theory of value persisted throughout his writings. Of course, his claim that Marx adopted the labor theory of value as the basis for his analysis is beyond dispute; however, his claim that Keynes also adopted this approach as a fundamental element of his monetary theory of production remains controversial. Dillard liked to emphasize the similarities of the analyses of Keynes and Marx, which he attributed to their attempts to examine the same phenomenon, "namely, capitalism as a social system of production based on private money-making, plus a sensitivity to the human cost of massive unemployment and the injustice of arbitrary inequalities in the distribution of wealth and income" [Dillard 1984, 431]. Thus, it does not surprise Dillard to find that Keynes and Marx adopted similar theories of value.

According to Dillard, "Theories of value in economics have generally been attempts to probe beneath the surface phenomena of the market to discover essential properties and relations" [Dillard 1984, 430]. Dillard points out that Keynes agreed with Marx that "everything is produced by labour." Unlike Marx, Keynes was willing to include as labor the "personal services of the entrepreneur and his assistants" [Dillard 1984, 429]. According to Marx, rent, interest, and profits are elements of surplus value, produced by labor. Keynes agreed with classical economists like Smith and Ricardo that rent was an unearned income accruing to the nonfunctional class of landlords; however, he went further and claimed that interest was also an unearned income going to the nonfunctional rentier class. Wages and profits were seen by Keynes as earned income going to reward the labor of workers and capitalists. Thus, while Keynes shared Marx's labor theory of value, he did not accept Marx's theory of surplus value. On the other hand, while Marx saw rent, interest, and profits as appropriated surplus, he did not view these as unnecessary; given the property laws of capitalist society, these are necessary incomes.

Dillard attributes this difference to Keynes's reformist philosophy in opposition to Marx's revolutionist outlook. Marx ascribed the existence of income to classes other than workers to exploitation of labor, through which surplus value is appropriated. Exploitation can be eliminated only through revolution and ex-
propriation. In Keynes's view, unearned income could be eliminated by reducing the interest rate to zero, which would eliminate rentier income and monopoly rents that are due to scarcity of capital (as discussed above, if interest rates are pushed down, capital becomes less scarce). This would also eliminate the misery caused by unemployment. Finally, as unearned incomes due to artificial scarcity are eliminated, only earned incomes remain, accruing to labor—both of workers and of entrepreneurs. Expropriation is not necessary: "In Keynes's ideal society, private ownership and entrepreneurship would continue" [Dillard 1984, 429]. Similarly, Dillard interpreted Keynes's call for "socialized investment" as the reformist call for elimination of "unnecessary" incomes that result from artificial scarcity—and not as support for expropriation.

Assessment and Extension

Of these three themes of Dillard's macroeconomics, two areas require further clarification and development. First, Dillard's theory of money supply is inadequate. He emphasized that the supply of money is an institutional monopoly; he argues that when money demand rises, this does not induce money supply. On the other hand, his whole theory of monetary production requires not only that the production process begin and end with money, but that the amount of money at the end of the process ($M'$) exceeds the amount at the beginning ($M$). While he did recognize that "banks add to the total supply of money by the creation of bank credit, that is, by increasing the liquid claims against themselves in favor of their customers whose additional money takes the form of increased balances" [Dillard 1960, 183], he did not explain the apparent contradiction between this and his claim that "when the demand for money increases, more money cannot be produced" [Dillard 1988b, 215]. Second, Dillard does not integrate the labor theory of value sufficiently into his monetary theory of production. His acceptance of the theory appears to be normative: the processes that would eliminate "uneared" income would also eliminate unemployment. It is difficult to see what role the labor theory of value plays in Dillard's theory of monetary production. While I cannot deal sufficiently with either of these problems here, I will point the direction toward their resolution.
Dillard, like Keynes of the *General Theory*, tended to interpret liquidity preference as a theory of money demand; like Keynes, Dillard enumerated three motives for holding money: the transactions, precautionary, and speculative demands for money. All of this has become part of the Keynesian "tradition" and requires no further comment. Keynes—at least the Keynes of 1937—realized, however, that this treatment was not sufficient. In a series of articles, he emphasized the finance motive, or a demand for money as a function of planned spending. He also emphasized that the banking system holds the "key" to an expansion: if desired spending rises, money demand rises to satisfy the finance motive; if banks accommodate, the money supply expands as spending rises; if banks will not accommodate, spending cannot rise unless interest rates rise so that money is released from "inactive" balances and flows into the "active" balances. Keynes emphasized that accommodation might be the norm, especially where overdraft facilities exist. Those who adopt the endogenous money approach have, of course, taken these insights very seriously; these can be incorporated within Dillard's theory.

Dillard correctly observed that the supply of money is an "institutionalized monopoly," as is the supply of most commodities in developed capitalist societies. He also realized that money is supplied when banks make loans. However, Dillard did not treat banks (and other financial institutions) as profit-seeking institutions with market power, whose output happens to be "money." Banks produce "money" when they believe this production will be profitable. Furthermore, the marginal efficiency of money ("the" interest rate) is not due primarily to the scarcity of money, but rather to the existence of liquidity preference. The return to money cannot be extinguished by legislation nor by increasing its supply; it can be eliminated only by eliminating a preference for liquidity.

Liquidity preference theory is not a theory of "money demand," nor is it a theory of "the" interest rate—it is a theory of asset prices. An even more interesting interpretation was provided by H. Townshend in an article in 1937: liquidity preference theory is a theory of value for assets. (While Keynes had certainly read the article, there do not seem to be any written comments on it. In 1944, Kenneth Boulding took this idea even further by making liquidity preference theory a theory of all market prices.) Liquidity preference determines the whole price system (or, equivalently,
the whole structure of interest rates) of assets. The rudimentary model often adopted by Dillard (and in most "Keynesian" interpretations), which includes only "money" and "bonds," "the" interest rate, and a "fixed" money supply, and which confounds "money demand" with "liquidity preference," simply cannot adequately treat Keynes's theory of liquidity preference.

A step in the right direction is to distinguish money demand from liquidity preference: money demand represents a "flow demand" for finance of prospective spending, while liquidity preference is a shorthand way of referring to a complex preference relationship. As Keynes argued, all assets have a return composed of \( q-c+l \), where \( q \) is the expected stream of returns, \( c \) is the carrying cost, and \( l \) is liquidity; in equilibrium, prices of all assets adjust such that the expected returns (or marginal efficiencies) are equalized. When liquidity preference rises, the perceived value of \( l \) rises relative to that of \( q \); this causes all asset prices to adjust so that marginal efficiencies are again equalized. The most liquid asset (high powered money--HPM--in all developed capitalist countries) has a return that consists entirely of \( l \) (its carrying cost and yield are zero); this sets the minimum expected return that must be achieved by all assets. In order for any asset to be newly produced, its expected return must exceed the \( l \) from HPM. For example, the expected return on capital determines the demand price for capital assets, and this must exceed the supply price before any new capital assets can be produced. If positions in assets are externally financed, the demand price must include a margin to cover "borrower's risk" (the risk of loss of equity if prospective earnings are not forthcoming); similarly, the supply price must include "lender's risk," or the interest rate charged on the loan. This means that the "marginal efficiency" of those capital assets that are externally financed must include an expected net return that exceeds \( l \) on HPM by an amount sufficient to cover these risks. Similarly, any privately issued financial asset must carry an expected return \( q+l \) that exceeds the return on the most liquid asset (HPM) in order for it to be supplied and demanded.

Interest is not a payment due to scarcity--it exists due to the preference for liquidity that exists because of uncertainty; interest is the payment required to get someone to hold money-denominated liabilities that promise payment in money terms at some later date. Only HPM need not pay interest because it is perfectly liquid; other liabilities must pay a positive interest rate because they
are less liquid. Thus, no particular interest rate can be driven to zero by increasing the supply of any particular private liability (e.g., bank deposits), rather, interest rates can be reduced by reducing uncertainty and raising optimism. As long as banks share in the expectations of other firms, an increase of money demand that represents a desire to purchase more assets will be met by an increase of money supply to finance positions—of course, this will not be done unless the loan rate exceeds the deposit rate. Thus, money demand and money supply generally grow together when optimism reigns. On the other hand, when liquidity preference rises, this represents a desire to exchange illiquid assets for liquid assets; the marginal efficiencies of capital assets fall; planned spending falls, and, with it, money demand falls; at the same time, the returns of liquid assets rise relative to those of illiquid assets. Thus, rising money demand leads to more money supply as banks make loans on the expectation that this activity will be profitable; but when liquidity preference rises, the money supply does not expand—instead, interest rates are forced to rise. Higher interest rates raise the standard return that must be achieved by all assets, and unemployment results because fewer investment projects have a return higher than the return to liquidity. As Dillard emphasized, unemployment is a "money market" problem, but it is not a problem of scarce money.

Is there room for a labor theory of value? We must first recognize that there are two price systems in every capitalist society—one for assets and another for current output. The largest component of current output is the output of the consumption sector; however, current output also includes the supply of newly produced capital assets—the output of the investment sector. The primary cost of producing current output is the wage bill. Virtually all of the wage bill goes to purchase the output of the consumption sector; if we can make the "classical" simplifying assumption that "workers spend what they get," while capitalists do not consume, then total revenues of the consumption goods sector equal total spending on the aggregate (investment plus consumption sectors) wage bill. Ignoring raw materials costs, this means that capitalists of the consumption sector receive as gross profits an amount equal to the wage bill of the investment sector. These profits are then sufficient to purchase the capital goods output of the investment sector. (I will not go into the details, but this analysis can be extended to take account of raw materials,
depreciation, worker saving, capitalist consumption, government spending, net exports, investment sector profits, and so on.)

Capitalist spending on wages determines worker income; total worker income determines capitalist gross receipts; capitalist spending on the wage bill in the investment sector determines capitalist gross profits; "capitalists get what they spend!"

This is a macroeconomic labor theory of value for current output. The labor employed in the consumption sector produces the "available" consumption goods output; the aggregate price of this output must exceed the consumption goods sector wage bill by an amount sufficient to ensure these workers cannot purchase all of this output. The wage bill of the investment sector determines the amount of the markup over labor costs in the consumption goods sector; this allows the investment sector workers to purchase the "surplus" output of the consumption sector, which then determines gross profit income to capitalists. Even the income of capitalists is determined by wages (in the simplest model); if there is no wage bill in the investment sector, there are no newly produced capital goods and no capitalist profit income. Workers will be employed in the investment sector only if the expected proceeds from ownership of capital assets—which determines the demand price—exceed the expected outlays incurred from ownership—the supply price. The supply price is primarily a function of wages in the investment sector (plus "lender's risk" if the capital assets are externally financed); the demand price is a function of the expected proceeds from ownership, the state of liquidity preference (which determines the value of \( i \)), and perceived "borrower's risk" (in the case of externally financed purchases). Since spending on the wage bill in the investment sector determines the markup that can be realized in the consumption sector, investment determines not only employment in the investment sector, but it also determines capitalist income by determining the prices that can be realized on consumption goods. Thus, both the labor theory of value and the liquidity preference theory of value are necessary components of any monetary theory of production. When expectations collapse and liquidity preference rises, investment spending falls so that consumption goods cannot be sold at a price sufficient to realize profit income, and "surplus value" created by workers in the consumption sector cannot be realized in money form. This can lead to a debt deflation if positions have been taken by issuing debt because debt commitments are always nominally valued; when required
output prices cannot be realized due to insufficient demand, bankruptcies follow.

The Marx-Keynes-Dillard "humanistic" claim that labor using capital (dead labor) produces everything is verified [Dillard 1960, 195]. However, there is uncertainty in any private property economy that operates on the basis of private profit and loss and money is used as the unit in which profits and losses will be recorded. Given the existence of uncertainty and money, there will always be a preference for liquidity. This means that embodied labor alone cannot serve as the sole basis for a theory of value—there must also be a theory of value for assets. Because the asset price system affects investment, however, and because this then affects the markup of prices in the consumption goods sector, even the prices realized in the consumption sector are a function of the state of liquidity preference. While the labor theory of value may apply mainly to the supply prices of current output, and while the liquidity preference theory of value may apply mainly to the demand prices for assets, both are necessary elements of the monetary theory of production. Interest income, or the return to capital, is not primarily due to scarcity—it is due to the preference for liquidity. These returns are reduced by reducing uncertainty, not by reducing scarcity. Indeed, in the case of capital assets, individual uncertainty is sometimes reduced through creation of artificial scarcity (Veblen's sabotage of production); reducing scarcity would in many cases actually increase individual uncertainty and the premium placed on liquidity. However, as Keynes argued, for society as a whole, the individual fetish for liquidity can be seen as the primary obstacle to growth at the technologically feasible rate. Fortunately, reduced scarcity and higher demand at the aggregate level can raise individual profit flows sufficiently that individual proclivities toward industrial sabotage and liquidity sometimes can be overcome.

References


