

The Barter Illusion in Classical and Neoclassical Economics

Dudley Dillard*

The veil of barter must be lifted from general economic theory if we are to have a clear and logical understanding of how our money economy behaves. Economists speak frequently of the “veil of money” and the “money illusion” but the more troublesome barter illusion is seldom acknowledged.¹ The barter illusion in classical and neoclassical economics is the subject of my paper.²

INTRODUCTION

Money is a problem for everyone, including professional economists. In recent years economic theorists have been seeking a way to put money into the Arrow-Debreu version of the Walrasian general equilibrium model. To quote Professor Frank Hahn of Cambridge University:

“The most serious challenge that the existence of money poses to the theorist is this: the best developed model of the economy cannot find room for it. The best developed model is, of course, the Arrow-Debreu version of a Walrasian general equilibrium. . . . A first . . . task is to find an alternative construction without thereby sacrificing the clarity and logical coherence of Arrow-Debreu” (Hahn, 1983, p. 1).

Where does Professor Hahn propose to start searching for insights for getting money into general equilibrium? Despite misgivings about Keynes’ formal economic theorizing, he confesses:

“I none the less hold that his [Keynes] insights were several orders more profound and realistic than those of his recent critics. . . . Accordingly, in these lectures I follow various Keynesian trails in an endeavour to reach a point where theory is not so blatantly at variance with fact” (Hahn, 1983, p. xi).

Following Professor Hahn’s lead, I likewise have found Keynes a useful guide in probing the relation of money to general economic theory. My problem is, however, somewhat different. Professor Hahn’s problem is how to get money into economic theory; mine is how money ever got out of economic theory in the first place. To the naive mind, it must seem incredible that “the best developed model” of the economy has found no room for money. For my point of departure, I take Keynes’ first draft of the *General Theory*, which he called “A Monetary Theory of Production” (Keynes, 1979, pp. 35–160/ 1973a, pp. 408–11). Also fundamental for my perspective is Keynes’ response to critics in his well-known article “The General Theory of Employment” (QJE, 1937, reprinted in Keynes, 1973b, pp. 109–23).

In a monetary theory of production, the strategic condition of economic life that gives money its commanding position is the existence of great uncertainty concerning the future,

*Department of Economics, University of Maryland. Presidential Address, Eastern Economic Association, March 11, 1988, Boston, Mass.

especially uncertainty about the prospective yields from investing in durable capital assets. This uncertainty gives rise to a demand for money as an alternative form of holding wealth. In order to induce wealth-holders to part with their money, they must be paid (at the margin) a premium in the form of interest. The level of employment and output as a whole will shift with fluctuations in the amount of investment in capital assets. There is no automatically self-adjusting mechanism leading to full employment in a monetary theory of production, whereas in the classical and neoclassical general principles, based on neutral money, there is always a tendency toward full employment. The latter is a theory primarily about the efficiency with which given resources are employed, and not a theory about employment as such.

In its microeconomic aspect, a monetary theory of production requires a theory of business enterprise, which is the dominant economic institution of modern civilization. Money has very special meaning for business. It is both the means and the end of business activity. Keynes writes in one of his early drafts of the *General Theory*: "The firm is dealing throughout in terms of sums of money. It has no object in the world except to end up with more money than it started with. That is the essential characteristic of an entrepreneur [business] economy" (Keynes, 1979, p. 89).

Business firms advance money capital to buy materials, equipment, and to pay wages to workers. When the output of the firm is completed, it must be sold for money, that is, the output must be reconstituted as money capital if the transaction is to be deemed successful by business standards. A firm is free to produce anything it wishes, but its output has no socially recognized use value or exchange value until it is validated by sale for money. Gains by business firms are said to be "realized" by transforming output into money. What is "real" from the view of the objective of the firm is money. That is the bottom line in the actual facts of business calculation. Business firms use profit and loss statements to measure their current money gains; and balance sheets to reflect their accumulated money gains.

Among classical economists the barter illusion is reflected in their insistence that production is for consumption. This is patently wrong for a large firm in a business enterprise system. The output of a large firm has negligible consumption value for the firm, however the firm might be personified as a consumer. The output becomes a reality as a use value only upon reaching a consumer in exchange for a money purchase, corresponding to sale for money by the firm. Only in some teleological sense can it be said of a business enterprise system that the purpose of production is consumption. Consumption may be said to be the *consequence* of production, but the motivation of a firm is not consumption. A firm that can make more money by producing fewer goods is driven by its pecuniary logic to do so. The proposition that production is for consumption is one of the classical pillars that will not stand up under the scrutiny of a monetary theory of production.

"Barter Illusion" in the title of this paper refers to the view that the economic system works as if it were a barter economy. Money exists in the classical and neoclassical models but it is assumed to be no more than a refined form of barter. The principles of the theory would not be different if goods did exchange directly for goods and if wage earners bartered their labor for subsistence. Now this is an illusion because money as a store of value in a world of uncertainty does affect motives and decisions of wealth-holders and wealth-producers in a significant way. The economic system to which classical and neoclassical economics has empirical and historical reference is a money economy (Dillard, 1967, chapter 1). It has been a money economy since the sixteenth century, when mercantilism replaced feudalism.³ A corollary of the barter illusion is that money is neutral with respect to output and employment. Economic theories resting on the barter illusion either assume away or contribute little to an understanding of many of the

most troubling problems of economic life such as unemployment, general overproduction, commercial crises, and business cycles.

MERCANTILISM: MONEY AT CENTER STAGE

An explanation of the barter illusion in mainstream economics begins with Adam Smith's assault on the mercantile system. Money occupies center stage in mercantilist economics all the way from the early bullionists to the later balance-of-trade advocates. The great aberration in the history of economic analysis is not the mercantilist preoccupation with money but rather the absence of money from the principles of economics presumably applicable to the capitalist world in which classical and neoclassical economic principles were forged.

In the age of mercantilism the passions of money-making were liberated from the moral and religious restraints of medieval thought. An emphasis on acquisitive and pecuniary motives features mercantilist writing. Eli Heckscher, the historian of mercantilism, characterizes the transition from feudalism to capitalism as a shift from a hunger for goods (provisionism) to a fear of goods (Heckscher, 1936, II, p. 108). A corollary of the mercantilist fear of goods is a hunger for money. This hunger for money and aversion for goods is reflected in Thomas Mun's famous maxim for increasing the wealth and treasure of a nation by foreign trade: "Wherein wee must ever observe this rule; to sell more to strangers yearly than wee consume of theirs in value" (Monroe, 1965, p. 171). Heckscher's interpretation and Mun's maxim are consistent with Max Weber's characterization of mercantilism as, "... carrying the point of view of capitalistic industry into politics; the state is handled as if it consisted exclusively of capitalistic entrepreneurs" (Weber, 1961, p. 255). The idea is to sell as much as possible and buy as little as possible in order to maximize the amount of money (gold and silver) received.

The mercantilists may be said to have adumbrated a monetary theory of production. Keynes explains the similarity between his theory and the valid aspects of mercantilist thinking in terms of investment being the strategic determinant of national prosperity. A favorable balance of trade represents foreign investment, which stimulates the import of money (gold and silver); which by bringing money (gold and silver) into the economy tends to lower the domestic rate of interest and hence to stimulate domestic investment. In Keynes' theory investment is strategic because it disburses current income (effective demand) into the economy without simultaneously bringing more consumer goods onto the domestic market. The application of these principles will stimulate economic activity if there are significant amounts of unemployed labor and other productive capacity. The assumption of chronic unemployment as a normal condition is valid for the mercantilist period and seems valid throughout the history of capitalism. Economists in the age of mercantilism, including David Hume and Sir James Steuart, developed theories with elements in common with Keynes (See below). A causal relation between money and employment is fundamental to a monetary theory of production. Mercantilist doctrine rests on the premise that increases in the precious metals will stimulate economic activity.

SMITH AND THE SIN OF ADAM

What provoked Adam Smith to remove money from center stage in the principles of political economy? Clearly there is no simple answer. On a conceptual level, Smith may have viewed money as a major disturbing force in his Newtonian vision of a self-adjusting natural economic order. Non-neutral money would have posed a threat to the concept of a pre-

established harmony, which is a presupposition for Smith's policy of laissez-faire.⁴ In the general case, non-neutral money may be incompatible with general economic equilibrium.

Another hypothesis is that Smith was so eager to discredit mercantilist policies that he overreacted in the direction of deemphasizing money. In what Smith describes as his "very violent attack . . . upon the whole commercial system of Great Britain" (Scott, 1937, p. 283), the focus is on the place of money in mercantilism, which Smith describes as a system of political economy that represents national wealth as consisting of an abundance of gold and silver (Smith, 1937, p. 238). While Smith did not really believe the mercantilist writers were this naive,⁵ he leaves no doubt of his determination to exorcise money from a prominent place in political economy. Money is reduced to impotent neutrality. This I refer to as the sin of Adam.

We shall note briefly Smith's treatment of money in three places in the *Wealth of Nations*: Book I, chapter 4, "Of the Origins and Use of Money"; Book II, chapter 2, "Of Money Considered as Part of the Great Stock of Society"; and in Book IV, chapter 1, "Of the Principles of the Commercial, or Mercantile System."

Labor is Real Wealth and Money is Nominal Wealth

Smith's chapter "Of the Origins and Use of Money" is preceded by three chapters on the division of labor and followed by three chapters on value and price. The chapter on money provides the linkage between the division of labor and terms (ratios) of exchange of goods among the specialized producers. The chapter immediately following the one on money makes the important point that labor is the real price and money only the nominal price of the things exchanged. The labor theory of value is Smith's first analytical put-down of the central role assigned to money in mercantilist economics.

Money as a Cost not a Revenue

In Book II on the accumulation of capital, Smith treats money as part of the expense of maintaining the total social capital. Money is classified as a form of circulating capital but, unlike all other forms of circulating capital, it resembles fixed capital in the sense that a deduction (depreciation) must be made before obtaining the social net revenue, or national income. Money is a cost and not a revenue in Smith's system of national accounting. The fewer the resources devoted to the maintenance of money, the greater the wealth of the nation. This is a second analytical put-down of the mercantilist doctrine that national wealth consists of money in the form of gold and silver. Money is merely the great wheel of circulation (Smith, 1937, pp. 273, 276, 280).

In this chapter Smith praises the use of paper money and bank credit because they economize on the use of resources tied up in the stock of money. The chapter discusses at length developments in Scottish banking and the issuance of paper money in the British colonies of North America and elsewhere. Smith speaks of banks converting "dead stock into active and productive stock" (1937, p. 305). Gold and silver represent the dead stock (1937, p. 305). An economy can improve its condition by exporting some of the gold and silver in exchange for something more useful.

Smith recognizes that paper money and bank credit introduce elements of potential instability into the economy, as compared to gold and silver money, but "prudent operation" of banking, with appropriate regulation of paper money can avoid "excessive multiplication" and "malicious runs" on banks (1937, p. 305).

Smith was acutely aware of financial panics, stock-jobbing tricks, bank schemes, and national disasters such as John Law's Mississippi Bubble (1937, p. 453). In his *Lectures* he covers these speculative episodes but ignores them in the *Wealth of Nations*. Despite scathing rebukes to merchants and master manufacturers—classes not to be trusted—Smith largely ignores the instability of capitalism associated with financial abuses, which even in Smith's time periodically disrupted the continuity of production.

Smith's retrogression from Steuart. Smith's retrogression into the barter illusion might have been avoided if he had taken account of the economic analysis of a contemporary Scot, Sir James Steuart, whose work, according to a recent authority, "marks a distinct turning point in the history of the theory of money" (Vickers, 1975, p. 488). Steuart's theory confronts the problem of unemployment, a widespread condition in eighteenth-century Britain, and allows a place for money and interest as instruments of policy to alleviate unemployment. The barter illusion clouded Smith's vision of the dynamics of money in relation to employment and output.

Smith ignores Hume on non-neutral money. Although Smith was well aware of the economic writings of his friend and fellow Scot, David Hume, he made no mention of Hume's analysis of the short-term benefits from increasing the quantity of money. According to Hume, in the interval between an increase in the supply of money and the subsequent rise in prices, employment and output will increase significantly (Hume, N.D., p. 170). Hume shows a clear appreciation of his contemporary mercantilists for whom money could be a positive force increasing output and employment.

In defense of Smith, it might be said that his theory is concerned with long-term equilibrium and not with short-term intervals that drew the attention of Hume and Steuart. Keynes is reported to have said that long-term equilibrium is for undergraduates, which is a corollary of his famous statement, "In the long run we are all dead" (Keynes, 1971, p. 65, Keynes' emphasis). Significantly for our purposes, a related but little known statement by Keynes pertains to Hume on money:

"Hume began the practice among economists of stressing the importance of the equilibrium position as compared with the ever-shifting transition towards it, though he was still enough of a mercantilist not to overlook the fact that it is in the transition that we actually have our being. 'It is only in this interval or intermediate situation, between the acquisition of money and a rise in prices, that the increasing quantity of gold and silver is favourable to industry' . . ." Keynes, 1936, p. 343n).

So Hume did see short-term advantages from increases in the supply of money, while Smith did not, or at least did not refer to it. Smith does speak of interest as "the use of money" (1937, p. 52).

Principle of the Mercantile System

In his famous chapter "Of the Principle of the Commercial or Mercantile System" Smith opens with some acute observations about the properties of money but ends weakly with money running after goods rather than goods running after money. He attributes popular misunderstandings about money to its double function as the instrument of commerce and the measure of value. "The great affair, we always find, is to get money" (1937, p. 398). Smith correctly observes that money is the socially recognized form of private wealth, which recognition is the beginning of wisdom in a monetary theory of production. "Money is the known and established instruments of commerce . . ." (1937, p. 407).

Smith notes the lower carrying costs of money as compared with goods in the hands of merchants and manufacturers. He even makes the point that goods have virtually no use value for a capitalist producer who is "... much more anxious to exchange his goods for money, than money for goods" (1937, p. 407). In making a shift from individual producers to the economy at large, Smith correctly stresses that goods have use value only for society at large. At this point he jumps to the conclusion: "Money, therefore, necessarily runs after goods, but goods do not always or necessarily run after money" (1937, p. 407). This seems to be saying that because goods have use value to potential consumers, that producers have no problem selling them, which begs the whole question of sufficiency of effective demand. At this point, Smith has anticipated J.B. Say's law of markets and is ensconced in a barter-like economy in which products exchange for products.

Smith fails to distinguish between use of money by consumers and the use of money capital by business firms. He writes: "The man who buys, does not always mean to sell again, but frequently to use or to consume . . ." (1937, p. 407). This is surely true for consumers, but it is not true of business firms, which buy without selling again only if they are going out of business. In the logic of a monetary theory of production, a business enterprise sells not in order to consume but in order to make money and to accumulate capital in the circular flow of money and commodities. A shortcoming of Smith and classical and neoclassical economists generally is that they have no theory of business enterprise. In a society of independent craftsmen and peasants, producers do sell in order to consume, but this is not true of large capitalist firms which are in business in order to sell for money. In defense of Smith, it might be said that he lived in an age of transition from independent craftsmen to capitalist entrepreneurs. While this excuse may hold more justification for Smith than for his successors, even by Smith's own statistics it is not correct. Smith estimates that in his time in Europe that only one craftsman in twenty was self-employed (Smith, 1973, p. 66).

J.B. SAY: CONVERTING SIN INTO DOGMA

J.B. Say occupies a central position in the development of the barter illusion. His ideas provide the transmission link from Adam Smith to David Ricardo. Whereas Smith toys with the puzzle whether goods chase money or money chases goods, in Ricardo's *Principles of Political Economy* that is no longer debatable. Money is neutralized—banned for all practical purposes—from the classical Garden of Eden. If Adam (Smith) is the original sinner, J.B. Say is the disciple who turned faith into dogma and postponed the atonement indefinitely.

Say's self-imposed task in political economy was to put order into Adam Smith's somewhat rambling discourse on the principles of political economy. This is Say's message in his long introduction to his *Treatise on Political Economy* (Say, 1971, pp. xv-lx). Undoubtedly much was lost in the process of putting the *Wealth of Nations* into a systematic treatise. Leo Rogin comments: "Say put Smith's theory in order in the same way that a cautious spouse puts her husband's trousers in order when she turns them upside down and empties them of all their valuables. So Say 'purged' Smith of 'dangerous thoughts'" (Rogin, 1956, p. 209).

Say's famous chapter on the law of markets begins in the first edition of his *Treatise* (1803) in good Smithian fashion as a refutation of mercantilist monetary fallacies. The expanded chapters of later editions focus on the question of sources of demand for products. In the English translation of the fourth edition, chapter 15 is entitled, "Of the Demand or Market for Products" (Say, 1971, pp. 132-40). Here Say states the law of markets that supply creates its own demand, because products exchange for products. The economy works as if it were a barter system with money strictly neutral with respect to output and employment.

Perhaps Say's clearest statement of his law is the following passage from chapter 15:

"... a product is no sooner created, that it, from that instant, affords a market for other products to the full extent of its own value" (Say, 1971, p. 134)

This appears to mean that if there are unemployed workers, for example, all that is required to employ them is to put them to work producing additional products because these products coming onto the market will generate sufficient demand to clear the market. No general deficiency of demand is possible because output, of the right kind,⁶ will create new demand of sufficient magnitude. Involuntary unemployment is not possible in the barter-like world of J.B. Say.

With respect to money, Say continues: "For, after all, money is but the agent of the transfer of value" (1971, p. 133). A long chapter entitled "Of the Nature and Uses of Money" explains why money is a more efficient medium of exchange than actual barter; and a further chapter "Of Signs or Representatives of Money" deals with "representatives of money" such as bills of exchange, bank deposits and paper money. Thus while money provides a more efficient form of exchange than direct barter, in no sense is the use of money essentially different from barter.

Say does not distinguish between money-exchanges in an economy of self-employed producers and money exchanges in an economy of large capitalist producers. His institutional assumptions for the most part conform to those of Adam Smith. Money is used in a system of simple exchange in which producers sell in order to get money to buy the goods they need for living. Say adopts Smith's proposition that incomes not spent for consumption are nevertheless spent, because saving is a form of spending. Whether money outlays are for consumption or for investment (saving), the circular flow of sales and purchases is uninterrupted by such things as delays in purchases following sales (hoarding); or what amounts to the same thing, changes in the velocity of money, is not included in the analysis. Saving and investing, for the most part, are done by the same individual.

When the great post-Napoleonic depression swept through the nations of western Europe, Say witnessed and acknowledged the existence of general gluts, general overproduction, secular stagnation, massive unemployment, idle plants, hoarding, and the other things that are "impossible" according to his law of markets. In the first of his *Letters to Malthus* (Say, 1936), Say asks a series of sweeping questions, including: "... from whence comes that general overstock of all the markets of the universe . . . ? These are the question upon which the happiness and tranquillity of nations depend" (Say, 1936, p. 2). These concessions by Say have sometimes been interpreted as a "recantation" of the law of markets (See Hollander, 1979, p. 94). However, that is not the way Say viewed either economic events or the fate of his theory. He opens his second letter to Malthus by stating: "I think I have proved in my first letter that Produce can only be bought with Produce. I still see no cause to abandon this doctrine, that it is production which opens a market for production" (Say, 1936, p. 22).

Say's staunch defense of this theory in the face of events running contrary to the theory tells us something important about the nature of economic theories. They are not a copy of the world of experience. By necessity, economic theories are highly abstract; they abstract from all but a few pertinent aspects of actual experience. One does, however, expect a theory to be realistic, meaning by realistic a theory that suggests hypotheses for understanding and for dealing effectively with insistent problems in the real world. For Say the remedies for the plight of Europe in 1821 included mainly less governmental intervention in private enterprise, lower taxes, less hoarding by banks, and more production of the right kind. Say expressed confidence

that his old theory was adequate to deal with the new and wide-spread industrial fluctuations emanating from the post-Napoleonic spread of the industrial revolution. If governments and banks would behave rationally, happiness and tranquillity would return. Say remained a happy-face economist.⁷

RICARDO AND THE GOSPEL ACCORDING TO DAVID

Money in David Ricardo's *Principles of Political Economy* is rendered neutral by the heroic assumption that money in the form of gold is produced with an average composition of fixed and circulating capital. In developing his theory of distribution, Ricardo isolates money in order to focus on his labor theory of value as the "sheet anchor" of his system. As a result of the assumption that gold is produced with an average composition of capital, Ricardo says: "We shall probably possess as near an approximation to a standard measure of value as can be theoretically conceived" (Ricardo, 1951, p. 45). Having thus reduced money to an invariable unit, all changes in the price of any (other) commodity would reflect changes in its value and not a change in the monetary unit in terms of which it is measured. With this empirically unrealistic but logically potent assumption in the first chapter, money virtually disappears from the *Principles*. Such belittlement of money may seem strange for Ricardo, who attributed so much importance to money during the bullion controversy. The neutrality of money, however, is logically consistent with Ricardo's purpose, which in the *Principles* was to argue the case for repeal of the British corn laws. (See below penultimate paragraph in this section on Ricardo.)

Ricardo accepts without qualification J.B. Say's proposition that general overproduction is impossible because goods are bartered for goods. In the Preface to his *Principles* Ricardo eulogizes Say for his exposition of the principles of Adam Smith and includes a footnote explicitly praising Say's law of markets (1951, p. 7).

In his chapter on "Effects of Accumulation on Profits and Interest" Ricardo writes:

"Productions are always bought by productions, or by services; money is only the medium by which the exchange is effected" (Ricardo, 1951, pp. 291-92).

Further, there can be no deficiency of demand because "Demand is only limited by production" (1951, p. 290). Like Say, Ricardo acknowledges there can be overproduction of particular products arising from miscalculations by producers, but these mistakes will be remedied by producers going out of business or shifting their output to other products.

Ricardo concedes "only one case" in which it is theoretically possible to have a general glut of all commodities, but the conditions for this case are so unrealistic that it occupies only one brief paragraph in the *Principles* (1951, p. 292). The one case in which a general glut might arise is that of necessities, mostly food. If the desire to accumulate should become so strong that capitalists and others cease to consume luxuries, and only necessities are produced, a general glut of necessities can arise. Although wages would be abnormally high because of the intense demand for labor arising from the very rapid accumulation of capital, population cannot increase fast enough in the short run to generate a demand for all the necessities being produced.

Such a glut could, in Ricardo's logic, be only temporary. With wages high, profits would be low (according to a Ricardian axiom), and the incentive to accumulate would be automatically checked. In the longer run, population would increase rapidly to absorb the temporarily redundant food and other necessities. Moreover, the capitalists would be glad to produce and sell luxuries to their affluent workers (Ricardo, 1951, pp. 312-13). Thus although a general

glut is theoretically imaginable, it is practicably impossible. When Malthus later confronted Ricardo with his "one possible case" on general gluts, Ricardo exclaims "Impossible" (1951b, p. 312).

There is irony in Ricardo's "one-case only" concession for a general glut. It could occur, in theory, when wages are exceptionally high. By contrast, the overproduction theories of Malthus, Sismondi, and others rest on grounds that wage-earners are so poor they cannot buy back what they produce, thus leading to general underconsumption. But in Ricardo's theoretically possible case, wage-earners are never more affluent than during the general glut.

In the famous Malthus-Ricardo controversy concerning effective demand, Malthus contends there is an optimum propensity to consume that will maximize the rate of accumulation. This is because of an organic (systematic) relation between the amount of consumer demand and the amount of capital formation needed to produce that amount of consumption. According to Malthus, the rate of accumulation can be too high in the sense that the capacity to produce will outrun the ability of society to consume. The result is overproduction and general gluts.

Ricardo argues, on the contrary, that there can never be too much capital accumulation. The rate of profit is not lowered by accumulation as such. If the profit rate falls as capital accumulates, this is only because diminishing returns in agriculture raise wages and thereby lower profits. This is the line of reasoning formulated by Ricardo in his *Essay on Profits* (1815) and reinforced in his *Principles of Political Economy* (1817) to argue for repeal of the corn laws in order that England could import cheap food and have low (Ricardian) wages, high profits, and rapid accumulation of capital to prolong England's industrial leadership. Ricardo's closely integrated theories of value, profits, wages, and rent are built into a model addressed to the burning issue of free trade in food. In scope, Ricardo's *Principles of Political Economy* is rather monographic compared to Adam Smith's *Wealth of Nations* and J.S. Mill's *Principles of Political Economy*. Ricardo's "monograph" is admirably designed to deal with the corn law problem but is not easily adapted to issues raised by the post-Napoleonic industrial depression and stagnation.

How does one account for the inability of two great economists such as Ricardo and Malthus to reconcile their differences on the issue of general overproduction? Keynes puts the answer aptly when he says: "Malthus is dealing with the money economy in which we happen to live; Ricardo with the abstraction of a neutral money economy" (Keynes, 1972, p. 97). As noted above in the case of J.B. Say, Ricardo has the problem of the appropriate level of abstraction for theorizing about general gluts. Many a broken tooth has resulted from mastication of abstractions. Ricardo's abstraction of a neutral-money economy is inappropriate for dealing with effective demand and economic depression. Time and again Ricardo responds to Malthus in terms of the illusion that the economy works as if were a barter system in which productions are bought with productions. Money makes no significant difference; effective demand cannot be deficient—that is Ricardo's false message stemming from the barter illusion.

J.S. MILL'S REASONED ANALYSIS AND CONFIRMATION OF THE FAITH

John Stuart Mill, who has been called the greatest mind of the nineteenth century, had a penchant for making statements that turned out in the fullness of time to be outrageous.⁸ One of these occurs in this chapter "Of Money" in his *Principles of Political Economy*:

"There cannot, in short, be intrinsically a more insignificant thing, in the economy of society, than money" (Mill, 1987, p. 488).

The foregoing statement from the *Principles* represents Mill's mature view and is consistent with his acceptance of Say's law and the "immortal Principles" of Ricardo (Mill, 1974, p. 1). Mill was also influenced by his father, James Mill, who is sometimes credited with being the originator of the law of markets.⁹

Influence of Consumption on Production

In his monumental work on *The Economics of John Stuart Mill*, Samuel Hollander has a chapter which he suggests might be, but is not, entitled, Was Mill a Keynesian? The answer is "No," but the question suggests justifiably more flexibility in Mill than in the other classical economists. On occasions Mill seems on the verge of breaking free from the barter illusion.

In Mill's early essay "Of the Influence of Consumption on Production," written about 1830, when Mill was 24, and published in 1844 in *Essays on Some Unsettled Questions of Political Economy*, he temporarily lifts the veil of barter for a peek into the light of a money economy. In speaking of the turnover of capital, he says that in normal times a very large proportion of capital lies idle (Mill, 1974, p. 55). Periods of brisk demand are the "... periods of greatest production: the national capital is never called into *full employment* but at those periods" (1971, p. 67. Emphasis added).

In the 1830 essay, Mill continues in non-classical fashion to suggest that Say's law is a proposition founded on the "... supposition of a state of barter" (1974, p. 69). If we suppose money to be used "these propositions cease to be exactly true" (1974, p. 69).

There is a difference, says Mill, between actual barter and simple commodity exchange using money. Under pure barter, buying and selling constitute one indivisible act, whereas the use of money "... enables this one act of interchange to be divided into two separate acts, or operations; one of which may be performed now, and the other a year hence, or whenever it may be most convenient ... he does not therefore necessarily add to the *immediate* demand for one commodity when he adds to the supply of another" (1974, p. 70. Mill's emphasis).

Toward the end of the 1830 essay, Mill returns to the central question of general overproduction. During periods of commercial crises Mill concedes the possibility of general overproduction of commodities and deficiency of money, assuming money is not considered to be a commodity, as Mill agrees it should not be for purposes of this analysis. In commercial or financial crises people "... liked better to possess money than any other commodity. Money, consequently, was in request, and other commodities were in comparative disrepute. In extreme cases, money is collected in masses, and hoarded" (1974, p. 72). This position represents a distinct departure from Say's law.

By introducing into his analysis intervals of varying length between sales for money and subsequent purchases with money, Mill takes a first step toward a monetary theory of production. Longer intervals between sales and subsequent purchases represent a propensity to hoard and at least a temporary reduction in effective demand. Even in a simple circular flow, the increased preference for money gives rise to the possibility of losses for individual sellers. This is the microcosm for Mill's acknowledgment that there can be general overproduction of commodities in commercial crises.

After this promising exploration of the sense in which it is possible to have an excess of all commodities, Mill concludes his 1830 essay with a return to the gospel of Say and Ricardo. "Nothing is more true than that it is produce which constitutes the market for produce ..." (Mill, 1874, p. 73). Thus Mill's youthful analytical excursion "Of the Influence of Consumption on Production" fails in the end to penetrate the barter illusion.

Propositions on Capital and the Wages Fund

Through the seven editions of *Principles of Political Economy* (1848 to 1871), Mill's ideas about money seem to have changed very little. The promising analytical exercise displayed in his 1830 essay is not repeated. The veil of barter, which we have associated with the neutrality of money and the law of markets shrouds Mill's entire thousand-page treatise. He does, however, directly confront the non-neutrality of money at several points in the *Principles*. We shall note Mill's vacillation in Book I on some of his propositions on capital and the wages fund; in Book II in chapters on money and credit and in particular in the famous chapter on "Excess of Supply"; and in Book IV on the tendency of profits to fall to a minimum.

Mill's first proposition on capital is "That industry is limited by capital" (Mill, 1987, p. 63). Capital is demand for labor, and the greater the amount of capital, the greater the demand for labor. Consequently, wage earners "may always be employed in producing something" (1987, p. 66). Closely related to the first proposition is Mill's fourth proposition on capital, that "Demand for commodities is not demand for labour" (1987, p. 79). This is closely related to the wages-fund doctrine, according to which wage earners barter their labor for subsistence. The demand for labor is determined by the size of the wages fund (circulating capital.)¹⁰ The demand for consumer goods determines the *direction* of demand and consequently the types of labor employed, but demand for labor as a whole depends on the size of the wages fund. A consumer who wishes to help wage earners as a group can do so by not spending for any commodity, but by saving and thus increasing the size of the wages fund and hence the demand for labor. Mill laments that the fourth proposition is so little understood: "It is no wonder that political economy advances slowly, when such a question as this still remains open at its very threshold" (1987, p. 80). He praises Say and Ricardo for keeping this proposition steadily in view.

The law of markets is a corollary of the wages-fund doctrine in the context of the fourth proposition on capital. If Mill had chosen to incorporate his famous 1869 recantation of the wages fund into his *Principles* of 1871, he would have been confronted with a far-reaching reconstruction of his entire treatise. At this stage of life, and in poor health, Mill was not prepared for such a task. (See Mill, 1987, p. xxxi and pp. 991-93.) He died in 1873.

Credit and Commercial Crises

Mill lifts momentarily the view of barter in discussing the impact of credit on commercial crises. In a section on "Effects of great extensions and contractions of credit. Phenomena of a commercial crisis analyzed" he describes a speculative boom initiated by expectations of large profits and fueled by trade credits, leading to sharp price increases. The rapid expansion of economic activity is followed by a major contraction and a recoil of prices from high levels. When prices fall below normal levels, credit becomes difficult to obtain from banks and other lenders even by merchants with strong credit ratings.

"... so now, when everybody seems to be losing, and many fail entirely, it is with difficulty that firms of known solidity can obtain even the credit to which they are accustomed ... all dealers have engagements to fulfill ... no one likes to part with ready money. To these rational considerations there is superadded, in extreme cases, a panic as unreasoning as the previous over-confidence; money is borrowed for short periods at almost any rate of interest, and sales of goods for immediate payment are made at almost any sacrifice" (Mill, 1987, p. 528).

Here Mill recognizes the role of credit and money in the discontinuity of production, although

the emphasis is on prices rather than on output and employment. Unlike his 1830 essay, this is not just a matter of analytics; it brings into economic analysis one of the major institutional developments of the nineteenth century, the dominant position of credit.

The significance of money in commercial crises is reinforced by the credit system. In a panic or crisis, credit evaporates like snow in a blast furnace, and hard cash remains the difference between business failure and survival. Money reveals itself as the ultimate form of business wealth, the means and end of business activity. Commodities are sacrificed at almost any price in order to obtain the object of businessmen's desire, money. Crises reenact the mercantilist scenario of fear of goods and hunger for money.

Excess of Supply

Mill's chapter on "Excess of Supply" has special significance for the classical barter illusion because it contains Mill's fullest and clearest statement of the impossibility of general overproduction based on the proposition that products exchange for products. The chapter is at once doctrinaire in defense of Say's law of markets and an acknowledgment of the possibility of temporary excesses of commodity supply and deficiency of money.

Mill first addresses the question whether there can be a lack of *ability*, or power, to purchase all that is produced. He asks: "What is it which constitutes the means of payment for commodities?" and replies: "It is simply commodities" (Mill, 1987, p. 557). All sellers are by definition buyers. Doubling the total output of commodities would double purchasing power. So there can be no problem. "A general over-supply, or excess of all commodities above the demand, so far as demand consists in means of payment, is thus shown to be an impossibility" (Mill, 1987, p. 558). Thus Mill reiterates the old refrain of Say's law, be it an identity, as here seems to be the case, or as an equality in equilibrium. He defines the terms to make it so.

Next Mill asks whether the *desire* to purchase may be less than the volume of output produced. This, he says, is a more plausible form of the argument for over-production. He concedes it is abstractly conceivable that this might be possible for all commodities. However, "The fact that they go on adding to the production proves that this is not *actually* the case" (1987, p. 559. Mill's emphasis). Then Mill adds the punch line: "We saw before that whoever brings additional commodities to the market, brings an additional power of purchase; we now see that he brings also an additional desire to consume; since if he had not that desire, he would not have troubled himself to produce" (1987, p. 559).

By interpreting a worker's decision to produce as an indication of his desire to produce, Mill begs the question of those wage earners who are involuntarily unemployed and do not have the opportunity to make a decision to produce. Mill does not reckon with the possibility of a failure of organization in a monetary system, that denies employment at wages more than sufficient to induce them to work.¹¹ Mill assumes here, as elsewhere, that production is for consumption. While there are forms of economic society based on this principle, clearly it is not true that in a system of business that the producers are also the consumers; business firms produce in order to make money on the most favorable terms. In this connection and with special reference to Mill, Keynes writes that in classical economics, "... money makes no real difference except frictionally and that the theory of production and employment can be worked out (like Mill's) as being based on 'real' exchange with money introduced perfunctorily in a later chapter . . ." (Keynes, 1936, pp. 19-20).

In the final section of the chapter on "Excess of Supply" Mill distinguishes cyclical and secular aspects of over-supply. He repeats his earlier acknowledgment that in commercial crises

"there is really an excess of all commodities above the money demand: in other words, there is an under-supply of money" (Mill, 1987, p. 561). He reiterates that commercial crises are caused by excessive speculation, a recoil from extravagantly high prices, and the "sudden annihilation of a great mass of credit" (1987, p. 561). Reluctantly Mill concedes that such crises "may be indiscriminately called a glut of commodities or a dearth of money" (1987, p. 561).

Secular Tendency of Profits to a Minimum

Mill distinguishes cyclical phenomena such as commercial crises from conditions associated with secular tendencies for the rate of profit to fall toward a minimum with the approach of the stationary state. The tendency for the rate of profit to fall within a "hands breadth" of the minimum brings stagnation and widespread unemployment. "Establishments are shut up, or kept working without profit, hands are discharged, and numbers of persons in all ranks, being deprived of their income, and thrown for support on their savings, find themselves, after the crisis has passed away, in conditions of more or less impoverishment" (1987, p. 734). The going gets rough. These conditions of unemployment and stagnation, Mill insists, are not caused by lack of effective demand. They result rather from a profit rate fluctuating around a very low secular level and subject to revulsions that Mill describes as "almost periodical" (1987, p. 734). Mill was a keen observer of economic conditions, but he was not easily persuaded to change his theoretical model even when the facts did not seem to fit. Theories take precedence over observations.

Mill and Confirmation of the Faith

At one point, Mill pays special tribute to J.B. Say and to his father, James Mill, for proclaiming as a fundamental truth the law of markets that products exchange for products. He declares this an issue on which economists must take a stand: "The point is fundamental; any difference of opinion on it involves radically different conceptions of Political Economy, especially in its practical aspect" (Mill, 1987, p. 562). He rebukes Malthus and Sismondi, whose "fatal misconception has spread itself like a veil between them and the more difficult portions of the subject, not suffering one ray of light to penetrate" (1987, p. 562). Mill is certainly correct when he says the acceptance or non-acceptance of the principle that products exchange for products involves radically different conceptions of political economy. He has, however, misplaced the veil; it shrouds the barter-like analysis of classical economics from the clear light of a real-world monetary economy. After penetrating into that light on some occasions, Mill's analysis falls back under the veil of barter.

NEOCLASSICAL ECONOMICS: EQUILIBRIUM WITHOUT MONEY

Thus far we have traced in some detail the barter illusion in the classical economics of Adam Smith, J.B. Say, David Ricardo, and J.S. Mill. Turning now to neoclassical theory, we find the barter illusion comfortably ensconced in a body of doctrine primarily concerned with the allocation of given resources among alternative uses in order to yield maximum satisfaction. The theory focuses on equilibrium of real satisfaction and real sacrifice, with money in a subsidiary role and typically treated, if at all, in a volume apart from the basic principles of economics. Unlike Ricardo and Mill, the neoclassical economists make no attempt to defend Say's law of markets against its critics. It is taken for granted.

Although neoclassical economics is not a homogeneous entity, it continues the tradition of neutral money. Among the trio of founders (Jevons, Menger and Walras), its point of departure is a theory of the exchange of goods for goods among consumers who maximize satisfaction by adjusting their relative marginal utilities to proportionality with prices in a competitive market. The theory of consumer behavior is followed by a theory of the firm maximizing its profits by carrying output to the point at which marginal revenue equals marginal cost. The general message is that if consumers and producers operate rationally in purely competitive markets, the resulting equilibrium will yield maximum welfare for all concerned. The turbulence of a monetary economy does not disturb the economic tranquility because money as a store of value and an object of hoarding is largely excluded. The barter illusion is present because of assumptions that the economy works as if it were a barter system.

STANLEY JEVONS: MAXIMIZING PLEASURE THROUGH BARTER

As one of the founders of neoclassical marginalism, Stanley Jevons broke sharply with the classical tradition of Ricardo and Mill, but he was conventional and conservative on the subject of money. His marginal utility theory of value is essentially a theory of exchange based on the outcome of barter between two traders exchanging two stocks of commodities. When the bartering stops, they are said to be in equilibrium, at which point their subjective preferences (marginal utilities) correspond to objective market prices.

Money plays no part in Jevons' *Theory of Political Economy*, which is more a monograph than a general principles of the John Stuart Mill type. Jevons wrote a separate volume on *Money and the Mechanism of Exchange* (1875), which is conventional in the treatment of those topics. Jevons developed an ingenious theory of economic fluctuations in which the periodicity of business cycles is conditioned by weather conditions via the cycle of sun spots. This could hardly be called a monetary theory of cycles. Jevons accepted Say's law of markets and had no sympathy for the then current versions of underconsumption and overproduction theories.

CARL MENGER: MONEY THE MOST SALEABLE GOOD

Carl Menger differs from classical economics in more ways than Jevons, but money in Menger is no less neutral than in Jevons and the classicists. Menger's *Principles of Economics* (1950) is about a goods economy, not about a monetary economy. It is a pure theory of the value of goods, the exchange of goods for goods, including goods of a lower and higher order.

The final chapter of Menger's *Principles* is entitled "The Theory of Money." Money is a device originating among economizing individuals who seek more efficient ways of exchanging goods. The inefficiencies of direct barter are explained and illustrated. Money evolves as the most saleable of commodities from cattle-money to metallic money and coins. Money as an institution is the unintended consequence of individuals acting in their self-interest; it is not a product of social contract or of government, although government may increase the general acceptability of money by declaring it legal tender for the payment of taxes and debts.

Included in Menger's chapter of money is a discussion of money as a store of value. He recognizes that low carrying costs and durability make money an efficient form in which to accumulate wealth for future consumption. As a temporary store of value, money enables wealth-holders to postpone decisions concerning when and in what form to consume.

Menger fails to seize the opportunity to link his discussion of money as a store of value with his concern with uncertainty. He could have but did not relate his section on "Time and Error"

to hoarding money as a store of value, as Keynes and Shackle do. Like the classical and neoclassical economists generally, Menger's is a theory of given resources. He makes no reference to Say's law, overproduction, unemployment, or business cycles. Money is neutral in Menger's principles of economics.

LÉON WALRAS: A THEORY OF NO UNCERTAINTY

From the point of view of the barter illusion in neoclassical economics, the case of Léon Walras is more complex than that of Jevons and Menger. All three begin their general systems with a theory of exchange without money (pure barter), but Walras proceeds to write a complete treatise on the principles of economics. He follows his theory of exchange with a theory of production and a theory of capital formation, and then a section entitled "Theory of Circulation and Money." Walras' ideas about money evolved through the four editions of the *Elements of Pure Economics*. In the preface to the fourth edition (1899) he writes: "Clearly, however, it was my theory of money that underwent the most important changes as a result of my research on the subject from 1876 to 1899" (Walras, 1954, p. 38).

Apart from the numéraire, which is present from the first edition, Walras develops money in a fuller sense as part of his general equilibrium theory. He applies his general theory of value to money. The value of money is based on the concept of a "desired cash balance" and the equality of supply (offer) and demand for money (Walras, 1954, p. 38). The "service of availability" of cash is central to his thought. Consumers and entrepreneurs have "fairly exact ideas" about their receipts and expenditures of cash needed for consumer purchases and capital outlays. Cash balances are held to meet the transactions needs of consumers and producers. Walras rules out uncertainty by assuming that the amounts and timing of these transactions are known, in which case ". . . we eliminate all occasion for uncertainty" (Walras, 1954, p. 318; see also p. 317). Money is held for transactions but not for speculative purposes. Walras says speculation is an aspect of applied economics (p. 310).

Despite Walras' efforts to integrate money into his model, he comes up with a system that operates as if it were a barter system. Money is neutral. In his large treatise on *Elements of Pure Economics*, Walras avoids questions of economic crises (p. 381),¹² potential overproduction, and the possibility of deficiency of effective demand. The famous controversy concerning the law of markets, which involved Ricardo and Mill on the one hand and Malthus and Sismondi on the other, is not mentioned by Walras. Involuntary unemployment is ruled out by definition. It is a theory that explains away but does not explain unemployment. Like the other neoclassical economists, Walras provides a theory of efficiency of given resources, but he does it in a more detailed and elegant manner.¹³

ALFRED MARSHALL: MONEY AS A MEASURE OF THE STRENGTH OF MOTIVES

In his *Principles of Economics* Alfred Marshall continues the classical and neoclassical tradition of neutral money, of analyzing the economy as if it were a barter system. Keynes includes Marshall among the economists who embraced Say's law of markets (Keynes, 1936, pp. 19-21), and Professor John K. Whitaker says Marshall viewed Say's law ". . . as an equilibrium truth of great importance" (Whitaker, 1987, p. 361).

Unlike Walras, who incorporates monetary theory into his *Elements*, Marshall makes no attempt to include monetary theory in his *Principles*. Beginning at an early date, Marshall worked out his ideas on money and presented them in separate papers and before Parliamentary

committees. Only in 1923, one year before his death, did he put his work on money together into a single volume *Money, Credit and Commerce*. He developed the well-known Cambridge cash balance approach to the quantity theory of money. His theory of money and credit deals not only with price levels but also with cyclical and general unemployment, which he views as temporary departures from equilibrium resulting from disturbances in credit markets (Whitaker, 1987, p. 361).

In the *Principles* Marshall does assign to money one special and important function in economic theory that differs from that found in other treatise on economic theory. Money, says Marshall, ". . . is the centre around which economic science clusters" (Marshall, 1930, p. 22). Better than anything else, money can be used to measure approximately the strength of motives—not the motives themselves—to sacrifice and to satisfy in economic activity. On the one hand, there is a certain sum of money that will just induce an individual to undergo certain sacrifices (labor and abstinence) in production; and on the other hand, there is a certain sum of money an individual will just give up to enjoy certain satisfactions (utilities) in consumption (Marshall, 1930, pp. 14–15). Money is the common element linking Marshall's two levels of analysis, the subjective and the objective levels. At the subjective level, money measures indirectly the sacrifices of production and the satisfactions of consumption; at the objective level, money measures the expenses of production and the expenditures for consumption. Money does not, however, enter directly into the motives and decisions, as it does in a monetary theory of production. Money serves merely as the measuring rod of the force of motives. So the barter illusion dominates Marshall's economic theory in the *Principles of Economics*.¹⁴

SUMMARY AND CONCLUSIONS: AWAITING THE ATONEMENT

From Adam Smith to the present, money has been strangely absent from mainstream principles of economics. More precisely, money as a store of value plays no significant role in mainstream economics. Explicit in classical and implicit in neoclassical principles is the assumption that the economy operates as if it were a barter system. This I refer to as the barter illusion.

In contrast to mainstream economics with its barter illusion is a monetary theory of production in which the consequences of the essential properties of money are incorporated as part of the principles. As the perfectly liquid form of private wealth, money affects the volume of output and employment in a world of uncertainty. These effects operate mainly through the motives and decisions of business enterprise, which as the dominant institution of modern civilization, does most of the employing and most of the producing of output.

In the circular flow of converting money capital into real output and reconverting real output into money capital, the properties of money are a strategic factor. The most critical transaction in the circular flow is the sale by firms of real output for money. Every such transaction involves an incipient crisis; the transaction may fail for lack of effective demand. Profit is realized only if and when real output is converted into money on terms favorable to the firm. Mainstream economics lacks a realistic theory of business enterprise. The system of business enterprise is a monetary economy; money enters into the motives and decisions of business firms and is the measure of their success in the short run (profits) and the long run (capital accumulation). A monetary theory of production is essential for clear and coherent understanding of how a monetary economy operates.

Our theme that classical and neoclassical economics involves a barter illusion is examined by reference to four classical economists: Adam Smith, J.B. Say, David Ricardo, and J.S. Mill;

and four neoclassical economists: Stanley Jevons, Carl Menger, Leon Walras, and Alfred Marshall. Prior to Adam Smith, the mercantilists had adumbrated a monetary theory of production, which highlighted the acquisitive and pecuniary motives of the mercantile classes. Unlike his successors, Adam Smith gave full vent to the "mean and malignant expedients" (Smith, 1937, p. 577) of merchants and master manufacturers, who connived to raise prices of their customers and conspired to lower wages of their workers. Worst of all, however, they exploited the public by hoodwinking and manipulating the government in an unholy alliance to feather their mercantile nests. Smith concluded it was more important to get the commercial classes off the backs of government by a policy of laissez-faire, and to leave protection of consumers, workers, and the general public to freely competitive markets. In his assault on mercantilist policies, Smith undercut mercantilist theory by moving money from center stage to the status of a wheel of circulation. He erected a Newtonian-like natural economic order in which the disturbing force of money is absent. He purged money from economic theory. This is the sin of Adam.

J.B. Say's anti-mercantilism submerges the acquisitive and pecuniary motives of merchants and master manufacturers and converts the sin of Adam into the dogma that products exchange for products. Ricardo neutralizes money in his *Principles of Economics* and accepts Say's barter illusion as the basis for arguing against Malthus that general overproduction is impossible. John Stuart Mill, with fair and reasoned analysis, almost lifts the veil of barter, but in his final analysis confirms the faith in the barter illusion and in the immortal principles of Ricardo.

Classical economists have the virtue of arguing the cases for the barter illusion. Neoclassical economists take it for granted. In their monographic principles of economics, Jevons and Menger derive marginal utility theory from models in which individuals barter for goods until they reach an equilibrium of maximum satisfaction. Walras and Marshall develop broader treatises but do not escape the barter illusion. The significance Marshall assigns to money has nothing to do with the law of markets, which he accepts. In Marshall's *Principles of Economics* money is a device for measuring the strength of subjective sacrifices and satisfactions in production and consumption respectively.

More than any other early neoclassicist, Walras struggles to integrate money into his general equilibrium theory of prices. He does not succeed, and his general equilibrium remains a theory of refined barter. The search for Professor Hahn and others to find a way to integrate money into the Arrow-Debreu version of the Walrasian general equilibrium is evidence that the problem of getting money into general economic theory has not been resolved.

There is no guarantee that dynamic money can be conceptually reconciled with static equilibrium. Taking dynamics out of money has yielded neutral money and the barter illusion. The remaining possibility is to render equilibrium dynamic, which conceptually is not an easy task. If general equilibrium theory cannot accommodate dynamic money as a store of value under uncertainty, then general equilibrium cannot justify Professor Hahn's description as "the best developed model of the economy" (Hahn, 1983, p. 1). In that event, the logic of a monetary theory of production must prevail to the exclusion of general equilibrium. Professor Hahn would perhaps view this as throwing out the baby with the bath. Unfortunately drastic action is sometimes necessary even in economic theory.

Finally, to close on the note at which we began: General economic theorists need to lift the veil of barter from general economic theory. Only a monetary theory of production can yield a realistic and fruitful theory of our monetary economy. Atonement for the sin of Adam awaits fulfillment of this task.

NOTES

1. "Money illusion" means a failure to distinguish between real and money magnitudes, such as between real wages and money wages. "Barter illusion" is developed in the course of this paper. It refers to the misapprehension (illusion) that the economy operates *as if* it were a barter economy. Money is recognized as a medium of exchange but is neutral in relation to output and employment. "Veil of barter" is used in this paper to mean that the significance of money is obscured by the barter illusion. "Veil of money" is commonly used in the economics literature to suggest that money covers up significant real forces. The four concepts are not mutually exclusive.
2. "Classical and neoclassical economics" as used in this paper refers exclusively to the corpus of what is earlier called the "principles of political economy" and later the "principles of economics." Numerous writers developed ideas about non-neutral money, but their ideas did not become part of mainstream principles. Henry Thornton (1760–1815) is an example.
3. One of the problems with mainstream economic theory is that it has not operated with any explicit concept of an economic system. One cannot be certain whether the "principles" are intended to be universal in their application or something less than universal. Feudalism and socialism are not monetary economies in the sense the term is used in this paper, but both these systems make use of money. Capitalism is a monetary economy in the sense that money is a strategic institution in the system of business enterprise. See Dillard, 1987, "Money as an Institution of Capitalism."
4. On pre-established harmony and laissez-faire, see Heckscher, 1936, esp. II, p. 318.
5. See Smith, 1937, pp. 238, 250, 626. In describing mercantilism as a system of political economy that confused gold and silver with real wealth, Smith also pointed to the self-serving motives of merchants and master manufacturers. He said they did not necessarily know what was good for the country but it was their business to know what was good for themselves.
6. Say's output "of the right kind" fails to take account of the strategic role of investment activity in disbursing income which generates part of the demand for current output of consumer goods and services. In Keynes' theory, for example, investment is primarily a device for clearing the market for the current output of consumer goods. For Say's law to work, investment would need always to be profitable and accumulation continuous. An empirical observation of undoubted validity is that capital accumulation under capitalism has never been sustained for long periods. On analytical grounds, Say weakens his case for continuous accumulation by accepting Smith's (as contrasted with Ricardo's) view that the accumulation of capital reduces the rate of return because of increasing competition to sell output and to hire wage earners.
7. I am indebted to Professor Will Mason for this felicitous expression.
8. A well-known example of Mill's "famous last words" is, "Happily, there is nothing in the laws of value which remain (1848) for the present or any future writer to clear up; the theory of the subject is complete" (Mill, 1987, p. 436). This came on the eve of the marginal utility revolution in value theory. A lesser noticed example is Mill's "the sands of Arabia" as an example of absolutely worthless land. Mill, 1987, p. 423.
9. Hollander credits Say with the priority over James Mill on the law of markets. See Hollander, 1979, p. 95.
10. See Mill's chapter "Of Wages" for discussion of the wages-fund doctrine. See Mill, 1987, pp. 343–60.
11. See Keynes, 1979, pp. 101–2. "A state of unemployment can, I think, only be defined as . . . a failure of organization which prevents a man from producing something, the equivalent of which he would value more highly than the effort it had cost him. . . . The existence of chronic unemployment is, in itself, a proof that the classical theory is insufficiently general in its postulates."
12. Walras' only mention of crises in *Elements* is on p. 381. Crises are defined as "sudden and general disturbances of equilibrium." He argues, "The more we know about the ideal conditions of equilibrium, the better we shall be able to control or prevent crises."
13. For an interpretation of Walras that places his work in a larger perspective, with similarities to Keynes and Marx, see Morishima, 1977, esp. pp. 1–10.
14. Marshall's *Principles* includes an appendix on "Barter." See Marshall, 1930, Appendix F, pp. 791–95. Barter between two individuals exchanging limited supplies of two commodities, after the manner of Jevons' theory of exchange, will not result in a stable equilibrium because the marginal utilities of both commodities are different after each exchange. In order to reach stable equilibrium

there must be in the market ready to be exchanged a large stock of one commodity such that its marginal utility is practically constant. In the text of his *Principles* Marshall assumes the marginal utility of money to be constant for any given individual. He thus rules out the income effects of price changes. See Hicks, 1939, p. 32.

15. Arrow and Hahn tell us on p. 338 of a 369-page treatise on general equilibrium, "The economy we have been considering . . . is essentially one of barter; all acts of exchange are completed between two households exchanging one good for another." See Arrow and Hahn, 1971, p. 338. They add a final chapter on "The Keynesian Model."

REFERENCES

- Arrow, Kenneth J. and F.H. Hahn. *General Competitive Analysis*. San Francisco: Holden-Day, 1971.
- Dillard, Dudley. *Economic Development of the North Atlantic Community: Historical Introduction to Modern Economics*. Englewood Cliffs, N.J.: Prentice-Hall, 1967.
- _____. "Money as an Institution of Capitalism," *Journal of Economic Issues*, Vol. 31 (December 1987), pp. 1623–47.
- _____. "Effective Demand and the Monetary Theory of Employment," in *The Foundations of Keynesian Analysis*, edited by Alain Barrère. London: Macmillan, 1988.
- Hahn, Frank. *Money and Inflation*. Cambridge: MIT Press, 1983.
- Heckscher, Eli F. *Mercantilism*. two volumes. London: George Allen and Unwin, 1955.
- Hicks, J.R. *Value and Capital*. Oxford: Clarendon Press, 1939.
- _____. *Critical Essays in Monetary Theory*. Oxford: Clarendon Press, 1967.
- Hollander, Samuel. *The Economics of David Ricardo*. Toronto: University of Toronto Press, 1979.
- _____. *The Economics of John Stuart Mill*. two volumes. Toronto: University of Toronto Press, 1985.
- Hume, David. *Essays: Literary, Moral and Political*. London: George Routledge and Sons, no date.
- Jevons, W. Stanley. *Money and the Mechanism of Exchange*. New York: D. Appleton and Co., 1875.
- _____. *The Theory of Political Economy*. London: Macmillan, 1888.
- Johnson, E.A.J. *The Predecessors of Adam Smith*. New York: Prentice-Hall, 1937.
- Keynes, John Maynard. *The General Theory of Employment, Interest and Money*. New York: Harcourt, Brace and Co., 1936.
- _____. *A Tract on Monetary Reform*. volume 4, *The Collected Writings of John Maynard Keynes*. London: Macmillan, 1971.
- _____. *Essays in Biography*. volume 10, *The Collected Writings of John Maynard Keynes*. London: Macmillan, 1972.
- _____. *The General Theory and After. Part I, Preparation*. volume 13, *The Collected Writings of John Maynard Keynes*. London: Macmillan, 1973a.
- _____. *The General Theory and After. Part II, Defence and Development*. volume 14, *The Collected Writings of John Maynard Keynes*. London: Macmillan, 1973b.
- _____. *The General Theory and After. A Supplement*. volume 29, *The Collected Writings of John Maynard Keynes*. London: Macmillan, 1979.
- Malthus, Thomas Robert. *Principles of Political Economy*. New York: Augustus M. Kelley, Inc., 1951.
- Marshall, Alfred. *Money, Credit and Commerce*. London: Macmillan, 1923.
- _____. *Principles of Economics*. London: Macmillan, 1930.
- Menger, Carl. *Principles of Economics*. Glencoe, Ill.: Free Press, 1950.
- Mill, John Stuart. *Essays of Some Unsettled Questions of Political Economy*. Clifton, N.J.: Augustus M. Kelley, Inc., 1974.
- _____. *Principles of Political Economy*: Ashley edition. Fairfield, N.J.: Augustus M. Kelley, Inc., 1987.
- Monroe, Arthur Eli. *Early Economic Thought*. Cambridge: Harvard University Press, 1924.
- _____. *Monetary Theory before Adam Smith*. New York: Augustus M. Kelley, 1966.
- Morishima, Michio. *Walras' Economics: A Pure Theory of Capital and Money*. Cambridge: Cambridge University Press, 1977.
- _____. "Anti-Say's Law versus Say's Law: A Change in Paradigm," in *Evolutionary Economics: Applications of Schumpeter's Ideas*. edited by Horst Hanusch. Cambridge: Cambridge University Press, 1988.

- Ricardo, David. *On the Principles of Political Economy and Taxation*. volume 1, *Works and Correspondence of David Ricardo*, edited by Piero Sraffa. Cambridge: Cambridge University Press, 1951.
- _____. *Notes on Malthus's Principles of Political Economy*. volume 2, *Works and Correspondence of David Ricardo*, edited by Piero Sraffa. Cambridge: Cambridge University Press, 1951.
- _____. *Papers and Pamphlets, 1815-23*. volume 4, *Works and Correspondence of David Ricardo*, edited by Piero Sraffa. Cambridge: Cambridge University Press, 1951.
- Say, Jean Baptiste. *Letters to Thomas Robert Malthus on Political Economy and Stagnation of Commerce*. London: George Harding, 1936.
- _____. *A Treatise on Political Economy*. New York: Augustus M. Kelley, Publishers, 1971.
- Schumpeter, Joseph A. *History of Economic Analysis*. New York: Oxford University Press, 1954.
- Scott, William R., *Adam Smith as Student and Professor*. Glasgow: Jackson, Son & Co., 1937.
- Simmel, Georg. *The Philosophy of Money*. London: Routledge and Kegan Paul, 1978.
- Skinner, Andrew S., and Thomas Wilson, editors. *Essays on Adam Smith*. Oxford: Clarendon Press, 1975.
- Smith, Adam. *An Inquiry into the Nature and Causes of the Wealth of Nations*. Cannan edition. New York: Modern Library, 1937.
- Steuart, Sir James. *An Inquiry into the Principles of Political Economy*. 2 volumes. Edited by Andrew S. Skinner. Chicago: University of Chicago Press, 1966.
- Vickers, Douglas. *Studies in the Theory of Money, 1690-1776*. Philadelphia: Chilton, 1959.
- _____. "Adam Smith and the Status of the Theory of Money," in *Essays on Adam Smith*, edited by Andrew S. Skinner and Thomas Wilson. Oxford: Clarendon Press, 1975.
- Walras, Léon. *Elements of Pure Economics*. London: George Allen and Unwin, 1954.
- Weber, Max. *General Economic History*. Translated by Frank H. Knight. New York: Collier Books, 1961.
- Whitaker, John K. "Alfred Marshall," *The New Palgrave Dictionary of Economics*. London: Macmillan, 1987. Vol. 3, pp. 350-63.