



No. 8508

MONEY: MENGENS'S EVOLUTIONARY THEORY

by

Gerald P. O'Driscoll, Jr.
Research Department
Federal Reserve Bank of Dallas

Research Paper

Federal Reserve Bank of Dallas

No. 8508

MONEY: Mengers's Evolutionary Theory

by

Gerald P. O'Driscoll, Jr.
Research Department
Federal Reserve Bank of Dallas

December 1985

NOT FOR QUOTATION OR ATTRIBUTION WITHOUT AUTHOR'S PERMISSION.
COMMENTS ARE WELCOME

* The views expressed in this article are solely those of the author, and should not be attributed to either the Federal Reserve Bank of Dallas or to the Federal Reserve System.

INTRODUCTION

Carl Menger is best known as the codiscoverer of marginalism and the founder of the Austrian School. In the last fifteen years, there has been a renaissance of interest in Menger's work. Some of this interest was stimulated by the centennial of the "Marginalist Revolution."¹ Coincidental with this general interest in the Marginalists, the revival of the Austrian School has generated specific interest in Menger. The modern Austrians have focused chiefly on Menger's methodological views, especially his early statement of methodological individualism.² In this essay, I examine Menger's theory of money, which is less well known than his methodological work. As I argue below, however, Menger's theory of money is at least as important as his methodology. Recent work in the microfoundations of monetary theory hightens the relevance of Menger's analysis of money.³ For instance, the recent controversy over the legal restrictions theory of money should provide us with renewed appreciation for Menger's approach, which constitutes an alternative explanation of the demand for noninterest-bearing liabilities of the federal government. Since Menger's theoretical and methodological work

are the foundation of his monetary analysis, I review these in the next section. After that, I examine Menger's theory of the origin and development of a medium of exchange. I then contrast his theory with the legal restrictions theory. I conclude with an assessment of the Mengerian contribution to monetary theory.

MICRO ANALYSIS

I interpret the "Marginal Revolution" as a microeconomic revolt against Ricardian Economics. The differences among the early participants were important. As Mark Blaug observed, the Marginal Revolution took three distinctive forms: "the marginal utility revolution in England and America, the subjectivist revolution in Austria, and the general equilibrium revolution in Switzerland and Italy."⁴ To treat the three approaches as one would be to gloss over important differences, obscuring the distinctiveness of each contribution.⁵ Nonetheless, there is a microeconomic thread running through the work of the three great marginalists.

As a general microeconomic revolution, the work of Jevons, Menger and Walras was never brought to fruition. Large areas

were effectively ceded to an older way of thinking, with most orthodox economists accepting the micro - macro division as natural, dictated by the phenomena. The acceptance of a macro realm of thinking in orthodox economics goes against the spirit of the 1870's, the spirit that accounts for whatever homogeneity exists in the work of the three great figures discussed.

Menger shares with Jevons and Walras the fate of having had his contribution diluted, as it were. Nonetheless, one could say that the microeconomic content of modern economics is the joint outcome of the work of all three. I now turn, however, to Menger's distinctive contribution. What is most distinctive about Menger is that which has been least absorbed into orthodox economics.

Subjectivism

Methodological subjectivism is the specifically Mengerian or Austrian contribution to economics. Although Menger's concern with disequilibrium economics has recently been emphasized,⁶ the connection between his subjectivism and his emphasis on change and the economic process -- a constant state of disequilibrium --⁷ is not generally made.

A subjectivist analyzes all economic events in terms of agents' perceptions of these events: a thing is a good, for example, because individuals believe it to be a good. They make decisions

because of their respective beliefs about the relevant state of the world, not because of the actual or objective state of the world as seen by the economist posing as ideal observer. Menger held that "there is not a phenomenon of the real world which does not offer us the spectacle of constant change," a view inconsistent with making perfect knowledge constructs the central focus of economics. The perfect knowledge assumption is antisubjectivist because it implies that, despite the pervasiveness of change, transactors have already acquired all relevant information. The assumption leads to the conclusion that perceptions always correspond to reality, eliminating genuine informational problems from economic analysis. Since perfect knowledge is the defining characteristic of equilibrium, an economics in which uncertainty is central is inherently an economics of disequilibrium, the market process and change. The emphasis on subjectivism, change and disequilibrium goes far toward explaining why economists who followed Menger's lead have felt uneasy with modern neoclassical economics.

It is standard to suggest that demand is the subjective element in price determination, while cost is the objective element. The view that subjectivism applies to tastes or the demand side of price determination, while objective factors are relevant to the cost or supply side, is incompatible with Menger's analysis. This point can best be seen by quoting Wieser, who applied

Menger's analysis to cost theory.

Between costs and utility there is no fundamental opposition. Costs are goods valued, in the individual case, according to their general utility. The opposition between costs and utility is only that between the utility of the individual case, and utility on the whole. Whoever thinks of 'utility' without thinking of 'cost,' simply neglects, in the utility of one production, the utility of the others. And whoever produces, in the individual case, at least cost, produces, on the whole, with the highest utility, inasmuch as he thus saves all the opportunity of utility possible, and consequently in the long run utilizes all the opportunities to the utmost possible.

Thus when the law of costs obtains, utility remains the source of value. More than this, marginal utility remains the measure of value.

Nonetheless, in his famous scissors analogy, Marshall criticized the Austrians for treating utility alone as the source of value or explanation of price. In arguing that the Austrians' focus on utility emphasized too much the demand side, Marshall misconstrued their position. Schumpeter's criticism of Marshall

11

on this issue was exactly to the point.

They (the Austrians) stood in no need of being told about the two blades of Marshall's pair of scissors. What they aimed at showing was that both blades consist of the same material -- that both demand and supply (no matter whether the case is one of exchanging existing commodities or of producing them) may be explained in terms of 'utility.'

12

Schumpeter further observed that:

...The marginal utility principle applies to the demand and supply sides of the value problem in any case, both in the long run and in the short run. Cost of production is not an independent principle taking charge in the long run. But the marginal utility principle, acting upon the data of the situation, will

in the long run (granting a number of assumptions) so operate as to equate exchange value to costs.

Nevertheless, neoclassical economists have generally accepted Marshall's synthesis of subjectivist demand theory and objective cost theory.¹³ The question is not one of relative importance of two types of factors, "subjective" and "objective", but one of consistency in approach. Since the subjectivist is concerned with others' perceptions under uncertainty, all relevant economic magnitudes are "subjective." If a "fact" (be it a technological relation or other condition) does not affect perceptions, it is not economically relevant.

It must be emphasized that Menger, though a methodological subjectivist, was no epistemological subjectivist. That is, he did not deny that there is an objective reality independent of individuals' knowledge of it. Being an Aristotelian, Menger affirmed the existence of this reality, as well as our ability to apprehend it. But our knowledge of reality is imperfect at each moment, even as it is being perfected. Menger was thus led to a subjectivist methodology, which emphasizes the incompleteness of knowledge pervading every market transaction.¹⁴

There is one more major element to be fitted into our picture of the Mengerian approach. Having done that, I can then develop Menger's theory of money. In the next section, then, I develop Menger's approach to institutional analysis.

Undesigned Social Institutions

As indicated above, subjectivists emphasize uncertainty and disequilibrium. This emphasis naturally directs one's attention to how individuals acquire and disseminate information, an inquiry that almost inevitably leads to a theory of institutions. Institutions play a crucial role in the production, dissemination and use of information in society. This viewpoint, which derives from Menger, was fully developed in Hayek's analysis of the price system and in Mises' and Hayek's work on economic calculation. ¹⁵ The comparatively short shrift given to institutions in neoclassical economics is, at least in part, an effect of its not having incorporated subjectivism. ¹⁶

Menger began his analysis of the evolution of social institutions with the following question: "How can it be that the institutions which serve the common welfare and are extremely significant for its development come into being without a common will directed toward establishing them?" ¹⁷ As he noted: "The solution of the most important problems of the theoretical social sciences in general and of theoretical economics in particular is thus closely connected with the question of theoretically understanding the origin and change of 'organically' created social structures." ¹⁸ At the end of the book in which he takes up "organic" institutions, Menger explicitly sets down what he

Believed the proper method to be to address the problem:¹⁹

We already alluded to the fact that a large number of the phenomena of economy which cannot usually be viewed as 'organically' created 'social structures,' e.g., market prices, wages, interest rates, etc., have come into existence in exactly the same way as those social institutions which we mentioned in the preceding section. For they, too, as a rule are not the result of socially teleological causes, but the unintended result of innumerable efforts of economic subjects pursuing individual interests. The theoretical understanding of them, the theoretical understanding of their nature and their movement can thus be attained in an exact manner only in the same way as the understanding of the abovementioned social institutions. That is, it can be attained by reducing them to their elements, to the individual factors of their causation, and by investigating the laws by which the complicated phenomena of human economy under discussion here are built up from these elements.

This is what Menger elsewhere referred to as the "compositive" method. In advocating that the actual, complex structures be built up from their individual elements, Menger articulated the case for methodological individualism. In characterizing social institutions as the results not of human design ("not the result of socially teleological causes"), but of human actions ("the unintended result of innumerable efforts of economic subjects pursuing individual interests"), Menger reminded the reader of the need for causal analysis of the forces producing institutional change.

Menger's emphasis on the crucial importance played by undesigned institutions differentiates his theory from contemporary economic thinking, which increasingly sees every economic problem as amenable to optimal control analysis. Among

modern Austrians, Hayek has followed Menger most closely here by
focusing on the analysis of undesigned social insitutions.²¹

Throughout his work, Menger used this compositive method. In focusing on the evolution of social institutions, he remained closer to classical political economy than his contemporaries and their intellectual descendants. But while he shared the classical concern with legal, political and economic institutions, he rejected the macroeconomic approach to these questions. Menger's use of his individualistic, compositive method in monetary economics produced one of his most significant applications: a theory of the evolution of money. Almost alone among Menger's interpreters, Hayek perceived the link between his general approach to economics and the substance of his monetary economics: "the consistent application to the theory of money of the peculiar subjective or individualistic approach which, indeed, underlies the marginal utility analysis, but which has a much wider and more universal significance."²²

THE THEORY OF MONEY

It is now recognized that general equilibrium theory does not incorporate money as a distinctive good with unique properties. In general equilibrium models, money is merely a numéraire. The numéraire has no properties distinguishing it in principle from the "nonmoney" goods in the model. Models in which money is merely the numéraire good are barter models in disguise. In addition, the "money" in such constructs is inevitably neutral in

23
its effects. Linked with these failings of contemporary general equilibrium models is their inability to explain "how...certain commodities come to be exalted in the general media of

24
exchange." Menger solved the latter problem and avoided the first two. These successes alone commend his analysis to modern

25
theorists, who, however, are largely unaware of it.

Menger summarized the process of the evolution of a monetary

26
unit in the following way:

As each economizing individual becomes increasingly more aware of his economic interest, he is led by this interest, without any agreement, without legislative compulsion and even without regard to the public interest, to give his commodities in exchange for other, more saleable, commodities, even if he does not

need them for any immediate consumption purpose. With economic progress, therefore, we can everywhere observe the phenomenon of a certain number of goods, especially those that are most easily saleable at a given time and place, becoming, under the powerful influence of custom, acceptable to everyone in trade, and thus capable of being given in exchange for any other commodity. These goods were called "Geld" by our ancestors, a term derived from "gelten" which means to compensate or pay. Hence the term "Geld" in our language designates the means of payment as such.

In an analysis reminiscent of Adam Smith's invisible hand reasoning, Menger treated money's evolution as the unintended consequence of individuals pursuing their own self-interest. Indeed, there is some similarity between Menger's theorizing and the hypothetical history of Smith and the other Scottish social theorists of the eighteenth century. But Menger's consistent use of the compositive method enabled him to go further in this and other applications than had any who went before and most who came after him.

In the Principles, "The Theory of Money" follows the "Theory of the Commodity." Menger built his monetary analysis upon his more general analysis of holding stocks of goods. An economy progresses from economic self-sufficiency, to production for the market on order, to production for the market on speculation. Concomitant with this development is the increasing holding of stocks of unfinished and partly finished commodities, and, in the final evolutionary stage, stocks of finished commodities. In this context, commodities are stocks of goods intended for sale, a relationship that is not "inherent in a good, no property of

it, but merely a specific relationship of a good to the person
who has command of it."²⁷

Once they begin holding commodity stocks, wealth owners are necessarily interested in the marketability (absatzfahigkeit) or saleability of these stocks. Menger's analysis of this problem treats questions only recently rediscovered in the transactions-costs literature. Menger observed that though a commodity is for sale, "it is not intended for sale

unconditionally."²⁸ The stockholder is not interested in the most rapid possible sale of the entire stock, regardless of price. Thus, "merchants may ... be justified if they complain of sluggish sales, since although their commodities are intended for sale ... they are intended for sale, not at any price, but at prices that correspond to the general economic situation."²⁹

The "general economic situation" is a subjective category, differing for different holders of stocks. Roughly, Menger attempted to get at a measure of the relative costliness of disposing of a unit, or the whole supply of a commodity, at the price that would obtain were the seller in active communication with potential buyers. Menger's analysis is not entirely foreign to the idea of a "perfect market," but neither is it a crude approximation of that idea. He dealt with the process of trade and the evaluation of markets, not with some hypothetical end

point. Moreover, in being concerned with the marketability of various commodities, he was -- to force his analysis into static terms -- concerned with less-than-perfect markets that are becoming more perfect.

In Menger's analysis, traders discover that some commodities are particularly marketable and widely acceptable. ³⁰ In other words, these commodities can be quickly disposed of at low transaction costs. Transactors eventually discover that certain commodities are more marketable while others are less so. Over time, they become increasingly willing to invest their wealth in the more marketable commodities. Indeed, individuals learn to accept certain commodities in exchange simply because they are marketable, and not necessarily because they themselves have any final demand for them. The process is self-reinforcing. As more traders willingly accept saleable commodities in trade, their ³¹ acceptability to prospective traders increases.

This historical process marks the evolution of a medium of exchange. As the process continues, a particular good will ordinarily become the common medium of exchange -- money. Historically, gold and silver have generally been those goods. Demand for gold and silver is relatively great and widely dispersed, while supply is relatively small. In other words, gold and silver are both relatively valuable and highly marketable.

Menger's analysis dealt with the outcome of many individuals pursuing their self-interest, which in this instance, consisted of a desire for liquidity. Since Keynes, monetary theorists have emphasized the importance of liquidity. In his restatement of Keynes' views, Sir John Hicks treated liquidity as flexibility: "... Liquidity is not a property of a single choice; it is a matter of a sequence of choice, a related sequence. It is concerned with the passage from the known to the unknown -- with the knowledge that if we wait we can have more knowledge." ³² Sir John's liquidity concept is basically Menger's. Above all else, liquidity gives the economic agent, be he craftsman, merchant, trader or consumer, flexibility. In vastly reducing the costs of specialized production, trade and stockholding, highly liquid commodities greatly facilitate economic progress. The evolution of a common medium of exchange is surely crucial to the development of a complex economic order.

Modern monetary theorists have long grappled with Menger's problem. Until recently, little progress was made in analyzing the process by which a money good came into existence. Most models implicitly assumed money was invented in some sense, despite the fact that over 100 years ago Menger realized that "money is not the product of an agreement on the part of economizing man, not the product of legislative acts. No one

³³ invented it." Of much of the recent literature, Professor Jones

remarked that: "Although these works illuminate how money might overcome logistical difficulties of reaching an efficient allocation with decentralized exchange, they offer no suggestions of how a monetary pattern of trade could evolve without a

centralized decision." ³⁴ Though Jones himself recognized Menger's pioneering work, he was unable to solve the problem of simultaneously determining the money good and its market value. Yet Menger had done this in the Principles and in "Geld". Since what becomes money was originally the most marketable good, it always had an exchange value. Its very marketability enhanced the demand for it over and above its use value. The addition of a demand for this good as a medium of exchange to its "nonmonetary" demand causes its relative price to rise over time.

There is, however, no unique point at which a good becomes money. Hence, there is no logical or historical break in the sequence of its price history. One day's prices built upon yesterday's, together with agents' expectations of future price movements, in a way not differing in kind for any other good. If anything, the good's high marketability made this process more certain than for the average good.

Menger analyzed money as a commodity in order to explain theoretically its historical evolution. The modern system of pure fiduciary money postdates, of course, Menger's theory. This

system has developed partly by evolution and partly by government intervention. In a sense, Menger anticipated or at least allowed for this development when he observed that "the legal order usually has an influence on the money-character of commodities

which, though small, cannot be denied." ³⁵ Mises extended Menger's analysis to modern monetary systems by examining the possibility

of government's making coins or notes money by "fiat". ³⁶

All that the State can do by means of its official stamp is to single out certain pieces of metal or paper from all the other things of the same kind so that they can be subjected to a process of valuation independent of that of the rest. Thus it permits those objects possessing the special legal qualification to be used as a common medium of exchange while the other commodities of the same sort remain mere commodities. It can also take various steps with the object of encouraging actual employment of the qualified commodities as common media of exchange. But these commodities can never become money just because the State commands it; money can be created only by the usage of those who take part in commercial transactions.

We can now assess the particular contributions of Menger to monetary economics. First, he solved the problem of the evolution of a common medium of exchange. He did so by applying his compositive method, which consisted of a thoroughgoing subjectivism. Jones' remarks about his own model apply with

equal force to Menger: ³⁷

...The approach suggests that a very common good would emerge as a first commodity money in a barter economy. The important point is that this commonness is a market characteristic of goods rather than an intrinsic physical characteristic such as portability,

divisibility, or cognizability. This is not to say that such physical characteristics play no role in determining which good will be used as a medium of exchange. However the analysis suggests that the rationale for using a medium of exchange in the first place might be found in the differing market characteristics of the good and the decentralized nature of exchange.

In the previous passage, Jones presented a subjectivist viewpoint on what constitutes a sound theoretical treatment of the origin of money or any other economic institution. Physical characteristics or objective conditions play a role in the evolution of organic social institutions. Enumerating such characteristics or conditions does not constitute, however, an explanation or analysis of the evolutionary process. Relating these characteristics and conditions to self-interested behavior of individuals can form the basis of an evolutionary economic analysis. To paraphrase Jones, the economist must account for the way in which physical characteristics of things become market characteristic of goods. Menger accomplished this in his theory of money by relating physical characteristics to marketability.

Menger's money is much more than a numéraire or otherwise neutral economic institution. It is one of the driving forces of economic development, replete with real effects. The distinctive property of the money good is that, being the most marketable of all goods, it has evolved into a common medium of exchange. Nearly all transactions are executed with the use of money, so money is the most liquid of all goods. It is "for sale" in every market.

Though still largely unfamiliar to contemporary monetary economists, Menger's theory of money has gained some exposure indirectly through the work of Georg Simmel. Frankel has contrasted Simmel's view of money as an evolved social institution with the "monetary nominalism" of Georg Friedrich

38
Knapp and John Maynard Keynes. Monetary nominalists contend that money is a conscious creation of the state, which can,

39
moreover, be altered as the state pleases.

Frankel brought out the correspondence between Simmel's views on money and those of Menger. 40 In a review article, Laidler and Rowe correctly emphasized the intellectual precedence of

41
Menger. Simmel, the sociologist, apparently drew on Menger's theory of money in developing his sociology of money. As important and deserving of economist's attention as Simmel's work is, Menger's is the source of the economic analysis of the origin of money.

In the next section, I utilize Menger's insights to analyze a contemporary monetary debate. In the process, I try to illuminate further Menger's contribution.

42
Why Money?

The simultaneous existence of noninterest-bearing fiat money and interest-bearing government debt presents an apparent paradox. The two assets are obligations of the same issuer, yet

43

bear very different rates of return. In a classic article, Tobin wrote of "the apparent irrationality of holding cash" and posed the question: "Why should anyone hold non-interest bearing obligations of the government instead of interest bearing

44

obligations."

Many have argued that, indeed, in a stationary state, there would be no demand for money. Stationarity implies certainty of payments and receipts, including certainty of timing.

Individuals could then bridge payments gaps through the purchase

45

and sale of liquid financial assets.

Along with a stochastic element to payments and receipts, transaction costs must be added to neoclassical models in order to generate a demand for money. Uncertainty is needed to generate a precautionary demand. Transaction costs in the form of brokerage fees are needed to insure that the precautionary

demand is for money and not for interest-bearing liabilities of the government (bonds).

There are two problems with this orthodox approach. First, the uncertainty of these neoclassical models is severely limited, if not contrived. "Uncertainty does play a role in the analysis, but only uncertainty with respect to the timing of payments."⁴⁶ Second, brokerage fees on highly marketable financial assets are quite low. Treasury bills in denominations of \$10,000 can be purchased for commissions of 30 basis points (3/10 of 1 percent) or less. In a world of 3-percent interest rates, this may have been a non-negligible transaction cost. It is surely negligible, however, in a world of double-digit interest rates.

Any plausibility this approach had was lost in the recent era of high interest rates, which saw the introduction of money-market mutual funds and other financial innovations. With as little as \$1,000, an individual investor can now place idle balances at interest rates only slightly below wholesale money-market rates. There is no bid-asked spread involved in going in and out of the new money-market instruments. And, of course, one can write checks to draw on his funds.⁴⁷ An approach that attempted to rationalize a demand for money in terms of characteristics of money markets was rendered inapplicable by innovations in these markets.

Theorists have recently reasserted the paradox of a demand for noninterest-bearing money. They deny that the paradox is the result of market forces, but argue that it is the effect of legal restrictions. Neil Wallace stated the case forecfully: 48

Laissez-faire means the absence of legal restrictions that tend, among other things, to enhance the demand for a government's currency. Thus, the imposition of laissez-faire would almost certainly reduce the demand for government currency. It could even reduce it to zero. A zero demand for a government's currency should be interpreted as the abandonment of one monetary unit in favor of another -- for example, the abandonment of the dollar in favor of one ounce of gold. Thus, my prediction of the effects of imposing laissez-faire takes the form of an either or statement: either nominal interest rates go to zero or existing government currency becomes worthless.

Wallace dubbed his analysis "the legal restrictions theory" of the demand for money and the description has gained acceptance. According to the theory, there would be no demand for noninterest-bearing money (e.g., currency) in an unregulated ("laissez-faire") banking system. By implication, interest-bearing money would be indistinguishable from other financial assets. Wallace's intellectual antecedents were even clearer on the last point. For instance, Fischer Black first identified an unregulated financial system as one in which "commercial banks and other financial institutions are free to offer checking accounts (and savings accounts) on any terms they might want to set, and in which there are no reserve requirements." He then argued that in such a world "it would not be possible to give any reasonable definition of the quantity of

money. The payments mechanism in such a world would be very efficient, but money in the usual sense would not exist." ⁴⁹ In place of money, Black predicted that equity-based cash-management accounts would emerge.

It would appear that one must choose between subscribing to a contrived market analysis or accepting the bold assertion that the demand for currency is the result of legal restrictions. There is, however, a third choice, which is to adopt Menger's theory of monetary evolution.

A Mengerian analysis sharply distinguishes between money, a perfectly liquid good, and highly liquid, nonmoney financial assets. Certain historical and institutional facts must then be considered. First, even in the freest of banking systems currency has not ordinarily borne interest. Second, in the United States, most legal restrictions on the creation of financial assets, including money, are of comparatively recent vintage. Restrictions on the payment of interest rates on demand deposits date only to the Banking Act of 1933. ⁵⁰ The restrictions on banks' issuing currency date only to the National Bank Act (1863). Even so, although interest was formerly paid on some demand-deposit accounts before the restrictions, currency did not generally bear interest.

The period of free banking in Scotland most closely

approximates a laissez-faire banking system. Scottish banks did not pay interest on their bank notes even though there was no

51

prohibition on their doing so. In his recent study of Scottish free banking, White concluded that: "Competitive free banking is therefore not inconsistent with an absence of interest-bearing currency. Notice that travelers checks today, even though they are paid over but once and are issued competitively, do not bear interest."⁵²

Historical experience casts doubt on the thesis of the legal restrictions theory. In theoretical terms, the "paradox" suggested by the legal restrictions theory is at issue. From a Mengerian perspective, there is no paradox in the fact that bonds yield interest and money either does not or else yields a lower rate of interest. This reflects money's superior liquidity, superior even to the most liquid, short-term nonmoney financial assets. As Menger emphasized, money is not just highly liquid but is perfectly liquid. Being the good that circulates routinely as the medium of exchange, money trades in every market and is never sold at a discount from par.⁵³

Klein characterized the distinction in the following way: it is money's nonpecuniary services that distinguish it from nonmoney financial assets. In other words, money yields nonpecuniary returns while other assets yield pecuniary returns. Liquidity is

the peculiar nonpecuniary return yielded by money. Because money is perfectly liquid and yields a nonpecuniary return, it will not also yield a market rate of interest. If money were both perfectly liquid and yielded an explicit market rate of interest, then its total return would be supra-normal. Competitive forces would drive down its explicit yield so that the total rate of return equaled that of nonmoney financial assets.

54

Klein's analysis is certainly consistent with Menger's approach. It is a market analysis, with a sound basis in both micro theory and institutional features of financial markets. The approach also obviates the necessity of invoking legal restrictions, which are of recent origin, in order to explain patterns of return that have persisted across time and differing institutions.

55

A School Apart

Mark Blaug once attributed to T. W. Hutchinson the claim that "what was important in marginal utility was the adjective rather than the noun."

56

This observation is decidedly not true of

57

Menger's work. Utility or subjective value was the paramount concept in Menger's analysis. His analysis was subjectivist both in methodology and in content. The theories of the other marginalists certainly contained subjectivist elements but none

58

The theories of the other marginalists certainly contained subjectivist elements but none

was as thoroughgoing in its subjectivism as was Menger's. Indeed, the enduring contribution of the Austrian School flows from its subjectivism. Streissler best summed up the situation when he observed that "the Austrians always stressed, and stressed rightly, I think, that they were the school of subjective values, a school apart."⁵⁹

Menger's most enduring legacy to monetary economics -- as to economics generally -- was his subjectivism. Having rejected an explanation of money as being the result of a centralized decision, Menger used his individualistic or microeconomic method to develop a theoretical solution. This approach enabled him to develop an evolutionary theory of money. This theory is less well known, however, than his methodological writings. In this paper, I have attempted to remedy the situation. I have also tried to indicate the contemporary relevance of Menger's theory of money.⁶⁰

1. See, for instance, Erich Streissler, "To What Extent Was the Austrian School Marginalist?" in R. D. Collison Black, A. W.

Coats and Craufurd D. W. Goodwin, eds., The Marginal Revolution in Economics: Interpretation and Evaluation (Durham, N.C.: Duke University Press, 1973), pp. 160-75; also see the essays in J. R. Hicks and W. Weber, eds., Carl Menger and the Austrian School of Economics (Oxford: Oxford University Press, The Clarendon Press, 1973).

2. See, for example, Lawrence H. White, Methodology of the Austrian School, Occasional Paper No. 1 (New York: Center for Libertarian Studies, 1977), pp. 2-5

3. See, for example, R. W. Clower, "Foundations of Monetary Theory," in Monetary Theory (Baltimore: Penguin Books, 1970), pp. 202-11; Joseph M. Ostroy and Ross M. Starr, "Money and the Decentralization of Exchange," Econometrica 42 (November 1974): 1093-1114; Robert A. Jones, "The Origin and Development of Media of Exchange," Journal of Political Economy 84 (August 1976): 756-75; and Robert A. Jones and Joseph M. Ostroy, "Flexibility and Uncertainty," Review of Economics and Statistics 51 (January 1984): 13-52.

4. Mark Blaug, "Was There a Marginal Revolution?" in Black, Coats and Goodwin, p. 14.

5. See William Jaffe, "Menger, Jevons and Walras De-Homogenized," Economic Inquiry XIV (December 1976).

6. Cf. Jaffe, 519-20 and Streissler, pp. 172-73.

7. Streissler does make this connection, but in the context of a more general thesis with which I cannot agree. (See footnote 59.) See Streissler, "To what Extent Was the Austrian School Marginalist?"

8. Cf. Friedrich A. Hayek, "The Facts of the Social Sciences" in Individualism and Economic Order (Chicago: University of Chicago Press, 1948), p. 60.

9. See Hayek, "Economics and Knowledge," in ibid., p. 42. Also see idem, "The Use of Knowledge in Society," in ibid., pp. 77-91.

10. Friedrich von Wieser, Natural Value, trans. by William Smart (New York: Augustus M. Kelley, 1971), p. 183; reprint of the 1893 edition. Two pages after this passage, Wieser added that: "Possibly it is the greatest triumph of the theory of marginal utility that it fully explains the obscure conception of costs, with which every other theory had to reckon, and with which no theory could come to any reckoning."

11. Joseph Schumpeter, History of Economic Analysis (New York: Oxford University Press, 1954), p. 922.
12. Ibid., p. 922n. The reader unfamiliar with Marshall's argument can find references in Schumpeter, pp. 920-24.
13. But see James M. Buchanan, Cost and Choice: An Inquiry in Economic Theory (Chicago: Markham, 1969). Buchanan defends a subjectivist analysis of costs.
14. On Menger's Aristotelianism, see Emil Kauder, A History of Marginal Utility Theory (Princeton: Princeton University Press, 1965), pp. 83 and 95-100; cf. White, Methodology of the Austrian School, pp. 3-4.
15. For Hayek's analysis of the price system, see "Economics and Knowledge," "The Use of Knowledge in Society," and "The Meaning of Competition," all reprinted in Individualism and Economic Order. On the Mises-Hayek analysis of economic calculation, see D. C. Lavoie, Rivalry and Central Planning: Socialist Calculation Debate Reconsidered (Cambridge: Cambridge University Press, 1985.)
16. For an excellent assessment of the role of institutions in economic theory, see Richard N. Langlois, "The 'New Institutional Economics': An Introductory Essay," in idem., ed., Economics as a Process: Essays in "The New Institutional Economics" (Cambridge: Cambridge University Press, 1986).
17. Carl Menger, Problems of Economics and Sociology, trans. by Francis J. Nock and ed. by Louis Schneider (Urbana, Ill.: University of Illinois Press, 1963), p. 146.
18. Ibid., p. 147.
19. Ibid., pp. 158-59.
20. Menger did so in a manuscript note to Schmoller's review of Menger's Methoden der Socialwissenschaften. See F. A. Hayek, The Counter-revolution of Science: Studies on the Abuse of Reason (New York: Macmillan, The Free Press of Glencoe, 1955), p. 212 (note 33).
21. For example, see Friedrich A. Hayek, "The Results of Human Action but not of Human Design," in Studies in Philosophy, Politics and Economics, (New York: Simon and Schuster, Clarion Books, 1969), pp. 96-105.
22. F.A. Hayek, "Carl Menger," Economica, N.S. 1(November 1934): 414.
23. Cf. Friedrich A. Lutz, "On Neutral Money," in Erich

Striessler, et al., eds., Roads to Freedom: Essays in Honour of Friedrich A. von Hayek (New York: Augustus M. Kelley, 1969), pp. 105-09; and R. W. Clower, "Foundations of Monetary Theory," in Monetary Theory (Baltimore: Penguin Books, 1970), pp. 202-11.

24. Robert A. Jones, 758.

25. Two prominent exceptions are Sir John Hicks in his Theory of Economic History (New York: Oxford University Press, Galaxy Books, 1969), pp. 28-29 and 63-68; and Boris P. Pesek and Thomas R. Saving in their Money, Wealth and Economic Theory (New York: The Macmillan Company, 1967), p. 171.

26. Carl Menger, Principles of Economics, First, General Part. Trans. and ed. by James Dingwell and Bert F. Hoselitz with an Introduction by Frank H. Knight (Glencoe, Ill.: The Free Press, 1950), p. 260.

27. Ibid., p. 241. Menger's subjectivist emphasis is evident in this passage and in his analysis of money generally; see ibid., pp. 236-41.

28. Ibid., p. 248.

29. Ibid.

30. Menger was almost exhaustive in discussing factors impeding and facilitating marketability. Ibid., p. 248-53.

31. Cf. Lawrence H. White, "Competitive Payments Systems and the Unit of Account," American Economic Review 74 (September 1984): 703.

32. Sir John Hicks, The Crisis in Keynesian Economics (New York: Basic Books, 1974), pp. 38-39. Hicks further noted that "by holding the imperfectly liquid asset the holder has narrowed the trend of opportunities which may be open to him ... He has 'locked himself in.'" Ibid., pp. 43-44. Cf. G. L. S. Shackle, Years of High Theory (Cambridge: Cambridge University Press, 1967), p. 6, where money is described as "the refuge from specialized commitment, the postponer of the need to take far-reaching decisions."

33. Menger, Principles, p. 262.

34. Jones, 759.

35. Menger, Principles, p. 261.

36. Ludwig von Mises, The Theory of Money and Credit, 2nd ed. Trans. by H. E. Batson (Irvington-on-Hudson, N.Y.: Foundation for Economic Education, 1971), pp. 60-61. For Mises' criticism of

the "state theory of money," see pp. 71-78 and 463-69.

37. Ibid., 775.

38. S. Herbert Frankel, Money: Two Philosophies (Oxford: Basil Blackwell, 1977)

39. Ibid., p. 48

40. Ibid., pp. 32, 34, 35, and notes thereto

41. David Laidler and Nicholas Rowe, "Georg Simmel's Philosophy of Money: A Review Article for Economists," Journal of Economic Literature 18 (March 1980): 97-105.

42. With apologies to Armen Alchian. See his "Why Money?" Journal of Money, Credit and Banking 9 (February 1977): 133-40.

43. Currency is the paradigmatic money in these accounts, and treasury bills the paradigmatic interest-bearing debt.

44. James Tobin, "Liquidity Preference as Behavior Toward Risk," Review of Economic Studies 25 (February 1958): 65. Cf. William J. Baumol, "The Transaction Demand for Money: An Inventory Theoretic Approach," Quarterly Journal of Economics 66 (November 1952): 545-56; and Don Patinkin, Money, Interest, and Prices: An Integration of Monetary and Value Theory, 2d ed. (New York: Harper & Row, 1965), pp. 78-195.

45. Cf. Baumol, pp. 169 and 175n. Baumol cited Knight, Divisia, Patinkin and Rosenstan-Rodan as sources of stationary-state argument.

46. Patinkin, p. 80, emphasis added

47. These financial innovations are examined in more detail in Gerald P. O'Driscoll, Jr., "Money in a Deregulated Financial System," Economic Review of the Federal Reserve Bank of Dallas (May 1985): 1-12, especially pp. 2-6. Deregulation of interest rates paid on deposits has accelerated the process described here.

48. Neil Wallace, "A Legal Restrictions Theory of the Demand for 'Money' and the Role of Monetary Policy," Quarterly Review of the Federal Reserve Bank of Minneapolis (Winter 1983): 4. For an earlier statement of the theory, see John Bryant and Neil Wallace, "The Inefficiency of Interest-bearing National Debt," Journal of Political Economy 87 (April 1979): 365-81. Also see John Bryant, "Analyzing Deficit Finance in a Regime of Unbacked Government Paper," Economic Review of the Federal Reserve Bank of Dallas (January 1985): 17-27. Some of the precursors of the Bryant-Wallace view are examined in O'Driscoll, pp. 6-10.

49. Fischer Black, "Banking and Interest Rates in a World Without Money: The Effects of Uncontrolled Banking," Journal of Bank Research 1 (Autumn 1970): 9

50. These restrictions have recently been substantially eliminated for individuals.

51. These notes did pay a contractually set rate of interest in the event that specie payment were suspended.

52. Lawrence H. White, Free Banking in Britain: Theory, Experience, and Debate, 1800-1845 (Cambridge, U.K.: Cambridge University Press, 1984), pp. 8-9.

53. Cf. O'Driscoll, p. 11.

54. Benjamin Klein, "The Competitive Supply of Money," Journal of Money, Credit, and Banking 6 (November 1974):425; cf. O'Driscoll, pp. 10-11

55. It would be beyond the scope of this paper to resolve the question of whether assets can have varying degrees of "moneyness," or whether they can straddle the demarcation between money and nonmoney. Certainly there are bank accounts, like money market deposit accounts, which yield interest and appear to have some of money's properties. Many if not most monetary economists would argue that assets do vary in their moneyness or liquidity. For a contrary view, however, see Dale K. Osborne, "What is Money Today?" Economic Review of the Federal Reserve Bank of Dallas (January 1985).

56. See Streissler, p. 160.

57. The Austrian concept of the margin differs from the modern neoclassical concept. Thus, the Austrians did not even agree on the meaning of the adjective. See J. Huston McCulloch, "The Austrian Theory of Marginal Use and of Ordinal Marginal Utility," Zeitschrift fur Nationalokonomie 37 (1977): 249-80.

58. This distinction is developed further in Gerald P. O'Driscoll, Jr. and Mario J. Rizzo, The Economics of Time and Ignorance (Oxford: Basil Blackwell, 1985), pp. 17-34.

59. Streissler, "To What Extent Was the Austrian School Marginalist?" p. 161. This paper, along with Streissler's companion piece, "Menger's Theories of Money and Uncertainty -- A Modern Interpretation," is extremely important for any reassessment of the Austrians. I have not dealt with them in more detail for two reasons. First, I had wanted to focus on the primary rather than the secondary literature. Second, I believe Streissler "reads back" to Menger's monetary economics, making

him seem too much like a precursor of Keynes. Moreover, I think Streissler went too far in separating Menger from the "marginalists," partly because Streissler played down the different concept of the marginal unit for the early Austrians. This different concept played no less a role for them than did the alternative concept for the Lausanne School. (See the reference footnote 57.)

60. I would like to acknowledge the helpful comments of Lyla H. O'Driscoll, Lawrence H. White and two anonymous referees. The views expressed in the article are solely the author's and do not necessarily represent the official position of any part of the Federal Reserve System.