Methodological Considerations in Demand-for-Money Construction*

By Richard H. Timberlake, Jr., Athens/Georgia

> There is thus constituted at any given moment a definite demand schedule for . . . money. . . . The demand schedule just described is represented by the equation $P = kR/M$. When $\bar{k}$ and $\bar{R}$ are taken as constant, this . . . equation [yields] a rectangular hyperbola.[1]

I. The Reason Why

For many decades the theory of money has utilized a demand-for-money construction that conceives of the alternative quantities of money units demanded primarily as a function of different possible interest rates on short-term credit instruments. This means of approaching a unit of money as an economic item for which a value must be determined has some serious deficiencies. First, it completely ignores the earlier classical concept of the demand for money. Second, it divorces the quantity of the item (money) under scrutiny from the relative value of the item over time. In so doing, it puts money into a different methodological camp than that in which the values of all other goods and services are analyzed. Each of these faults has subfaults that are examined below. Finally, an explanation is offered that analyzes this inelegance as it is currently fostered and accepted by economists.

II. The Demand for Money as a Function of Prices

The late *A. C. Pigou* formulated the expression used as an epigraph above in 1917. It states simply that the price of a unit of money depends on the fraction of real income people want to hold in the form of money relative to the existing stock of money. If $\bar{k}$ and $\bar{R}$ are allowed to be constants and

* This article has profited from the helpful comments of *Leland Yeager, Joseph Sinkey, Robert Dince* and *Edward Selby.*

[1] *A. C. Pigou,* "The Value of Money," Quarterly Journal of Economics, 32 (1917 - 18), reprinted in Readings in Monetary Theory, *Mints* and *Lutz,* ed., (NY: 1951), The Blakiston Company, p. 165.

each given a value of one, the formula reduces to $P = 1/M$. The price of a unit of money, then, is inversely related to the number of units of money in existence.

Pigou wrote that this formulation was a methodological device "for enabling us to bring together in an orderly way the principal causes by which the value of money is determined".[2] He did not argue that $\bar{k}$ and $\bar{R}$ would remain substantially constant. In fact, he went to considerable effort to specify the conditions in the real world that could change $\bar{k}$ and $\bar{R}$.[3] His analysis was similar in this regard to the exposition of *John Stuart Mill* on the same subject in the early nineteenth century;[4] and *Edwin Cannan* had a similar approach in his treatment of the demand for money in the early 1920s.[5]

These three notable economists thus specified a demand for money with particular properties. All three agreed fundamentally on what these properties were. The demand schedule included various nominal amounts of money that people would wish to possess at different possible real values of the money unit under given conditions of taste and real income. The "price" of the money unit was conceptual but nonetheless factual: It was the inverse of an index of all money prices. *Edwin Cannan* observed that this concept was elusive: the rise or fall in the value of a currency, he noted, "is disguised . . . by taking the form . . . of [a] fall or rise of [prices of] particular commodities."[6]

The items in the general demand function held constant included $\bar{k}$ and $\bar{R}$, where $\bar{k}$ is seen to be the "taste" for money, and $\bar{R}$ is simply real income. These variables are the same ones held methodologically constant in all other market constructions when the intent of the analyst is to isolate the effects of independent changes in quantities supplied on the prices of the items under scrutiny.[7]

---

[2] Ibid., p. 162.

[3] Ibid., p. 166 - 174. *Pigou* also dealt with the factors determining the supply of money under a gold standard system. He argued principally that the "Cambridge" equation he presented was a somewhat superior "engine of analysis" than *Fisher*'s quantity theory because the $\bar{k}$ in his equation brought the analysis "into relation with volition – an ultimate cause of demand . . ." He felt that the concept of velocity suffered because it seemed "at first sight accidental and arbitrary (p. 174)."

[4] *John Stuart Mill,* Principles of Political Economy. (ed., *W. J. Ashley*), NY: Longmans, Green, 1923, Book III, pp. 490 - 498.

[5] *Edwin Cannan,* Money, London: Staples Press, 8th ed., 1946, pp. 78 - 85. This section was written in 1921.

[6] *Cannan,* ibid., p. 83.

[7] See, *Milton Friedman,* "The Marshallian Demand Curve," Journal of Political Economy, LVII (December, 1949), pp. 463 - 495, reprinted in Essays in Positive Economics, University of Chicago Press: Chicago, 1953, pp. 47 - 99.

The classical demand-for-money construction is, therefore, in the same camp as the classical demand-for-anything. It isolates the price of the object analyzed as the dependent variable, and the quantity of the object brought to market as the independent variable. By this means a demand schedule is formed.

In the case of money, as in the case of anything else, a time period of adjustment is also built into the function. The appropriate time period is the one that allows all prices that are relevant to the price of the item examined to change. For an ordinary good or service, this time period would be approximately the same as it would be for money. When the analysis focuses on a commodity, many money prices are unaffected. The price level, i.e., the price of money, is also treated as a constant. When money is analyzed, the money prices of existing time contracts are unaffected while all spot prices are allowed to change. The real value of the good at issue would change in the first case, just as the real price of the money unit would change in the latter example. For methodological simplicity, money is regarded as "neutral": That is, the change in the quantity of money is assumed to have no effect on relative prices. Clearly, this assumption could hold only in a world without contracts, and one in which other money prices are immediately flexible.

In practice, the real world suffers distributional effects when prices change, and measurement of the price level is also subject to error. But these shortcomings do not invalidate the demand concept – the formal analysis of the effect of changing supplies on the price of the item under investigation.

The contribution of classical monetary theory was to fit the theory of money into the same methodological framework by means of which the real values of all other goods and services were analyzed. Such consistency was not the hobgoblin of small minds, as sophistry would have it. Rather it was an attempt to deal with real values – all real values including that of money – on a homogeneous, scientific basis.[8]

III. The Demand for Money as a Function of Interest Rates

The classical world that existed between 1815 and 1914 was sundered by World War I. The international gold standard – the money cornerstone of the classical economic system – gave way to managed paper moneys. Hyper-

[8] *Friedman,* ibid., especially pp. 65 - 68. *Friedman* notes here: "This argument [*Marshall*'s] suggests that not only was constant purchasing power of money a device for separating the theory of relative prices from monetary theory; it was a bridge between the two (p. 67)."

inflations in the early 1920s were followed by a world-wide hyper-depression in the 1930s. Money, which had been treated perfunctorily when it managed itself under the international gold standard, became an object of concern. It came to assume in fact a rather contradictory position. On the one hand, it could do a lot of harm if left to manage iself; therefore, it had to be managed. On the other hand, it could not do much good even if managed properly.

The authority for money's new image was, of course, *John Maynard Keynes*. The *Keynes*ian approach to money is based upon the familiar tri-partite demand for money.[9] This construction includes, first, a transactions-demand – money held both by households and business firms "to bridge the interval between the receipt of income and its disbursement"; second, the precautionary-demand, which sees money held to meet forthcoming monetary obligations – in truth, simply an extension of the income demand; and, third, the speculative-demand, which generates a "continuous curve relating changes in the demand for money [i.e., quantities of money demanded] . . . and changes in the rate of interest as given by changes in the prices of bonds and debts of various maturities."[10]

Clearly, only the last of *Keynes*'s "motives" implies the construction of a demand schedule in conventional terms. The transactions-motive leading to the income-demand – the behavioral response that could be expected to dominate the total demand for money in real life – does not provoke a traditional demand for money. To the contrary, income being generated has the mechanical effect of altering the amount of money held for transactions purposes in the same proportion.[11] Gone is any potential causative function that might relate the quantity of money to the value of the money unit. The functional effects of money are found only in the speculative-demand that reflects the effects of the quantity of money on rates of interest.[12]

---

[9] *John Maynard Keynes,* The General Theory of Employment, Interest and Money, NY: Harcourt Brace, 1936, pp. 194 - 199.

[10] Ibid., p. 197.

[11] Ibid., pp. 170 - 172.

[12] See *Franco Modigliani,* "Liquidity Preference and the Theory of Interest and Money," Econometrica, 12 (1944), 45 - 88, [re-printed in Readings in Monetary Theory, The Blakiston Co.: NY, 1951, pp. 186 - 239.] The author disposes of the demand for money in these words: ". . . [W]ithin an institutional framework, there must be for any given volume [value] of transactions a certain amount of money that is necessary to carry them out . . . The level of the rate of interest influences decisions concerning the disposition of assets, and *money needed to carry out transactions planned for the coming income period is not an asset.* . . . As the rate of interest rises above [some minimum] level, the demand for money will be substantially unaffected and will depend exclusively on the level of money income. (p. 197)." (His italics.) See also p. 191.

IV. Some Methodological Difficulties with the Liquidity Preference Demand-For-Money

While liquidity preference, as the speculative-demand was dubbed, has conventional features, it also has methodological deficiencies. Unlike the demand for apples, which sees various quantity-flows of apples demanded at various real prices of apples, the liquidity preference demand has various quantities of money demanded at different possible interest rates on securities. It is similar to relating the quantity of apples demanded, say, to the price of sugar. That is, this "demand" divorces the item under scrutiny (the unit of money) from the price of that item. Rather it conceives of the quantity of money demanded as depending on the rate of return derived from an item in another market – the one in which fixed-interest securities are traded.

Is this a principled method for viewing the demand for money or anything else? Note, that this construction is not employed reciprocally in the securities markets. No one argues that the quantities demanded of, say, Treasury bills are functions of the "price" of money. Their demand is duly related to their price, which is an inverse function of the yield rate they are expected to return to their holders.[13]

Some observers may argue that money is "different" – that the only close substitute for holding money is to hold securities. This argument, however, can be made for almost any other commodity. While an economic man may not commonly make a choice between holding securities and holding apples, he often makes a choice between holding securities and holding land. The rate of interest is also an important element in this latter choice. For when a person contemplates buying property, he frequently must sell a mortgage to get the money to buy the land. Thus, the rate of interest he must pay to the mortgage buyer has a significant effect on his demand for property. Yet, the demand for property is not constructed as a conventional and formal function of the rate of interest. This demand is instead a function of the price of property; the appropriate rate of interest on mortgages is simply one of the important factors that affects the demand side of this market.

The demands for securities and property can be made functions of their expected yields rather than of their prices, since prices and yields are so interlocked in the case of wealth items that generate a stream of income. However, if the demand for money is also made a function of the yield rate

[13] For a critical analysis of this practice, especially with reference to the "liquidity trap", see, *William Beranek*, "*Keynes*'s Liquidity Trap: Another View," (forthcoming).

of some security, then both the demand for securities and the demand for money are mutually dependent on that yield rate. Two demand functions are thus determined by one independent variable. Is such a construction permissible, let alone logical? It is, if the two items are perfect substitutes, which amounts to saying if they are practically the same thing. Even nickels and dimes, however, are not perfect substitutes on all occasions. And money surely is more than a security with a yield rate of zero. It, and it only, has the property of being the bridge between the receipt and disbursement of income. This function gives it a unique and special characteristic that cannot be dismissed merely as a "transactions motive". Money held for transactions has many escape routes.

Suppose for example, that all markets are in equilibrium, and that people hold a "certain amount" of money for transactions. Then a new issue of fiat money enters the economy and is spread ubiquitously. People now have an excess supply of money and, correspondingly, an excess demand for goods, services, and income-generating wealth. Everyone has moved down and to the right on his marginal utility schedule of money; and everyone attempts to exchange money for other things. This phenomenon is nothing more than the familiar real balance effect. All prices rise because the amount of money in the economy (after the initial increase) is fixed, and the attempt to get rid of nominal money cannot succeed. Only the real value of the money unit can change. Barring expectations of further price level or output changes, the value of each money unit must fall in proportion to the increase in the number of nominal money units. This behaviour describes a negatively sloped, hyperbolic demand for money, with the number of money units measured along the horizontal axis, and the price of money in terms of its ability to buy goods and services along the vertical axis.

To say that the demand for nominal money is a hyperbolic-shaped function is only to state that the demand for real money is constant under given conditions of taste and income. This principle is axiomatic, not tautological, when money has "only" the property of being a transactions device. If it is a transactions device, it must also include perforce the characteristic of being a store of value for greater or lesser periods of time; for it must be held until it is spent. This trait offers no difficulty to the construction of a hyperbolic money-demand schedule, because both the precautionary and speculative motives for holding nominal money can also be regarded as dependent on the value of the money-unit.

Contrary to the *Keynes*ian assumption, no "certain amount" of money is held for transactions unless the price of money, or – what is the same thing – "all prices", is assumed constant. To fix prices as *Keynes* did, method-

ologically speaking, emasculates money. To allow money to function only through the securities market is to deny its pervasive influence in all other markets and the associated effects of relative price changes in allocating resources. Such cavalier treatment of money is logically and realistically indefensible.

This argument can be emphasized by recourse to an extreme example. Suppose the economy used money for all exchanges, but all debts and contracts were prohibited either because of law or other circumstances. How could a liquidity preference demand-for-money be constructed in such an evironment? The answer is that it could not appear because no short-term (or long-term) interest rate could emerge to act as the independent variable. Nevertheless, money would exist; it would be demanded and supplied; it would have a price, and it would still have to be treated analytically.

V. Current Textbook Treatment of the Demand-for-Money

That the traditional demand-for-money in the form of a rectangular hyperbola has become anachronistic – at best, a relic of a "less sophisticated" era – is evident from a perusal of current textbooks on monetary economics. The demand for money is treated typically as follows:

> As the price of money (i.e., the interest rate) increases, people try to economize and get by with smaller cash balances to accommodate their day-to-day transactions needs and to satisfy their speculative and precautionary asset desires. Clearly both their transactions and asset demands for money are a [sic] function of the interest rate.[14]

Never mentioned in most such treatments is the determination of the value of money as the inverse of the price level.[15] Prices and real output are determined in concert, with no conceptual framework to specify how much one changes and how much the other.

---

[14] *David R. Kamerschen,* Money and Banking, 7th ed., Cincinnatti: South-Western Pub. Co., 1980, p. 5. *Kamerschen*'s definition is quoted because it is clear-cut. See also the following: *John J. Klein,* Money and the Economy, 2nd ed., New York: Harcourt Brace, 1970, pp. 375 – 376; *Robert Weintraub,* Introduction to Monetary Economics, N.Y.: Ronald Press, 1971, p. 255 - 264; *George G. Kaufman,* Money, the Financial System and the Economy, N.Y.: Rand McNally, 1973, pp. 241 - 245 and 400; *Lester V. Chandler* and *Stephen M. Goldfeld,* The Economics of Money and Banking, 7th ed., N.Y.: Harper & Row, 1977, pp. 294 - 310; and *Lawrence S. Ritter* and *William L. Silber,* Principles of Money, Banking, and Financial Markets, 2nd ed., N.Y.: Basic Books, 1977, pp. 223 - 230.

[15] See *Chandler* and *Goldfeld,* ibid., for an exception. Their treatment, too, is based on a demand for money functionally related to an interest rate. Theirs, however, has a family of liquidity preference demands that are drawn for different price levels.

One treatment of the demand for money in current literature – that by *Don Patinkin* – does relate the quantity of money demanded to the price level, but it does so without holding real income (or real wealth) constant.[16] When *Patinkin* constructs the individual's demand for nominal money, he includes in it a change in wealth along the demand curve as perceived by the individual. *Patinkin*'s money demander notes that an increase in nominal money balances increases his total wealth. With greater total wealth, all in the form of new money, the individual would want to get rid of some of the new money for other wealth, but he would also want to retain some of the new money as a "superior" good.[17] Clearly, the real wealth constraint is violated in *Patinkin*'s construction.

All comes right in the end, however. For as the new (excess) money bids up prices, everyone's previous "demand" for money shifts out. The new price level equilibrium then occurs on a hyperbola formed by the intersection of vertical money supplies and a series of these "demand" curves. No one can remain on his original *Patinkin* demand-for-money schedule as prices rise. Therefore, these "demand" schedules cannot record changes in the value of the money unit, given changes in the supply of money.[18] Only one point on each of these curves can ever be realized; the other points are not a series of achievable combinations.[19] The hyperbola of intersections, however, is attainable. It is in fact a demand schedule for money because it shows the various possible prices of money that would be recorded when different amounts of money are supplied to the economy.

Another approach to the demand for money is *Friedman*'s completely generalized function.[20] *Friedman*'s treatment rests on all of the possible variables that can influence the amount of money units people would want to hold. It is a multivariate function designed for empirical testing to determine which of these many possible variables are significant in the real world. It is unexceptionable for this purpose. It is not designed, however, to provide an elementary handle for an interpretation of the value of money to an unsophisticated neophyte approaching the subject, especially one who

---

[16] *Don Patinkin,* Money, Interest, and Prices, 2nd ed., Harper & Row: NY, 1965.

[17] Ibid., pp. 29 - 30, 46 - 48.

[18] Ibid., pp. 49 - 50.

[19] This criticism of *Patinkin* was first noted by *James Buchanan* in his classic article, "Ceteris Paribus: Some Notes on Methodology," Southern Economic Journal, Vol. XXIV, No. 3 (January, 1958). pp. 262 - 263.

[20] *Milton Friedman,* "The Quantity Theory of Money: A Restatement," from Studies in the Quantity Theory of Money, *Friedman* (ed.), University of Chicago Press, 1956, pp. 3 - 21. See particularly his methodological criticism of the "transactions motive" (pp. 11 - 12).

has been witness to the conventional construction of market concepts for all other goods and services.

VI. The "Market" for Money

Keynes's opus on money was the right book at the right time to have the impact it did. In view of its methodological deficiencies, however, its pedagogical prestige at the present time, even among economists who regard themselves as anti-*Keynes*ian, is puzzling. It is especially deficient in dealing with real world inflations, primarily because it was designed to focus on output and employment. So the question can be asked: Why is the demand-for-money constuction of earlier times completely neglected, when such neglect handicaps the analyst in making the fundamental and obvious connection between changes in money and changes in the price level?

The answer is to be found, I think, in what can properly be labeled The *Yeager* Principle. In an article first published in Kyklos, *Leland Yeager* develops a formal thesis explaining the fundamental differences between money and other things.[21] He notes that these differences "are crucial although banally familiar." Everyone knows, for example, that money to be money must be an universal medium of exchange. Every market is a market for money as well as for the good or service exchanged. But, as *Yeager* puts it:

> Unlike other things, money has no single definite price of its own that can adjust to clear a market of its own; instead its market value is a reciprocal average of the prices of all other things.[22]

An excess supply of money, *Yeager* emphasizes, does not appear in any particular market, or in connection with any disequilibrium price. Nor does it manifest itself as such to the individual. Rather it appears as an excess demand for goods in general by everyone in all markets.

By way of contrast, an excess supply of any particular good, including the nearest of "near-moneys", cannot cause such pervasive effects. If people have too many Treasury bills, for example, they market their excess, forcing down prices of T-bills and raising yield rates. Thus, the disruption due to the excess supply of bills is confined to the securities market. It does not ramify throughout the economy in the fashion that identifies an excess supply of money.[23]

---

[21] *Leland B. Yaeger,* "Essential Properties of the Medium of Exchange," Kyklos, Vol. 21, No. 1, pp. 45 - 68, reprinted in Monetary Theory, ed. *R. W. Clower,* Penguin Books, Ltd.: England, 1970, pp. 37 - 60. (References are to this latter source.)

[22] Ibid., p. 53.

[23] Ibid., p. 56.

People can never know what is happening to the money stock from their own micro-view of the world, because no single market responds with the conventional signals that reflect excesses of deficiencies of money. Indeed, money to be money must be markets-ubiquitous.

This pecularity is most inconvenient for the analyst. It means that a true money market must be an aggregated abstraction contrived by an intellectual process. It cannot be a market in the usual sense. *Cannan* recognized this difference. "The Money Market," he wrote, "is a place where you deal in loans not in money. We have not yet risen to the height of having a currency market in which we can buy and sell future Board of Trade, Statist and other Index Numbers."[24]

Economists, however, have not accepted a conceptual, aggregated market for money. Rather they have put the demand for money into a "money market" where it is associated with "near-moneys" and their yield rates.[25] This method is expedient rather than logical. It establishes a "price" for money in a market. But it also means that the economics profession has saddled itself with a demand concept that: (1) is methodologically dissimilar to all other demand functions; (2) divorces the real value of the thing being examined from the causal relationship; (3) ignores the primary function of the thing examined – in this case, the services rendered by money in metering the flow of income over time; and (4) has little or no empirical substantiation.[26]

The use of the classical framework to construct a demand-for-money in the mode of *Mill, Pigou,* and *Cannan* is seen to have the distinct methodological advantage of including the same set of given conditions that is pertinent to demand concepts used to analyze the flows of common goods and services. When the notion of a functionless "transactions-motive" is then abandoned for the more fundamental idea that sees the value of the money unit equal to some price level inversion, the demand for money may be firmly reestablished in the real world from which it was so untimely snatched.

---

[24] *Cannan,* Money, p. 83.

[25] If extended to ordinary commodities and services, the logic of such treatment would imply that aluminum, for example, be treated as "near-steel", and its demand be functionally related to the price of steel. In fact, any good or service that has identifiable substitutes is a "near"-something else.

[26] See, *Gail Makinen,* Money, The Price Level, and Interest Rates, N.J.: Prentice-Hall, 1977. While *Makinen* formally accepts and uses the demand for money as functionally related to interest rates, he also writes: "The results of empirical work suggest that the interest elasticity of money is low. (p. 143)."

References

Beranek, William: "Keynes's Liquidity Trap: Another View," (forthcoming). – *Buchanan,* James: "Ceteris Paribus: Some Notes on Methodology," Southern Economic Journal, Vol. XXIV, No. 3 (January, 1958), pp. 262 - 263. – *Cannan,* Edwin: Money, London: Staples Press, 8th ed., 1946. – *Chandler,* Lester V. and Stephen M. *Goldfeld*: The Economics of Money and Banking, 7th ed., N.Y.: Harper & Row, 1977. – *Friedman,* Milton: "The Marshallian Demand Curve," Journal of Political Economy, LVII (December, 1949), pp. 463 - 495. – *Friedman,* Milton: "The Quantity Theory of Money: A Restatement," from Studies in the Quantity Theory of Money, *Friedman* (ed.), University of Chicago Press: Chicago, pp. 3 - 21. – *Kamerschen,* David R.: Money and Banking, 7th ed., Cincinnatti: South-Western Publishing Co., 1980. – *Kaufman,* George G.: Money, the Financial System and the Economy, N.Y.: Rand McNally, 1973. – *Keynes,* John Maynard: The General Theory of Employment, Interest and Money, NYL Harcourt Brace, 1936. – *Klein,* John J.: Money and the Economy, 2nd ed., New York: Harcourt Brace, 1980. – *Makinen,* Gail: Money, The Price Level, and Interest Rates, N.J.: Prentice-Hall, 1977. – *Mill,* John Stuart: Principles of Political Economy. (ed. W. J. *Ashley*), NY: Longmans, Green, 1923. – *Modigliani*: "Liquidity Preference and the Theory of Interest and Money," Econometrica, 12 (1944), pp. 45 - 88, [re-printed in Readings in Monetary Theory, The Blakiston Co.: NY, 1951, pp. 186 - 239]. – *Patinkin,* Don: Money, Interest, and Prices, 2nd ed., Harper & Row: NY, 1965. – *Pigou*: "The Value of Money," Quarterly Journal of Economics, 32 (1917 - 1918), pp. 162 - 183, [re-printed in Readings in Monetary Theory, *Mints* and *Lutz* ed., (NY: 1951), The Blakiston Company, p. 165.] – *Ritter,* Lawrence S. and William L. *Silber*: Principles of Money, Banking, and Financial Markets, 2nd ed., N.Y.: Basic Books, 1977. – *Weintraub,* Robert: Introduction to Monetary Economics, N.Y.: Ronald Press, 1971. – *Yeager,* Leland B.: "Essential Properties of the Medium Exchange," Kyklos, Vol. 21, No. 1, pp. 45 - 68, [re-printed in Monetary Theory, ed., R. W. *Clower,* Penguin Books, Ltd.: England, 1970, pp. 37 - 60.]

Zusammenfassung

Methodologische Betrachtungen über Geldnachfrage-Konzepte

Der Beitrag ficht die Logik, die Nützlichkeit und die theoretische Konsistenz der der Konstruktion einer Geldnachfrage an, die Zinssätze als unabhängige Variable benutzt. Die klassischen Ökonomen von *Mill* bis *Pigou* sahen Geld in einem System, in dem die unabhängige Variable die Umkehrung eines Index von monetären Preisen war. Ihre Geldnachfrage wiesen so die gleichen methodologischen Beschränkungen – Geschmack und Realeinkommen – auf wie die Nachfrage nach anderen herkömmlichen Gütern oder Dienstleistungen. Das keynesianische Konzept entsprechend der „Allgemeinen Theorie" verbarg das Preisniveau in den Ausgabenaggregaten (Einkommen, Konsum und Investition) und setzte eine spekulative Geldnachfrage voraus, die den einen oder anderen der verschiedenen Zinssätze als unabhängige Variable unterstellte. So verschleiert wurde die Auswirkung des Geldes auf die Preise in den Hintergrund gedrängt. Die Behandlung der Geldnachfrage in heutigen Lehrbüchern

orientiert sich fast ausschließlich an keynesianischen Gesichtspunkten (d.h. man benutzt Zinssätze), während die klassische Konstruktion ignoriert wird, die eine Umkehrung der monetären Preise anwendet. Als Begründung für das keynesianische Konzept wird angegeben, daß es die Vereinfachung bietet, Geld so in einen Markt zu bringen, daß sich ein Zinssatz ergibt. In der Tat, wie *Leland Yeager* beobachtet hat, muß Geld in allen Märkten vorhanden sein, um Geld zu sein. Und der einzige Weg, um einen Preis für ein Gut zu erhalten, das auf Märkten, auf denen monetäre Preise bestimmt werden, angeboten wird, ist die Anwendung einer aggregierten Abstraktion, d.h. einer Indexzahl. Die Schlußfolgerung hieraus ist, daß die Nützlichkeit monetärer Analysen für Ökonomen maximiert wird, wenn die erwähnten Beschränkungen der Geldnachfragefunktionen vereinbar mit jenen gemacht werden, die man allgemein für die Nachfrage nach normalen Gütern und Dienstleistungen annimmt.

Summary

Methodological Considerations in Demand-for-Money Construction

This paper challenges the logic, the utility, and the theoretical consistency of constructing a demand for money that uses interest rates as the independent variable. The classical economists from *Mill* to *Pigou* saw money in a framework where the independent variable was the inversion of an index of money prices. Their demand for money thus had the same methodological constraints – tastes and real incomes – as the demand for any conventional good or service. The *Keynes*ian construction in the General Theory buried the price level in the spending aggregates (income, consumption and investment), and posited a speculative demand-for-money that assumed one or another of various interest rates as the independent variable. It thereby obscured and de-emphasized the effect of money on prices. Current textbook treatment of the demand for money is almost entirely along *Keynes*ian lines; that is, it is couched in terms of interest rates while the classical construction using an inversion of money prices is ignored. The reason the *Keynes*ian concept prevails is because it offers the simplification of putting money into a market so that a price (interest rate) may be seen. In fact, as *Leland Yeager* has observed, money to be money must be in all markets. And the only way to obtain a price for an item that enters all markets in which money prices are determined is by use of an aggregated abstraction, i.e., an index number. The conclusion is that the utility of monetary analysis to the economist is maximized when the constraints surrounding the demand-for-money function are compatible with those assumed for the demands of ordinary goods and services.

Résumé

Considérations méthodologiques sur les conceptions de demande monétaire

L'exposé met en question la logique, l'utilité et la consistance théorique de la construction d'une demande monétaire qui utilise les taux d'intérêt comme variable indépendante. Les économistes classiques de *Mill* à *Pigou* considéraient la monnaie

dans un système où la variable indépendante était le contraire d'un index de prix monétaires. Leur demande monétaire montrait les mêmes restrictions. méthodologiques – goûts et revenu réel – que la demande d'autres biens ou services traditionnels. Dans la « théorie générale », *Keynes* considérait le niveau des prix comme agrégat de dépenses (revenu, consommation et investissements) et il supposait une demande de monnaie spéculative qui considérait l'un ou l'autre des différents taux d'intérêt comme variable indépendante. C'est de cette manière que l'influence de la monnaie sur les prix fut placée en second plan.

Les livres actuels s'orientent presqu'exclusivement aux points de vue keynésiens de la demande monétaire (c'est-à-dire on utilise les taux d'intérêt). La construction classique qui utilise le contraire des prix monétaires, est par contre ignorée. Le soutien de la conception keynésienne est justifié pour la simplicité. L'argent est mis dans un marché de telle manière qu'il en résulte un taux d'intérêt. En effet, comme *Leland Yeager* l'a observé, la monnaie doit être présente sur tous les marchés pour être monnaie. Et, la seule manière d'obtenir un prix pour un bien offert sur des marchés à un prix monétaire déterminé est d'utiliser une abstraction agrégée, c'est-à-dire un nombre-indice.

En conséquence, l'utilité d'analyses monétaires pour les économistes est maximisée lorsque les restrictions mentionnées des fonctions de demande monétaire sont rendues compatibles avec celles que l'on suppose normallement pour la demande de biens et de services normaux.