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Henry Simons and the Quantity Theory of Money

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Abstract

Henry Simons had a major impact on monetary economics as founder of the Chicago School and, especially, through his famous essay on “rules vs. discretion.” He was an advocate of the quantity theory, and helped defend it in the 1930s and 1940s when it was under attack. Yet he held many views on monetary economics that were the exact opposite of those later championed by Milton Friedman and his co-workers. Simons favored a long list of restrictions on the financial system, he thought that Federal debt management (changing the maturity structure of the federal debt) had significant macroeconomic consequences, and most surprising, he thought that bond-financed federal deficits could have ended the Great Depression, and that Federal Reserve open market purchases could not have done so, a position at odds with Friedman and Schwartz’s interpretation of the Great Depression. Simons thought that in the absence of radical reforms the best rule for monetary policy was stabilizing the price level, rather than Friedman's (early) rule of stabilizing the growth rate of the money supply. Here I show that all of these positions which seem at odds with what later became known as monetarism flowed from the unique version of the quantity theory with which he worked. Unraveling the Simons paradox is worthwhile simply as an exercise in the history of economic thought. But I will argue that Simons's framework may still provide a useful way of thinking about monetary phenomena.
1. The Simons Paradox

Henry Simons was the founder of the Chicago School of monetary economics. Textbooks on money and banking still discuss his famous proposal for 100 percent reserve banking, the grandfather of current proposals for “narrow” banking. Even more important, his essay "Rules vs. Authorities" (Simons 1948 [1936]) has had a continuing influence on the way economists think about monetary institutions. Yet many of Simons's ideas remain puzzling, especially because they come from the founder of the Chicago tradition. Simons believed that bond-financed federal deficits could have cured the Depression, and that Federal Reserve Open Market operations were neither necessary nor sufficient. He believed that federal debt management policies had important macroeconomic consequences, and he advocated placing severe legal restrictions on the market for public debt. He also favored a long list of restrictions on private financial markets. He favored a monetary rule, but only if radical reforms of the financial markets were put in place. In the absence of such reforms, he favored price stabilization. His approach to monetary economics differed fundamentally, to say the least, from the approach of his famous successor at Chicago, Milton Friedman.

The interpretation of Simons developed by Milton Friedman (1969), Don Patinkin (1972), David Laidler (1993) and Frank Steindl (1990, 1995), and George Tavlas (1997, 1998a, 2014) depicts Simons as a user of the standard quantity theory of the day, but as a quantity theorist who emphasized the instability of velocity. This picture of Simons, however, explains only some of Simons departures from postwar monetarism. To be sure, it is consistent with his advocacy of monetary rules. But it fails to explain his enthusiasm for bond-financed federal deficits, his
disparagement of “mere” central bank policies, and his enthusiasm for federal debt management. Here I offer an interpretation of Simons that can, I believe, encompass more of his heterodox views on monetary policy.

Several papers on the origins of the Chicago school of monetary economics have clarified the origins of the modern quantity theory, but have also sharpened the Simons paradox. On the one hand, David Laidler (1993) has shown that Ralf Hawtrey, Lauchlin Currie, and others developed a version of the monetarist interpretation of the Depression similar to the version later developed in detail by Friedman and Schwartz in *A Monetary History*. The Great Depression, according to this view, was not inevitable. It could have been prevented, or at least greatly ameliorated, by Federal Reserve Open Market operations. Increased government spending financed by bond issues, on the other hand, was neither necessary nor sufficient to cure the Depression. Friedman and Schwartz laid out the argument in more detail, and with better data, but the basic policy conclusions are the same as in the earlier work.

On the other hand, George S. Tavlas (1997) has shown that the Chicago economists of the Depression era, although they regarded themselves as quantity theorists, favored Keynesian policies of expanded public works financed by government deficits. To be sure, agreement on deficits and public works as a way of fighting the depression concealed some important theoretical differences among the Chicago economists.² Paul Douglas may have been influenced by the under-consumptionist theories that were current at the time,³ and Jacob Viner tended to stress the supply of credit.⁴ But Simons, who I will focus upon here, viewed himself as first, last, and always a quantity theorist. The question then is how do we reconcile the finding that the Chicago economists, in particular Simons, viewed themselves as quantity theorists, with the finding that it was an entirely
different set of economists who developed the modern monetarist interpretation of the depression? Simons (1948 [1942], 190) was especially at pains to distinguish himself from Hawtrey, although Laidler, as I noted above, has shown that Hawtrey clearly anticipated Friedman. Simons described Hawtrey as an advocate "of mere central-bank action." In contrast, Simons placed himself among those economists who thought that "central-bank action is a feeble, inadequate, and anomalous implementation of monetary policy."

The startling difference between Simons and postwar monetarists can be seen clearly in the following quotation.

> Once a deflation has gotten under way, in a large modern economy, there is no significant limit which the decline in prices and employment cannot exceed, if the central government fails to use its fiscal powers generously and deliberately to stop the decline. Only great government deficits can check the hoarding of lawful money and the destruction of money substitutes once a general movement is under way. While the technical limits of cumulative movements are more nearly significant in the case of upswings or booms, the proper checks in this direction also are to be found in the taxing, borrowing and spending activities of the national government. Simons (1938, 222)

In other words, it appears that the founder of the Chicago School of Monetary Economics was a thoroughgoing Keynesian!

One possible resolution of the Simons paradox, Tavlas’s (1997) conjecture, is that Simons thought that Federal borrowing was necessary to create debt that the Federal Reserve could buy. Monetary policy, in other words, was the ultimate determinate of GDP, but fiscal policy was a necessary intermediary. Several considerations, however, suggest to me that this cannot be the whole explanation for Simon’s claim about the ineffectiveness of monetary policy. First, there was a substantial amount of federal debt in private hands on the eve of the Depression, about $15.4 billion. The stock of high-powered money was only $7.0 billion in December 1929. The Federal Reserve,
evidently, could have tripled the monetary base by monetizing the existing debt: The Federal Reserve did not lack for something to buy. Whatever the legal restraints on Federal Reserve actions, the Federal Reserve could have gotten them removed easily by asking Congress to change the law. Second, the argument is inconsistent with Simons’s criticism of open market operations. Why disparage open market operations, if the problem was simply a lack of something to buy? Third, if Simons had thought that federal deficits merely created a necessary vehicle for open market operations, he would have said so. He was not shy about expressing himself in plain English. Tavlas (1998) has also suggested that Simons and the other Chicago economists may have rejected open market operations because they were too slow to take effect, when immediate action was necessary. Again, while this may have been a factor, it is hard to reconcile a long lag with the categorical rejection of open market operations.

The key to resolving the Simons paradox, I believe, is something very different. Simons adhered to a broad definition of money that included a wide array of assets of varying degrees of moneyness. He believed that most forms of debt (whether privately or publicly issued) were, to some degree, money. From this definition Simons drew the conclusion that bond-financed federal government deficits would cure the depression because they increased the amount of bonds in circulation, and bonds were money. If government bonds were, say, 93 percent money, bond-financed deficits could stimulate the economy through the usual quantity theory story. Open market operations, on the other hand, were weak because, at best, they merely replaced assets that were 93 percent money with assets that were 100 percent money. This way of resolving the Simons paradox raises many questions about other aspects of open market operations, as well as about the relationship his broad approach to the definition of money to his arguments for 100 percent reserves
and monetary rules. But I will postpone answering these questions until I have developed Simon's analytic framework in more detail. I can then show that all of his proposals for reform flowed logically from his version of the quantity theory.

2. Simons’s Version of the Quantity Theory

Simons thinking evolved rapidly when he turned his mind to monetary problems in the early 1930s. Initially he worked with a standard version of the quantity theory, such as the following.

\[ M = kPy \]

where \( M \) is money, defined as currency plus deposits, \( k \) is the usual Cambridge \( k \), \( P \) is the price level, and \( y \) is real output. But by the time he wrote “Rules vs. Authorities” (1936) he was working with a much broader definition of money. His mature version of the quantity theory could be written as follows.

\[ C + \beta_1 D + \beta_2 S + \beta_3 TBI + \beta_4 TN + \beta_5 TB + \beta_6 CP + \beta_7 CL + \beta_8 CB + ... = kPy \]

Where \( C \) is currency, \( D \) is demand deposits, \( S \) is savings deposit, \( TBI \) is treasury bills, \( TN \) is treasury notes, \( TB \) is treasury bonds, \( CP \) is commercial paper, \( CL \) is call loans, and \( CB \) is corporate bonds. The \( \beta \)'s are coefficients representing the moneyness of assets (a number between 0 and 1, with \( \beta = 1 \) for cash). The \( \beta \)'s tell us, in other words, how much a particular asset is like currency. Simons referred to an asset's \( \beta \) as its "degree of effective circulation."
The assets are ordered so that the β’s decline from left to right. I have included assets that Simons referred to in his writings as near moneys, and I have tried (on the basis of comments in his writings) to order assets in the way that Simons did. But I cannot be sure that my ordering is precisely what Simons would have come up with had he decided to make his framework explicit. Indeed, one reason why Simons did not make his framework explicit may have been his belief that the set of assets influencing aggregate spending was so extensive, and fluctuated so violently over time, that any attempt to write out an explicit equation would be misleading.

All of the assets are promises to pay amounts fixed in nominal terms, and have finite maturities. Equities and very long-term bonds, a consol being the extreme case, are excluded. In principle even these assets warrant a place on the monetary continuum. But they lie so far away from cash (their β’s are so low) that for most purposes their moneyness can be ignored. Other assets, however, might be included, hence the ellipsis at the end of the left-hand side of (2).

One way of describing Simons’s framework is to say that he defined money as a weighted aggregate of a large set of assets with weights that varied over time. In his policy writings, of course, Simons did not use the word "money" to refer the sum on the left-hand side of (2). This would have been confusing given contemporary usage. Instead, Simons used other terms -- near moneys, substitute moneys, practical moneys, even ersatz moneys -- to refer to the exotic items in the left-hand side of equation (2). But this is a matter of form rather than substance. Simons was not unique in defining money as a weighted average. This approach to the definition of money has a long history, and when monetarism was in fashion it was the subject of much research by economists exploring Divisia indexes. But behind the equivalence at the formal level, there is a major difference between Simons’s approach and that of other proponents of weighted-average
definitions of money. The latter typically assume that the properties of an asset that determine its moneyness are more or less permanent and identifiable characteristics – interest rates, service charges, and so on. Simons believed that the moneyness of assets was a matter of opinion and varied with economic conditions. This comes out in a striking fashion in the exchange with Fisher discussed in section 4.

The conventional view of Simons is that he was a quantity theorist like many others who happened to stress the instability of velocity. This view is based on the "Appendix on Banking and Business Cycles" in Simons (1933). This document does present a standard quantity-theory interpretation of the Depression (based on equation 1) stressing the cumulative contraction of commercial bank lending and deposits, and the associated fall in velocity. There is no mention of the ubiquity of money that was at the heart of Simons's later policy proposals. But Simons was thinking intensively about money in the early thirties and his views were evolving rapidly. The policy proposals in his famous essay "Rules vs. Authorities" (1948 [1936]) and later essays reflect a different understanding of the quantity theory.

The evidence that equation (2), rather than (1), describes Simons's mature framework consists of two types. First, I show (in the next section) that the expanded version of the quantity theory explains Simons’s puzzling reform proposals, and his Keynesian view of fiscal and monetary policy. Second, I discuss (in section 4) a number of passages in Simons’s writings that are verbal statements of equation (2), and the “smoking gun,” a revealing exchange of letters with Irving Fisher.
3. The Evolution of Simon’s View of Money

In "A Positive Program for Laissez Faire..." published in 1934, Simons (1948 [1934], 54) explained the Depression along equation (1) lines, that is along lines consistent with the Friedman-Schwartz of the Depression.

We should characterize as insane a governmental policy of alternately expanding rapidly and contracting precipitously the quantity of paper currency in circulation ... Yet that is essentially the kind of monetary policy which actually obtains, by virtue of usurpation by private institutions (deposit banks) of the basic state function of providing the medium of circulation (and private "cash" reserves). It is no exaggeration to say that the major proximate factor in the present crisis is commercial banking.

A bit further on in the same essay (1948 [1934], 74) he restated this point and emphasized the role of sticky costs.

The depression is essentially a problem (1) of relative inflexibility in those prices which largely determine costs and (2) of contraction in the volume and velocity of effective money.

Simons, at that time, was implicitly using equation (1), although distinguishing between the moneyness of currency and deposits. The Depression had occurred because deposits and velocity \((1/k)\) had declined, depressing spending, and because prices had fallen faster than costs, assuring that part of the decline in spending would be absorbed by real output.\(^{11}\)

In "Hansen on Fiscal Policy," we find Simons's (1948 [1942], 199) mature, and somewhat different view of the monetary history of the twenties and thirties.

...proceeding without policy, we did avoid intolerable money shortage by recourse to a mass of ersatz moneys which could function only while the illusion persisted that they were really convertible into the real thing. In other words, we evaded long-term deflation by continuously courting deflation catastrophe.

Equation (2) now better represents his views. The long list of assets on the left-hand side of
(2) includes these ersatz monies. And the ersatz moneys functioned only as long as the illusion persisted that they were convertible into cash. Decreases in the public’s evaluation of their ability to substitute for cash, in other words decreases in the β’s in equation (2), depressed spending.12

The adjustment process set in motion by the perception that the moneyness of near moneys had declined was, according to Simons, damaging because it started a scramble for cash. Short-term loans were not renewed, or when possible, called in, forcing borrowers to cut back planned spending or to engage in a fire sale of assets to come up with cash. Banks were the prime example of lenders scrambling for cash and forcing their short-term borrowers into liquidation, and loans to the stock market were a spectacular case in point. The solution (to be adopted in lieu of more fundamental reforms) was to restrict banks to long-term investments, thus freeing them from the "illusion of liquidity" inherent in short-term lending (Simons 1948 [1936], 328). Assets would still have to be sold during bad times, but the issuers of those securities would not be forced into unnecessary liquidations. And banks would hold more cash in good times, because they would not be under the illusion that they held interest-bearing assets that were almost money. Thus, Simons anticipated Bernanke (1983) and subsequent writers influenced by him, who stresses the deterioration in the credit-intermediating role of banks in the Depression.

4. Rereading “Rules vs. Authorities”

Simons's proposals for reform of the financial system followed directly from his extended definition of money. The full set of these reforms is laid out in his famous paper “Rules vs. Authorities” (Simons 1948 [1936], 160-183). This essay, however, is often misread. True, one of the basic morals, that it is better to bind monetary authorities with rules than to permit discretion, is
widely understood. Many other sections of this essay, however, have been ignored or misunderstood because they need to be read through the lens of Simons’s version of the quantity theory. Simons considered three options (1) the best rule for monetary policy in the absence of financial sector reforms, (2) desirable reforms of the federal fiscal system, and (3) desirable reforms of the private financial sector. I will consider each in turn.

(1) The best rule for monetary policy, in the absence of fundamental reforms of the financial system was price stability. The reason appears in an oft-quoted passage that contains a verbal restatement of equation (2), Simons (1948 [1936], 164).

The fixing of the quantity of circulating media might merely serve to increase the perverse variability in the amount of “near-moneys” and in the degree of their general acceptability, just as the restrictions on the issue of bank notes presumably served to hasten the development of deposit (checking-account) banking.

Although the passage is quoted frequently, the crucial phrase, "and in the degree of their general acceptability," is crucial. If each asset possessed a fixed “degree of general acceptability” then the monetary authority could in principle estimate the acceptability of each asset — in other words, estimate the β’s in equation (2) — and measure the stock of money. A rule based on the weighted-average stock of money would work. But if the "degree of their general acceptability" varies over time, then all hope of removing discretion by formulating a rule for "money" would be lost. The problem would be compounded if, from time to time, new near moneys arrived on the scene.

Thus, in a second best world in which no fundamental changes were made in the financial system, price level stability was by default, the best choice. This rule involved many difficulties, including the problem of accountability, and the problem of political pressures on the agency defining the price level. But these problems, especially the latter, were more tractable than the problem of defining money when there were many monetary assets and the "degree of their general
acceptability" could change.\textsuperscript{14}

(2) One desirable, and possible, reform was the conversion of the public debt into currency and consols. A simplification of the debt would make it easier for both the government and the public to think through the consequences of debt policies and avoid mistakes. Attempts to lower interest rates on the debt by converting medium-term securities into short-term maturities would not inadvertently produce inflation, and the issue of medium term maturities would not create potentials for inflation that would build as the term to maturity of the outstanding bonds shrank (Simons 1948 [1944], 220-30). The idea that swaps of one form of government debt for another could have macroeconomic implications makes follows naturally from equation (2). If the Treasury converted say, Treasury Notes (TN) into Treasury Bills (TBI), it would be converting \$4 assets into \$3 assets, thus increasing the amount of money, and producing an inflationary impact on the economy.\textsuperscript{15} The opposite conversion, from Treasury bills to Treasury Notes, would lower the amount of money in the economy, producing a contractionary effect. If the difference between the moneyness of Treasury Bonds and Treasury Bill was greater than the difference in moneyness between Treasury Bills and Cash, then some debt management operations could be more potent than open market operations of the same size.

Since consols would normally pay a higher rate than shorter-term instruments, converting part of the debt into consols would increase the average rate of interest on the interest-bearing portion of the government debt.\textsuperscript{16} This led to his paradoxical conclusion that the government should aim at the highest possible level of interest on its debt.\textsuperscript{17}

What proportion of intermediate-term debt should be converted into consols and what proportion into currency? The government, according to Simons, should proceed experimentally,
guided by the goal of price-level stability. If too much medium-term debt were being converted into consols, the result would be deflation. If too much medium-term debt were being converted into currency, the result would be inflation.

Once this reform was accomplished, there would be no need for an independent central bank. The ability to implement monetary policy would reside in the Treasury. When faced with a deficit, the Treasury would make a simple decision, either to borrow money (issue consols) or create new money (issue cash).  

In "Hansen on Fiscal Policy" Simons (1948 [1942]) develops this point further by arguing that the "great task of a monetary authority is simply that of advising Congress..." Patinkin (1979, 230) finds this paragraph "obscure." But its meaning is clear once we view it through Simons's underlying model. A rule of price stability in a growing economy will imply, normally, an increase in the supply of money. That supply will come in the form of cash used to finance government deficits. The "monetary authority" would then be simply a group of experts who advised Congress on what level to set taxes at, so the resulting deficit when financed with cash, would increase the stock of money by an amount just sufficient to produce stable prices. In the event that the deficit turned out somewhat different than forecast, the monetary authority would also advise the Treasury on what proportion of any resulting deficit should be financed by cash, and what proportion by consols. Simons (1948 [1942], 206) thought that once the system was up and running:

It might be unnecessary for the authority to take any overt action beyond that of giving publicity to index movements and some advance notice of its recommendations.

Although partial reforms – the simplification of the debt, the replacement of the independent central bank by a monetary authority that advised the Treasury, and the adoption of a price level rule – would go a long way toward achieving monetary stability, they still fell short of the
comprehensive reforms needed to insure that a the Great Depression never happened again.

(3) Simons, if he had his way, would have gone much further. His complete list of legal restrictions necessary to create a "financial good society," including his famous proposal for 100 percent reserve banking, also followed directly from his version of the quantity theory as defined by equation (2). Surely few economists pondering equation (2) would have been able or willing to make the radical intellectual leap that Simons made. He simply proposed the elimination or regulation of almost all of the terms in equation (2) beyond cash.

We can set these reforms out as a series of tasks to be accomplished by Congress.

(i) Eliminate Treasury Bills (TBI), Treasury Notes (TN), and Treasury Bonds (TB). All debt issued by the government would be in the form of cash or consols.

(ii) Eliminate commercial paper (CP), call loans (CL), corporate bonds (CB), and all similar forms of near money issued by non-bank corporations. This reform would leave the financial system still short of the "unattainable" ideal of eliminating all "fixed money contracts" and thus eliminating completely the possibility of creating "effective money substitutes" or of forcing "wholesale liquidations" (Simons 1948 [1936], 165). Equity-only finance could be written into corporate charters, eliminating commercial paper, call loans, and longer-term corporate debt.

Corporate charters traditionally include a variety of restrictions -- on the lines of business that can be engaged in, on the form of governance, on the types of liabilities that can be created, and so on. Simons believed that modifying corporate charters to eliminate fixed money contracts would be a relatively easy addition in the atmosphere of the early 1930s. Going further and eliminating all fixed-money contracts would mean interfering with contracts between one individual and another (as opposed to contracts between corporations and individuals), and would raise serious legal and
philosophical objections.

(iii) Impose a 100 percent reserves reserve requirement on banks. This would have two effects. First, it would make the sum of deposits and currency held by the public equal to the total amount of currency outstanding, what would later be called high-powered money. In addition, 100 percent reserves would ensure that $\beta_2 = 1$, even during depressions, because the public would never have any concerns about the availability of cash.

Reforms (i) through (iii) would reduce the quantity equation from (2) to

\[ C^* = C + D = kPy, \]

where $C^*$ is cash issued by the government, the sum of currency held by the public ($C$) and currency held by the banks and therefore equal to deposits ($D$).

Once this version of the financial good society was reached, a monetary rule could be imposed – *the best of all possible rules, in the best of all possible worlds* – freeze $C^*$. This rule would have two very desirable properties. First, it would be so simple and easily understood that a new "religion of money," analogous to the religion of the gold standard, could develop around the idea that the government should never alter $C^*$. There would be no need in this world for a central bank; it could be replaced with a redemption agency whose only job was to replace notes when they wore out. Second, with $C^*$ frozen, and with $k$ stable -- remember that most changes in $k$ as conventionally measured, were due to changes in the $\beta$'s in equation (2) -- prices would fall at about the same rate that real income rose, thus distributing widely the benefits of economic growth.\(^{19}\)

The last point was important to Simons because he believed that some factor prices, especially some wages, were sticky. If prices fell as real income rose, then workers who could not change their nominal wages would benefit from the general increase in productivity brought about
by scientific and technical progress. If a rule of stable prices was followed – meaning in the Financial Good Society that $C^*$ would grow at the same rate as real income (assuming no secular changes in $k$) – then the benefit of a general increase in productivity could be obtained only by negotiating a higher nominal wage. A minister who was too shy to press his congregation for a salary increase would benefit from economic progress under a rule of frozen money but not under a rule of frozen prices.\textsuperscript{20}

In retrospect it is easy to view Simons's Financial Good Society as a crank proposal.\textsuperscript{21} In the short-run it would have involved many serious, but perhaps solvable transition problems (Hart 1951, [1935]). In the long run it would have prohibited a wide range of mutually beneficial transactions between borrowers and lenders, and acted as a break on the accumulation and effective allocation of capital. Perhaps we are fortunate that his plan was never adopted. But we are also fortunate that Simons followed his position to its logical conclusion because his views greatly stimulated the discussion of monetary economics.

5. Simons the Keynesian

The presence of treasury securities in equation (2) explains how Simons drew Keynesian policy conclusions from the quantity theory. For Simons it mattered little whether the government issued currency, Treasury bills, Treasury notes, or even Treasury bonds. All were money, or close substitutes for it; all entered the left-hand side of equation (2), and thus all had an expansionary impact. Issuing currency (bonds with a maturity of zero) might be the most efficient way to increase money in a deflationary emergency.\textsuperscript{22} But for every issue of currency there would be a slightly larger issue of longer-term government debt that would have the same impact. Action by the
monetary authority was not needed to make a deficit expansionary. Only if the government issued consols, a policy that it had not normally been followed in the past, would the expansionary effect of deficits be zero, or close to it.

The identity between monetarism, as Simons conceived it, and Keynesian economics meant that the labels could be used interchangeably. In reviewing Alvin Hansen's book *Fiscal Policy and Business Cycles* Simons (1948 [1942], 189) wrote that "Hansen, as judged by his policy proposals, is the extreme advocate of monetary explanation."

Skidelsky (1992, 393) has claimed that although Chicago economists favored deficit spending in the early 1930s they lacked the concept of a multiplier, and so could not make as persuasive a case for deficit spending as Keynes made in the *General Theory*. Here we see that Simons, by interpreting a deficit as an increase in money, could use velocity in the same way Keynes used the multiplier, to argue that a deficit would lead to a much larger increase in national income. The multiplier for an increase in government financed by treasury notes would be (from equation 2) simply \((\beta_4/k)\).

Simons's Keynesianism also embraced the belief that changes in the structure of the tax system (holding both expenditures and revenues constant) could stimulate or depress the economy, (Simons 1938, 23n). Increased progressivity of the tax system – which Simons thought was a good thing on normative grounds – would shift income from taxpayers with a high propensity to save to taxpayers with a low propensity to save. If higher savings were correlated with larger money holdings, then the effect of increased progressivity would be to reduce savings and the demand for money (increase velocity). There is nothing inevitable about the correlation between savings and velocity. It is conceivable that taxpayers in higher income groups will spend a higher fraction of
their income on savings and yet a smaller fraction on money balances. Much would depend on whether non-monetary vehicles for savings paid attractive interest rates. But Simons believed that in a Depression, when rates on non-monetary assets were unusually low, the correlation between savings and money demand would be positive; an increase in the progressivity would therefore be expansionary. He did not, however, advocate using changes in taxes to achieve monetary goals. Changing the structure of the tax system would affect an array of other important objectives. Financial reforms and monetary rules would be a better way to achieve macro stability.

Although Simons was a supporter of Keynesian policies in the early 1930s, he became a critic of Keynesian economics as it was developed by some of Keynes's disciples in the late 1930s. The problem with late-1930s-Keynesianism, as Simons saw it, was its emphasis on secular deficits. "Injection of money, within limits," he wrote, referring to fiscal deficits in a Depression (1948, 196), "is like putting fuel in the furnace; borrowing, like accumulating dynamite in the basement, with explosion risk growing as the pile accumulates."

Why did borrowing, by which Simons meant issuing long-dated bonds resemble accumulating dynamite in the basement? In the short run the stimulative effect of borrowing would be small because long dated bonds enter equation (2) with very low $\beta$'s. In the long run, however, long-dated bonds (if they are not consols) hold out the risk of an inflation explosion. One reason is technical. Although long dated bonds, say 20 or 30 years, enter the left-hand side of equation (2) with low $\beta$'s, their term to maturity gradually shortens – 20 year bonds become 19 year bonds and then 18 year bonds, and so on. As their maturity shortens, their liquidity increases ($\beta_5$ bonds become $\beta_4$ bonds, and then $\beta_3$ bonds, and so on) creating inflationary pressures. The government could avoid this problem by rolling over long-term bonds, or by issuing consols.
But there was another problem with deficits could not be solved so easily. Continuous
deficits meant that the debt might grow relative to GDP. Sooner or later bondholders would lose
confidence in the ability of the government to meet interest payments. Interest rates on government
debt would skyrocket. At some point only currency issues would avoid default. Keynesian
economics, pursued according to Hansen's directives, built into the financial system the potential for
inflationary disasters analogous to the deflationary disasters of the early 1930s. It all added up to
what would later be called "unpleasant monetarist arithmetic." Sargent and Wallace (1994 [1981]),
Woodford (1996). This is one illustration of the point made by Davis (1968, 481) that Chicago
economists in general in the 1930s did not object to Keynesian economics when it called for deficits
during recessions; they objected when it called for secular deficits.

Granted, given Simons’s framework, a fiscal deficit would be expansionary, even when the
money supply, as conventionally measured by M1 or M2 was unchanged. But why was it that only
government deficits could reverse a major depressi

First, it's important to distinguish between discount policy and open market operations.
Simons was especially skeptical about the effectiveness of discount policy. During the early 1930s
banks made relatively little use of the opportunity to borrow from the Federal Reserve. Infrequent
use of the discount window was partly the result of the Federal Reserve's long-standing policy of
discouraging borrowing, a psychological constraint that banks found it hard to jettison after 1929.
The Federal Reserve’s opposition to borrowing probably derived from the real bills doctrine.
According to real bills an adequate amount of credit would be created if banks simply met the needs
of trade by discounting commercial bills. If the Federal Reserve encouraged additional lending by
permitting banks to borrow at low interest rates, the result would be an excessive and possibly inflationary expansion of credit. Borrowing from the Federal Reserve was also constrained by the belief held by the banks that depositors would interpret borrowing as a sign of weakness. Banks preferred to liquidate securities or loans they needed cash.

Open market operations would be most effective (in the first round) when they replaced long-term bonds or consols with cash. Longer-term government debt existed in the early 1930s, but the net effect of monetizing it still would have been small, given Simons's intuitions about the moneyness of various forms of government debt. Of the $15.4 billion of Federal debt that was in private hands about 17 percent matured within five years, 56 percent within 10 years, and 82 percent within 20 years. Moreover, 51 percent of the debt was callable within 5 years. Simons (1948 [1942], 227) argued that call provisions increased the moneyness of bonds because they created the expectation that the bond would be converted into cash if short-term rates turned out to be lower than expected. Thus, only a small proportion of the federal debt consisted of the very long-term-non-callable debt that Simons thought would maximize the leverage of open market operations.

 Granted that the first round effects of central bank purchases of securities would be small, wouldn't the subsequent expansion of deposits stimulate the economy? The answer is not necessarily. First, because banks regarded government bonds and cash as close substitutes, a change in the composition of their holdings of these assets might not produce an important effect on their lending. Second, even if banks maintained stable cash reserve ratios, the multiplier effects of open-market operations might not offset the decline in the liquidity of the deposit liabilities of the banks. If the moneyness of deposits is low during a deep depression because of bank failures (a low $\beta_1$ and
\( \beta_2 \) in equation 2) while the moneyness of government securities is high (a high \( \beta_3 \) in equation 2), then the money generated by the new mix of currency and deposits could be lower than the liquidity of the treasury securities displaced.

We can see the potential magnitudes involved by looking at the money multiplier in the depths of the depression. Define “c” to be the ratio of currency held by the public to demand deposits and savings deposits held by the public. Define “r” to be the ratio of cash held by banks (reserves) to demand deposits and savings deposits held by the public. To simplify things, assume that the \( \beta \) on demand deposits and the \( \beta \) on savings deposits are the same and equal to \( \beta_1 \). Then the multiplier on an open market purchase of Treasury Bills, the ratio of the change in money (\( dM \)) to the change in high-powered money (\( dH \)), would be the right hand side of (4).

\[
\frac{dM}{dH} = \frac{c + \beta_1}{c + r} - \beta_3
\]

At their high points in March 1933 the currency ratio, \( c \), stood at .23, and the reserve ratio, \( r \), at12. If \( \beta_1 \) was 1.00 and \( \beta_3 \) was 0.00 (the conventional assumptions) the multiplier would be 4.24, revealing plenty of scope for effective open market operations. Reverse the assumptions, however – make \( \beta_1 \) equal 0.00 (deposits cease to be regarded as money) and \( \beta_3 \) equal 1 (treasury bills are virtually cash) – and the multiplier would be -. 35. Open market operations would be ineffective. The net effect of a change in the monetary base in this case in terms of conventional definitions of money (say, M1 and the corresponding velocity V1), would be a larger money supply and a correspondingly lower velocity. Thus, implicit in Simons's view of the Depression was a liquidity trap similar to Keynes's. These assumptions, of course, are extreme. Most economists would be inclined to place
intermediate values on the β’s. And at most intermediate values the multiplier would be positive. For example, if β₁ was .5 and β₃ was .5 the multiplier would have been 1.61, leaving some scope for effective open market operations.

6. An Exchange of Letters with Irving Fisher

Passages that can be given mathematical form along the lines of equation (2) occur throughout Simons's later writings. In "Rules vs. Authorities," for example, Simons (1948 [1936], 326) insists on the infeasible nature of reforms that depend on a sharp distinction between circulating media and "non-circulating near moneys," listing "time deposits, savings accounts, treasury bills, and commercial paper of large corporations," as examples of near moneys. And in referring to private debts in general, Simons (1948 [1936], 327) notes, "They come close to the money category, or become significant as money substitutes, only as they approach maturity..." and he adds that "these distinctions obviously relate merely to differences of degree along a continuous scale." Surveying the wide range of debt maturities issued by the Federal government, Simons (1948 [1944], 221) concluded that the government was issuing "moneys, practically moneys, and near moneys under other names." Simons's insistence on the importance of near moneys also comes out in his review (1935) of Lauchlin Currie's The Supply and Control of Money in the United States. Here is a key passage from the review:

We must see that there is little difference between demand deposits and savings accounts, and that all institutional borrowing and lending at short term presents the same problems and anomalies as does deposit banking.

The “smoking gun” is a letter to Irving Fisher dated July 4, 1934. This statement shows not only that Simons insisted on including a long list of assets in equation (2), but also that Simons
believed the $\beta$’s on some of the exotic assets in equation (2) were ordinarily close to one.

In fact, I am more and more convinced of the importance of the point on which we seemed somewhat do [to?] disagree. Much is gained by our coming to regard demand deposits as virtually equivalent to cash; but the main point is likely to be lost if we fail to recognize that savings-deposits, treasury certificates, and even commercial paper are almost as close to demand deposits as are demand deposits to legal tender-currency.

Fisher strongly rejected this claim. His reply throws into sharp relief the difference between not only Simons and Fisher, but also the difference between Simons and subsequent quantity theorists.

It seems to me quite preposterous to consider savings deposits on all fours, or very similar to, deposits subject to check. I feel sure that a statistical study will convince you of this if you will take the trouble to make it.

Fisher went on to explain that the payment of interest was the crucial dividing line: Assets that paid interest were not money because they would not circulate from hand to hand.\footnote{As evidence, he cited a case that has received renewed attention in recent years: the attempt to issue interest-bearing currency during the Civil War.} I remember Professor Sumner impressing me, when I studied under him, with the attempt in the Civil War to circulate $50$ bonds bearing $7\,3/10\%$ interest amounting to the exact figure of one cent per day, the idea being that this was so easy to calculate that these bonds would circulate as currency. But the very fact that they drew interest led to their being held and they were a flop as currency.\footnote{Fisher did not even bother to address Simons’s claims that treasury certificates and commercial paper were also money. Today, it is true, most monetary economists, although not all, would reject the claims that treasury certificates or commercial paper should be considered near monies. But Simons claim that savings deposits should be considered money has fared well, and Fisher’s claims that savings deposits are not money, and that interest-bearing assets cannot be money have fared}
Simons's interest in near moneys has been noted in passing by most of the writers who have examined his views, for example, Mints (1945, 220-222), Mints (1950, 122-23, 203-05), McKean (1951), Friedman (1969), Patinkin (1969), Stein (1987), and Laidler (1993). The reference that draws the most attention to Simons's emphasis on near moneys is McKean (1951, 66):

"... in elaborating the quantity theory of money, economists tended to obscure the other balance-sheet items and to focus attention on the influence of one particular asset – money -- which had to be defined arbitrarily. Some-- Henry Thornton was one of the earliest, and Henry Simons one of the most persuasive -- sought further in the balance sheet for influences on the level of spending and emphasized that liquid assets other than those defined as money were near-moneys or money substitutes."

Indeed, McKean (1951, 83) believed that Simons "may have exaggerated the significance of near-moneys." The extent to which Simons's concern with near moneys pushed him in unique directions, however, has been missed.

7. Where did these Ideas come from?

Although Simons frequently cited other authors in his work on public finance, he rarely did so in his work on money. Possibly, Simons was afraid that some of the people he was influenced by were considered cranks and citing them would detract from the force of his arguments. We can make some guesses about the schools of thought that influenced Simons based on his personal background. Simons was born in Virden Illinois in 1899. He earned his A.B. from Michigan in 1920 and he was a graduate student at Michigan in 1920-21, but did not get his M.A. In 1921 he moved to Iowa where he was listed in the catalog as an instructor of commerce and as a graduate student. Donald Dewey conjectures that this appointment may have resulted from making a
favorable impression while at Michigan on Fred M. Taylor, whom Frank Knight, already a force at Iowa, admired. In 1923-24 Simons was listed in the Iowa catalog as a member of the graduate faculty and in 1926 as an assistant professor. In addition to Knight, Simons would have come in contact at Iowa with two experts on money and banking: Charles Oscar Hardy and Chester Arthur Phillips. The latter is famous for having worked out the mechanics of fractional reserve banking. From Iowa, Simons moved to Chicago as a lecturer in 1927, probably as part of the “deal” that brought Knight to Chicago. In the first half of 1928 Simons was given a leave to learn German. He spent the time in Germany, partly at the University of Berlin.

He returned to Chicago in 1928 as an assistant professor. From then on he did considerable teaching, and was probably not a serious degree candidate. Later, despite considerable opposition from Paul Douglas based on his lack of “serious” publications, but with the continuous support of Frank Knight, he was granted tenure and promoted to associate professor. He was promoted to full professor shortly before his death in 1946. Knight was undoubtedly the major intellectual influence while at Iowa and Chicago. But Simons’s monetary views differed from Knight’s. Knight leaned toward a somewhat mechanical view of “hoarding” to explain cyclical fluctuations.

One can detect in Simons’s writings, the influence of the Populist ideas that were widely debated in the Midwest when he was growing up. The Positive Program for Laissez Faire, contains lists of reforms – nationalization of monopolies, progressive income taxation, expansion and control of the money supply (Simons 1948 [1934], 57) – that bear a striking resemblance in style and substance to the demands in the famous Populist “platforms,” such as the St. Louis Demands of 1889 or the Omaha Platform of 1892. Although the monetary planks in the populist platforms are not identical with Simons's proposals, mainly because the Populists usually identified money with
currency, the platforms do call for an elimination of national bank notes, an increase in the stock of
currency to $50 per capita, and the gradual increase in the stock of currency thereafter with the
growth of per capita income. It all sounds very much like Simons, but I have found no explicit
reference to the Populists in Simons’s writings.

Albert G. Hart (1951 [1935]) discusses both the Chicago Plan and some of the other plans
for 100 percent reserves that arose independently and simultaneously. He also reports (1951, 437)
that “From conversations with various American economists I am convinced that the same notion
occurred to economists at several other centres of economics at the same time, although their
findings have not happened to be published.” One hundred percent reserves was an obvious plan
given the meltdown of the banking system that had occurred from 1929 to 1933. I have found only
one published remark by Simons in which he acknowledged a clear precedent. In _Full Recovery or
Stagnation?_, Alvin Hansen (1938) chided Simons for failing to cite Frederick Soddy as the inventor
of 100 percent reserves. There was more than a drop of acid in this remark, because Soddy, a Nobel-
prize winning chemist (1921), was an amateur economist who had a reputation as a monetary crank.
In a review of Hansen's book, Simons (1939) acknowledged Soddy as a forerunner. But, Simons
argued, there were times when ignoring predecessors was justified, and that once started there was
no need to stop with Soddy! While Soddy did stress the dangers inherent in fractional reserve
banking, and did advocate 100 percent reserves as a cure, he did not hold to the broad view of
money that underlies Simons thinking. Thus, while Simons was undoubtedly aware of Soddy, it is
unlikely that Soddy was a major influence.

Simons may also have been influenced by ideas encountered during his stay in Germany.
This influence is abundantly clear in his writings on public finance (Stigler 1982, 166), and it seems
natural to suppose that his thinking about money would have been influenced as well. The definition of money was widely discussed in Germany at the time, as might be expected given the monetary disorders of the war years and the 1920s, in a way that would have appealed to Simons’s philosophical approach to economics. A number of German-language economists, such as Robert Liefmann and Alfred Amonn, debated the origins of money, the impact of the development of near monies and clearing systems on the equation of exchange, and possible reforms of the monetary system: all topics of deep interest to Simons in the 1930s. Simons’s view that government issued paper money is the ultimate form of money, and that privately issued substitutes are ersatz monies that should be eliminated, bares some likeness to the ideas of the "chartalists," such as George Knapp, who saw the role of the state as crucial in the creation of money. (Cowen and Kroszner 1994, 148-49).

The most important source for Simons’s theoretical framework, however, would appear to be Irving Fisher. Simons’s version of the quantity theory can be approached from Fisher’s version, and this may have been the path that Simons followed, although I have found no direct evidence that it was. Fisher’s version of the quantity theory can be written as follows. (Fisher 1922, 48).

\[
CV_0 + DV_1 = PT
\]

Where \(C\) is currency held by the public, \(D\) is demand deposits, \(P\) is the price level, \(T\) is total transactions, and \(V_0\) and \(V_1\) are the velocities of circulation.

Fisher regarded his equation as an extension of the traditional quantity theory because it shows bank deposits as well as "money" affecting the price level. Fisher did not consider deposits money because deposits were not generally acceptable, but he thought that deposits did influence the level of transactions (although the velocity of deposits would be lower than for cash) and hence
should be included. By simply adding additional assets we can go from Fisher’s equation to Simons’s. Thus, a “Simonized” version of Fisher’s equation could be written as

\[(6) \, CV_0 + DV_1 + SV_2 + TBI \, V_3 + TNV_4 + TBV_5 + CPV_6 + CLV_7 + CBV_8 \ldots = Py\]

Where S is savings deposits, TBI is treasury bills, and so on as in equation 2, and \(V_0 \ldots V_8\) are the corresponding velocities. In addition, I have replaced PT with the more modern term Py.

If we divide through by \(V_0\), we have an equation in which each asset is weighted by its velocity relative to the velocity of currency.

\[(7) \, C + \frac{D(V_1)}{V_0} + S\left(\frac{V_2}{V_0}\right) + TBI\left(\frac{V_3}{V_0}\right) + TN\left(\frac{V_4}{V_0}\right) + TB\left(\frac{V_5}{V_0}\right) + CP\left(\frac{V_6}{V_0}\right) + CL\left(\frac{V_7}{V_0}\right) + CB\left(\frac{V_8}{V_0}\right) \ldots = \left(\frac{1}{V_0}\right)Py\]

From the perspective of this equation it is natural to describe the weights on each asset the way Simons does as “degrees of effective circulation,” that is as measures of how close an asset was to currency in terms of its ability to influence economic activity.

There, it is interesting to note, a striking parallel between Simons's work in public finance, which insists on a very broad definition of income, and his work in monetary economics, which insists on a very broad definition of money. To put its simply, Simons's work in public finance centered on broadening Fisher's definition of income, and Simons's work in monetary economics centered on broadening Fisher's definition of money.

8. From Simons To Friedman

To judge from the published record, it appears that it was Lloyd Mints who was the transition figure between Simons and Friedman. Mints accepted Simons’s argument that monetary policy should be guided by rules and not by discretion. And he accepted the Simon’s argument that
the existence of near-moneys, especially short-term government debt, compromised the effectiveness of monetary policy. He therefore endorsed Simons’s calls for monetary rules and for the elimination of short-term private and governmental debt that could substitute for cash. But he did not agree with Simons that the existence of near-monies had rendered open market operations ineffective during the Depression. Indeed, he made the point, later developed in detail by Friedman and Schwartz in *A Monetary History*, that open market operations had failed because they had not been used soon enough and on a sufficient scale. Mints (1946, 62-63; 1950, 36-51) pointed to the decline in the stock of money defined as currency plus deposits, and the failure of the Federal Reserve to acquire large amounts of earning assets—especially from July 1929 to July 1931 when Federal Reserve earning assets fell from 1.38 billion to .95 billion—as evidence that monetary policy had been mishandled rather than ineffective.\(^35\)

Friedman and Schwartz went further and rejected the starring role that Simons had assigned to near monies, and the role of best supporting actor that Mints had assigned. They did so on the basis of empirical research summarized in *Monetary Statistics* (1970). Here they rejected Simons’s broad-based approach to the definition of money, but not because it is wrong in principle. Friedman and Schwartz (1970, 151-52) discuss the weighted-average approach, illustrated in equation (2), and conjecture that more work along those lines would be done in the future. Their objection to equation (2) is based on the practical difficulty of assigning plausible weights. Thus, the ultimate difference between the Simons and Friedman and Schwartz was in their attitude toward empirical research. Simons did no quantitative research, and there is some evidence that he disdained some who did (Steindl 1995, 82). Friedman and Schwartz, on the other hand, based their definition of money on the accumulation of masses of quantitative data. In effect, Friedman and Schwartz carried out the
research that Fisher called for in his exchange with Simons.

Simons's attitude toward empirical research probably was the result of a number of factors. The similar attitude of Frank Knight, Simons's mentor at Chicago, undoubtedly played a role (Reder 1982, 6). Simons's belief that money is ubiquitous also discouraged empirical research. If one believes, as did Simons, that money is part of all nominally defined contracts of shorter than infinite duration, and that the degree to which those assets are money fluctuates over time, the task of estimating the stock of money would be insoluble.

Empirical research, on the other hand, was a high priority for Friedman. By the time he turned to monetary economics, he had already compiled an outstanding record in empirical research and had worked closely with two of the leading practitioners: Henry Schultz and Simon Kuznets. In the case of Friedman's attempts to estimate the demand for money, it was the influence of Henry Schultz, or more perhaps more exactly the work done while he was assisting Schultz, that appears to have been critical. At first glance Schultz, whose magnum opus The Theory and Measurement of Demand consisted of a series of studies of the demand for agricultural products, may seem a strange choice as a major influence on monetary economics. But it was the influence of his work with Schultz on the demand for agricultural products, I believe, that explains the brand of empirical analysis that separated Friedman from both Simons and the Keynesian school.

Friedman's essay "The Quantity Theory of Money -- A Restatement" (1956) is best read as an attempt to construct a framework for testing the quantity theory by estimating demand curves for money analogous to Schultz's demand curves for agricultural products. On this reading, Schultz's decision to include only a few variables in the demand function (the price of corn and the prices of other cereals) becomes the basis of Friedman's decision to include only a few variables including the
own rate of return on money (for currency, the rate inflation) and the rates of return on bonds and equities in the demand function for money. Just as Schultz is then able to use his estimates to evaluate the effects of New Deal agricultural policies, such as output restrictions, Friedman is able to use his estimates to evaluate the effect of alternative monetary policies.

This brings us to perhaps the most contentious statement in the debate over the origins of the monetarist tradition, Friedman's claim in 1956 that he was merely building on Chicago's "oral tradition." This contention was attacked by Patinkin (1969) and Johnson (1971) who claimed that Friedman had invented the Chicago tradition in order to minimize his obvious debt to Keynes. Steindl (1990) and Tavlas (1998b) have already done much to lay this criticism to rest. Steindl showed that the very same term, "oral tradition," was in use at Chicago, and Tavlas showed that Friedman's approach was anticipated in the work of Knight and Mints. My reading of Simons reinforces their point. It is clear that the essence of Simons's approach is a stable demand for money – the right hand side of (2) – and that the problem is the variability in the supply of money. The movements in velocity, as conventionally measured, that worried Simons are not to be interpreted as fluctuations in the demand for money as Patinkin (1969) would have it, but rather as variations in supply of near-monies, and variations in the nearness of near-monies.

The influence of Schultz's model was critical here as well. The demand for corn was relatively stable compared with the supply, so an ordinary least squares regression of quantity on price (or price on quantity) would reveal the demand curve for corn, and provide the basis for policy analysis. (Would acreage restrictions increase farm incomes?) Friedman's strictly analogous argument, that the supply of money varies a lot, and the demand for money varies little, plays the same role in his research program that it does in Schultz's: it justifies the use of ordinary least
Friedman (1969, 84) interpreted the differences between himself and Simons to "A few facts that we now know, and that he did not." Patinkin (1979, 222-24), objects to this characterization of the difference, pointing out, that Simons was familiar with Lauchlin Curries's estimates of the stock of money, which show declines similar to those estimated by Friedman and Schwartz. In his list of the "facts that we now know" Friedman, however, does not include the simple fact that the stock of money fell. Instead, he stresses a number of more subtle empirical findings: (1) the dating of the period of monetary restraint to mid-1928, (2) the role of the Federal Reserve in producing the first phase of the monetary contraction, (3) the imposition by the Federal Reserve of a tight money policy after Britain left gold in 1931, and (4) the general conclusion (1969, 91) that "at all times throughout the 1929-33 contraction, alternative policies were available to the System by which it could have kept the stock of money from falling and indeed could have increased it at almost any desired rate." Friedman points, too, to other evidence uncovered by him and his students that preventable changes in the stock of money led changes in velocity.

All of these are facts that strengthen the case for the Friedman-Schwartz interpretation of the depression. But they do not fully address Simons's concerns. On my reading of Simons, the crucial evidence that would have made him abandon his defense of Keynesian fiscal policies in deep depressions and his advocacy of radical financial reforms, would have been evidence that a simple sum of currency outside banks and deposits was an adequate definition of "effective money" (to use Simons's term). This was the issue addressed in Friedman and Schwartz (1970). Had Simons been aware of the Friedman-Schwartz demonstration of the utility of a simple sum definition, he might have followed them in stressing the control of M2 as the key to recovery from the Depression. This
conclusion, however, is far from certain. Simons stressed the tendency of the weights on monetary assets, "the degree of their general acceptability," to decline during a depression. That possibility was consistent with the evidence provided by Friedman and Schwartz that most of the time a simple-sum definition of money was adequate.  

Simons also stressed that, in the absence of legal restrictions, financial innovation might undermine the effectiveness of a particular monetary rule. Thus, Simons might well have been among those economists who interpreted the decline in velocity in the early 1980s as a result of changes in the relevance of traditional measures of the money stock, and thus as evidence favoring a price level rule as opposed to a money growth rule.

9. What Can We Learn from Simons?

Henry Simons has been one of the most puzzling figures in monetary economics. He was the founder of the Chicago school of monetary economics. Indeed, he was as George Stigler (1982, 166) put it, the "Crown Prince" of Chicago economics. Yet he was a strong supporter of Keynesian economics in the early 1930s, although a critic of the stagnationist version of Keynesian economics that emerged in the late 1930s. And Simons advocated a wide range of legal restrictions on private and governmental financial markets. His interpretation of the Great Depression, to take the most dramatic example, was the exact opposite of the interpretation developed by Friedman and Schwartz in *A Monetary History*. Simons believed that Federal Reserve actions would have been ineffective, and only government deficits could have saved the economy.

These puzzles are resolved when we recognize that although Simons worked with the quantity theory, it was a quantity theory that included a wide range of near moneys, and which
emphasized the time-varying character of the moneyness of near moneys. Bond financed deficits, for example, were expansionary in Simons's view, even if M1 or M2 was unchanged, simply because most outstanding government securities, as Simons put it, "practically money." For the same reason open market operations would have had only a small effect: they would merely substitute one form of money for another.

Laidler (1993) is correct when he argues that from a long-run perspective Simons's major direct contribution to monetary thought was his emphasis on the distinction between rules and authority. Simons's version of the quantity theory played no direct role in the future development of the field. I would argue, however, that Simons's insistence on the quantity theory played an important indirect role by keeping the language of the quantity theory alive at Chicago. In the 1930s and 1940s most macroeconomists outside Chicago lost confidence in the ability of central banks to influence the level of economic activity, at least in deep depressions. Only fiscal policy seemed to offer any hope. To most economists this meant abandoning the quantity theory in favor of the Keynesian income-expenditure approach. Simons, however, because he held to a version of the quantity theory that encompassed cases in which fiscal and debt management policies were effective and changes in narrowly defined monetary aggregates brought about with open market operations were not, saw no reason to abandon the quantity theory.

Language is important. Although economists who spoke in terms of C+I+G might study the definition of money or the determinants of velocity, and sometimes did, they were more likely to study the consumption function or the determinants of investment. Economists who spoke in terms of MV might study the consumption function or the determinants of investment, and sometimes did, but they were more likely to study the definition of money or the determinants of velocity. The
final irony is that, when Friedman and his coworkers revived the quantity theory, it was a quantity theory in the image sketched by Fisher, Currie, Hawtrey, Clark Warburton, and other non-Chicago monetarists, rather than in the image sketched by Simons.

Simons is recognized as important in the history of monetary economics for his brilliant statement of the case for rules over discretion. But is there any reason to take his ideas about the nature of money seriously? The recent financial crisis, and the puzzling behavior of money (as conventionally measured) since then, suggests to me that there may still be some juice in the orange. Perhaps if monetary economists had paid more attention to Simon’s ideas about the importance of near monies they would not have been thrown for a loss by the events of 2008.
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Endnotes

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2. Indeed, in discussions with Keynes in 1931 the Chicago economists were stronger advocates of deficit spending than was Keynes, who still thought that central bank led reductions in interest rates could reverse the slump. They were, as Skidelsky (1992, 392) put it, "more Keynesian than Keynes." The question is why they were so convinced that deficit spending would work. Simons, at least, as I show below, had a clear rationale.

3. Laidler (1998a, 1998b) sees Douglas as tangential figure (to the Chicago monetary tradition) strongly influenced by underconsumptionist theories. Tavlas (1998a), however, sees Douglas as solidly within the Chicago quantity theory tradition, and as a major contributor.


5. Evidence of this attitude recurs throughout his work. Perhaps the earliest statement occurs in an unpublished memorandum listed in the Simons papers as an "Unidentified Statement on Government Expenditure and Depression," Simons (n.d., 2). “If action is needed to raise prices (and we believe it is), it should take the form of generous federal expenditures, financed without increase of taxes on commodities or transactions.”

6. I will be defining "Keynesianism" as a belief in the efficacy of bond-financed deficits, and the relative impotence of monetary policy. I believe this policy-oriented definition to be the most common. It is possible, of course, to see the essence of Keynesianism in a particular theoretical perspective. Patinkin (1972) for example, saw the inclusion of interest rates in the demand for money at the theoretical heart of Keynesian economics.

7. The equation, as I have written it, does not distinguish gold coins from redeemable paper currency, since this distinction will not be needed to unravel the puzzles discussed in the paper. But this is a logical extension. Devaluation, or going off gold altogether, would lower the moneyness of currency, and other gold substitutes, putting downward pressure on GNP. This was the reason Simons thought that going off gold had been a great mistake. (Simons 1948, 168).

8. Simons believed that ordinary corporate bonds, which at that time often had maturities of 20 or 30 years, were money substitutes. (Simons 1945, 280) So only corporate bonds of very long
maturities would be excluded.

9. Barnett, Fisher, and Serletis (1992) provided a good overview of the work on Divisia indexes. Research has continued apace, but I am not aware of a more recent survey of the field.

10. Milton Friedman (1969, 82, note 1) reports Aaron Director's recollection that the memorandum was written largely by Simons, and thus Friedman relies heavily on this document to infer Simons's views. Subsequent writers have followed Friedman. But Simons (1948, 163) refers to the ideas in the memorandum as reached by "a group, including the present writer, in connection with some tentative proposals for banking reform." This formula suggests that the views in the memorandum, even if written largely by Simons, probably expressed a consensus, and in any case, reflected an early stage in his thinking about the causes and cures for the Depression. The "Supplementary Memorandum: Long -time Objectives of Monetary Management," considers the merits of money supply rules and price rules. It concludes, tentatively, that monetary rules are to be preferred, even with current institutional arrangements, the opposite of Simons (1948 [1936]). In addition the following statement occurs with regard to monetary rules.

    Perhaps a suitable rule can be devised. On the other hand, it may seem expedient to grant some discretionary authority. For the moment, we cannot see clearly what is the best escape from the dilemma. Consequently, we merely raise the questions, partly as a matter of intellectual honesty, but mainly in the hope that other economists may find satisfactory solutions or throw light on how the opposing considerations should be weighed. (Simons 1933, Supp.4).

Evidently, Simons was thinking intensively about money at this point, and had a long way to go.

    J. Ronnie Davis supplied further evidence that Simons's thinking evolved rapidly in the early thirties. Davis noted that in his pencilled margin notes to a memorandum favoring deficit spending in the early 1930s circulated at Chicago in 1934-35, Simons expressed opposition to bond-financed deficits, and favored discretion over rules. (Davis 1969, 393 and passim).

11. Sticky costs were the result, Simons believed, of monopolies such as labor unions and industrial cartels. This connects Simons's monetary analysis to his views on the organization of industry. See De Long (1990) for a recent exposition of Simons's views on industrial organization.

12. This point is developed, in somewhat less flamboyant language, in Mints (1950, 122-23) where he cites accounts and notes receivable as examples of short-term debt whose perceived liquidity decreased during the depression. By way of evidence, he mentions, without a specific citation, a study of 25 businesses that decreased their holdings of accounts and notes receivable, and increased their holdings of cash. Mints, however, did not share Simons's view that the nearness of government bonds and cash made open market operations ineffective.

13. Friedman (1953 [1948]) called for the elimination of interest-bearing government debt other
than consols, but he did not follow Simons in calling for the elimination of similar private securities.

14. Simons, in (1933, 12-14, and the supplementary memorandum, "long-time objectives of Monetary Management") argued against price level stabilization under then current monetary arrangements. One concern was that price level stabilization normally requires a continuous increase in the stock of money, and that under fractional reserve banking that means that the banking sector will share (unfairly) in the seignorage. This recommendation represents an early stage in Simons's thinking.

15. The idea that bonds have an important monetary dimension has been taken seriously by the current generation of theorist. See Bansal and Coleman (1996).

16. The average interest rate on the total debt, including both cash and consols, might be lower.

17. As he pointed out, maximizing interest on interest-bearing debt does not work for bonds with call provisions. Call provisions tend to raise the yield to maturity, but Simons would eliminate call provisions.

18. Friedman (1953 [1948]) included restricting the debt issued to finance a federal deficit (in ordinary times) to cash in his "A Monetary and Fiscal Framework for Economic Stability."

19. Friedman (1984) revived Simons's proposal to freeze highpowered money, and offered a similar rationale. Friedman, however, would combine the freeze on highpowered money with free banking, rather than with 100 percent reserves and other restrictions on the financial sector.

20. Simons was not original in advocating a "productivity norm." Similar rules were endorsed by many previous and contemporary economists including Simon Newcomb, Alfred Marshall, Francis Edgeworth, Friedrich Hayek, and Dennis Robertson. Selgin (1990) is a recent and comprehensive restatement of the case for a productivity norm. What is original in Simons is the combination of the productivity norm with his other proposals.

21. Simons took a perverse pleasure in referring to himself as a monetary crank.

22. Simons (n.d., 5-6) says that "Outright issue of Greenbacks - with provision for retirement as production, employment, price, and federal revenues increased - would probably be the easiest and wisest course. To indulge inflation in this most straightforward manner, is perhaps the best insurance against excessive indulgence."

23. The figure for total Federal Debt in private hands is from U.S. Board of Governors (1943, 512, table 149). The breakdown by maturity is from the same source (511, table 147) but is for total debt outstanding. The maturity structure of the debt in private hands might be slightly different. A more important reservation is that the breakdown may be by maturity at time of issue, and may not reflect
actual number of years remaining.

24. While the following argument is consistent with Simons's approach it is not clear that he ever fully thought through the implications of the relationship between open market operations and the multiplier process. Simons blamed fractional reserve banking for creating unwanted volatility in the stock of money. And he was aware of Chester A. Phillips's *Bank Credit* (1926), which explained part of the process -- Phillips was a colleague at Iowa, and the book was on his reading list at Chicago. But as Steindl (1995) has shown, Simons, like other monetarists who preceded Friedman and Schwartz, lacked a money supply model that could easily integrate his insights. In Steindl's view this was one of the key innovations of Friedman and Schwartz that made their analysis of the Depression more persuasive than that of their monetarist predecessors.

25. Currie's definition of money corresponds roughly to Friedman and Schwartz's M1. There are, however, many differences in detail that lead to differences in cyclical timing. See Friedman and Schwartz (1970, 268-9).

26. The letter (Simons 1934) accompanied Simons's margin notes on Fisher's manuscript on 100 percent money (Fisher 1935).

27. This dividing line meant that Fisher did not regard bank deposits, most of which bore interest until the 1930s, as money. Deposits might, however, influence aggregate spending. Hence Fisher included them in the quantity theory. This is discussed further in section V.


29. Donald Dewey kindly provided part of the information used in this section. (Letters: November 23, 1994; November 29, 1994.) I have also relied on Stigler (1982).

30. Hardy (1948) wrote a long review for the *Journal of Political Economy* of the collection of Simons’s essays on monetary economics. Hardy credited him with discovering the price-stability rule. But Hardy seems to have missed how Simons related the choice of rule to the degree of reform.

31. Knight (1941)

32. Hicks (1931) is one of the classic histories of Populism. The Appendix contains a number of platforms. The populist platforms were the outgrowth of an earlier period of hard times.

33. Cowen and Kroszner (1994, pp. Chapter 5) present a detailed account of the lively debates over the nature of money that Simons would have encountered.
34. Kasper (1990, 52) also assumes that Fisher was the starting place for Simons. She does not, however, discuss Simons’s modifications of Fisher’s framework.

35. Mint’s (1950, 38) estimates of deposits and currency are about the same (within .5 percent) of Friedman and Schwartz’s M1. Mint’s (1950, 45) intermediate target, Federal Reserve holdings of earning assets, is plotted and discussed by Friedman and Schwartz (1963, 338-39). They conclude (1963, 340-41) that “Ultimately then, it was the failure of the Reserve System to replace the decline in discounts by other credit outstanding that was responsible for the decline in the stock of money [from August 1929 to October 1930].” But Steindl (1988) argues that while Mints anticipated part of the Friedman-Schwartz story, his analysis of the money supply process was inadequate.

38. While working with Schultz, Friedman evidently read widely in the literature on the measurement of demand curves. It was this literature, I believe, that is brought to bear in the 1956 paper. I am grateful to Dan Hammond for making the need to be careful at this point clear to me.

37. Friedman served as Schultz's research assistant in 1934, and at several points in the text Schultz acknowledges Friedman's contribution to the project.

38. To suggest that Friedman was working on the basis of an extended analogy with conventional demand models does not in the least diminish his intellectual achievement. I am sure that if I had been a student a Chicago at the time, I would have trooped diligently back and forth between Simons's class and Schultz's without the thought that it might be useful to cross-pollinate their ideas ever entering my mind.

39. Timberlake and Forston (1967) regressed changes in nominal income on changes in monetary assets and found that in the 1930s the weight on demand deposits was lower and the weight on time deposits higher, than in previous periods. They concluded, in a passage that Simons would have approved, that “demand deposits lost some of their moneyness due to the additional risk imputed to them by depositors.”

40. See Mehrling (1998) for a general discussion of how the use of various "languages," such as Walrasian general equilibrium, shaped the evolution of monetary research over the years 1920-70.