

## **The Money Muddle: The Transformation of American Monetary Thought, 1920–1970**

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The history of twentieth-century American monetary economics is, in one possible reading, a story of discontinuity. The field was quite active during the 1920s, more or less disappeared in the depression and war years, reemerged only slowly during the 1950s, and developed during the 1960s along the two competing lines that came to be known as “monetarism” and “Keynesianism.” Not surprisingly, given the gap of the 1930s and 1940s, postwar monetary economics differed significantly from the monetary economics of the 1920s. The dormant decades saw a sea change not only in monetary institutions (the Glass-Steagall Act) but also in the social function of economic analysis (the rise of big government) and in styles of economic thinking (the Keynesian revolution). As a consequence, postwar monetary thinkers typically proceeded as though theirs was a field *sui generis* and simply ignored earlier writings, which seemed to come from another world as well as from another time.

In building their field anew, postwar authors could not easily proceed inductively from the operational details of individual banks and their interaction in the banking system as prewar authors had done. The most recent monetary experience of depression and wartime provided scant empirical basis for spinning theories about peacetime prosperity. Instead, postwar authors typically proceeded deductively from the neo-

classical theory of value, although not because of any particular commitment to the deductive method or to individualism as such. Rather, the theory of value, despite all its problems (e.g., imperfect competition), seemed to them the most solid core of ideas economics had to offer. When building anew, one is wise to start with solid foundations. For better or for worse, postwar monetary theory therefore came to be structured around the ideas of money supply, money demand, and equilibrium. Postwar monetary debate was conducted in a language that may be called "monetary Walrasianism"—Walrasian in the sense that the economy was conceived as a set of simultaneous equations in which prices move to equate supply and demand for each good, and monetary in the sense that one set of equations was conceived as equating money demand and money supply. The work of Patinkin (1956), Modigliani (1963), Tobin (1969), and others became the canonical texts of postwar monetary Walrasianism.

Discontinuity is clearly a major part of the story, but from a longer and broader perspective, elements of continuity come into focus that provide an essential context for the full story of the transformation of monetary economics. In the history of monetary thought, there have always been two basic approaches to the study of money and banking, depending on whether money or banking is taken as the starting point of analysis. The locus classicus of the two approaches is the debate in England between the currency school and the banking school over the 1844 Peel Act (see Mehrling 1996c). To understand American monetary debate, it is essential to appreciate how the debate between these two theoretical approaches has played out against the backdrop of political debate about the role of banks in American democracy. In the late nineteenth century, the quantity theory of money (currency school) became associated with populist agitation for monetary inflation because of William Jennings Bryan and the Free Silver movement (Rockoff 1990), while the alternative credit theory of money (banking school) became associated with the eastern banking interests that opposed Bryan. This interplay of theoretical debate with monetary politics continued throughout the twentieth century.

In the story of continuity, the key figures are Milton Friedman and Edward Stone Shaw. In their intellectual formation, both must be understood as pre-World War II economists, although both did their mature work in the rather different postwar context. As such, they provide a crucial link between the 1920s and the 1960s that helps us see

the similarities as well as the differences between the two periods. Furthermore, because they began their inquiries on the subject of money in radically different places, the comparison between Friedman and Shaw helps reveal the shifting fault lines in American monetary debate. Friedman began with money, whereas Shaw began with banking. Friedman was, as everyone knows, the origin of postwar monetarism, and Shaw (with his student and collaborator John Gurley) was, as is often forgotten, the origin of the Keynesian strain of monetary thought more usually associated with James Tobin.

Both monetarism and Keynesianism evolved in directions that led away from their Friedman-Shaw origins, but the Friedman-Shaw link with prewar traditions nevertheless provides a useful lens through which subsequent developments can be viewed. That lens brings into focus a number of issues that have long puzzled observers, the most significant of which is the vexed question of what exactly separates the monetarist view from the Keynesian view. The heat of the postwar debate is hard for outsiders to understand, in part because it was framed as a dispute about the slopes of certain Hicksian curves, the size and number of lags, and other technical issues. As many have commented, on the surface the monetarist Friedman and the Keynesian Tobin appeared to be reasoning on the basis of more or less the same model, a substantial agreement that made the evident deep disagreement hard to fathom. The energy on both sides can be understood better once one appreciates that the monetarist-Keynesian debate was only the latest chapter in a dispute that runs throughout the history of American monetary economics. That dispute has always been about much more than mere monetary theory, embracing also the more fundamental question of the proper role of money within the American social and political structure.

The heat of the postwar monetarist-Keynesian debate provides evidence that, although the neoclassical language might have become hegemonic, what economists wanted to say with that language remained as pluralist as in the interwar years. The problem was that the language itself constrained what could be said or at least constrained what could be expressed with sufficient clarity that it could be broadly understood. Because the theory of value abstracts from monetary phenomena in an effort to explain exchange ratios, ultimately the project of developing monetary theory on value-theoretic foundations is deeply incoherent. More particularly, Walrasian general equilibrium (in its Arrow-Debreu

formulation) ultimately has no place for money (Hahn 1965). Monetary Walrasianism thus turned out to be an oxymoron at best and at worst a Procrustean bed onto which neither the currency school approach nor the banking school approach could easily fit. The apparent virtue of the language—that it transforms highly charged theoretical and political issues into narrowly technical questions resolvable on empirical grounds—turned out in the end to be a will-o'-the-wisp, always dancing just out of reach. The wandering monetary debate never quite got around to a forthright assault on the deep problems that structure the field, and one reason was that the deep problems were hard to formulate in the new language of monetary Walrasianism.

### The Interwar Years

Monetary thinkers of the interwar period inherited their conception of the subject from the pre-World War I debates between the titans Irving Fisher and Laurence Laughlin, in particular their confrontations at the 1904 and 1911 meetings of the American Economic Association. The two men stood at opposite poles in their approaches to monetary theory: Laughlin promoted his own version of the banking school view, whereas Fisher promoted a version of the quantity theory of money cleansed, he claimed, of the taint of Bryan. The heat of their encounters, however, was clearly kindled from the more flammable fuel of their diametrically opposed policy conclusions. Whereas Laughlin was a staunch defender of laissez-faire and the automatic mechanism of the gold standard, Fisher advocated scientific management of the currency directed toward stabilization of prices and thus also, he claimed, business cycles. In the ensuing drama, Laughlin played the battle-weary veteran still nursing scars from his earlier bouts with the populist supporters of Bryan. Fisher played the fresh challenger, the crusader in possession of the one and true faith that was all the more compelling for its presumably scientific basis. It was a battle of abstract ideas, but one fraught with far-reaching consequences, situated as it was within the larger political debate about the creation of a central bank.

The establishment of the Federal Reserve System in 1913 meant that, after the immediate distraction of war, American monetary debate tended to organize around criticism of the Federal Reserve's operations (Dorfman 1959, chaps. 11–12; Barber 1985). Nevertheless, that debate retained its pre-World War I public character. When Fisher wished to

influence monetary policy in the 1920s, he did not simply address himself to the central bankers but also built a popular price stabilization movement to pressure Congress to enact his favorite policy into legislation (Fisher 1934). Similarly, those who wished to defend the Federal Reserve also had to address themselves to the public (Burgess 1927). What was new in the 1920s and is often overlooked amid the Sturm und Drang of the public debate was the increased space available for intellectual debate to proceed separately from political debate. Precisely because the normative political debate focused on the Federal Reserve, there was more room within the economics profession for consideration of the positive intellectual questions. Exemplary in this regard was the work of Allyn Young.

Young grew up during the battle between Laughlin and Fisher, but when he came to teach the subject in the 1920s, he turned instead to the British economist Ralph Hawtrey, whose work represents the crowning achievement of Britain's long experience with central banking. In *Currency and Credit*, Hawtrey (1930, 35) offered his theory as a version of the quantity theory, but he rejected explicitly any simple causal link between the quantity of money and the price level. Instead, he was interested in understanding how an expansion of business and expansion of credit support each other in a process of *mutual* causation. He traced changes in prices to changes in spending ("consumers' outlay"), and he linked the quantity of money ("unspent margin") to the price level only through that spending (59–60). Insisting always on the fundamental involvement of the monetary system (through banks) in financing production and trade, Hawtrey emphasized that monetary interventions inevitably have consequences ranging far beyond their effect on prices. Treating currency as subordinate to credit, his primary focus was on the interest rate, not on the quantity of money, as a tool for intervention. All these views allow us to place Hawtrey in the banking/active management category in figure 1 and to understand Young's (1920) promotion of Hawtrey as an attempt to separate the dispute about approaches to monetary theory from the political dispute about social control of banking.

In Young's engagement with Hawtrey's work, one can see him finding his own intellectual balance between the competing traditions of American monetary thought (Mehrling 1996b). Like Laughlin and the banking interests, Young supported the gold standard. Like Fisher and the populist interests, Young supported monetary intervention to stabi-

**Pre-World War II**

School	Active Management	Passive Accommodation
Currency school	Irving Fisher Lauchlin Currie	
Banking school	Ralph Hawtrey Allyn Young	J. Laurence Laughlin Benjamin Anderson

**Post-World War II**

School	Active Discretion	Passive Rules
Currency school		Milton Friedman
Banking school	James Tobin	Alvin Hansen Edward S. Shaw

**Figure 1** Typology of Monetary Theories

lize business cycles. In retrospect, it is clear that Young's ability to carve out an intermediate position in the highly charged monetary debates of the 1920s was helped by the continuing balance of political forces, a balance in which the Federal Reserve stood as a fulcrum, with populist forces on one side weighing against banking interests on the other. The monetary disaster of the 1930s upset that political balance and thus eliminated the intellectual space in which Young had done his work.

In the crisis of the 1930s, old patterns reasserted themselves, and debate reverted to the Fisher-Laughlin axis. The dispute between Lauchlin Currie (a student of Young) and Benjamin Anderson provides evidence of such a reversion. After Currie wrote his book *The Supply and Control of Money in the United States* (1934), Anderson (1935) attacked Currie as "the uncompromising advocate of an extremely tight and inflexible version of the quantity theory." Currie (1935, 703) responded by attacking Anderson's "crude statement" of "the nineteenth century Banking Principle," a characterization that Anderson rejected. It is clear from their exchange that neither Currie nor Anderson was able to

absorb the intellectual contribution of the other and that the energy driving their dispute was more about the desirability of active intervention than about which view of money should guide policy choice.

Outside academe, political fault lines were even more in evidence (see Barber 1996). The failure of the Federal Reserve to stem the deepening depression of 1929–33 ultimately proved a stronger argument for the activism preferred by populist forces than any of their previous political agitation had been. Franklin Roosevelt's victory was understood by all as a victory of the common folk and a defeat for Wall Street, and as part of that victory, the balance of monetary debate swung toward the quantity-theory activists. However, in the ensuing years, activism—including devaluation in 1934 and domestic expansion thereafter—failed to yield very convincing results, and renewed depression in 1937 ultimately meant defeat for the activists as well. As a consequence, the vigorous debate of the 1920s, having already narrowed in the early 1930s, ultimately disappeared after 1937, not because either side conquered the other but because real-world events defeated both contenders.

The rout of traditional social forces and the evident bankruptcy of the traditional poles of monetary debate left an intellectual vacuum. In this context, the new ideas coming from across the ocean in John Maynard Keynes's *General Theory* rose rapidly to prominence, as much because of the proved demerits of the alternatives as because of their own unproved merits. In the debate about money, the main effect of the Keynesian influence was to widen the range of possible stabilization policies to include fiscal as well as monetary measures, with the consequence that one could thenceforth advocate restraint in one dimension combined with activism in the other. In the American context, this extra fiscal dimension provided a wedge for splitting apart the traditional populist bundling of activism with the quantity theory of money.

### The Postwar Years

Alvin Hansen showed the way by opposing the use of monetary policy for stabilization, preferring instead a policy of “low and stable” interest rates in order to accommodate fiscal expansion during peacetime as well as war. Influenced by the anti-quantity-theory views of French economist Albert Aftalion, Hansen embraced fiscal policy and Keynes as the more effective outlet for his activist impulses. In Hansen's (1949,

1953) view, both Keynes and Aftalion were successors to Thomas Tooke, the great British banking school theorist. Thus, in terms of the traditional categories of American monetary debate, Hansen was staking claim to the banking/passive rules position in figure 1. It is important to emphasize, however, that he did so not because he favored restraint more generally (as did Laughlin) but rather in spite of (and even because of) the fact that he favored activism generally. Also note that, by the time of Hansen's works, the prewar distinction between active management and passive accommodation had modulated into the postwar distinction between discretion and rules (see Simons 1936), both essentially forms of active intervention. Depression and war had effectively eliminated the strong *laissez-faire* position. Hansen's rule—fixed low-interest rates—was among the first to be proposed, but it would not be the last.

As will become clear, Hansen's example established the structure of the post-World War II monetarist-Keynesian debate as a replay of the pre-World War I Fisher-Laughlin debate, but with the political sides switched. Aside from that leadership role, however, Hansen did not contribute much to postwar monetary debate, since as an activist he preferred to focus his attention on the more effective levers of economic policy and as an economic scientist he was never much interested in banking. From his research on business cycles, Hansen had concluded that money was more an effect than a cause, and he was content to promulgate that conclusion without much further analysis of the precise mechanisms within the banking system that led to it in practice. Elaboration of a new Keynesian monetary economics was therefore left to others, as well as elaboration of a new counter-Keynesian position. The former task began with the Gurley-Shaw project at the Brookings Institution during the 1950s, and the latter was undertaken by Friedman and Anna J. Schwartz at the National Bureau of Economic Research (NBER).

It has already been noted that Shaw and Friedman were prewar economists in their intellectual formation. More specifically, they were both pre-Keynesians, and, even more important, both were offsprings of the American institutionalist tradition, albeit hailing from different branches of that tradition. Shaw came from the Richard Ely-Young branch, and Friedman came from the Thorstein Veblen-Wesley Clair Mitchell branch (Mehrling 1997; Hirsch and De Marchi 1990; Backhouse 1995, chap. 11; Hammond 1996). In methodology, both were



pragmatists in the mold of John Dewey, committed to scientific inquiry as an inductive process that abstracts general patterns from the data of experience. Both began with the data—Shaw with the balance sheets of financial intermediaries, and Friedman with time series of monetary liabilities. Both aimed ultimately to abstract a general theory from that data—Shaw by using the methods of accounting he had learned from his Stanford professor J. B. Canning, and Friedman by using the business cycle methods invented by his teacher Mitchell.

Bringing their prewar sensibilities into the postwar period, both Shaw and Friedman located themselves outside the monetary Walrasianism that became orthodoxy, and they did so for much the same reasons. Although both accepted the basic apparatus of Marshallian microeconomics, both rejected Keynesian macroeconomics as a framework for monetary analysis on the grounds that static equilibrium had little to offer for understanding the dynamic disequilibrium processes that were the essence of monetary phenomena. Both were also convinced, against the grain of orthodoxy, that monetary phenomena were important in their own right, not just reflections of more important real phenomena. As a consequence, at a time when most other economists sought incremental progress within a common intellectual framework, both Shaw and Friedman were forced to develop their own frameworks.

Despite their common intellectual formation, from the beginning Shaw and Friedman approached money from opposite directions. Shaw always placed banks at the center of his analysis, starting with his 1936 dissertation and continuing through his 1950 text *Money, Income, and Monetary Policy*. The Brookings project began in 1954 as a study of trends in commercial banking, and one of the most lasting contributions of *Money in a Theory of Finance* (Gurley and Shaw 1960) was an appreciation of banks as financial intermediaries and consequently an appreciation of the extent to which money is an "inside" asset. The same lesson was the basis of the debt intermediation view promoted by Shaw in his final book, *Financial Deepening in Economic Development* (1973). Shaw began with banks because he viewed banking institutions as the essential infrastructure of a decentralized market economy. Indeed, the function of banking was so important to him that he was unwilling to subordinate it to the goals of mere macroeconomic stabilization. It follows that Shaw fits into the banking/passive rules category in figure 1, along with Hansen, although he rejected Hansen's sug-

gested rule and advocated instead stable growth of the reserve base to provide for growth of the financial infrastructure in line with economic growth (Shaw 1958).

Friedman, by contrast, always began with money. Indeed, in his 1948 "Monetary and Fiscal Framework for Economic Stability," which was the starting point of the NBER project "Monetary Factors in the Business Cycle," he urged elimination of banking by raising required reserves to 100 percent (Hammond 1996, chap. 3). Thenceforth, for Friedman, money was always first and foremost the liability of the government, not of banks. Even more, given his background in consumer theory, Friedman was inclined to treat money as a form of wealth, an "outside" capital asset with the peculiar property that its production was costless. In his view, the theory of money demand, or "velocity," linked changes in money supply to changes in nominal income through the quantity equation:  $MV \rightarrow PY$ . In principle, monetary policy could be used for macroeconomic stabilization, but the length and variability of lags made such use impracticable. Friedman's (1960) well-known recommendation for a constant money-growth rule as the guarantor of long-run price stability places him in the currency/passive rules category in figure 1.

Not surprisingly, given the similarity of their projects, there was considerable rivalry between Shaw and Friedman. Early drafts of the Gurley-Shaw book were targeted explicitly at the quantity theory of money, as well as at the Keynesian theory of liquidity preference. Similarly, Friedman's 1960 advocacy of a constant money-growth rule can be seen as responding to Shaw's (1958) similar advocacy by providing very different grounds for the policy. What is surprising is that these initial jabs were also the final ones, not the prelude to a full-fledged debate. What happened? For both men, monetary Walrasianism presented itself as the more compelling intellectual opponent in the years after the publication of Patinkin's *Money, Interest, and Prices* (1956).

The story of why monetary Walrasianism became dominant must be told elsewhere. Suffice it to say that the rise of big government, which brought with it a rise in the demand for clear technical answers to detailed technical questions, had a lot to do with it on the demand side, and the influx of European émigré economists, many of them from engineering backgrounds, had a lot to do with it on the supply side (see Craufurd D. Goodwin's essay in this volume). The full story is no doubt more complicated; certainly it is by no means clear that the government

was demanding what the economic engineers were prepared to supply. For present purposes, however, it is more important to trace the consequences than to examine the causes of the dominance of monetary Walrasianism.

The first consequence was a change in the language of monetary debate. Thus, the first two chapters of Gurley and Shaw 1960 argue within the framework of Patinkin 1956, and the appendix by Alain Enthoven (a student of Shaw and a recent Massachusetts Institute of Technology Ph.D. at the time) places the Gurley-Shaw theory within the framework of neoclassical growth theory. Similarly, Friedman's "Theoretical Framework for Monetary Analysis" ([1970] 1974, 32, 48) explicitly presents the quantity theory as a set of money demand and supply equations grafted onto a Walrasian system of commodity demand and supply equations (see also Friedman 1969, 3). For both Shaw and Friedman, these "formal" statements of their views subsequently became the standard references, not the more literary statements such as Shaw 1958 and Friedman 1960.

The second consequence was a shift in the subject of monetary debate toward stabilization. The monetary Walrasian language was designed to aid discussion of short-run stabilization, and the choice to speak that language necessarily also involved a choice of subject matter. Thus, the Gurley-Shaw theory was assimilated within the orthodox IS/LM framework as an argument about the ineffectiveness of countercyclical monetary policy on account of the prevalence of money substitutes (Tobin and Brainard 1963). And Friedman was assimilated as an argument about the relative effectiveness of monetary policy on account of the interest inelasticity of money demand. Thus, the contribution of these two institutionalists, neither of whom cared much for monetary Walrasianism or stabilization policy, was transformed (or reduced) into an empirical dispute over the slope of the LM curve.

The advent of monetary Walrasianism transformed the style and subject of traditional monetary debate, but it must be emphasized that influence operated in the other direction as well. Whereas the contributions of Shaw and Friedman were arguably diluted (and distorted) by their adoption of monetary Walrasian ground rules, monetary Walrasianism itself was enriched and reshaped by their interventions. From

revealed himself as a proponent of the banking school approach, although he preferred to call it the "New View" (Tobin, 1963). Thus the monetarist Friedman and the Keynesian Tobin reiterated the pre-World War I Fisher-Laughlin debate, with the difference that now the currency school approach was associated with conservative policy views and the banking school approach was associated with more activist views.

In historical context, what the heat of the monetarist-Keynesian debate was all about becomes clear. Like the Fisher-Laughlin debate, it was about not only the fundamental nature of money but also its appropriate role in American society. Unfortunately, and also as in the Fisher-Laughlin debate, the titans largely talked past each other, despite their agreement to conduct the debate on the common ground of monetary Walrasianism. The language of Walrasianism allowed postwar debate to avoid the inflammatory rhetoric of populists versus bankers that had stymied communication during the Fisher-Laughlin era, but the new language turned out to pose obstacles of its own.

The problem was simply that the logic of Walrasianism left no place for money. As early as 1911, Young pointed out that the Walrasian model was already implicitly a monetary model because it posited a uniform price system that was inconceivable without the arbitrage operations of a monetary system. Postwar monetary Walrasianism, however, brought in money, not as the critical infrastructure of a decentralized market economy but rather as a separate sector of the economy sitting alongside the "real" sector. It was a way to talk about money if you already had another way to think about money, as both Friedman and Tobin did. It was, however, a deeply problematic way of thinking about money if you were starting from scratch, as the next generation of students inevitably was. In this sense, it could be argued that the elements of discontinuity ultimately proved stronger than the elements of continuity, at least for the history of postwar macroeconomics (see Mehrling 1996a). Monetary Walrasianism was a new language that, like any language, made it easier to talk about some things but harder to talk about others. Money, unfortunately, turned out to be one of the hard topics.

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