Working Paper No. 251

Paul Davidson's Economics

by

Richard P.F. Holt
Southern Oregon University

J. Barkley Rosser, Jr.
James Madison University

L. Randall Wray
The Jerome Levy Economics Institute

September 1998

Whenever economists discuss Post Keynesian economics and its influence in the profession, one name will always be mentioned–Paul Davidson. Aside from being a prolific author, Davidson is known for his quick wit and intellect. In his discussions, or debates, he insists that all arguments be pushed to their logical conclusions. Underlying these discussions is a deep belief that economics should be concerned with the problems of the real world and that the purpose of economic policy is to help society become more humane and civilized. If there is a theme that runs clearly throughout Paul Davidson's work, and with increasing vigor, it is his insistence on adhering to the words and ideas of John Maynard Keynes. It is this that inspires his admirers and annoys those who disagree with him, and it is most exasperating for those who consider themselves to be somewhere in his camp, but who have felt his criticism or disagreement because of their alleged deviations from Davidson's interpretation of the views of Keynes. For Paul Davidson, it was Keynes who was the master; he is merely the prophet.

This has shown up in numerous contexts, some humorous. At the time Davidson and Sidney Weintraub founded the *Journal of Post Keynesian Economics* (JPKE), he was not initially enamored of the term Post Keynesian, especially given that Paul Samuelson had been using post-Keynesian eclecticism in his famous Principles text as a label for a version of the neoclassical synthesis for which Davidson had little use. Rather, Davidson proposed calling it the *Journal of Keynesian Economics,* until it was pointed out that its initials would then be JOKE. Today he calls himself a Keynes-Post Keynesian in order to distinguish himself from the 57 other varieties of Post Keynesians. But, particularly in his writings, Davidson has intentionally separated himself from what he considers to be the "Old" Keynesians (Samuelson, Tobin, Solow, and Patinkin) who reigned in the American economics profession in the 1950s and 1960s and the "New" Keynesians (Mankiw and Romer) of the 1980s and 1990s. His primary criticism of both the Old and New Keynesians is that they do not accept the essential logic of Keynes's economic theory and continue to work in an analytical framework that is essentially pre-Keynesian. Another important issue that puts Davidson in a different camp from the other Keynesians is his insistence that the innovative element of Keynes's *General Theory* [1936] can be found in its monetary analysis. Davidson points out that Keynes provided an unique monetary framework, dealing specifically with a monetary production economy, instead of the simple exchange economy that appears to dominate the neoclassical model of the Old and New Keynesians.

Before reviewing in greater depth Davidson's contributions to economic theory, it is important to understand some of the earlier intellectual and professional influences on his career.

Early Intellectual Influences on Davidson's Career

An important decision in Paul Davidson's intellectual life came when he decided to enroll in the graduate economics program at the University of Pennsylvania. Although he was accepted to graduate programs at Harvard, M.I.T., Berkeley and Brown, he turned them down and went to Pennsylvania because of their generous financial aid package. This financial aid gave Davidson and his wife, Louise, the income to start a family. In graduate school the teacher that influenced Davidson the most and became his mentor was Sidney Weintraub. Under the intellectual influence of Weintraub, Davidson developed an interest in income

distribution, Keynesian macroeconomics and heterodox economics.

Davidson [1965] credits his paper "Keynes's Finance Motive" published in the *Oxford Economics Papers*, as providing him with his first real insight into the role that money plays in Keynes's *General Theory*. In the paper Davidson argues that Keynes added the finance motive for the demand for money to explain how the real and monetary sectors of the economy depend on each other. If entrepreneurs expect that it will be profitable to increase production, and if the finance is there (usually through bank loans), they will enter into money-wage and other forward contracts to produce more goods and services. This shows that finance comes before increases in production and employment, and that money is not neutral since a shortage of money would hold up economic expansion. The publication of this paper gave Davidson the confidence to pursue his ideas of trying to integrate monetary analysis into Keynes's general theory.

Another important paper that contributed to Davidson's intellectual and professional growth was his "Money, Portfolio Balance, Capital Accumulation and Economic Growth" [Davidson, 1968] that was finally published in *Econometrica*. Davidson wrote the paper in response to Tobin's "money and growth" model that appeared in *Econometrica* in 1965 [Tobin, 1965]. The paper presented an alternative approach to money and capital accumulation which Davidson believed was more in tune with Keynes's *General Theory* and *Treatise on Money*. Initially he had difficulties getting the paper published. Nine months after submission he received from the editor of *Econometrica* two referee's reports saying that "Both referee's have found much in the paper of merit, but both feel that it falls short of being publishable in its present form...[because it] is not precise enough in its analytic content." In response, Davidson revised the paper by simply adding some algebraic equations in the text and the paper was acceptable for publication. Davidson hoped that the paper would create some dialogue, particularly from Tobin. This did not happen. In response, Davidson decided that it was time to write a book that would force the issues of money and employment to the table. That book turned out to be *Money and the Real World*, written during his stay at Cambridge University in 1970—1971.

Cambridge turned out to be a rich intellectual experience for Davidson. He found himself surrounded by some interesting and lively colleagues like Basil Moore, Nicholas Kaldor, Richard Kahn, Michael Posner and Ken Galbraith. More importantly, though, was his professional relationship with Joan Robinson. When they first met Davidson and Robinson would discuss draft chapters of his manuscript *Money and the Real World*. Some of their discussions got very heated and she finally refused to speak to Davidson about his work. Nevertheless, when Davidson arrived at his office, which he shared with Richard Kahn at the Faculty building on Sidgwick Avenue, he would usually find a blank sheet of paper with a hand written question from Joan Robinson. Davidson would spend the morning writing his answer and when Robinson went out for morning coffee, he would put the paper with his answer in her office. When Davidson returned back to his office after lunch he would find Robinson's comments scrawled over the paper.

Another important relationship in Davidson's career was his friendship with John Hicks. They met at the International Economics Association Conference on "The Microfoundations of Macroeconomics" in 1975 at S'Agora, Spain. After the conference, Davidson and Hicks corresponded. Through their correspondence and meetings in London and Hick's home in Blockley, Davidson believes that he had some influence, with Hicks changing his mind about the importance of ISLM. Hicks also influenced Davidson on numerous topics like time, liquidity, contracts and expectations. Davidson particularly points to the influence that Hicks had in writing chapter 3 of his 1982 book *International Money and the Real World*.

Paul Davidson's Monetary Theory

Davidson distinguishes Post Keynesian economics (PKE) from the so-called "Keynesian revolution" in terms of five characteristics. First, in PKE, money matters in both the short run and the long run. Second, PKE concerns a "nonergodic" economy, moving from an irrevocable past to an unpredictable future. Third, according to PKE, given uncertainty over the future, money-denominated contracts are the principal method used to organize production, with money contracts representing a rational means used by individuals to reduce "disquietude" about the future. Fourth, there are two special properties of money: its elasticity of production is zero, and its elasticity of substitution approaches zero. Finally, according to PKE, unemployment is a natural outcome of a money-using, entrepreneurial economy. Clearly, every one of these five characteristics is related to the different treatment of money in the PKE approach as opposed to the typical "Keynesian" theory of the

textbooks. Rather than demonstrating that each of these characteristics is unique to the PKE approach (and foreign to the "bastard Keynesian" or ISLM approaches), we will focus instead on the distinguishing role that money plays in Davidson's theory.

Many important economic outcomes are nonergodic, in the sense that it is not possible to calculate a probability distribution for alternative events [Davidson, 1978, 227]. At the same time, individuals must take action even when they cannot know (even in a probabilistic sense) the outcome. Perhaps most important, entrepreneurs must engage in time-using production processes on the basis of expectations of future prices, costs, and sales quantities. The most important method used to reduce uncertainty in these situations is to engage in monetary contracts. While it is true that in some situations it would be possible to write "real" contracts, we usually find contracts are normally written in money terms and are ultimately enforceable almost solely in money terms. Money contracts are indeed ubiquitous in all modern economies. Is this a coincidence? Is it due merely to an attempt to minimize "transactions costs"? Are money contracts merely derived from the use of money as a medium of exchange? According to Davidson, the use of money in these contracts can be traced to its essential properties and is not a fortuitous result of the search for the cost-minimizing replacement for barter exchange. Rather, humans invented legally enforceable, money-denominated contracts in order to deal with the unknowable future. Davidson argues that this invention simultaneously freed humans from the "Malthusian" constraints of nature and created for the first time the possibility of involuntarily unemployed resources.

Rather than focusing on money as a medium of exchange, then, Davidson emphasizes the role of money in discharging contractual obligations. Holding money always increases liquidity, defined as the ability to meet contractual obligations as they come due. While one might *use* money as a medium of exchange, one *holds* money only in an uncertain world in which a liquid position is desirable–as Keynes rightly asserted, in a world without uncertainty only the insane would desire liquidity, even if the sane might use money to facilitate exchange. The use of money contracts encourages entrepreneurs to undertake time-using production processes that necessarily involve uncertain outcomes. This can encourage economic growth, but at the same time it can generate unemployment because it becomes possible and even desirable to hold money rather than the products of labor.

According to Davidson, the first essential characteristic of money is that it has negligible elasticity of production; in other words, when the demand for money rises, this does not cause entrepreneurs to hire labor to produce money. This is why money can become a "sink-hole" of purchasing power: if expectations about the future become pessimistic, liquidity preference rises, raising the demand for money and lowering the demand for the products of labor. As money is not produced using labor, the fall of demand for commodities produced by labor is not offset when money demand rises. Further, the second characteristic of money–near-zero elasticity of substitution–ensures that no matter how high the demand for money rises relative to its supply, it will not lead to substitution into alternatives to money. This guarantees that there is no process that would tend to push the economy back toward full employment [Davidson, 1978, 144-147].

Like Keynes, Davidson emphasizes that all assets which last more than one period have an expected return that is comprised of four elements: $q — c + l + a$, where q is the expected yield, c is the carrying cost, l is liquidity, and a is expected appreciation in nominal terms. Money, the most liquid asset, has a return comprised entirely of liquidity (l), as it has no yield or carrying cost (and because its price cannot appreciate in terms of itself). At the other end of the spectrum, plant and equipment have a return comprised almost wholly of expected profits less carrying cost, ($q — c$), where carrying cost can include physical depreciation (while it is conceivable that some plant and equipment could appreciate in nominal terms, this would be quite unusual). Other assets fall between the two extremes.

When liquidity preference rises, the subjective valuation of liquidity (the l) rises, raising the return to holding money. All asset prices then must adjust to equalize expected returns, with the spot price of the least liquid asset–physical capital–falling the most (to raise its $q — c$). When the spot price of capital assets falls below the lowest price at which anyone would produce capital equipment for new sales no more capital is produced, generating lay-offs in the investment sector. As discussed above, the laid-off workers are not able to obtain jobs producing the liquid assets that are in high demand precisely because labor is not required in their production. Unemployment results when the object of desire, money, cannot be produced in sufficient

quantities to quell the disquietude [Keynes, 1936, 235; Davidson, 1994, Ch.6].

It might seem that Davidson is adopting the typical fixed (or "exogenous") money supply in his exposition. An increase of money demand does not lead to an increase of money supply, so that interest rates are driven upward and cause unemployment. This is not the case. First, the problem is not simply that the supply of money is fixed–if it were, the central bank could always solve the unemployment problem by increasing the money supply and driving down interest rates. In Davidson's view, the problem really is that labor is not involved in the production of liquid assets, so that this would do nothing to put labor to work even if more money were supplied. Second, Davidson explicitly rejects the exogenous money view, arguing that the money supply can be increased through two entirely different processes: the income-generating finance process and the portfolio change process. The orthodox analysis concentrates on the latter: when the central bank engages in open market operations, it changes bank portfolios (including reserves) which then can indirectly affect the money supply "exogenously" as in the deposit multiplier story.

More importantly, the supply of money can be increased to satisfy the private sector's demand for finance. This is related to one of Davidson's first contributions of PKE which was to revive Keynes's emphasis on a fourth motive for holding money–the finance motive–in addition to the three motives listed in all the textbooks (transactions, precautionary, and speculative). As Keynes had argued, the demand for money is at least partially a function of planned spending (and not simply a function of current income and interest rates) because households and firms (and even government) accumulate money in advance of spending. In this case, money demand rises even before spending and income, placing pressure on interest rates. However, so long as banks and other financial institutions accommodate this demand by increasing the money supply, interest rates need not rise excessively to prevent spending from rising. In this case, the money supply increases endogenously to finance planned spending. Like Keynes, Davidson emphasizes that this is the normal case; it is only when liquidity preference rises that the demand for money would not be met as this is a demand for liquidity (or, money to hold) rather than a demand for money to spend. Davidson does allow, however, for rising interest rates as spending, or even planned spending, increases–bank accommodation of money demand need not be complete.

Unlike the orthodox approach to inflation, which sees it as a result of excessive aggregate demand (perhaps as a result of lax monetary policy that has created too much money), Davidson argues that inflation is always a symptom of struggles over income distribution. Like orthodox economists, he believes that the costs of inflation are significant, and it needs to be fought. However, he argues that a more "civilized" method must be used. Rather than trying to reduce demand, he advocates a tax-based incomes policy (TIP) to fight "income inflation" as well as buffer stock programs to fight "spot price" inflation.

Paul Davidson's International Money

Another area of policy to which Davidson has devoted considerable effort and which reflects his adherence to the ideas of Keynes is his proposal to reform the international monetary system [Davidson 1991b, 1992—1993, 1994; Thirlwall, 1979]. Davidson believes Keynes's proposals at Bretton Woods form the sound basis for an international monetary system. Davidson also believes that a major reason for the global deceleration of growth after 1973 was the replacement of the more-or-less fixed exchange rate system of Bretton Woods with a floating exchange rate system, which increased the degree of Keynesian uncertainty in the world economy.

According to Davidson, the current monetary system generates an equilibrium that is far below world-wide full employment because of built-in stagnationary biases. In the present system the onus of adjustment is always placed on trade deficit countries, which are forced to engage in austerity in an attempt to move toward balanced trade. This reduces markets for the products of creditor nations, which also reduces employment in these countries. Davidson argues that the move to flexible exchange rates in the early 1970s made matters worse because falling exchange rates in debtor countries generate expectations of further depreciation, and thus lead to destabilizing speculation. The free market cannot resolve this problem, with some agents stepping in to take long positions, because the short view comes to dominate. Only central banks can stop a run if it develops, but this requires concerted action since speculators can easily swamp the intervention that can be mounted by an individual central bank. Further, only surplus nations really have the wherewithal to intervene, however, these

nations generally wish to accumulate as much foreign reserves as possible to maintain liquidity. Thus, Davidson links the international situation to his previous analysis of domestic money and liquidity: accumulation of the internationally-recognized reserve asset (now the dollar) reduces national uncertainty and ensures that international contracts can be met as they come due, which in turn exerts a deflationary or high unemployment bias to the world economy. The current system encourages export of both unemployment and inflation even as it fuels speculation and instability.

Davidson advocates fixed exchange rates to encourage use of longer-term money contracts. He would create an international mechanism to "reflux" liquidity from surplus nations that accumulate international reserves to deficit nations. This would be done through creation of an "international money clearing unit" (IMCU) held only by central banks and used for international clearing. An overdraft system would ensure that countries that were temporarily short of IMCU reserves could borrow them from surplus countries. His proposal would place the burden of adjustment on both creditor nations (which would have to "use or lose" their international reserves–spending them for imports, using them for foreign direct investment, or loaning them to deficit nations) and debtor nations (which would be required to make adjustments to reduce trade deficits). Finally, he proposes to ensure that the long-term value of the IMCU remains stable (or perhaps even rises) by forcing each country that experiences inflation to devalue its currency relative to the IMCU.

Paul Davidson and Aggregate Supply

One area where Paul Davidson has truly been a neglected prophet has been his work in aggregate supply theory[2]. Part of the neglect can be attributed to the current version of aggregate supply and demand analysis used in economics textbooks, which differs substantially from the version put forward by Davidson. Drawing on Keynes's original formulation in the *General Theory*, later formalized by Sidney Weintraub [1958], Davidson's aggregate supply is the Z function that puts expected sales proceeds on the vertical axis as a function of employment. This is clearly different from the standard AS/AD model presented in an aggregate price-quantity space. Davidson initially presented his version in his 1962 *Economic Journal* article [Davidson, 1962] and developed it more fully later in his book *Aggregate Supply and Demand Analysis* [Davidson, 1964] with his first collaborator, Eugene Smolensky[3]. Most importantly, Davidson argues that the D (demand) and Z curves are not identical, and that so long as one of the components of the D curves is not a function of employment, unemployment can develop regardless of supply conditions–that is, regardless of the competitive nature of markets. In this way, he dispenses with the textbook version of Keynes, which achieves "Keynesian" results only through imposition of "market imperfections."

On the surface, Davidson's version resembles the much derided Keynesian cross model. But, as noted by Colander [1996], it differs by having explicit microfoundations built into the curves. Davidson's version also expresses the curves in money wage units. This allowed him to understand the significance of wage-price (cost push) inflation, today labeled supply-side inflation, well before the Old Keynesians or monetarists, who emphasized excess aggregate demand as the main cause of inflation prior to the oil price shocks of the 1970s. This concern with supply-side inflation became the basis for what are probably the best known and most durable of his policy prescriptions, incomes policies (TIP).

Davidson's Contributions to Environmental and Natural Resource Economics

One of the less known aspects of Paul Davidson's career is his role in developing environmental economics. Curiously this arose initially from his foray, immediately after graduate school, into the world of corporate economic advising for the Continental Oil Corporation in 1960—61. Drawn by the prospect of a generous salary for a young family, Davidson advised the corporation's president and helped him with publicity releases. Many may find this episode in Davidson's career surprising. However, he has always been a supporter of market capitalism, if not of its laissez-faire variety, and has respected the success of hard-working entrepreneurs. At Continental Oil, he was nearly fired from his position when he forecast that the company would do better financially if Kennedy won the 1960 US presidential election. When Kennedy subsequently won and the company did well, Davidson's stock rose in the eyes of the company's president and his advice was sought after until he and his wife, Louise, tired of the corporate political environment, returned to academia at the University of Pennsylvania.

This experience at Continental led to a major article [Davidson, 1963] on domestic oil policy, and during the 1970s Davidson continued to write articles in environmental economics, as well as to testify frequently before congressional committees on environmental issues. Needless to say, it is not hard to see a link between this research and his early and insightful willingness to consider the possibility of cost-push inflation and his consideration of methods of dealing with inflation in the form of incomes policies.

Another spinoff of Davidson's experience at Continental was his participation in some of the earliest studies of the recreational demand for water resources [Adams, Davidson, and Seneca, 1966; Davidson, 1967; Cicchetti, Davidson, and Seneca, 1969] which contributed to the development of important methods for valuing non-marketed goods that have since become standard in environmental economics.

Davidson's contribution to environmental economics continued when he served as Chair of the economics department at Rutgers, where he built up one of the first programs in the United States in environmental economics. Many of the first environmental economists to be hired around the US in the 1970s were products of the Rutgers program and Paul Davidson's influence. It was also during the same period that Davidson established Rutgers as the main center for what would be known as Post Keynesian economics by hiring such figures as Alfred Eichner, Jan Kregel, and Nina Schapiro.

Davidson and Other Heretics

While Davidson is, of course, a founding member of the heretical group known as the Post Keynesians, not all of his views are shared by all Post Keynesians. We will identify several controversies, which include methodological differences, theoretical disagreements, and divergent policy prescriptions.

In his review of Money and the Real World, Hyman Minsky criticized Davidson's exposition:

> The effort as it stands is an important milestone in the search for a new theory. However, because Davidson does not break with the equilibrium growth vision that underlies standard theory and because the integration of the financial and real dimensions of a capitalist economy is imperfectly realized, the work as it stands does not mark a paradigmatic shift. Davidson's effort is a large step forward but it does not signal our arrival at the destination. (Minsky 1974, p. 7)

Minsky's critique touched on theoretical issues, but more importantly identified the methodological stance that frequently comes up in discussions of Davidson's work. According to Minsky, the "weakness of Davidson's argument is due to his insistence upon integrating the General Theory and A Treatise on Money." (ibid p. 9) In Minsky's view, the Treatise adopted a Marshallian, equilibrium, approach which is quite inconsistent with (and irreconcilable with) the cyclical nature of the analysis of the General Theory. According to Minsky, "Keynes's view [in the *GT*] was that our lives are spent in transition, and that in every transitory and temporary system state, ongoing, objective, and subjective changes take place which change the behavior of the economy." In contrast, Davidson "still is wedded to the idea that the economic process can be characterized by sustainable equilibriums. His emphasis is upon growth and accumulation as steady rather than as cyclical processes and the essential destabilizing impact of evolving financial and cost relations which take place during each temporary equilibrium is neglected." (ibid p. 11)

Minsky pointed to Davidson's treatment of uncertainty as an example of the inconsistencies that can arise from an attempt to interpret the *GT* on the basis of the theoretical foundation of the *TOM.* According to Minsky, "[u]ncertainty is the fundamental theoretical construct in the General Theory" (ibid p. 11), but "[i]n Davidson uncertainty is an empty bag." (ibid p. 12) In Keynes's exposition, "uncertainty is a useful operational concept because system experience is the common proximate determinant of the ruling states of mind toward uncertainty and the evaluation of uncertain prospects which affect the financial, investment, and portfolio decisions of households, firms and bankers." (ibid p. 12) In the real world, "Uncertainty is of central importance in decision-making because the economy is inherently cyclical." (ibid p. 13) However, because Davidson focuses on equilibrium and stability, "his awareness of the importance of uncertainty does not lead to anything deeper and more fundamental than the scattering of symbols which presumably reflect the state of uncertainty into various equations." (ibid p. 13) In other words, while Davidson links use of money and money

contracts to uncertainty, his methodological approach fails to shed light on the transition from one type of structure to the next.

More generally, Minsky and other institutionally-oriented Post Keynesians insist that theory must take account of custom, usages, rules of thumb and of law, inherited portfolios, size and role of government, conventional beliefs, collective memories, and subjective expectations that together determine the "transitory and temporary system state" as the economy cycles between boom and bust. Minsky argued that his version of Post Keynesianism provides a specific theory based on the institutions of modern capitalism. In contrast, Davidson rejects both the methodology as well as the conclusion of this sort of approach. He has argued that he follows the approach of the *GT*, which "developed a more general theory than the classical one..." (Davidson 1994, p. 29) Davidson argues that neoclassical general equilibrium analysis is simply a special case theory which has three more axioms than Keynes's *GT*. Davidson's method, then is to provide the most general theory that allows for money contracts, nonergodic uncertainty, and the special characteristics of money (discussed above). He then shows that such an economy may reach equilibrium before resources are fully employed. However, this equilibrium need not be unstable; indeed, Davidson objects to Post Keynesian analyses that emphasize instability, arguing that real world capitalist economies are remarkably stable. This difference is not merely semantical (is the glass half empty or half full?) but really reflects the underlying method: should Post Keynesians develop general, institutionally truncated, equilibrium theories, or should they analyze institutionally rich, evolving, economies?

Another area of controversy concerns the endogeneity of money, however, this is probably a case in which differences are primarily those of emphasis. As noted, Davidson long ago adopted the endogenous approach to money, but emphasized that money can be introduced to the economy through two distinct processes, the portfolio-change process and the income-generating finance process. The first of these processes is more similar to the orthodox exogenous money approach: the central bank increases reserves, which changes interest rates and induces subsequent portfolio adjustments. Many Post Keynesians adopt a more radical "Horizontalist" approach that insists that central banks cannot determine the quantity of reserves; open market operations and discount window operations are defensive in nature, with the central bank only able to determine the price at which reserves will be supplied. (See especially Moore 1988.) Banks set retail loan and deposit interest rates relative to the central bank's target rate (the fed funds rate in the US) and then accommodate the demand for loans and accept the supply of deposits at those administered rates. The money supply is thus said to be "horizontal" at the loan rate of interest. Davidson has argued (primarily at conferences) that this downplays the importance of portfolio changes as well as the influence that this might have on loan interest rates and the willingness to lend.

Probably a greater source of controversy has been Davidson's views on causes of inflation and appropriate policy for fighting inflation. As discussed above, Davidson believes that inflation is "a symptom of a struggle over the distribution of income" and "the existence of continuing inflation in any society involves some redistribution of real income from the weaker to the more powerful groups in an economy and/or its trading partners." (Davidson 1991a, pp. 89, 91) The appropriate policies are TIP to fight domestic inflation and indexing of the IMCU to fight exported inflation. In contrast, other Post Keynesians attribute inflation to a variety of causes and would recommend a basket of policies to reduce inflationary pressures should they arise. For example, Minsky argued that "prices in our accumulating economy are the carriers of profits and vehicles by which a surplus is forced." (1986, p. 254) In a big government, big firm, big labor economy, "there are a variety of inflations", with inflation "mainly determined by the way the economy is run." (ibid pp. 265, 260) He attributed inflation primarily to the markup over wages (which many call "profits inflation"), rather than to wage pressure, arguing "the behavior of money wages once the inflation barrier is pierced is more a defensive reaction than a cause". (ibid p. 261) Thus, an incomes policy would treat only the symptom but not the primary cause of inflation. Instead, he advocated policies that would increase the production of consumer goods, and which would reduce pressures to increase the markup. Indeed, he not only believed that TIP was impractical and politically infeasible, he also believed it would unnecessarily interfere with the ability of private firms to set prices that would "validate their liability structure" (that is, service the debt issued to finance positions in assets). In private conversations, Minsky worried that the Davidson/Weintraub advocacy of TIP hindered widespread acceptance of Post Keynesianism (and partially for this reason preferred to label himself a Financial Keynesian).

More generally, Davidson is more optimistic and perhaps more "mainstream" than many other Post Keynesians about the feasibility and effectiveness of economic policy. He argues: It is the responsibility of a civilized government to act as a balancing wheel in maintaining industry's aggregate sales by using its fiscal powers.... All civilized governments must assume the obligation to assure that:

a. current aggregate demand is sufficient to encourage business firms to create productive employment for all those who wish to work; and
b. guarantee that future effective demand will be sufficient to reward entrepreneurs who develop new plant and equipment to improve worker productivity. (Davidson 1991a, p. 77)

He concludes that full employment with price stability is possible, indeed, it is the responsibility of civilized government, and can be accomplished through a combination of countercyclical aggregate demand adjustment (primarily through use of fiscal policy–like Keynes he doubts monetary policy is sufficiently effective) and imposition of TIP. In some respects, this is closer to the position of the "bastard" Keynesians than it is to other Post Keynesians. Indeed, he credits bastard Keynesian policy during the Kennedy/Johnson and Reagan/Bush administrations for achieving high aggregate demand with low inflation (although he recognizes that the rhetoric used in the second case was not Keynesian). According to Davidson, while the policies were Keynesian (and Post Keynesian), the policy-makers never understood the theory behind the policies, thus, abandoned correct policy even though it was working. The policies that Davidson advocates do not appear to require the radical changes to our economy that many other heterodox economists might support, such as a radical redistribution of wealth, income, and power. Nor does Davidson seem to advocate major doses of microeconomic tinkering. Rather, Davidson would have the government ensure a regime of full employment and stable prices, and then leave a great deal of room within which markets would be free to operate.

Another important professional rivalry in Davidson's career has been with James Tobin. In many ways, one would think that Davidson and Tobin would be walking side by side down the Keynesian path. They are both interested in the many of the same issues: the desirability of full employment, the importance of money and financial markets, international economics and social justice. But in Davidson's mind there is one irreconcilable difference between them that won't go away: Tobin does not follow Keynes. Davidson claims that instead of following Keynes and questioning certain fundamental axioms of the classical theory, Tobin has embraced them. This logically leads Tobin, according to Davidson, to an explanation of involuntary unemployment that consists of supply conditions caused by inflexible wages and prices. Davidson argues that Keynes, while holding onto instantaneously flexible wages and prices, recognized that certain fundamental classical axioms needed to be overthrown to achieve a more general theory of employment. By doing this, Keynes was able to show that Say's Law does not hold (i.e., supply does not create its own demand) so long as one component of aggregate demand is not a function of employment, instead of relying on inflexible wages and prices to explain unemployment.

Davidson's second major criticism of Tobin is that his policy implications are contrary to Keynes's. Davidson argues that Keynes believed in permanent government policies whereas Tobin's conclusions lead him to only short-run government efforts such as creating more price flexibility and deregulation. Overall, Davidson's criticism of Tobin is similar to his criticism of both the Old and New Keynesians which can be captured in Davidson's challenge to them and others:

> If economists would only take up the challenge of Keynes's revolutionary general theory and investigate the properties of a system of microeconomic demand and supply functions that has thrown out the axioms of ergodicity, ubiquitous gross substitutability, and non-neutral money, then a truly New Keynesianism–dare I say it Post Keynesian economics–could be developed which could again permit economists to provide useful and realistic guides to both micro and macroeconomic policies. This would be a New Keynesianism that Keynes could readily endorse [Davidson, 1994, 302].

Why Has Paul Davidson Been Neglected?

In his essay honoring Davidson, Colander [1996] compares him to Paul Newman in *Cool Hand Luke* and declares that both Pauls are handsome, suave and have a strength of character that is unbreakable. And both

suffer from a major failure to communicate [Colander, 1996, 22]. Colander then carries out a translation of Davidson's views into a more standard form, thereby presumably resolving the communication problem. But, we suspect (and as Colander himself realizes) Davidson probably has little use for this solution. The problem runs deeper.

A more important reason has been the recent trend in ideology, politics, and policy viewpoints. Despite his pro-market capitalism, Davidson's policy positions put him towards the left end of the political spectrum, and as there has been a major shift towards the right his views have become increasingly isolated and unfashionable. Although he was never a fan of the Soviet system, its collapse has spilled over to discredit many of the Western European economies that viewed themselves as the civilized halfway houses between the US and the USSR. Some of these, such as Sweden, were the clearest and most successful homes of incomes policies in the form of nationwide collective bargaining and generous social safety nets that fit the Post Keynesian mold and fit the vision put forth in Davidson and Davidson [1988][4] of a civilized economy and society. Now many of these nations seem to have lost their moorings and are moving away from these policies and imitating the US system to varying degrees, although some such as Denmark, Norway, Austria, and especially the Netherlands seem to be resisting the trend and doing reasonably well.

This also reflects itself in the ascendance of the Mankiw variety of New Keynesianism in the aftermath of the weakening of the New Classical influence [Mankiw and Romer, 1991]. Davidson is almost certainly correct that this approach probably has more in common with the New Classicism, with which it competes, than it does with the nonergodic Keynes-Post Keynesian approach of Paul Davidson. And this ascendance is not unconnected with the broader political and policy currents mentioned above, symbolized by the rise of such politicians as Bill Clinton and Tony Blair whose New Democrat and New Labour views do not fit in with those of Davidson.

And finally, there has been his "holding their feet to the fire" of criticism of many of those who would be his allies, but whom he finds, rightly or wrongly, to be insufficiently Keynesian. Here is Paul Davidson's greatest weakness and also his greatest strength. As the truest Keynesian he becomes isolated and neglected in the purity of his viewpoint. At the same time, by clearly defining and holding a strongly held position he may have a longer and more significant influence. In the future when people seek an interpreter of Keynes who gives them the real thing, aside from the writings of the master himself, it will be to the writings of Paul Davidson they will turn. In this sense, Paul Davidson will win in the long run by losing in the short run.

Notes

The authors acknowledge the input from David Colander, Paul Davidson, Louise Davidson, and Eugene Smolensky in writing the article. A shorter version will appear in the *Eastern Economic Journal* .

1. See Arestis and Chick [1992], Lavoie [1992], and Arestis [1966] for perspectives on at least some of the 57 varieties of Post Keynesian economics.
2. That he has not gone completely unrecognized in this regard can be seen in his having been asked to write the entry on "Aggregate Supply" for the *New Palgrave: A Dictionary of Economic Theory* [Davidson,1987].
3. Eugene Smolensky was a fellow graduate student of Paul Davidson at the University of Pennsylvania.
4. Greg Davidson is Paul's third son and is an administrator at NASA, not a professional economist.

References

Adams, F.G, Davidson, P., and Seneca, J.J. 1966. "The Social Value of Water Recreational Facilities Resulting from an Improvement in Water Quality of an Estuary: The Delaware-A Case Study." In A.V. Kneese and S.C. Smith, eds., *Water Research* , Baltimore: Johns Hopkins University Press.

Arestis, P., ed. 1996. *Keynes, Money and the Open Economy: Essays in Honour of Paul Davidson*, Volume One. Cheltenham: Edward Elgar.
———, and **Chick, V.**, eds. 1992. *Recent Developments in Post-Keynesian Economics*. Aldershot, Hants: Edward Elgar.

Cicchetti, C.J., Davidson, P., and Seneca, J.J. 1969. *The Demand and Supply of Outdoor Recreation*. Washington, D.C.: Department of Interior, Bureau of Outdoor Recreation.

Colander, D. 1996. "AS/AD, AE/AP, IS/LM and Z." In P. Arestis, ed., *Keynes, Money and the Open Economy: Essays in Honour of Paul Davidson*, Volume One, Cheltenham: Edward Elgar, 22—33.

Davidson, Paul. 1962. "More on the Aggregate Supply Function." *Economic Journal*, June.
———. 1963. "Public Policies Problems of the Domestic Crude Oil Industry." *American Economic Review*, March.
———. 1965. "Keynes's" Finance Motive." *Oxford Economic Papers*, March.
———. 1967. "An Exploratory Study to Identify and Measure the Benefits Derived from the Scenic Enhancement of Federal-Aid Highways." *Highway Research Record*, no. 182.
———. 1968. "Money, Portfolio Balance, Capital Accumulation, and Economic Growth." *Econometrica*, April. Reprinted in C. Panico and N. Salvadori, eds., *Post Keynesian Theory of Growth and Distribution*, Edward Elgar, England, 1992.
———. 1978. *Money and the Real World*, 2nd edition, London: Macmillan.
———. 1982. *International Money and the Real World*. London: Macmillan.
———. 1987. "Aggregate Supply." In J. Eatwell, M. Milgate, and P. Newman, eds., *The New Palgrave: A Dictionary of Economic Theory*, London: Macmillan.
———. 1991a. *Controversies in Post Keynesian Economics*, Edward Elgar.
———. 1991b. "What Kind of International Payments System Would Keynes Have Recommended for the Twenty-First Century?" In P. Davidson and J.A. Kregel, eds., *Economic Problems of the 1990s: Europe, the Developing Countries, and the United States*. Aldershot, Hants: Edward Elgar.
———. 1992—93. "Reforming the World's Money." *Journal of Post Keynesian Economics*, Winter, 153—79.
———. 1994. *Post Keynesian Macroeconomic Theory: A Foundation for Successful Economic Policies for the Twenty-first Century*. Aldershot, Hants: Edward Elgar.
———. and Davidson, G. 1988. *Economics for a Civilized Society*. New York: W.W. Norton, Second edition.

Keynes, J.M. 1936. *The General Theory of Employment, Interest and Money*. London: Harcourt Brace.

Lavoie, M. 1992. *Foundations of Post-Keynesian Economic Analysis*. Aldershot, Hants: Edward Elgar.

Mankiw, N.G., and Romer, D., eds. 1991. *New Keynesian Economics*. Cambridge: MIT Press.

Minsky,P. Hyman. 1974. "Money and the Real World: A Review of Article." *The Quarterly Review of Economics and Business*: 14, 2 (Summer): 7—17.

Moore, Basil. 1988. *Horizontalists and Verticalists: The macroeconomics of credit money*, Cambridge University Press.

Thirlwall, A.P. 1979. "The Balance of Payments Constraint as an Explanation of International Growth Rate Differences." *Banca Nazionale del Lavoro Quarterly Review*, March, 45—53.

Tobin, James. 1965. "Money and Economic Growth." *Econometrica*: 33.

Weintraub, S. 1958. *An Approach to the Theory of Income Distribution*. Philadelphia: Chilton.