MONEY UNCERTAINTY AND TIME, by Giuseppe Fontana, Routledge, 2009. ISBN: 0415279607; 142 pages.

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Giuseppe Fontana is a "big tent" Post Keynesian. In this updated and reworked version of his 1999 Ph.D. dissertation, written under the direction of Malcolm Sawyer, he argues that once Keynes's position on methodology is grasped, and the theoretical concepts of uncertainty are better understood, it is possible to bring accord to various strands of Post Keynesian theory. Thus, rather than privileging a specific approach to P-K theory (the "small tent" position held by Paul Davidson and others), Fontana develops an argument that claims to synthesize or harmonize contending (and often contentious) theoretical perspectives within a general Keynesian monetary framework.

Fontana begins with a brief history of P-K economics, stressing the sometimes heated debates between the Neo-Ricardians (Garegnani, Eatwell, and Milgate) and the Non-Ergodic/Monetary theorists represented by Robinson, Shackle, Chick, and Davidson. (As a sidebar, I was glad to see the work of Al Eichner brought into the discussion, as his work on the behavior of the large corporation [the "Megacorp"] is often omitted in these accounts.) Within these broad classifications, one finds controversies among the Kaleckians, Circuit theorists, Kaldorians, and others, all of whom claim to adhere to a Keynesian approach, but where the identification of that approach is under contention. "The age of uncertainty" (pp. 22 ff.) led to "self-doubts" which were magnified given the increasing exclusion of P-K economists from the leading journals and the puzzlement as to the failure of neoclassical economists to absorb the lessons of the Cambridge Controversy. Hopes for a single, integrated Post Keynesian theory that would displace orthodoxy were dashed, and a proliferation of alternative approaches was generated. To bring coherence to the P-K argument, Fontana argues that we must return to questions of method, and here (p. 24), promotes critical realism as the proper methodology within which to address the various issues and the methodological stance that would allow synthesis and coherence.

Fontana then turns to an examination of Keynes's methodology in concert with the theory advanced in (mainly) *The General Theory*. This is a most informative chapter, well worth reading in its own right. As a summary statement, Keynes's method is one of a "temporary, but continually shifting communion between formal analysis and general experience" (p. 33). Keynes's theoretical approach was never one of a purely formalist nature, unlike that of modern neoclassicism. Clearly, formalism was an aspect of his theory, and the conventional treatment of *The General Theory* (neoclassical Keynesianism) reduces the theory to precisely this—and, thus, misses the whole point. Keynes painted his theoretical picture on a foundation of a real, functioning modern capitalist economy where institutions, rules, habits, psychological propensities all were incorporated into the theory itself (pp. 38-9). Rather than seeking a universal theory, as does orthodoxy which, as it is of a universal nature *must* abstract from a capitalist economy and does promote a mechanical, formalist method, Keynes sought to develop a theory specifically directed toward an examination of that economy. His remarks such as the following from *The General Theory* and the draft chapters to the *GT* are indicative:

> . . . the characteristics of the special case assumed by the classical theory happen to be those of the economic society in which we actually live, with the result that its teaching is misleading and disastrous if we attempt to apply it to the facts of experience (Keynes [1936] 1973, 3).

> The distinction between a co-operative economy and an entrepreneur economy bears some relation to a pregnant observation made by Karl Marx . . . . He pointed out that the nature of production in the actual world is not, as economists seem often to suppose, a case of C-M-C' . . . . That may be the standpoint of the private consumer. But it is not the attitude of *business*, which is a case of M-C-M', i.e. of parting with money for commodity . . . in order to obtain more money . . . (Keynes [1933] 1979, 81; emphasis in original).

That is, the actual "experience" of a monetary production economy was what had to be understood through a theoretical analysis that incorporated the principle characteristics of such an economy. And, for Fontana, this approach is consistent with that of critical realism which also takes "experience" as its point of departure. (Fontana's praise for George Akerloff, and Tversky and Kahneman as promoting this Keynesian perspective [p. 39] is a bit too generous for my tastes, but, in broad tent Keynesian terms, they do fall under his umbrella.)

The chapter on method is coupled to the chapter on "Probability and Knowledge." Drawing mainly on *A Treatise on Probability*, here Fontana develops a matrix relating the various measures of probability, from absolute certainty to absolute uncertainty, linked to the "weight of argument" or the amount of information on which the probability estimate is calculated. When probable knowledge does exist, but is based on little information, he assigns such a calculation as "uncertainty$_1$". "Uncertainty$_2$" exists in cases when probabilities are unknown or incalculable, "the most extreme form of uncertain knowledge" (p. 51). The rest of Fontana's argument is built mainly on uncertainty$_1$ as uncertainty$_2$ means that humans have insufficient knowledge or reasoning powers to estimate a reasonably trustworthy probability.

Fontana then raises the issue of formal versus human logic in Keynes. This issue was prompted by Ramsay's criticism of Keynes's *Treatise* which caused Keynes to reflect more deeply on the nature of uncertainty. Granting Ramsay's criticism, Keynes argued that it was applicable to those cases where knowledge was atomistic (what Fontana labels "atomic"). This refers to those cases where the material examined is sufficiently discrete so that each unit "exercises its once separate, independent and invariable effect" (p. 53). While this may apply to the natural world, it did not, according to Keynes, apply to the social. In the social world, the variables are interdependent, thus knowledge cannot be inferred merely by examining the separate parts. Fontana illustrates this through the example of investment decisions in which the decision of one investor is based on expectations of all other investors in addition to those of consumers. This holds for all investors. Hence, the rational basis for decision-making can't be known until the outcome of all such decisions is realized as that decision is of an interdependent, not an independent nature. In other words, in a real world populated by real humans, reliable probabilities cannot always be estimated—"animal spirits" prevail. And this leads to Paul Davidson's "non-ergodic" world.

Following these chapters that establish the ground on which he develops a synthetic resolution of various strands of Post Keynesian monetary theory, Fontana turns to specific examinations of "Uncertainty and Money." Here, he argues that the New Fundamentalists (Lawson, et al.), the Monetary Circuit theorists (Parguez, Graziani, et al.) and the Non-Ergodic/Monetary (Davidson, Kregel, et al.) strands all rest on seemingly different Keynesian foundations. Specifically, the New Fundamentalists argue their case on the basis of *A Treatise on Probability*, the Circuit theorists on *A Treatise on Money*, and the last group on *The General Theory*. Fontana argues that this segmentation of Keynes's work is mistaken, and his three books are really interconnected, though with different emphases. As such, then, the three specified strands of P-K theory are interconnected. In brief, money, either in the form of a final means of payment (the Circuit Theorists) or a store of wealth (the Non-Ergodic Monetary theorists), is the macroeconomics link through which the micro units of the economy attempt to deal with uncertainty (the emphasis of the Fundamentalists). Hence, not only does correct theory of a Keynesian nature provide a macrofoundations of microeconomics, but a proper understanding of the relation between money and uncertainty facilitates a reconciliation of the various P-K theoretical approaches.

The author then moves to the last theme in his title, time. Here, and this was somewhat of a surprise to me, he introduces Hicks into the argument. Specifically, it is (mainly) the Hicks of the "Sir John" (later) period rather than the "J. R." (early) period (as per Solow).

Fontana first examines the two meanings of Hicks's aphorism, "monetary theory is in history" (p. 76). The first meaning is that monetary theory is necessarily related to actual events, thus monetary theory is rooted in history. The second meaning is based on Hicks's argument that proper monetary theory must be dynamic rather than built on static, steady state analysis. Fontana then develops Hicks's single period and continuation theory in which the theory unfolds initially in a single (accounting) period and proceeds sequentially in single period steps where the linkages between the periods examines the (disequilibrium) effects of the previous period on changing expectations, attempting to correct the disequilibrium position -which leads to the next period. Fontana argues that Keynes flirted with a similar "dynamic" approach in developing his general theory, but his thoughts on this did not enter *The General Theory* itself. Hicks's time method of analysis is established as the foundation from which he then examines the controversy between Horizontalists and Structuralists.

Both wings of the Post Keynesian monetary tradition hold an endogenous theory of money. The Horizontalists (or accommodationists) focus on the "loans create deposits" and "deposits generate reserves" principles while the Structuralists privilege liquidity preference, arguing that the Horizontalists leave no room for this most important aspect of Keynes's general theory. The central disputes are nicely summed up by Fontana: "(T)here is disagreement over the degree of accommodation by central banks of the demand for reserves by commercial banks….Second, there is a dispute about the meaning and relevance of the liquidity preference of commercial banks….Thirdly, there is a controversy over the implications of the liquidity preference of the non-bank private sector" (pp. 105-6). In this section, the contributions of Moore, Pollin, Wray, Bell, Kaldor, et al. are highlighted.

Fontana then employs a four panel set of diagrams to highlight the differences and their significance, and in the concluding chapter he argues that while both wings are consistent with a Keynesian approach, they develop their respective cases in two different modes of time. Returning to Hicks, Fontana claims that the Horizontalists are theorizing on the basis of Hicks's single period analysis in which expectations are constant, while the Structuralists root their position in continuation analysis where expectations change based on the last period's outcomes. Once this distinction is made clear, Fontana then sees no fundamental difference between the two approaches, concluding that "the Horizontalist and Structuralist analyses together form a more general theory of endogenous money" (p. 119).

No doubt, debates will continue as to the proper theory and method to adopt in order to provide a coherent and fruitful alternative to prevailing orthodoxy. Giuseppe Fontana's book is unlikely to convince the most ardent adherents of one position or another (and will certainly not convince those holding a "small tent" position). However, Fontana does lay out several contentious issues clearly and does provide a framework within which the ongoing debates can be better systematized. For those who follow this literature, he has provided a valuable service which, if Post Keynesians are serious in their pursuit of a unified theory, can go quite a way in offering some guidance in such a quest. Now, if Keynes can be coupled to Marx and Veblen who more than any other theorists do provide a framework within which the actual "experience" of a capitalist economy can be captured, I'd suggest that Post Keynesian theory would not only be more robust, but would then offer a distinct and convincing alternative to the dominance of neoclassical theory. This, of course, would be dangerous.

References

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