The Capital Theory Controversy


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The latest bout of controversy in capital theory starts with Joan Robinson’s 1953-54 article, “The production function and the theory of capital”. There, she asked at least three fundamental questions. First, what do we mean by capital in traditional (neoclassical) theory? Secondly, how do we measure it, that is to say, is there a technical unit (corresponding to hours for labour and acres for land) which is independent of distribution and prices, so that all the arguments of the aggregate production function are coherent, may be precisely defined, and may legitimately be regarded as one of the determinants of distribution? (This was a rhetorical question.) Thirdly, what sense can be made of the notion of an economy getting into equilibrium? Either it is in equilibrium (all plans and expectations are fulfilled) and has always been so, or it is in a particular state and past happenings, current events, especially those which were not expected, and future expectations determine what happens next. Moreover, there is no guarantee (or even sense) in the notion of convergence on, or fluctuations around, an equilibrium position.

These questions and her answers spawned a huge literature, the contents of which sometimes overlapped but, more often, were akin to ships passing in a (dark) night. Many papers concentrated on the more secondary question of the measurement as opposed to the meaning of capital. The latter made it necessary to ask what sort of society is being analysed and what vision of it has been translated into the approach taken.

Piero Sraffa’s classic (1960) provides crucial insights into both these issues. He shows that in the supply and demand approach it is impossible to find a unit which is independent of distribution and prices with which to measure capital (implicitly outside the confines of a one, all-purpose commodity model). And he argues that the approach of the classical political economists and Marx, the crucial organising concept of which was the surplus – its creation, extraction, distribution and use –, was a more fruitful way to
view economic processes. Krishna Bharadwaj (1963) wrote a remarkable review article of Sraffa’s book, emphasising these points and Avi Cohen (1989) has shown that both approaches run into incoherence outside the confines of the one commodity model.

Those who concentrated most on measurement but who were nevertheless far too astute not to understand meaning include Trevor Swan (1956), see especially the remarkable appendix to his article, Robert Solow (1956) and the Daddy of them all, Paul Samuelson’s surrogate production function article of 1962. There, he attempted to show that the results of the one commodity model which exhibited all the agreeable propositions concerning the workings of competitive capitalism and which reflected the central insight that price is an index of scarcity, carried over to the rigorous general equilibrium heterogeneous commodities models of MIT and elsewhere. Not content with this, his pupil, David Levhari (1965), claimed to have shown that Sraffa’s refutation of the agreeable results, especially his demonstration of capital-reversing and reswitching, were not true of a model of an economy but only of a model of an industry. This precipitated a symposium in the Quarterly Journal of Economics refuting Levhari’s claim. (Pasinetti (1966) was the first to have done so). It included a handsome summing up article by Samuelson (1966). He accepted the refutation, used an Austrian model to explain why the so-called paradoxes – non-downward sloping demand curves for capital, no watertight guarantee that abstinence and accumulation would result in higher living standards for all – could occur and why he had missed this point first time around. In fact, he had sensed the reasons in his 1962 article which reported a fundamental paper by Pierangelo Garegnani which was only published in 1970. In it he alerted Samuelson as to how special his results were. Garegnani (1990) is his most full and authoritative account of these issues.

Solow (1963), following arguments with Joan Robinson over ‘capital’ and ‘its’ marginal product, argued that it would be better to handle capital theory and the process
of accumulation by concentrating on the rate of return on investment derived from Irving Fisher and Knut Wicksell rather than on the former concepts which the critics argued were incoherent. Solow developed both the theory and the application of the latter concept in his 1963 book. Pasinetti (1969) returned to Fisher’s writings in the light of Joan Robinson’s and especially Piero Sraffa’s critique in order to argue that Solow’s approach (and Fisher’s theory) were as vulnerable to the new results as were the foundations of the aggregate production function. The latter was used in neoclassical growth theory, Swan (1956), Solow (1956), and in the applied work on technical progress and productivity growth, Solow (1957).

Two books which critically survey these issues are Harcourt (1972, which grew out of Harcourt 1969), and Bliss (1975). The first is more partial (to say the least) to the Cambridge UK critique; Bliss (1975) is more partial to the neoclassical MIT approach but is also fundamentally independent, sending a plague on both their houses whenever it was deemed necessary. Bliss’s book was lauded in a review article by Avinash Dixit (1977). Stiglitz’s review article (1974) of Harcourt (1972) was not laudatory. An amusing, insightful but slightly fence sitting article is Sen (1974). The principal papers in the debate are collected in Harcourt and Laing (1971). Finally, a technically competent but conceptually naïve survey is Erwin Burmeister (1980). In the 1970s the results were used to criticise mainstream international trade theory, see Metcalfe and Steedman (1973), and, in the 1980s, mainstream monetary theory, see Rogers (1989).

My last say – to date – is Harcourt (1994; 1995) where it is concluded that “the current position is an uneasy state of rest, under the foundations of which a time bomb is ticking away, planted by a small, powerless group of economists who are either ageing or dead” (45).
John Maynard Keynes


Keynes, J.M. (1919), *The Economic Consequences of the Peace*, London, Macmillan. CW II


**John Maynard Keynes**

Where best to go in order to understand John Maynard Keynes – man, economist, philosopher, man of action, bibliophile, loving friend, devoted son, happy husband? Undoubtedly Robert Skidelsky’s two volumes (1983, 1992) dominate all else because of their insights, depth of economic, historical and philosophical analyses and overall erudition. Especially masterly is Skidelsky’s account of the making and the significance of *The General Theory*. It is to be hoped that the third and final volume will be published soon and be as good as its companion volumes. For the detailed authoritative account of Keynes’s history and contributions, Donald Moggridge’s economist’s biography (1992) cannot be bettered. His discussion of Keynes’s roles in the two world wars is especially masterly. From his discussion of Keynes’s activities at the Treasury and then the Treaty of Versailles, we may see clearly why and how Keynes changed from being an extremely clever, gifted but often flippant and unserious, even immature person, not dissimilar from many of his Bloomsbury friends, to becoming a mature, courageous, passionate defender of what he saw as right values, and just outcomes and procedures.

The upshot of this was his resignation from the UK delegation at Versailles and the writing of *The Economic Consequences of the Peace*, Keynes (1919). Whatever its lasting merits as an accurate account of the likely consequences of the clauses of the Treaty, see Etienne Mantoux (1946, 1999) for doubts, it must surely always survive as a courageous and noble statement of a good man’s reaction to events and people, and to what he saw as foolish and evil.

In World War II, through Moggridge’s account we witness Keynes literally killing himself by overwork for his country and for a wider world. The account of the consequences of his death on Easter Morning 1946 as immediately perceived are described with crystal clarity by Austin Robinson in his superb *Economic Journal* obituary of Keynes in 1947.
Roy Harrods *Life* (1951), though a fascinating read, is flawed by the biographer not referring to crucial aspects of Keynes’s personal life, that he was bi-sexual certainly before his extremely happy marriage to Lydia Lopokova in 1925 and probably after, and by an overmuch intrusion of Harrod’s views and roles into the story.

For the making of *The General Theory* and the so-called Keynesian revolution allied with the historical events accompanying them, Peter Clarke’s 1987 book stands alone. In the last 20 years or so, there has arisen an important literature on the relationship between Keynes’s economics and his philosophy. (His Fellowship for King’s in the first decade of this century was published in 1921 as *A Treatise on Probability.*) Three philosophical emphases of Keynes which are crucial for his economic thinking, especially in *The General Theory*, were first, his realisation that the whole need not be the sum of parts; secondly, his systematic pondering on the principles of reasonable behaviour in an uncertain environment; and, thirdly, his discernment of the existence of the spectrum of appropriate languages with which to discuss different theoretical issues in a discipline such as economics. The outstanding books in this literature are Rod O’Donnell’s *Keynes: Philosophy and Economics* (1989), Anna Carabelli’s *On Keynes’s Method* (1988), John Davis’s *Keynes’s Philosophical Development* (1994) and John Coates’s *The Claims of Common Sense* (1996). Of shorter essays which may be read with great profit and pleasure, Joseph Schumpeter’s essay on Keynes (1946) must be mentioned. Schumpeter so managed to suppress his jealousy of Keynes as to make this an absorbing read. David Bensusan-Butt wrote a delightful essay about Keynes’s unique impact on the idealistic and searching young in the interwar period, Bensusan-Butt (1980). Finally, to obtain a quick feel of what Keynes the man and his writings were about, Moggridge’s little book, *Keynes* (1976) and the entry on Keynes in Cate (1997) provide appreciative and succinct accounts.

G.C. Harcourt
The General Theory of Employment, Interest and Money


The General Theory of Employment, Interest and Money

Maynard Keynes published his *magnum opus*, *The General Theory of Employment, Interest and Money* with Macmillan in February 1936 at a subsidised price in order to encourage as many people as possible to read it; even though he warned that, as it was addressed principally to his fellow economists, the general public, while welcome to eavesdrop, could not expect fully to understand. For Keynes, writing the book represented his final escape from old ideas which he had been taught and which he in turn had taught to others. It required scrapping the quantity theory of money and shifting the focus of analysis of the system as a whole (itself a new emphasis) from the long period to the short period and from preoccupation with the determination of the general price level to that of the overall levels of employment and income.

Moreover, it required the acceptance of the revolutionary idea that the ultimate resting place of the economic system – its equilibrium – was not necessarily one of full employment but one which exhibited sustained unemployment of labour and capital goods in both the short and the long period. It also required, as James Meade (1975) told us, that we change from viewing the world as a dog called saving wagging an investment tail to viewing it as a dog called investment wagging a saving tail.

Associated with the shift of vision was the scrapping of the dichotomy between the real sector, where relative prices and quantities were determined, and the monetary sector, where, given the long-period equilibrium level of the economy (a Say’s Law position of long-period full employment) and prevailing habits and institutions, the quantity of money served to determine the general price level. Furthermore, money itself was but a veil and the money rate of interest was dominated by the natural rate of interest in the real sector — it ruled the roost, all else had to conform to its level.
All this was replaced by the theory of a monetary production economy in which the real and the monetary factors intermingled indissolubly from the start of the analysis, the money rate of interest ruled the roost and the concept of aggregate demand had equal status with that of aggregate supply in the determination of the rest state point of effective demand. The determination of the general price level itself was presented as a natural extension of Marshall’s short-period supply curve analysis at the level of the industry to the level of the economy as a whole. The most authoritative account of this process, in the later stages of which he played a fundamental role, is Richard Kahn’s Mattioli Lectures, *The Making of Keynes’s General Theory* (1984), see also Kahn (1978). For Keynes’s own evaluation and further thoughts which put his book into perspective, his 1937 *Quarterly Journal of Economics* article in which he replied to the criticisms of Dennis Robertson and Jacob Viner and spelt out the roles of expectations and uncertainty in the new system, is the definitive account.

There are a number of other excellent accounts of this process – Edward Amadeo (1989), Peter Clarke (1988) and an ultimately flawed one, Patinkin (1976). The story is also, of course, the highlight of all the three great biographies of Keynes, Harrod (1951), Moggridge (1992) and Skidelsky (1992). For a modern understanding of the process and where we are now, pride of place in the 1980s must be given to Victoria Chick’s 1983 book, together with her selected essays, edited by Philip Arestis and Sheila Dow (1986). The most comprehensive evaluations of Keynes and his influence by scholars coming from many different directions, is to be found in the two volumes edited by Harcourt and Riach which were published in 1997 by Routledge. The volumes may have a jokey title but they have a serious purpose. In the framework of modern economic analysis (a framework which involves an approach which is alien to Keynes’s own views on the nature of theory in a subject such as economics), there is no better derivation of Keynes’s results than Frank Hahn and Bob Solow’s *Critical Essay* (1996). And for thoughts 30
years on by those who were originally bitten by the *GT* bug, Lekachman’s collection (1964) is absorbing reading. Especially is this so of Brian Reddaway’s review of the book which was written in 1936 while he was on his way to Australia after having been Keynes’s supervision pupil when Keynes was writing *The General Theory*. It even contains a clear (but unconscious) account of the essentials of IS and LM analysis. The best early introduction to the essential ideas, an introduction which is still relevant today, is Joan Robinson’s ‘told to the children’ little book, Joan Robinson (1936). In the United States in the postwar period Paul Davidson’s *Money and the Real World* (1972) is an authoritative account and extension of Keynes’s ideas in *A Treatise on Money* (1930) as well as in *The General Theory*.

How Keynes’s ideas came to us through textbooks requires, first, reading J.R. Hicks’s famous "Mr Keynes and the ‘Classics’" (1937), together with the complementary papers of Roy Harrod (1937) and James Meade (1937). The history of this process has been written by Warren Young (1987). Finally, for an attempt to tease out what Keynes must really have meant within the postwar developments of the Walrasian general equilibrium system, Robert Clower’s 1965 paper on the dual decision hypothesis and Axel Leijonhufvud’s big book (1968) are essential reading. For a critical account of the ideas of Keynes and his principal followers which nevertheless accepts the essential correctness of their contributions, the late Anthanasios (Tom) Asimakopulos’s last book (1991) is a priceless book for teachers and taught alike. The best textbook accounts which are true to Keynes’s vision are Lorie Tarshis’s 1947 *Elements* and James Trevithick’s 1992 *Involuntary Unemployment*. Both are as critically faithful to their mentor as they are crucially relevant for their respective times.

G.C. Harcourt