Production, Distribution and Value in the Long Period

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Kurz, Heinz D. and Neri Salvadori. *Theory of Production: A Long-Period Analysis*. Cambridge and New York: Cambridge University Press, 1995. ISBN 0-521-44325-3. Pp. xx + 571.

The primary purpose of this large book is to lay out the 'state of the art', so to speak, with respect to the theory of production, distribution and value - in the long-period framework. By the long-period method is meant:

> the investigation of economic systems that are characterized by a uniform rate of profit and uniform rates of remuneration for each kind of "primary" input in the production process, such as different kinds of labour and natural resources. These economic systems and the corresponding prices are to be understood as reflecting characteristic features of a capitalist market economy...The prices are taken to fulfil the condition of *reproduction*: they allow producers to cover just costs of production (including, as things may be, the provisions of the producers and profits at the "ordinary" rate of return on the value of capital advanced at the beginning of the uniform period of production) [p.1].

The co-authors are both well-known and distinguished contributors to economic literature. In particular, they both have been significant contributors to the Sraffian research programme of reconstructing in coherent analytical form, the classical 'surplus approach' to production, distribution and value (*vide* Garegnani 1984 or 1987). Indeed, this book is a quite comprehensive expression of at least the core of that research programme (and somewhat more), thirty-five years on from Sraffa (1960). [One of the advance reviewers, on the back paper cover, uses the term 'Neo-Ricardian' rather than Sraffian. (Regrettably, 'neo-classical' has already long been *mis*appropriated by others - *vide* Aspromourgos 1986). I think this nomenclature very unfortunate: it is not at all clear that Sraffa's approach is particularly wedded to Ricardo's system.]

What makes this theoretical work of particular interest to historians of economic thought is that it actually constitutes a remarkable marriage of formal theoretical analysis of the highest rigour, and a substantial scholarly interpretation of the history of economic thought. Kurz and Salvadori combine a comprehensive treatment of long-period equilibrium theory, with a quite complete account of the history of the long-period approach. This is certainly remarkable for a work of theory in the late-twentieth century - a period in which it has become a general (if implicit) presumption, widely held, that all which is worth knowing and reading, can be found in the (predominantly American) journals of the last ten years. Historians of thought will find this approach of Kurz and Salvadori refreshing, as will theorists who have not succumbed to the afore-mentioned temper.

The book has fifteen chapters, as follows (with titles as stated here, not entirely verbatim):

1. free competition and long-period positions

2. a one-commodity model
3. two-commodity models
4. any-number-of-commodities models
5. choice of technique
6. alternative descriptions of production techniques
7. fixed capital
8. joint production
9. jointly utilized machines
10. land rent
11. wage and profit differentials
12. limits to the long-period approach
13. circular production and surplus
14. the problem of capital in marginalism
15. alternative theories of distribution.

Chapters 1 and 13-15 are predominantly historical, though no less analytical for that. As well, every chapter (save chs. 13 and 14, for obvious reasons) concludes with a section of 'Historical notes'; and every chapter (except chs. 1, 11 and 13-15 - again, for fairly obvious reasons) has appended to it a set of mathematical 'Exercises'. (In the main, the level of difficulty of the exercises makes them only appropriate for students at the graduate level, and perhaps advanced undergraduate Honours courses and courses in mathematical economics.) There is also a 34 page mathematical appendix, and the list of close to 700 References is a valuable resource in itself.

What follows from this is that approximately 200 pages - 40 per cent of the text proper - may be described as history of economic thought. This is said advisedly because it is precisely a great strength of the authors' achievement here, that 'theory' and 'history of thought' cannot be so simply demarcated in the text. Nevertheless, for the readers of this *Review*, I have taken the liberty of reading the book in a way in which it was not really intended to be read: the historical chapters (adding in ch. 11, which has a substantial historical content) and 'Historical notes' first, followed by the remaining formal theoretical chapters.[1] This approach may be of particular interest to historians of thought, especially those considering using the book as a reference work for courses.

In summary, these 200 pages amount to a history of classical and marginalist long-period approaches to distribution and value, including an account (and critique) of the replacement of the long-period method, in marginalist economics, by intertemporal and temporary equilibrium theory, from the 1920s onward. As well, there are accounts of twentieth-century developments of the classical approach, which occurred independently of Sraffa; and of alternative views on 'closure' of the Sraffian system.

With regard to non-Sraffian twentieth-century developments, the discussion provides striking evidence that the proposition, 'history is written by the victors', is entirely applicable to economics. One cannot come away from chapter 13 without a reinforced view that marginalism - unwittingly or otherwise - has created a history of the discipline which operates selectively, to confirm the rightfulness of the ascendancy of marginalism itself. It is comforting to a certain kind of mindset, to look back into intellectual history and see only pale reflections of one's self, plus a few aberrations. Kurz and Salvadori show that analytical aspects of the classical-Marxian schema were being developed and clarified in remarkable ways, by continental (in particular, Russian) thinkers who are unknown in standard histories of economics (pp. 384-403). (There has surely been both a marginalist bias and an anglocentric bias operating here.) Of particular interest in this regard are the contributions of Georg von

Charasoff (b.1877) and Robert Remak (b.1888 - murdered in Auschwitz). It suffices to quote, with respect to the former:

> Von Charasoff was perhaps the first author to note clearly what more than two decades later von Neumann was to call "the remarkable duality (symmetry) of the monetary variables (prices p_j , interest factor β) and the technical variables (intensities of production q_i, coefficient of expansion of the economy α)" (von Neumann, 1945, p.1) [p. 390].

More generally, the authors argue strongly and convincingly for placing von Neumann (and Leontief) in the classical tradition of analysis - not only in the sense that von Neumann's model is of classical character, but also in that the model was developed in a consciously classical-Marxian context. (This argument is expanded in an excellent recent article - Kurz and Salvadori 1993.) Hence, on the old von Neumann versus Sraffa issue, they emphatically see a consistency between the two conceptions. Thereby, the marginalist appropriation of von Neumann is rejected (pp. 379, 421-26).

In addition, with regard to Leontief, it seems that the young doctoral student (who was supervised by von Bortkiewicz) was much more disdainful of subjectivism in economic analysis than he later appeared to be:

> In his Ph.D. thesis Leontief advocates the view that economics should start from "the ground of what is objectively given..."; economic concepts are meaningless and potentially misleading unless they can be observed and measured. ...The starting point of the then going marginalist approach, that is, the *homo oeconomicus*, is considered inappropriate because it gives too much room to imagination and too little to facts... Economic analysis should rather focus on the concept of circular flow which expresses one of the fundamental "objective" features of economic life [pp. 390-91].

This implies that the later Leontief, by then a Harvard professor, acquiesced in the integration of his economics into a marginalist interpretive framework (*vide* pp. 393-94).[2]

More generally, the history of economic thought in the book is very sound and balanced. Furthermore, in the areas of history of thought with which I'm less familiar, it is convincing. As always, one can find points of detail with which to quibble. In my view, the significance of Turgot is under-rated, relative to the usual 'hero' of the story, Smith (pp. 39-40; cf. the absence of reference to Turgot at pp. 2-4, 305). The notion of a general rate of profit on capital cannot be found in Cantillon (pp. 37-38; cf. Aspromourgos 1996: 116-23). With regard to the 'Historical notes' to chapter 6 (pp. 175-76), it reasonably could be argued that Petty had an intuition of the dated-labour approach to production, in his conception of 'the Wealth, Stock, or Provision of the Nation' as 'the effect of ... past labour' (Hull 1899: 110; cf. 108 with 114). Perhaps more importantly, with regard to Petty, is his conception of a self-reproducing 'corn' sector of the economic system:

> ... suppose there be in a Territory a thousand people, let these people be supposed sufficient to Till this whole Territory as to the Husbandry of Corn, which we will suppose to contain all necessaries for life, as in the Lords Prayer we suppose the word Bread doth; ... Suppose ... that a tenth part of this Land, and tenth of the people, ... can produce Corn enough for the whole ... (Hull 1899: 89).

This is almost certainly the first formulation in the history of economic thought, of a subsystem (with a single basic commodity) in the sense of Sraffa (1960) (cf. Kurz and Salvadori, pp. 85-89). Petty's hypothetical economy is precisely a 'corn-silk model' in the sense of Kurz and Salvadori (pp. 59-63, 79; Hull 1899: 30-31, 42-44, 89-90).

As to the formal theoretical analysis of chs. 2-10, suffice it to say here that this is essentially a very thorough examination of the properties of systems of long-period price equations, under successively more general assumptions concerning production conditions. (See the chapter contents listed above. Chapter 12 essentially deals with important cases in which stationary relative prices cannot hold - most notably, the use of renewable and nonrenewable scarce natural resources.) It is a well-known property of these systems of 'production-price' equations - which have the distributive variables embedded within them (rates of profits, rents, real wages) - that in general they exhibit one degree of freedom. The question of 'closure' (mentioned above) is the question of which distributive variable to exogenously fix (subject to technological constraints) and how to determine it. From this point of view, the relation between the last two chapters of the book is that ch. 14 constitutes a critical history of marginalist attempts to explain income distribution in a capitalist economy, while ch. 15 outlines the history of alternative approaches to (long-period) income distribution.

As is well known, the classical economists resolved this question by reference to the real wage as a datum for price theory, determined by custom and/or conflictual bargaining. Under mature capitalism - with real wages above customary subsistence and therefore free to vary endogenously - the almost universal preference of those working within the modern surplus approach has been to exogenously fix the general rate of profit (r). In turn, the predominant view until recently has been that r may be determined by reference to the so-called 'Cambridge Growth Equation': r is determined by the rate of capital accumulation (g), together with saving propensities, so as to ensure that saving equals investment along a steady-state growth path. More recently, the suggestion of Sraffa (1960:33) concerning the alternative possibility of determining r by reference to interest rates (i) determined in the financial system, *independent* of the production system, has been given more substantial statement and supporting argument (*vide* pp. 480-83, 490-91). In the long-period framework it is agreed that rates of profit in production and yields on instruments traded in financial markets are brought into a kind of parity (though not necessarily strict equality). With one degree of freedom the question becomes -

$$g \Rightarrow r \Rightarrow i \text{ or } i \Rightarrow r \Rightarrow g?$$

Kurz and Salvadori (p. 483; cf. 489-90; also 46-48) seek to reconcile these two apparently contending views, citing Panico (1993). But given there is only one degree of freedom in the determination of distribution, how can this be done? In essence the proposed reconciliation involves making g a function of fiscal policy and i a function of monetary policy. If this is accepted, then a kind of policy 'accommodation', or 'policy reaction function' (my language), can be proposed: monetary policy accommodates fiscal policy's determination of g, by setting the appropriate i - or fiscal policy accommodates monetary policy's determination of i, by setting the appropriate g. This is not the place to enter into a lengthy theoretical debate about this issue, but I do not find this resolution convincing. Suffice it to make two comments. The supposition that fiscal policy can determine the rate of accumulation and growth is by no means a weak assumption and one would be interested in seeing a formal derivation of the proposition. Second, if such a mechanism is entertained, and monetary policy accommodates fiscal policy, then this would entail neutrality of money - at least to the extent that in long-period equilibrium i is independent of monetary phenomena.

To conclude, and notwithstanding my immediately preceding comments, this is not so much a book of bold claims, as a manual of analytical results (though some of these *are* bold). In an advance review on the back paper cover, Paul Samuelson announces that he is expecting to wear out a copy every two years. I hope his academic career has been more financially lucrative than mine - probably a safe assumption. But the sentiment is sound. This is a book which can be used again and again. The history of thought can be very usefully set as reading for undergraduate courses. The formal analysis beyond ch. 3 (i.e., beyond two-commodity models), to my mind is largely suitable only for graduate level courses. For researchers working in the framework of the long-period approach, the book is a definitive statement of the frontiers of the core of that research programme - and points to the areas requiring further scientific development.

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Notes

1 The authors at one point note explicitly, and rightly, that the 'Historical notes' cannot by themselves serve as a history of thought (p. 379). They therefore also cannot be judged by that criterion.

2 Leontief's thesis was published in part (Leontief 1928), and this has recently been translated into English (Leontief 1991). Kurz and Salvadori (p. 390n.8) report that certain passages of the 1928 text are omitted from the English translation.

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