realisations converge in the limit. This, Davidson argues, is the type of stochasticism underlying neoclassical economics, particularly the rational expectations hypothesis. The concept of long-run equilibrium can only have meaning in a ergodic world. By contrast a non-ergodic stochastic process displays no convergence of phase and statistical averages. Non-ergodicity is a characteristic of a world of crucial decisions in which agents make choices that affect the probability distributions of future outcomes.

Davidson introduces uncertainty into production decisions through Keynes's concept of user cost (vol. 2, ch. 13). User cost was originally defined by Marshall as the cost of wear and tear. Keynes extended the concept to embrace the intertemporal opportunity cost of utilising resources now rather than later. Defined in this way user cost becomes an important link between the present and the future. Expectations about the future will affect current evaluations of user cost and thereby affect current production decisions. The notion of user cost is applied by Davidson to the analysis of the rate of depletion of nonrenewable resources (vol. 2, chs 27, 29).

Davidson has contributed a great deal to the development of post-Keynesian economics. His books and articles reflect a profound appreciation of Keynes's *General Theory* and its contemporary relevance to analytical and practical problems. However, it is doubtful that these two volumes are really justified, apart from their obvious convenience value. These collected writings are of the 'everything but the kitchen sink' variety. They would have been much improved by a more draconian editorial approach. Too many papers are repetitious and lacking in original content. For example the whole of part V of volume 2, containing some fairly standard applications of cost benefit analysis to the valuation of water and recreation, could have been excluded completely. A single volume of around twenty papers on Davidson's macroeconomics would have been more useful and effective. As it is, those interested in Davidson's contribution to post-Keynesian economics would be better advised to read *Money and the Real World*.

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Macroeconomic Dynamics: A Marshallian Synthesis. By HUGH ROSE. (Oxford and Cambridge, Mass.: Basil Blackwell, 1991. Pp. 173. £70.00 hardback. ISBN 1 55786 037 8).

Professor Rose's book *Macroeconomic Dynamics* is a fascinating study of ideas that has been long in gestation. It grew out of lectures given to graduate students in the 1960s when Rose was at the Universities of Toronto and Rochester, and subsequently at his current post at Johns Hopkins. Some parts of the book are therefore quite mature, having been published some time ago. One of the most distinctive features of the book is its scholarship – a rare commodity nowadays. Few pages pass without some discussion of how the analysis sheds light on, or is related to, debates and views of the past. Of course, much of the debate centres on Keynes, whose writings are quoted frequently and in some detail; but there are also detailed discussions of other writers of the 1930s and 1940s, including Pigou, Kalecki, Wicksell, Kaldor, and Hawtrey. However, the book is not just an exercise in the history of thought. What is so refreshing is that Rose presents his formal theory, with all the techniques of macrodynamic systems, alongside his retrospective glance at earlier debates.

The objectives of the book are quite ambitious. Rose aims to present a general macrodynamic system which encompasses a variety of alternative theories which can thereby be contrasted and compared with each other. This is what accounts for the word 'synthesis' in the subtitle. The adjective 'Marshallian' comes from the use of Marshall's analysis of short-run price determination to model temporary equilibrium. Very simply, at any instant prices are determined in a temporary exchange equilibrium for given levels of output, employment, and capital. Dynamic forces governing output, employment, and investment cause this temporary equilibrium to move. The model can generate various patterns of economic growth and cycles.

The scope of the book is very large – the theories explored in detail include those of Keynes, Harrod-Domar, Kalecki, and Kaldor – so it is not possible to summarise all of the arguments. However, one of the most entertaining parts of the book concerns the contemporary theory of 'real' business cycles. Rose starts his discussion with *Genesis* 41.47–8, 41.53: 'Seven years of abundance came, and...passed, years of plenty for Egypt; and now, as Joseph had prophesied, seven years of scarcity began...'. He then examines the view that business cycles are the economy's efficient response to exogenous fluctuations in productivity. The last sentence of the book reads 'whether it is to be seen as the apotheosis of the new classical Macroeconomics or as its *reductio ad absurdum* is a question that only posterity can decide' (page 164). Indeed.

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Growth Theory: Volumes 1, 2 and 3. By R. BECKER and E. BURMEISTER. (Aldershot: Edward Elgar, 1991. Pp. xi+420, xiv+428, xiii+394. £195 3 Vols. hardback. ISBN 1 85278 189 0.)

Before Game Theory and Industrial Organisation there was Growth Theory. It flourished and then for a time it was forgotten. Now it has started a new lease of life. While Romer (1986) was the first to alert us to how much there was left to explain, it needed Lucas (1988) and his 'pied piper' qualities to start the new rush. Interestingly both show that earlier work was too narrow and simplistic (and a-historical) and so throw doubt on other similar theories, for instance macroeconomic theories. It may well be that the next wave will be Keynesian.

In any case these three volumes are timely for this revival of interest. They reprint a number of famous papers (Arrow, Solow, Ramsey, Neumann etc.)