of evolutionary theory. Time is of the essence to this theory. Orthodoxy can do all it may with ad hoc assumptions about periodic equilibria but it cannot deal with time in the way that history demands. Nor can it deal with the Austrian concern with 'radical uncertainty', the absence of probability distributions on future outcomes of every economic event. Nor does he appreciate the difference between theory of production and theory of allocation. Evolutionary economics is about production, income and investment — the New Institutional Economics which he suggests should enlighten evolutionaries, ignores production in order to solve transactions problems, leaving production to look after itself. These misconceptions lead him to set up false conflicts between different writers. Finally, his excessively narrow conception of 'neo-Schumpeterian' prevents him from appreciating the breadth of the programme. He goes so far as to suggest that neo-Schumpeterians should work with these broader evolutionaries, an injunction they hardly need.

In summary, the volume is another one of a number which attempt to introduce the evolutionary research programme to the wider community of economists. It is fortunate that so many of the papers are well worth reading.

NOTES AND REFERENCES

- 1 J.A. Schumpeter, Capitalism, Socialism and Democracy, Harper, New York, 1942.
- 2 G.M. Hodgson, Economics and Evolution: Bringing Life Back into Economics, Polity Press, Cambridge, 1993.

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Whither Socialism? by Joseph E. Stiglitz (MIT Press, Cambridge, Mass., 1994), pp. xiii + 338, ISBN 0-262-19340-X.

This book expands on the Wicksell Lectures Stiglitz gave at the Stockholm School of Economics in 1990. His original plan had been to present an overview of the current state of the economics of information, but events in Eastern Europe led him to the new policy questions and the old theoretical issues highlighted by the collapse of socialism. Fortunately, Stiglitz was too strong-minded to abandon the first plan: we still have the overview, strengthened by its expansion to the issues facing economies in transition.

Why should this book be of interest to *Prometheus* readers? Stiglitz is one of the leading exponents of the new information paradigm which has furnished a new view of how markets solve the resource allocation problem. His contribution and prolific writing goes far towards justifying the dominance of Stiglitz authorship in the lengthy list of references.

The Samuelson-type economics, "the solution to a complicated maximization problem" (p.11), presented to generations of students has to be replaced by a "far more complicated and more interesting" (p.11) economics. The reality is not an engineering one of blueprints to be consulted by 'decision-makers' who merely maximized, but rather a world in which information is

never complete and is always costly; where information activities become the main claim on resources; and where it is increasingly difficult to apply the notion of optimality to information and to disequilibria. This reality is, of course, the setting of so much of the research and debate reported in *Prometheus*, dealing with innovation, technological and organizational change and policy-making.

The presentation of the emergence of these ideas could have been better grounded in the history of economic thought. It is misleading to state: "During the last fifteen years....the information-theoretic approach to economics....has developed (p. 5). One of the most important complications this approach has brought is recognition that events are path-dependent. We should apply this to the new paradigm itself. Stiglitz allows that there were "other important critiques of the neoclassical paradigm...consistent with the information paradigm" (p. 281, n5). However, much of the development of the new paradigm took place before 1975.

The central theses (pp. 13-14) of the book are:

- * The contention that market economies ensure economic efficiency gives little guidance in choosing economic systems. Let in information imperfections and incomplete markets and there is no presumption that markets are efficient.
- * The equivalence of market and market socialist economies is misguided for the reasons above.
- * Neoclassical economics did not provide a good description of how markets worked. Had it done so, market socialism might have succeeded.
- * There are additional questions to be answered: How should resource allocation decisions be made? Who should make those decisions? How can the right decisions be induced? How can decision-makers know what and how much information to acquire? How can the separate decisions of all the actors be coordinated?
- * Competition, markets and decentralization contribute to success and government may need to play a large role if competition is to be preseved. Stiglitz likes the title of R. Wade's book, Governing the Market: Economic Theory and the Role of Government in East Asian Industrialization.
- * Socialist efforts encountered problems because of the lack of property rights and the lack of incentives and competition. "Even more important perhaps were problems of information" (p. 14).

To underline the usefulness of this book, I draw attention to four separate topics which relate to current issues common to developed, developing and transitional economies.

Chapter 7, Competition, in the course of 29 pages, canvasses a wide range of matters in the competition policy debate and can serve as a useful check on over-enthusiastic reliance on simplistic argument. For example, Stiglitz quotes from his joint 1988 paper with Partha Dasgupta:

The idea that a theory of potential competition would at least enable the extension of welfare economics to modern industrial economies, while it may have been well funded was not well founded.

Chapter 8, Innovation (14 pages) tackles technological change which "alters both the prospects for perfect competition and the role played by actual competition" (p. 138). In keeping with the information paradigm, the procedure of analyzing economic activity ignoring technological change and then extending that analysis to modern industrial economies in which technological change has a central role is rejected.

Chapter 9 has a cumbersome title, Centralization, Decentralization, Markets and Market Socialism. Information and Organization might have served better. Instead of arguing in the traditional way that decentralization is possible because only limited information is required,

Stiglitz takes a different view: decentralization turns on the limited capacities of individuals and firms to process and transmit information. Far too little attention has been given to the design of organizations, so this change of perspective is welcome. There are alternatives to 'the market' and 'government' and their design calls for research.

The fourth topic follows from Chapter 9 issues and is the role of government. Chapter 13, Asking the Right Questions: Theory and Evidence works through many traditional objections to government participation and intervention. The right questions have to be relevant to the information paradigm reality, not to the assumed world of perfect competition. Business lobby thinking tends to focus on claims about relative private and public performance of certain activities and to avoid consideration of what governments can do that the private sector cannot. Government has a power of compulsion, eg., to force tax payments. It can deal with social objectives and it can effect coordination in ways the market fails to do. In general, Chapter 13 suggests a very real need to rework the old ground of the role of the state from the new information-theoretic perspective.

This book makes accessible much of the new thinking about information economics. It will be a pity if its title unduly restricts its wide reading.

I have one major complaint. Despite Stiglitz's recognition of the added complexity that comes with the information paradigm and his plea for theories to say a lot about information, information itself remains a general purpose concept. The potential payoff from a characteristics approach to information could be great: in the design of organizations; in shaping policies for communications, research, competition and intellectual property rights; and in business strategy.

NOTES AND REFERENCES

1 See. for example, contributions included in D. M. Lamberton (ed.), The Economics of Information and Knowledge, Penguin Books, Harmondsworth UK, 1971 and The Economics of Communication and Information, Edward Elgar International Library of Critical Writings in Economics, Cheltenham UK, 1996.

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Organizational Change: A Processual Approach by Patrick Dawson (Paul Chapman Publishing, London, 1994), pp. xii + 211, £14.95, ISBN 1-85396-237-6.

This text is the latest in a long line of books purporting to deal with how change is brought about within organizations. Dawson is critical of many of these texts. In particular, he finds fault with those who perpetuate "the orthodoxy imposed by Lewin's seminal work", arguing that they adopt "uncritically" Lewin's three phase model of planned change ("unfreezing, changing, and refreezing"), which he sees as inappropriate to the "dynamic nature of change in today's business world". Nor does he like the literature which relies on "anecdotes and metaphor" and, in particular, appears to wish to deal a body blow to Rosabeth Moss Kanter, whom he depicts as presenting "little of real use to the discerning manager".

Given these preliminary remarks, one would expect the author to come up with a frame somewhat different from that offered by Lewin and to offer something of real