

A second theme that runs through much of the modern literature in this area concerns the interaction between technological competition and market dominance. The central question here is: does current market leadership confer advantages in patent races? In terms of welfare, the issue is of significance because first, incumbent monopolists may spend resources to obtain patents they do not intend to use ('sleeping patents') to preempt rivals and protect their position; second, even when this does not occur, welfare is reduced if the market becomes progressively more monopolised (for any given supply of innovations). Also, third, in an international trade context the loss of market leadership by the domestic firm implies an erosion of the share of oligopolistic industry profits annexed by the domestic economy.

This theme does not receive much attention from Stoneman (the issue of 'sleeping patents' gets some mention in chapter 9), but there is good justification for this given the nature of the book: work on policy issues as related to this theme is at its infancy, especially with respect to international competition. The existing work in the area with international trade aspects is treated (quite comprehensively, apart from the recent work of Brander and Spencer which, I think surprisingly, receives tangential attention) in chapter 12. I also found surprising the almost total lack of discussion on recent developments in the theory of co-operative research ventures by economists such as Katz and Shapiro.

In a final concluding chapter, Stoneman offers his personal view of UK experience in technology policy and makes a number of suggestions for what he considers to be the best way in which the government should intervene to correct the sub-optimal amount of R&D undertaken by the private sector in the UK, as well as non-optimal market outcomes related to the degree of risk-taking and to diffusion. I found the chapter full of useful insights obviously derived from the author's long experience in dealing with both practical and academic issues related to all aspects of the process of technological change. I can recommend this book without hesitation to all those with an active or potential interest in the economics of this process.

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Beyond Computopia: Information, Automation and Democracy in Japan by
Tessa Morris-Suzuki
(Kegan Paul International, London, 1988) pp. x + 221, cloth £30, ISBN
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The enthusiasm with which certain influential government agencies, businessmen and academics in Japan have greeted the development of the new information and communications technologies and the arrival of the information society is probably unparalleled amongst developed nations. It is therefore timely to have a critical account of the history of the information society concept in Japan, the reasons for its emergence, the functions it fulfills in society, and the prospects for its realisation.

Morris-Suzuki argues that from the 1960s to 1980s, the officially accepted and propagated information image has shifted from that of an 'information

evolution' (a change within the industrial system), to that of an 'information utopia', which predicts the flourishing of human creativity, social harmony, and diminishing materialism in the information society of the near future (chapter 2). It is this extreme image of the information society that is challenged in the book. Using a Marxist perspective, the author argues that it is an information utopia of Japan's ruling class. Its function is to replace the now outdated economic growth model of the 1950s and 1960s and to provide a new consensus for economic policy-making which supports and strengthens the existing power structures during a time of turbulent technological, economic, and social change (chapters 3, 4).

In contrast to this utopia, the author proposes the concept of 'information capitalism', which recognises that in the foreseeable future, the information revolution in 'Western countries will take place within, and as part of, the capitalist system, with all the economic and social contradictions this implies'. Information capitalism is regarded as different from previous stages of capitalism, in particular because of the widespread disappearance of the traditional working class — industrial blue collar workers — due to automation. An alternative theory of advanced capitalism is put forward (chapter 5), which contains a new definition of exploitation appropriate to the changing socio-economic conditions and which, unlike some theories of monopoly capitalism, acknowledges that innovation has become a vital source of profit.

The second part of the book (chapters 6 to 10) documents and analyses recent social changes connected with the emergence of information capitalism in Japan. The aim is to gauge possible directions of future social change and compare them with the conditions predicted by the information utopia. The conclusions drawn are necessarily tentative and preliminary. The chapters focus on the impact of the new technologies on employment; its quantity and composition, the quality of work, its regional distribution, and the weakening of organised labour. Not surprisingly, the reality of the emerging information society is found to be much more complex and contradictory than suggested by the information utopia.

The author concludes the book by proposing an alternative utopia, i.e. 'information democracy' (chapter 11). She argues that the conditions for the establishment of this utopia include the dismantling of the legal and institutional systems which convert knowledge into private property (for example, copyrights and patents), workers control of technological change, the abolition of private property and the profit-motive, and the sharing of routine information tasks between all members of society. In short, the author advocates (information) socialism as a replacement for information capitalism.

The book should appeal most to social scientists working with the Marxist paradigm. Theories of advanced capitalism are in need of revision in order to come to terms with the information society, and Morris-Suzuki's book is a thought-provoking contribution to this debate. Social scientists who, like the reviewer, do not share the same paradigm will find some of the theorising in the book simply unacceptable. Given the past experiences and current developments in many socialist countries, the statement that the profit motive and private property are the main cause of all evil and need to be abolished shows a strong act of faith, if not blind belief, on the part of the author. However, large parts of the book — the history of the information society concept and Part two (chapters 6 to 10) — should appeal to a wide readership. The discussion in Part two appears to be well-balanced and should be of interest to

anyone concerned about employment and social impacts of information and communication technologies in Japan and other advanced capitalist economies. Moreover, much of the material is not normally accessible to non-Japanese speakers. The book is well-structured and easy to read. However, there are some important limitations in the conception and scope of the book which need pointing out.

It is legitimate to ask how representative of the information society image adopted by the 'ruling elite' in Japan is the extreme information utopia criticised by Morris-Suzuki. This question is particularly pertinent when one considers that the concept of information capitalism (the view that the information society is a form of advanced capitalism) is by no means new. For example, some Japanese government publications state very clearly that the 'advanced information society' is seen as a way to foster capitalist development.¹ Nor is this view new amongst Marxist writers. Schiller, for example, argues that the information sector is perceived and intended to overcome the crisis of US capitalism.²

A major self-limitation of the scope of the book is the neglect of comparisons with other advanced capitalist economies. For example, reading chapter 4 one might get the impression that the student unrest of the late 1960s was peculiar to Japan. More importantly, the question why Japan's information capitalism might be more (or less) successful than that of the US, for example, is not addressed. This is partly due to the fact that the author does not attempt any judgement whether Japanese society is either superior or inferior to other industrial societies (p. 4). Cultural comparisons are explicitly excluded from the analysis. This approach is understandable given the cultural stereotypes propagated by some Japanese and Western writers. However, at least at one point (p. 114) the author does acknowledge the importance of inter-country differences in social attitudes.

The aim of the author is to abstract from Japan-specific factors in order to focus on technological and social changes associated with the information revolution which are common to most advanced countries, and on which a general model of information capitalism can be built. However, this approach can only be partially successful. To establish a 'general model', other advanced economies have to be included in the analysis, at least the US and Western Europe. They differ in important respects from the Japanese economy: in regard to economic structure, organisational forms, labour market regimes, degree of flexibility, etc. Therefore, their adjustments to the requirements of information capitalism are different from those in Japan.

Also, the book does not say much about Japan's role in the world economy. However, the importance of the international dimension of Japanese information capitalism is highlighted by the dramatic changes which have taken place in the economy and society since the mid 1980s — the rising Yen, the increase in Japanese foreign investment, the emergence of domestic demand as a new engine of growth (about half of this demand is now reported to be consumer spending), the associated increase in manufactured imports and the acceptance of foreign manufactured consumer goods. These recent changes once again testify to the flexibility of the Japanese economy and society to adapt to a quickly changing environment. They also provide an opportunity to assess some of Morris-Suzuki's preliminary conclusions.

In some cases, her analysis can easily be extended to cover the new developments; in other cases, a thorough reassessment is indicated. For example,

the model of the impact of information capitalism on the regional distribution of the labour force (chapter 9), which suggests a tendency towards centralism of corporate policy-making and advanced research activities, but decentralisation of many manual, clerical and lower level managerial tasks, can be interpreted in an international context, with the former tasks remaining located in Japan, but the latter tasks being transferred overseas. This could increase the likelihood of structural unemployment, and suggests that the author's conclusions might even be too optimistic in this respect. On the other hand, the increase in domestic demand, which was seen as unlikely by the author within the existing political framework (p. 97), might more than compensate for this effect.

To sum up, the caveats mentioned should not distract from the basic message of this book which, although not new, is important and difficult to dispute. The information society heralds a new phase in world development, but in many respects it is also a continuation of the past. It has not come about by accident or exogeneous technological change. Instead, the new information and communication technologies are being vigorously developed because they seem to offer a way out of some of the current problems and contradictions facing advanced capitalism. Moreover, they have the potential for reducing or increasing human misery and suffering. However, I am doubtful that the realisation of the socialist utopia advocated by the author would be an adequate or helpful framework for the empowerment of the disadvantaged in the information society.

REFERENCES

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Information Resources and Corporate Growth edited by **Eduardo Punset and Gerry Sweeney**
(Frances Pinter, New York/London, 1989) £25, ISBN 0-86187-720-9

This book emphasises the future of the knowledge economy and the global economic integration that it is achieving. There is a new 'technical culture' which not only provides the competitive edge to corporate success, but is moving corporations to come together to expand their information pool rather than to execute financial mergers. The work is a collection of selected papers presented to the European Conference on Information: the Key Asset, held in Madrid in 1988.

Gerry Sweeney, one of the editors of the book, believes that successful entrepreneurship depends upon superior and valuable information and that Japanese corporate growth can be attributed to strategic management of information. The crucial management of the knowledge economy dates back