

Book Reviews

The Spatial Context of Technological Development

Ricardo Cappellin and Peter Nijkamp. Gower (Avebury), Aldershot. 1990. ISBN 0566071495. £14.95 (hardback) 501 pp.

Mapping and Measuring the Information Economy.

Ian Miles and contributors, Library and Information Research Report 77. British Library Board. 1990. ISBN 071233232X.

These two volumes have a number of important features in common. Both are team efforts to break new ground in the study of information technology and its social implications; both studies operate at statistically high levels of generality — and both end with calls for more specific research to be carried out at enterprise level. However, the two studies set themselves objectives which reflect very different intellectual starting points. Cappellin and Nijkamp are economic geographers whose main purpose is to explore the spatial context of technological change; Miles *et al.* are researchers at the Science Policy Research Unit, examining existing survey data with a view to understanding the emergent ‘Information economy’.

Cappellin and Nijkamp argue that the further examination of spatial context can enhance our understanding of the technical change process and guide policy analysis, particularly at regional level. The book is divided into four sections; the first two parts examine technical change in the manufacturing service sectors. Parts three and four are devoted to new theoretical contributions and the policy implications of the volume as a whole. There is a particularly interesting paper on ‘Knowledge technologies and the evolution of the service sector’ (Chapter 9) and another on ‘The role of small and medium-sized enterprises in promoting innovation’, (Chapter 12). Cappellin and Nijkamp combine the language of innovation theory and policy studies in the hope that closer examination of the spatial dimension will allow research to identify and isolate the key explanatory variables involved.

The main difficulty with this project lies with the question of attributing explanatory significance to physical space. The authors rely heavily on the forecasting literature and on the diffusionist view of technological change, but end by asking questions

about the political and organizational processes underlying the physical spread of IT. It later becomes apparent that this can only be achieved by means of an intellectual sleight of hand. The idea of territory is arbitrarily redefined to include both the human agencies on the ground and the sedimented traditions which underlie the immediate social context of change. Territory is thus given a spurious explanatory significance and made synonymous with socio-historical processes — but the analysis has no model of process to offer. When the role of managerial and governmental agency is finally addressed (Premus, 459) the authors either fudge the question of organizational innovation or simply point to the need for more research on organizational learning. In this sense the book leaves off where one would most like it to have begun i.e., at the point where policy studies, innovation theory and the study of organizational change meet.

In *Measuring and Mapping the Information Economy*, Miles *et al.* begin by pointing out that the popular notion of an information economy has overtaken “the previously dominant, but increasingly discredited idea of a post industrial society”. Just as post industrial theories asserted that a service sector and service occupations were inexorably growing in importance owing to shifts in final demand towards services...so information economy theorists were talking of the rise of an information sector, of the growth of information occupations, of information products as superior goods (in the economist’s sense) and of knowledge displacing wealth as the basis of power.

Miles *et al.* do not set out to test hypotheses about the information economy, but the study allows the authors to come to a number of definite conclusions. The first point is that “the current wave of IT developments is indeed a technological revolution, and that IT is finding application within a vast range of social and economic activities”. Second, “the slow pace of organizational change means that the rapid diffusion of IT is unlikely to be matched by an equally rapid modification of human practices”. The new technologies have no independent impact on society and its organizations: technological change simply modifies the range of opportunities that confront people.

Miles *et al.* cover several major areas of survey investigation: Research and Development, hardware