

Smith *et al.* show that high technology small firms can play an important role in generating innovations at the early stage of the industry life cycle, as well as in adapting known technologies for niche markets. However, innovative small firms remain financially vulnerable (a third closed soon after introducing their innovation) and, contrary to British Conservative Government faith in their key role, seem unlikely to play a very significant role in the economy. Webb and Cleary show that suppliers of computing technology regard major customers as a valuable source of information and expertise for product innovation, and that successful firms made good use of informal feedback from users in developing new systems. This theme is developed further in the Chapter by Cawson, Haddon and Miles, also in the context of the IT industry. They present the innovation of consumer IT products, such as compact discs, video recorders and e-mail, as a dynamic, cyclical process which encompasses the modification of products in response to customer feedback and use after sale, as well as the original research, design and development.

Overall this book provides much of value and stimulus to academics working in the areas of innovation and technology management. Whether the book will reach industry, government and trade unionists, as intended by the ESRC Research Initiative, is doubtful. Managers will not find best practice guidelines, nor will policymakers have unambiguous conclusions to work from. The book shows that exploiting technological innovation to economic advantage at firm or industry level is both complex and difficult.

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The Commercialization of News in the Nineteenth Century by *Gerald J. Baldasty* (University of Wisconsin Press, USA, 1992), pp. xii + 227, US\$19.95, ISBN 0-299-13404-0 (pbk).

Gerald Baldasty's study of the development of news and newspapers during the nineteenth century in the United States is a timely contribution to a matter of immediate interest. While late twentieth century newspaper publishers struggle with attempts to reinvent themselves in a promised world of interactive electronic media systems, Baldasty shows how American newspapers developed in equally turbulent times.

American newspapers originated as mouthpieces for individual politicians or political parties. Readers expected that they would be partisan and that they would espouse the views of their political sponsors. Also, readers know that many newspaper editors were political activists who organised party meetings, drafted political platforms and recruited candidates. Readers were aware that most newspapers depended on financial subsidies from local, state and federal politicians. Sometimes these subsidies involved direct financial support. At other times government publishing contracts provided subsidies in disguise.

But by the middle decades of the nineteenth century, demographic changes and changes in the political process led to a de-emphasis on politics and advocacy. Newspapers moved from the political realm and became businesses. Baldasty discusses three kinds of changes. The first was that the nature of politics changed so that politicians became less dependent on the press as a means of communicating with the electorate. As a consequence politicians

became less interested in providing financial support. Second, the development of the penny press led newspapers to embrace business, rather than politicians as their major source of income. Largely driven by the increasing costs of capital necessary to start a newspaper, newspapers became a servant of business and advertisers with an inbuilt incentive to provide larger and larger audiences for advertisers. And finally, urbanisation created a readership with an interest in making sense of the urbanisation process.

While Baldasty charts the relationship between the financial support of newspapers and their content, he also shows how publishers changed their views of readers. In the *ante-bellum* era readers were seen as voters. But by the end of the nineteenth century they were seen as consumers. This business orientation of publishers meant that they shaped and packaged news to increase its marketability. Content which was interesting, entertaining and diverting was chosen if it could meet the needs and interests of the two key sources of income, advertisers and readers. Concern about the demographics of readership led to the targeting of women and businessmen as discrete audiences. At the same time politics was de-emphasised and an independent press became to be seen as a virtue.

Baldasty's study is important because it provides us with a precedent for thinking about the structural changes which newspapers publishers must face as they move away from newsprint to various forms of electronic delivery of news. While electronic delivery of text-based news to homes has a history of failure, there is unprecedented research and development activity in this area on a number of fronts. Traditional newspaper publishers, telecommunications carriers and software companies are forging new alliances as they explore the possibility of a domestic market for text-based news. If evidence for convergence can be seen anywhere, it is in the research and development activities of newspaper publishers.

So where might Baldasty's analysis take us as we contemplate the future of the newspaper industry? There are at least two challenges which face traditional publishers. Their first task is to ensure that they do not become mere wholesale commodity suppliers, supplying news which is retailed to domestic suppliers through intelligent menuing and editing software systems which is supplied by others. The second major challenge is to understand the implications of the interactive features of electronic delivery systems for their readers and their advertisers. Will the essentially one-way publishing process be transformed to place the newspaper publisher as a manager of communications between readers and advertisers? Baldasty's timely book helps us to raise and ponder these intriguing questions.

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Innovation, Policy and Law: Australia and the International High Technology Economy
by *Christopher Arup* (Cambridge University Press, Melbourne, 1993), pp. vii + 340, \$59.95
hardback, ISBN 0 521 43003 8.

One kind of intellectual property debate revolves around the question, to which discipline does the study of technology-based innovation belong? It is a matter of interest outside universities as well as inside them, because those who are concerned with policy and practice want to know what kinds of academic specialists to consult. For a long time – too long a time – the field was divided between scientists and technologists on the one hand and