

conferencing project in Western Australia, are cases in point. The authors see potential both for broad educational training offered at secondary or tertiary level through telecottage centres, and for vocational training in the information sector. They also predict telecottage employment creation in such fields as data gathering for government departments or market survey work for distant firms. Further employment opportunities could exist for word processing, data entry, desk top publishing, secretarial services and applications programming. In addition, primary producers in remoter districts, it is suggested, could make use of a regional telecottage facility to participate in such computer assisted livestock marketing as CALM (the Computer Aided Livestock Marketing Scheme), an electronic saleyard auction for buying and selling cattle, sheep, lambs and pigs using 'objective descriptions' of weight, fat score, muscling and other factors, sight unseen. Essentially, they stress the regional flexibility of telecottages and their capacity to make innovative accommodations in mixing functions that reflect local opportunities and needs.

One strength of this publication is its 'hands-on' approach. Information has been culled from central telecottage contacts abroad; cost estimates of small, medium, and large telecottages are conveyed, and the whole is fortified by a substantial bibliography. The wider questions of the cost/benefit of the diffusion of telematics to rural regions and of equity of access are also discussed. In this context, the report's findings point a clear need for research concentration relating to rural telecommunication in Australia. While telematics, it avers, appear to have the potential to contribute to the achievement of time honoured policy goals of decentralisation and reducing rural disadvantage, "intellectual inquire in this area is still in its infancy".

The authors's conclusions, however, offer a considered appraisal of present rural telecommunication prospects in Australia. Market forces, they conclude, will be unlikely to achieve universality of access to telematics infrastructure; benefit/cost ratios for investment in telematics in rural areas are likely to be positive for many regions, but probably not for very sparsely populated ones; but "shared facilities such as telecottages and co-operative arrangements between local business and the telecommunications operator may be appropriate modes of introduction to telematics in rural areas".

Ann Moyal.

Communication Research Institute of Australia, Canberra.

The World Television Industry: An Economic Analysis by *Peter J.S. Dunnett* (Routledge, Sydney, 1990), pp.246, ISBN 0-415-00162-5.

Peter Dunnett has provided a most informative and highly accessible overview of the world television industry. First commercially developed in the 1920s, the television industry was reaching well over a half a billion households world-wide by 1992. As a pervasive and potentially persuasive medium, the industry certainly is deserving of book-length attention.

This book provides a brief economic history of the industry and a succinct review of the basic economics which have underpinned this development, followed by an extensive survey of the global evolution of the industry and its present state in each major region of the world.

The history is one of the basic free-to-air broadcasting technology, delivered commercially or by governments, progressively extending throughout the world in an evolutionary manner from the 1920s to the 1970s. In the 1980s however a major revolution took place. New technologies made possible various new means of delivering programs — satellite, cable and, most importantly, VCR. From this time supply was able to transcend the broadcasting spectrum, so transforming the structure of the industry and producing a new set of challenges, the effects of which are still being worked out.

Chapters on demand and supply and on industry structure then examine the general economics of television. Demand is classified as deriving from viewers, advertisers and governments, and the nature of each of these demands is discussed. The distinctive analysis in the economics of this industry arises from recognition that under traditional technology, television broadcasting is free-to-air and limited by its share of the frequency spectrum. This leads to familiar problem of adequately reflecting the intensity and diversity of consumer preferences in the provision of television programs. Advertisers, as intermediaries seeking message exposure, can to some extent pursue different objectives to the viewers. And governments may have a different conception of viewers' needs, often reflecting concern to redress private monopoly problems or to cater to various 'externality' or 'merit good' objectives.

By contrast to demand, supply is more directly the product of technology, though this in turn has been reflected in and transformed the structure and conduct of the industry delivering the service. A central concern in the book's analysis is domestic supply competition and the policies imposed by national government, but it is emphasised that domestic decisions on supply are increasingly subject to global pressures. These pressures are physical, in the form of difficult-to-exclude signals from sources outside national borders, and they are financial, in the form of the massive economies of scale enjoyed by the major program producers who can sell at low marginal cost on international markets.

However, beyond this analysis, the bulk of the book (in fact over 60 per cent) is devoted to regional analysis of the state of the television industry. Successive chapters cover North America, United Kingdom, Europe, Japan and Australia, the Communist countries and the developing world. Naturally the effect for television of the dramatic recent political changes in the Eastern Bloc are not reflected in this book, published in 1990. One suspects that the Western media conglomerates will be assiduously cultivating access to these markets, as much as possible. The story of how the former Soviet Bloc countries respond to that pressure will be a fascinating one.

But perhaps what is most interesting in the book is the general themes that emerge from the regional studies. The exposition of the regional developments themselves are descriptive, loosely informed by the earlier analytical structure and discussion. But the common themes are nicely pulled together in an insightful concluding chapter. In this way the early analyses and the real world description come together to form a set of general conclusions.

Dunnet ultimately seeks to evaluate the state of play in television according to the single yardstick of consumer benefit. And, by this criterion, he judges the effect of the television revolution of the 1980s as highly beneficial. Above all the general move from the state monopoly or tight oligopoly situation to a looser oligopoly, characterised by supplier rivalry and contestability, is felt by him to better serve the consumer's needs. Television has become more cost-efficient, diverse and accessible in his view.

Does this mean that the broader public interest is also advanced? Basically, Dunnett's view is that "Television is light entertainment and escapism" (p. 224). Consistent with this he sees no great problems of political control arising from the media conglomerates dominating the future direction of the industry. These conglomerates are sufficiently "apolitical" and "rivalrous" to limit such concerns, in his view. Similarly, he feels that while threats to national identity and worry about the media promotion of materialism and other values of concern may be there, they can be exaggerated. And compared to the benefits from huge amounts of low-cost popular entertainment and from the dramatic expansion in the global flow of information through television, these negatives are judged to be either not fundamentally damaging or at least possibly able to be met by a bit more imaginative and innovative policy-making. For instance, Dunnett finds recent developments in public broadcasting in the UK and elsewhere promising and argues on that basis that public service broadcasting should not be vertically integrated and should be an outlet for independent suppliers. However, as regards issues of explicit violence and sex being portrayed on television and influencing behaviour, he admits that "no country has found a really satisfactory and acceptable way to regulate a code of conduct" (p. 225).

Overall, the book is a sober and clearly argued and documented paen of praise for the role of modern technology and of the forces of the market in "an age of abundance in determining who will supply the consumer with television" (p. 227). Of course, in this market-place, life may not be easy for some producers, as the consumers will choose a mix of media distribution vehicles that suit themselves. And the recent history of pay television, interactive television and possible already DBS and HDTV show there are many traps ahead in predicting technological demand patterns, quite apart from content. But all seems well for the consumer, at least in the view of the Canadian academic author of the book under review. No doubt there will be others who are less sanguine on the benefit to the public-interest of this market-led process, including this reviewer. The book is strong on explaining and understanding the role of technology in markets, but there remains considerable scope for a more serious engagement with those political and social effects of television that universally motivate public policy concern and which will no doubt continue to do so in the future.

Glenn Withers

Latrobe University and EPAC, Canberra.

Lawrence and His Laboratory: A History of the Lawrence Berkeley Laboratory, Vol.1. *by J.L. Heilbron and R.A.W. Seidel*

(University of California Press, Berkeley, California 1991), pp.xv + 586, US\$29.95, ISBN 0-520-06426-7.

This is both a remarkable and a forgettable book — remarkable in its meticulous completeness, its footnote references to the source of every statement, the extent of its bibliography and, in contrast, the relative poverty of its index; forgettable in that the detail overrides dramatic quality of many of the events it describes, and for its lack of critical discrimination between the scientific importance of the work of individuals, or to recognise, in some rather glaring instances, the difference between intrinsic value and self-advertisement by those who stand