characteristic combination of technical detail and political fantasy. The station is "equipped with two 250 kW SW transmitters of Marconi manufacture" and with "high-gain curtain arrays" and is one of the few SW stations in the world designed to operate without human supervision. It is designed to transmit a powerful signal to Japan, Korea and the People's Republic of China. Wood wonders why the UK Foreign Office found a budget of 100 million pounds to build it in Hong Kong at this time, says it is "anybody's guess" and continues. "One could possibly conjecture that the intention is to bring about an internal uprising in China with the hope that the present regime will be overthrown, thereby averting the takeover of Hong Kong" (p. 126).

Possibly one could, but the unfortunate result of such carefully hedged conjectures is to make a reader extremely wary. Even in areas where the author is probably well informed, one is inclined to seek for information elsewhere. (Thus, having read in Wood's chapter on the development of the triode, that "...This opinion is not universal and there are those who regard the true inventor to have been de Forest" (p. 9). I would try Susan Douglas,[8] who, needless to say, is not listed in Wood's bibliography). Since such a loss of credibility means that worthwhile material is too readily overlooked, the publisher and editor of this book have served neither author nor reader well. While it may for a time be intriguing for a reader to wonder about the origins of the author's varied and lively prejudices and to marvel at the range of speculations, presumably this is not what readers are looking for when they take this book from the shelves. In short, the history of international broadcasting remains to be written.

NOTES AND REFERENCES

1   L. Soley and J. Nichols, *Clandestine Radio*, Praeger, New York, 1987.
2   A. Briggs, *The BBC - the first 50 years*, Oxford University Press, Oxford, 1985.
3   A. Briggs, *The War of Words* (Vol. III of The History of Broadcasting in the UK), Oxford University Press, Oxford, 1970, p. 287.
4   R. McChesney, *Telecommunications, Mass Media and Democracy*, Oxford University Press, New York, 1993.
5   *ibid.* p. 19.
6   *ibid.*
7   *ibid.* p. 35.
8   S. J. Douglas, *Inventing American Broadcasting 1899-1922*, Johns Hopkins University Press, Baltimore, 1987.

Mary Cawte
University of Wollongong

The Age of Multimedia and Turbonews *by Jim Willis* (Praeger Publishers, Westport, CT., 1994), pp.xi + 233, US $18.95, ISBN 0-275-94378-X.

There are few discussions today regarding new information and communication technologies that neglect to consider the importance of two key themes: multimedia and technological convergence. This latest effort by Jim Willis follows the tradition by concentrating on media technologies generally, then more specifically analysing their changing nature relative to the field of journalism. For non-media scholars the text may appear to be a consolidation of concepts from a number of other related disci-

plines and applied to news media; for the media scholar it provides a broad introduction to the new technologies and how journalism, news and the consumer will be affected by this period of change and convergence.

Paramount in the discussion is the notion of turbonews, the "rabid desire for the 'all at once' experience of consuming information," an important motif that permeates the entirety of the text. Equally pervasive is the popular misnomer multimedia, in this particular case representing the convergence of previously distinct media forms such as television, computing, radio, cable, and telephone into "one multipurposed, multifaceted, easily accessible, and painlessly digestible medium" (p.2). While discourse is light on providing the reader with a tangible focus with which to grapple the two primary concepts, in his favour Willis provides a format that overcomes the awkward technical discussion of new media (including comprehensive aspects of CD-ROM and HDTV) in the second chapter, leaving space for a more palatable discourse on applications, regulation, and implications.

Chapter 3 'Multimedia Seers and Shapers' is perhaps the most interesting, relevant, current and condensed examination of the American media industry at the present time, providing an excellent overview of cooperative ventures, strategic partnerships, and pioneers in the field. Chapters four to seven concentrate on the applications provided by new convergent technologies such as interactive television (home shopping, education, and news), electronic publishing (videotex, newspapers, databases, electronic mail, and desktop publishing), and marketing and advertising (Pay-Per-View, Video-On-Demand, Infomercials, and Information Agents). Chapters eight to ten explore the implications of the new media, particularly legal, regulatory, and ethical considerations; the effects upon journalism; and added almost as an afterthought, lifestyle challenges at home and work.

The basic challenge Willis poses to those involved with the media, is the question of striking a balance between content and form, using the new technologies to improve journalism without sacrificing its principles. While not providing answers to this challenge, Willis manages to canvass a wide variety of viewpoints, provides support from a number of theoretical perspectives, and uses the most current sources possible in true journalesque style. What is lacking perhaps is a more detailed coverage of several items that one would consider, even from a news media perspective, warrant further discussion. A preoccupation with Home Shopping throughout the monologue could have been compressed to make way for more worthy discussion of lifestyle implications, particularly a more scholarly analysis of electronic democracy and the information rich and poor issues which were covered very briefly. While in-depth coverage is afforded to material covered extensively elsewhere, such as current broadcast and cable legislation in the US, less time is spent on bold predictions and forecasts that can truly be called the author's own. What is lacking are strong statements regarding the dominant type, form, and content of new media we can expect to emerge from the current period of convergence.

The greatest failing of the text however is the ethnocentric focus and limited scope of the book to the American market. While Willis consistently stresses that the new competitive environment is truly international, virtually the entire discussion centres upon the United States, a market not generally applicable to the rest of the world. This is not to suggest however that discussion within the U.S. is not comprehensive. To his credit, Willis paints a clear picture of the current state of play on this content, making sense of the myriads of conflicting indicators and viewpoints, successfully conveying these to the reader.

The Preface notes the book is appropriate for both students of the mass media and

media managers; in this context the wide coverage of technology, policy, applications, and implications is appropriate for these two audiences. For others it provides an interesting foray into journalism and news media developments within the United States.

Dean Noacco

University of Wollongong

Sociomedia: Multimedia, Hypermedia and the Social Construction of Knowledge *edited by Edward Barrett* (The MIT Press, Cambridge MA, 1994), pp. vii + 580, ISBN 0-262-52193-8 (pbk) or 0-262-02346-6 (hbk)

Sociomedia presents twenty five gender-balanced papers, mostly from a 1991 MIT Conference, on hypertext, hypermedia, and multimedia applications technology in the university. The editor coins the term *sociomedia* to direct attention from the machinery aspects onto the social purposes of IT because it is the 'complex interaction of human relationships which define "university" and "education," human relationships that are the real content of all educational technology' (p. 9). Unfortunately, his stated editorial aim to 'textualise the computer' is only partly successful.

Although divided into two sections, 'Perspectives' and 'Practices', the book is clearly directed at the practice. A major disappointment for me is the lack of critique with problems seen largely as technological matters. Nevertheless, those already committed to the wider use of information technology in universities will find much of interest. There are fifteen papers on teaching and learning applications, particularly multimedia visualisation - combining graphic, textual, audio, and video representation cross-referenced with audiovisual and textual information from other disciplines (Davis p. 392) - and virtual classrooms.

Multimedia papers cover curriculum areas ranging from Physics (CUPLE Project) and Engineering Design (EDICS and CATS at MIT) to Literature (Brown IRIS Intermedia Project), as well as successful applications in urban planning and geology engineering. Janet H. Murray shows how multimedia programs can enhance cultural understanding in Language Learning. Surrogate travel is provided by embedding maps on one another so that students can obtain increasing levels of detail in the simulated reality of travel. Other language programs which allow the user to interact and vary the narrative structure (eg. the programs *Philippe* and *No recuerdo*) look interesting, but conversations, it is admitted, remain stilted and limited. Anderson's assessment of the *Medical Centre* program that links problem solving protocols of the Patient Module to relevant content information in Hypermedia databases indicates that medical students can assess the solution to medical problems but, more importantly, the heuristic of the decision making process.

Virtual classrooms (VC) are defined by Slatin as 'a process whereby students and instructors interact with one another and with the course materials through the medium of interactive written discourse' (p. 31). Those universities that are attempting to provide education on the cheap by technologising intellectual labour would do well to reflect on the book's papers on VCs. Consistent with Barrett's theme of textualising the computer, Hiltz's paper provides two worthy objectives: improved access to advanced education for those in communities made remote by distance, time factors, or circumstances; and improved quality and effectiveness of education by promoting a collaborative learning environment (p. 348).