Book reviews

The Multimedia Handbook, Tony Cawkell, Routledge, London and New York, 1996, 461 pp., £90, ISBN 0 415 13666 13666 0.

You can hardly review your own book – we will have to see what others think of it. However, you now know that it exists. It is of some interest to compare it with the Encyclopaedia which is reviewed next; these two books are of about the same size and price – both are large and expensive. Both contain a core of material of lasting interest, accompanied by other material which will soon go out of date, and some which is out of date already. This unavoidable aspect of the printed book will no doubt be dwelt upon by critics who need ammunition. Should costly books about fast-moving topics be published on some other media?

If the answer is yes, this is hardly the place to try and argue your own efforts out of existence but it must be said that a different medium, such as a CD-ROM with, say, an annual up-dated reprint, could cope with the problem of obsolescence. But the advantages of easy browsing, and the simplicity of scanning and reading still make the book very hard to beat.

In this case the Multimedia Handbook is by one author and has quite a number of illustrations while the Encyclopedia is by no less than 165 authors and has no illustrations. In the Multimedia Handbook an ordered list of nearly 500 references is provided, a glossary, and an index. In the Encyclopedia the longer entries contain their own references, some with 30 or more.

International Encyclopedia of Information and Library Science, edited by John Feather and Paul Sturges, Routledge, London and New York, 1997, 492 pp., £85, ISBN 0 415 09860 21.

As the editors say in the Preface, this book "takes a broad sweep across the domain" but they ask "Where do we draw the lines?". That is exactly the problem that I faced with the Multimedia Handbook. What is multimedia and what is not?

Any person interested in the broad area should have access to this book. The people who need it most are people practising in those parts of the field which ought to be based on a thorough knowledge of information and library science. I am referring to the areas receiving the most hype. The people operating in them are short on knowledge and long on sales superlatives. I fear that they may not be among its users.

The editors say in the Preface: "The management and organisation of libraries, and the skills and techniques of librarian-ship form a large part of the book", but there is a great deal about other matters as well. If the authors would claim that there is enough about IT to satisfy most librarians, I would agree with them.

This book will shortly be reviewed at length in the *Journal of Documentation*, so this is just to tell you that it exists and you should be sure that you buy or can borrow it.

The Subject Approach to Information, A.C. Foskett, Library Association, London, 1996, 458 pp., £39.95, ISBN 1 85604 048 8.

Professor Foskett's first appointment was at the College of Librarianship, Wales. Later he moved to Loughborough University, AERE Harwell, and the Metal Box Company. He was head of the Library

School at the University of South Australia when he retired. Foskett is well known in the profession and this book, which has now reached its fifth edition, is a standard work on the subject.

The book has a number of chapters contained within its five parts – Theory of Information Retrieval Systems; Pre-coordinate Indexing Systems; Pre-coordinate Indexing Languages; Post-coordinate Indexing Languages; The Future and Digital Libraries. Each chapter is well referenced and, as we might expect, the book ends with a good index.

Foskett well appreciates the general problem of defining his area. "Another damn'd square book" writes Foskett in his Preface, quoting the Duke of Gloucester's reaction to the second volume of *The Decline and Fall of the Roman Empire*. Foskett continues "I do not aspire to the heights of that work, but I must admit that the description might be applied to the present volume...". He has substantially revised all parts except Chapter 2, covering fundamentals. The book's title "The Subject Approach to Information" conceals the fact that it is wide-ranging, very interesting, and should be mandatory reading for everyone who designs, sells, or writes about electronic information systems. We must assume that every librarian worth his or her salt, has it at their elbow.

Even if they find the middle part of the book heavy going and may think that it does not bear on their activities, the systems people should buy it to read and take to heart the first one hundred pages about the theory of information systems. Chapter 2 covers the basic theory, stemming from Cyril Cleverdon's work, very clearly. It continues with an explanation of methods of searching databases and describes procedures for systematic indexing.

Most of the book is about indexing, indexing, and more indexing. The topic is rarely mentioned by supporters of the current electronically-based information systems – implying that indexing is a dry, boring, subject which would debase the "ain't it marvellous!" image. That is why many of today's systems excel in quantity – and, as they say so descriptively in another country, in bells and whistles – but not in quality.

Broadly speaking, information files contain factual information or conceptual information, or both. For instance the factual tag "A.C. Foskett; The subject approach to information. Library Association. 1996" contains all that is needed to find the book in a vast library provided that you already possess that information.

However, finding a book which contains comprehensive information about the concepts in which you are interested – for instance, classification schemes or on-line public access catalogues (well described in this book) – is another matter. These remarks introduce the problem of meaning ambiguity which a good index purports to solve.

In this book the important difference between pre-coordinated and post-coordinated indexing systems is emphasised, but from Foskett's definitions I do not find it easy to visualise the difference. Having picked up the subject *en voyageant*, so to speak, rather than having been taught it, I visualise the differences as follows.

First, in a pre-coordinated card index containing cards referring to information about, say, Networks, CD-ROM; Networks, intelligent; Networks, LAN; Networks, library; Networks, WAN; the term-pairs will have been chosen at the time of indexing.

Second, in a post-cordinate computer records system, the term-pairs may be chosen after they have been assigned; using the same terms I could choose the combination "networks AND intelligent AND WAN" – a combination which could not be retrieved with one pass using the pre-cordinated system.

An indexing language consists of a vocabulary for naming subjects arranged according to an agreed syntax. Foskett describes a number of pre-coordinated indexing systems and languages created before about 1960 and still widely used in libraries. They include the Dewey Decimal, the Universal Decimal Classification (UDC), Colon, Library of Congress and others.

The arrival of the computer in the nineteen sixties enabled the potential value of a post-coordinate system to be realised; the book continues with descriptions of several schemes often characterised by the use of a thesaurus to standardize the language, provide preferred terms, and define semantic relationships between terms – as a simple example, the instruction: "for heat insulation USE thermal insulation". Major thesauri used in science and in the social sciences and humanities such as Inspec, Engineers Joint Council (EJC), the National Library of Medicine's MESH, Educational Resources Information Clearinghouse and others are described.

The two concluding chapters cover Visual Arts and Graphics and Digital Libraries, otherwise known as virtual or electronic libraries. The author writes: "One of the major benefits of computer access is the availability of multimedia. However, there is little point in having access to large amounts of pictorial material if we cannot find what we want". He continues with a description of the two major image indexing schemes – Iconclass and the Art and Architecture Thesaurus.

We may take it that Foskett would probably say, if asked: "The technology and the systems have their place and on occasions may be invaluable, but we cannot do without the traditional skills of librarians. Long live librarians!".

Rethinking University Teaching, Diana Laurillard, Routledge, London and New York, 1993 (Reprinted 1994, 1995), 284 pp., £14.99, ISBN 0 415 09288 4.

Laurillard is a senior lecturer at the Open University. The book's sections cover What Students Need from Educational Technology; Analysing Teaching Media; The Design Methodology. There are appendices listing educational journals, a list of useful addresses, a glossary and an index. 105 items are cited in the reference section. I will echo the advice of a reviewer, printed on the back cover: "a copy of it should be sent to the Vice Chancellor of every university with an exhortation to take some time to read it carefully".

This book is about teaching philosophies and the usefulness and application of teaching media. In the chapter "Analysing teaching media", audiovisual media like television and video are discussed. The next chapters cover hypermedia, interactive media, adaptive/tutorial media, video conferencing and computer-mediated conferencing. The book goes on to discuss the application of multimedia methods for effective teaching.

In her Introduction, Laurillard says: "Vast sums are made available to investigate the best way of using computers where the subject matter taught is incidental. The more rational approach, seldom adopted, is to offer vast sums to investigate the best way of teaching a particular topic, and through that to fund the use of computers as an incidental part of the strategy. As a result of irrational funding we have studies that tell us that computers, video, etc., can be effective and can also fail utterly, but we have very little idea of how they might work in combination, or how design relates to the content being taught".

And later: "The development of educational media has an odd mix of engines driving it – technological pull, commercial empire-building, financial drag, logistical imperatives, pedagogical pleas – and between them they generate a strange assortment of equipment and systems from which the educational technologist must fashion something academically respectable".

In the Hypermedia Chapter, Laurillard sets out her philosophy about knowledge and information: "Within this account, clearly knowledge is not the same as information". The success of computer-based information processing "has allowed computers and information technology to pervade many aspects of our life" but "knowledge is information already transformed: selected, analysed, interpreted, integrated, articulated, tested in application, evaluated".

On hypertext, Laurillard considers that: "As an information storage and retrieval system it is a very well designed medium. But as an educational medium, enabling the student to develop their academic understanding, it has little to offer... These systems should not be invested in greater powers than they have. Their attractiveness and logistical convenience makes it likely that they will be used increasingly to replace other information retrieval systems, but it would be absurd to suppose they can replace anything else... It will be very easy for them to produce extensively documented rubbish unless the focus is kept firmly on the quality of the knowledge they generate from these systems".

Quality is a very difficult attribute to measure. How do you tell when the quality of knowledge is being improved as the result of a re-assessment of teaching strategy and improvements in the design and application of teaching material using some kind of electronic system? It is very difficult to quantify an increase of such a subjective attribute.

In Chapter 12 "Effective Teaching with Multimedia Methods" a "Blueprint for the organisational infrastructure" is presented. It specifies what should be done and by whom. A variety of recommendations are made, of which "the evaluation of pedagogical effectiveness" is of particular interest. "The academics' experience of using new technology materials is the best source of information about the value of this kind of learning method... unless more academics contribute to building this knowledge, the new technologies will be no more than costly failures".

According to the 1995 Teaching and Learning Technology Programme (TLTP) Spring programme catalogue, the programme is receiving "probably somewhere in the region of £75M... the largest learning technology initiative ever undertaken within UK higher education". That is certainly a great deal of money. The catalogue states: "New and innovative ways of delivering higher education to our students can only be beneficial".

Continuing: "However, to successfully implement these new methods will require a commitment from each institution to rethink its teaching and learning strategies". It would be interesting to discover whether Laurillard's Blueprint is being implemented and whether academics *are* supplying information about the value of this kind of learning.

Furthermore, the material in Laurillard's book has the ring of experience and the advice given should be heeded. This raises a question about TLTP's funding. Perhaps, to repeat Laurillard's suggestion previously quoted "The more rational approach, seldom adopted, is to offer vast sums to investigate the best way of teaching a particular topic, and through that to fund the use of computers as an incidental part of the strategy" would be a rewarding activity to fund.

Fifty Years of Information Progress: a Journal of Documentation Review, edited by Brian C. Vickery, Aslib, London, 1994, 234 pp., £40, ISBN 0 85142 327 2.

I am not sure why this book has been sent to me quite recently when it was published in 1994. It is nonetheless interesting for that. It contains an Introduction by Brian Vickery with contributions from Tom Wilson, Peter Lewis, Alan Gilchrist, Stephen Robertson, Jean Tague-Sutcliffe and Maurice Line.

The book is extremely well referenced, most contributions having at least 100 references, but this does not necessarily mean that the selection provided is always well chosen. For example, it is odd that while citation analysis is mentioned several times in Vickery's table "Key topics covered in *J.Doc*", the work of Eugene Garfield who invented the Science Citation Index is not among Tague-Sutcliffe's 33 citations.

Tom Wilson's chapter contains some interesting information. He considers that the Baltimore study into the information needs of ordinary citizens "stands as a benchmark for large scale studies of this

kind... the rank order of major information problems or questions cited by residents would probably stand today, although issues relating to crime might be somewhat higher up the list". The top five issues of interest are Neighbourhood, Consumer, Housing Maintenance, Crime and Safety, Education.

Peter Lewis was the Director General of the British Library's Bibliographic Services Division. His chapter is noticeable for the frequent occurrence of the remark "... was not mentioned in the *Journal of Documentation*". Evidently he believes that in this area, at least, *J.Doc* might have done better. Lewis, not unexpectedly, devotes a good deal of the chapter to a discussion of MARC and UNIMARC – a US-developed system for a format used for the exchange of library catalogue data on magnetic tape. Variations of it have been adopted in many countries.

Alan Gilchrist's chapter about classification cites Foskett's work's several times (see the review above) – in fact, this chapter almost represents a condensed version of parts of Foskett's book although the approach is somewhat different and I found it easier to read. Gilchrist has no doubt about the significance of Cyril Cleverdon's Cranfield experiment in the nineteen sixties. It is extraordinary that Cleverdon is not included among the many biographies provided in the Encyclopedia reviewed above. Gilchrist says "It is clear that Cranfield 1 had a major impact on our perception of information retrieval systems". Gilchrist also draws attention to another significant historical event – the 1957 Dorking conference on "Classification for Information Retrieval" which gave rise to "The Dorking Legacy". He particularly mentions the influence of S.R. Ranganathan and lists some of the people who attended the conference – virtually everybody who was anybody in this field.

Stephen Robertson traces the history and describes current practice in his chapter about computer retrieval. He mentions a 1949 article which discussed Bush's ideas in passing, but I reckon that Vannevar Bush's Rapid Selector, conceived in 1935, was the first "computer" retrieval system, even though programmable computers had not even been invented. It was a machine for retrieving coded microfilm records. Claude Shannon was a member of the design team. Bush thought that the machine would revolutionize libraries. The machine never worked properly but it lingered on until the sixties.

Robertson discusses theories and real systems and concludes that "while there is not now (and may never be) any overall theory of information retrieval, new models and theories continue to contribute to our understanding".

In the chapter "Quantitative methods in documentation" Jean Tague-Sutcliffe provides a table of the number of papers about different subjects which appeared in *J.Doc* between 1945 and 1993. There were ten or more papers about Citation Analysis (27), Informetric Distribution (19), Library Loans (12), Obsolescence of the Literature (10) and Journal Scattering (10). Tague-Sutcliffe discusses these topics at length.

The concluding chapter by Maurice Line is about libraries and their management. Having been Director-General of the British Library's Lending Division, Line is a realist. He thinks that some *J.Doc* authors "enter into a phantasy world where they play with theoretical models that require unobtainable data and would be of no practical use if the data could be collected". Line's chapter is a thorough examination and explanation of the subject under the headings Major Events, Trends, Functions and Objectives, Budgets and Costs, Modelling, Collection Management, Evaluation and Performance Measurement, Personnel, Mechanisation, National Library Issues, Co-operation, Library Instruction, Marketing, Management Research and Conclusion. The chapter ends with nearly 200 references.

The *Journal of Documentation* was first published in 1945 and is probably the most highly respected among library and information science journals. This book describes its progress and substantiates its authority, besides being a very good source of information about specialised subjects.

Tulip, Elvira, and Future Libraries

The remaining reviews are about electronic libraries; there are considerable differences of opinion about their future. Tulip is realistic, Elvira is optimistic and Future Libraries is extravagantly pessimistic.

Tulip Final Report, Marthyn Borghuis et al., Elsevier Science, New York, 1996, 368 pp., free on request, ISBN 0 44 82540 1. (See also the Internet under WWW.Elsevier.NL for the complete report.)

The findings of the Tulip project are now fairly well known, but this report, published right at the end of 1996, contains full and sometimes very interesting details. It describes a thorough investigation into technical, behavioural, and economic issues associated with the networked delivery of the contents of 43 Elsevier material science and engineering journals to desktops in nine large American universities.

In Tulip, the size of Elsevier's database is as impressive as the size of the audience. 74,000 articles from the journals were distributed on 537,000 pages to the participating universities. Some figures are given for user's costs. For instance, MIT reported that "hardware costs consisting primarily of server and storage were approximately $100,000".

Interest in this very large experiment lies in the fact that it includes an assessment of the real-world results obtained when printed journals are replaced by their electronic equivalents – scanned reproductions of printed current journals. In much of the earlier work on this subject, journals were to exist in electronic form only. Roistacher's "Virtual Journal" (*Computer Networks*, 1978) was based on an idea which has come and gone "The Editorial Processing Centre". The centre would be a shared facility used by editors and authors for producing journals including electronic journals.

In a previous article in IS&U entitled "Interesting articles of the 1990s" I referred to Lancaster's 1995 article "The evolution of electronic publishing" (*Library Trends*). Lancaster mentioned two major experiments in the late seventies – Turoff and Hiltz's Electronic Information Exchange at the New Jersey Institute of Technology and Shackel and Pullinger's work at Loughborough University. By 1995, says Lancaster, "the probability of being able to sustain a scholarly journal solely in electronic form has increased considerably... Many different periodicals now exist within the Internet".

Work on electronic journals was going on before Hilz and Shackel reported their findings. The first mention that I have been able to find was in a 1972 article by Harold Bamford in the *Journal of the Washingtom Academy of Sciences*. John Senders from the University of Toronto was an active early protagonist. He came over to the UK and talked about it at a conference of the Institute of Information Scientists in 1976 and subsequently published an article entitled "An On-line Scientific Journal" in the Institute's magazine.

In 1987 David Freeman, writing about "The false start of the electrical journal – a look at human factors and automation" in the *Proceedings of the Asis Annual Meeting*, wrote that "The conclusion seems to be clear enough: considerable improvements in present technology are required to make the electronic journal widely acceptable to the scientific community".

Since then the improvements seem to have been sufficient to produce the necessary encouragement. More than that – Electronic Libraries have become fashionable. In the UK a three-year budget of £15,000,000 was established in 1993 by the Joint Information Systems Committee (JISC) following a report known as the Follett report. Electronic Journals are one of the major activities; many universities received research funding. Four universities – Imperial, Warwick, Southampton and South Bank received one million pounds between them. Nearly one million pounds has been provided in support

of "The Electronic Super Journal" to be considered by a consortium of publishers and the Universities of Loughborough and Manchester.

But returning to the report being reviewed, the Tulip report is comprehensive. It consists of chapters covering project description, technical aspects, promotion, user behaviour, organisational and economic issues, implications for the future, and appendices describing the participating universities, Internet delivery problems and other details. Elsevier needed to obtain some information which required human assessment on an appropriate scale while the universities were able to assess the consequences of implementing a much discussed idea.

We can only guess whether the politics of confidence was a consideration here. It is unusual for any commercial organisation to release such frank and detailed information which must be of great interest to their competitors. Presumably the inclusion of such a large effort from the universities precluded the idea (if there was one) that the outcome should be confidential.

This is in marked contrast to the attitude of organisations currently undertaking interactive television "Information Highway" experiments. Like publishers, they need operational experience and user reactions. For instance, the reaction when calling up people at BT about trial results, was "this information is confidential".

The Tulip report says that "The general concept underlying the project was very well received by students and faculty... there is enthusiasm about the concept of desktop access to electronic information..." and, by the end of 1995, the project was "very rewarding for all partners who have learned many valuable lessons that will enable them to better face the long transition phase towards digital libraries".

However, the experience seems to have thrown up numerous problems and constraints. The following comments from the report will convey the general flavour:

"Too often, work on digital libraries, not to mention much theoretical discussion, proceeds without a thorough grounding in the realities of costs. There are certain assumptions which precede this state of affairs, among them the notion that somehow libraries will be cheaper than print libraries, perhaps even free. One suspects that this arises from the misplaced hope that digital libraries will liberate us from the difficult cost dynamics of print libraries. Tulip proved to its participants beyond a doubt that building digital libraries will be a costly and lengthy process".

"All participants have been confronted with the harsh economic realities of building even a prototype of an electronic journals system" says the report.

"Even with anti-aliasing technology, page images displayed on the computer screen are not really used for reading". I asked Elsevier for more information about the user aspects of this interesting comment. After all the research that has been done on reading from a screen, here we have the reactions of a large body of real-world users to it. In Tulip the screen was used for scanning but articles to be read were then printed. Elsevier cannot see any solution to this print-on-paper preference. Even with today's relatively high quality displays, people still prefer to read publications in print.

Continuing:

"If there are no libraries we are going to be confronted with a lot of inconsistent interfaces, financial arrangements, delivery vehicles... and the library can, at least potentially, add value by making that coherent".

"Users will only move to electronic publications when they find the content they need in sufficient quantity. Having journals in electronic form and bringing them to the desktop are a necessary but not sufficient condition for the scholarly user. You must deliver a certain critical mass of needed information to warrant learning a new system or accessing information in a different way". (This is, of course, the problem that there has always been with all information systems.)

Tulip is being succeeded by a full scale production commercial program called Elsevier Electronic Subscriptions (EES). All Elsevier's 1100 plus titles are available in electronic format. Elsevier Science is offering EES to a number of selected high end customers among which will obviously be the Tulip participants.

Electronic Library and Visual Information Research (Elvira 2), edited by Mel Collier and Kathryn Arnold, Aslib, London, 1995, 152 pp., £30, ISBN 0 85142 354 X.
Electronic Library and Visual Information Research (Elvira 3), edited by Mel Collier and Kathryn Arnold, Aslib, London, 1996, 184 pp., ISBN 0 85142 383 3.

According to the encyclopedia reviewed above, an Electronic Library is "The concept of information stored electronically and made accessible to users through electronic systems and networks, but having so single physical location...".

In the UK, 1993 was the year that the Joint Information Systems Committee established the already mentioned Electronic Libraries Programme with a budget of £15 million over three years – a response to the "Follett Report" which contained recommendations about "ways in which information technology in an electronic library can help libraries cope better with the increasing demands on services" (Quotation is from the Elib programmes leaflet).

Most of the authors in Elvira 2 and 3 obviously believe that electronic libraries, or at least the aspects of them which are the subject of their research, represent the way forward. Professor Tom Wilson, a much respected member of the profession says (Elvira 2): "Anyone who preaches the disappearance of the book and journal, in totality, is likely to be on shaky ground. The death of libraries has been much exaggerated... I suspect that there is a huge, fundamental inertia in the system that will be difficult to overcome". However, having discussed possible changes in scholarly communication, Wilson concludes: "if they happen (or perhaps it is even now possible to say when they happen) libraries must change radically".

The Elvira meetings show that certain components of an electronic library such as electronic journals, image indexing and retrieval, and information searching and retrieval in general are receiving most of the attention. Electronic journals have the longest history and are still receiving most attention.

Social aspects and cultural traditions are also being considered. McGuiness and Burke (in Elvira 3) talk about "the paradigm shift from ownership to access... the academic library shifts from a collection-centred to a user-centred base... end users must learn to physically locate and access the relevant sources". The librarian "will guide the user to the best information which may or may not be held locally". Professor Day and others write about "The Culture of Convergence" and quote some ideas from the nineteen eighties where "a Scholarly Information Centre rather than the library is the centre of the university". Referring to the United States: " 'Convergence' (between the computer centre and the library) was often achieved through a change in management structure such a the appointment of a Chief Information Officer which became a common feature of US convergence". But the authors wonder: "Does the librarian lose out to the technologist?".

These two publications provide a good overview of what is happening in this field. We are promised an "Elvira 4" in due course.

Future Libraries: Dreams, Madness and Reality, Walt Crawford and Michael Gorman, American Library Association, Chicago and London, 1995, 198 pp., £19.95, ISBN 0 8389 0647 8.

"In the gap between the realities of library life and the dreams of some futurists the absolute predictions of the latter are made in the comfortable knowledge that nobody will denounce them... the smart thing is to make predictions for decades in the future; with luck the prophet will be dead before the predictions turn out to be wrong."

Walt Crawford is a senior analyst at the Research Libraries Group Inc., and a past President of the LITA division of the ALA. Michael Gorman is Dean of library services at California State University. He is a recipient of the ALA's Margaret Mann citation and Melvin Dewey medal. The above quotation sets the tone of the book.

These authors present a robust outspoken defence of print and present libraries. "One of the sillier forecasts of an all-electronic future is the idea that everyone will read from computer devices... The facts are that books work and they work better than any alternative for *sustained reading*... there are people who would really rather read text on a screen than on a page, simply because it *is* on a screen" and "Libraries are not wholly or even primarily about information. They are about the preservation, dissemination, and use of recorded knowledge in whatever form it may come...".

Chapter 3 "The madness of Technolust" starts with the quotation "The only difference between the men and the boys is the price of their toys". "Technolust" is typified by the people who bought Pentium-based personal computers to replace their 486/66s. They were more than twice as expensive and showed a 20% improvement in performance. "One has to be in the grip of a powerful compulsion to regard an expenditure of more than 200% for a 20% improvement as a bargain. Nevertheless the techno-junkie magazine reviewers said 'gotta have it *now*'... techno-junkies see technology as an end in itself".

In regard to technolust in libraries "... electronic resources are perceived as having a higher status than print resources". This may help to explain "the number of seemingly thoughtful and experienced library leaders who have succumbed to a simplistic all-digital view of the future".

Crawford and Gorman make a valid point about the relationship between journal publishing and the sociology of science. "Our present system of journal publishing, defective though it may be, ensures rewards for publishers, writers, and editors... there is no guarantee that a system of electronic journal publishing would yield these rewards and thus fuel the engine that drives progress in science and in other fields".

I could find only one reference to British authors in this American-oriented book. It is to Collier, Ramsden, and Wu (Essen symposium *Opportunity 2000*), with the quotation "The publishing industry will become totally electronic... for academic information purposes the book will eventually become solely of antiquarian or aesthetic interest... If one does not accept these basic tenets then one is not facing reality". Crawford and Gorman's verdict on these comments is "This nonsensical marketplace argument is essentially harmless unless it is used to make investment decisions or is accepted by powerful and gullible people".

There is something in all this, but the weakness of the pro-book argument is the obvious effort which has been devoted to trawling for data which makes the case. Straw men are set up to be demolished. For instance, in the chapter "Deconstructing dreams of an all-electronic future" the thinking of "those who project it" is outlined; any reasonable person would pay little attention to the few extremists who project such a future. It includes such statements as "All data on all subjects will be available at all times... everyone will consider this the only way to deal with texts, graphics... Librarians will cease to exist... etc., etc."

However, the authors recover their *sang froid* in the closing chapters with recommendations about what, in their view, the future should look like: "A library should use all available methods to provide service outside the library... Major national databases are cost effective enhancements to the service provided by the library's online catalogue... effective library alliances use a variety of real-world tools and techniques while continuing to experiment... etc."

The resounding conclusion is "The surest path to irrelevance is to allow yourself to be defined by someone else. Librarians who accede to being called 'information professionals' and libraries who go willingly into a subordinate role in a municipal 'leisure division' or a university 'information technology division' have lost control of their destinies".

This is an amusing book and is informative provided you are wary of "the straw man" approach.