Some reflections and thoughts on the future of books and libraries

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The article is the culmination of a quarter century's observations on the ongoing debate for ascendancy between printed books and the electronic media. Implications for library and information professionals and their institutions are considered. At the dawn of a new century and coincidentally the millennium, the opportunity is taken to reaffirm the author's strong faith and belief, after almost a half-century as librarian, that the printed book will survive in the foreseeable future.

Hierdie artikel is die kulminasie van 'n kwarteeu se waarneming van die voortslepende debat aangaande die oorheersing van gedrukte boeke deur die elektroniese media. Die implikasies vir biblioteek- en inligtingswerkers en hulle inrigtings word bespreek. Na bykans 'n halfeeu as bibliotekaris, op die vooraand van 'n nuwe eeu en toevallig ook die millennium, word die geleentheid gebruik om sterk vertroue uit te spreek dat die gedrukte boek in die naby toekoms behoue sal bly.

Twenty years ago in the course of addressing the Third South African Conference of Bibliophiles in Johannesburg, I took the opportunity to reaffirm my faith in the future of the printed book. I was inspired to do so at the time by the action of the U.S. Library of Congress in establishing the Center for the Book (1977) and in affirming its belief in the importance of the printed word and the book. Both these actions were aimed at marshalling the American nation's spiritual, physical and financial support for the book.

More recently, in 1998, a Centre for the Book has been established in Cape Town in a building formerly occupied by the Cape Archives. This is essentially a component of the South African Library, one of the country's two national libraries. This is the way it should be: an inherent part of the country's national preservation library.

Such an act of rededication to the concept of the printed work is desirable from time to time because books have always been controversial. This has certainly been the case for the 500 years since Gutenberg, primarily because of their content. One has only to think of names like Galileo, Voltaire, Darwin and Marx to appreciate that the ideas in their books shook churches, toppled monarchies and even spread revolutions. The book always was a powerful method of ushering change in society.

Technological challenge ... and rival

As we move towards the end of the present century and the dawn of the new millennium, the world finds itself deep in the midst of another kind of change: the *form* of the printed word. The television set and the computer are two outstanding examples of technological devices which continue to present a challenge to books, publishers and libraries; all the more so now that video-cassette recorders on the one hand, and computers on the other, have been brought within the reach of individuals.

The combination of computers and television has brought with it a rival and competitor to the printed page because of the flexible approach and speed of textual display which are inherent features of this recent technology. Computer-controlled video discs have the facility of storing the contents of thousands of books on a thin plastic sphere. CD ROMs are an established feature of technological development. Television sets can be used to call up millions of pages of texts from remote data banks in various parts of the world.

Hence the undeniable fact is that no matter whether personal computers or satellites are involved, *textual* messages are being carried and they do pose a threat to conventional print in general and to the book in particular.

The end result is not always as revolutionary or even as different as one would expect. In the publishing industry for example, electronic technology has superseded manual handling of type, yet the end product is still the same printed object, no matter whether a book, periodical or newspaper is involved.

Computers are now an integral part of publishing activity; even to the extent that authors (once accepted) submit their manuscripts on computer discs.

Utopian view of electronic publishing

It is not difficult to speculate on what could happen if this situation were to be carried to an extreme. In the editing, revision and preparation of a manuscript for publication, if the composition and creation of a text image and if the printing, marketing and distribution of books could all be handled electronically through computers, then the end result would be instant publication. Logically this situation could be further extended through authors, publishers and readers communicating with each other at low cost, because there would be no need for editors, typesetters, printers, marketing organizations and book shops as we know them today. Even the appropriate accounting and royalties could be executed at the touch of a button. An article could be submitted to the editor of an electronic journal in electronic form and the referee's participation would be electronically executed as well! The end result is too wondrous to even contemplate: billions of pages of information conveyed at low cost and

rapid speed. The media have published numerous features heralding this book of the future.

Importance of publishers and readers

However, it is important to remind oneself of the sobering thought that all this existing technology cannot change several basic aspects of the book world. The vital role of the publisher is to decide what to publish and how best to reach a relevant audience. Placed as he is between author and reader, a publisher adds authority and fulfils a selection process. Can one really afford to sacrifice so many features which enhance books: page size, type selection, logo, layout, cover; to all of which a reputable publisher is so dedicated?

The importance of readers in the world of books should also not be underestimated, because they cannot be deprived of decisions on what to read and what to buy. The point is that readers do have a way of getting their messages through to publishers: their enthusiasm for television plays, concerts, records and leisure results in a flow of books because books mirror society's activities.

Accordingly, it is safe to say that the future of the book depends more on what readers need than on what publishers want; publishers do tend to respond to public demands.

Books and technology: a role for each

It should also be remembered that books, despite the ravages of inflation and the near disastrous effects of local currency devaluation, hold their own price-wise with photocopiers, telephones, faxes and computer print-outs.

This is not to deny that there are instances where research workers seek specific and highly specialized information for professional and research purposes. The new technology does have the edge in this quest for reference material and research data. However, the mental stimulus and pleasure which are experienced in the reading of a novel or play – and even in the close reading of a literary text in the learning situation – is best achieved through the medium of books as we know them today.

It is nonsensical to speculate that the millions of books presently in print – and the hundreds of thousands of books published annually – could be eliminated in favour of a computerized/television screen combination and online databases. Libraries will remain centres of interaction between the physical repositories which they constitute and the information they disseminate, and in this way they will continue the process of preserving human culture and experience recorded over many centuries and in many languages.

Prophecies of gloom dispelled

I do not share the ominous predictions of the prophets of gloom who include in their number highly regarded information scientists. These individuals are on record as saying that by the year 2000, print on paper will have given way entirely to electronics for the publication of factual information; the prognosis being that a scientist in the year 2000 will not need to write or even visit a library in the course of his work. It is envisaged that he will create all the information he needs at his terminal linked to the relevant bibliographic databases. Already these prophets of gloom have been proved wrong.

It is however not necessary to go to extreme lengths in defence of the printed book as has been done in some American towns where two days a week were declared as non-television days to counteract the adverse effects of this medium.

Future of books

No efforts should be spared to promote the cause of the book. The former Librarian of the U.S. Congress, Dan Boorstin (an historian) and the former Executive of the British Library, Sir Harry Hookway (a chemist by training), set excellent examples in this regard. Both regarded the newer means of information retrieval as modifications, not dispossessions, of the previous methods. By analogy, the discovery of photography did not spell the end of painting, just as the advent of the gramophone did not result in the end of the live concert; the introduction of radio did not result in the death of the newspaper; and theatre was not doomed when cinema appeared. So too, is the case of computerized databases. The public uses them for certain information, and databases will serve their purpose but the future of the printed book remains assured.

Underwood, in an important paper delivered at the Seventh South African Conference of Bibliophiles held in Cape Town in 1996, while acknowledging the significant role of electronic media, nevertheless comes out strongly in favour of the printed book in these terms:

> 'Let me say that I do not think that the book will ever be supplanted. It is successful as a tool and can be a beautiful object. It is also the culmination of many centuries of experience and experimentation, a process which continues. By comparison, the design and presentation of electronic documents presently represents an early stage in the development process' (Underwood 1997:52).

Libraries, librarians and change

It does not make sense to envisage the end of libraries as we know them today. The library – no matter whether it be a university or public library – is not only a building for conserving knowledge but an *intellectual* means for the organization and dissemination of information. It is the librarian's role rather than the library itself which has changed in the new information age. Although the library has changed physically to accommodate the new technology, it will nevertheless remain as the central focus for millions of people who use libraries each day: for education, information and recreation.

Experts agree that developments over the next quarter century can pose a threat to the existence of the library profession, but nevertheless a challenge exists for the profession

to make its services more valuable to the community of users than they have ever been before.

Maurice Line has provided one of the best balanced all-round perspectives of the future (Line 1993). Line, well known and greatly respected in South Africa, is conscious of the hazards of attempting to provide forecasts for libraries and information centres of the next quarter century, especially as so many previous forecasters were wrong in their prognoses. This has certainly been the case in technology, in telecommunications, in automatic indexing and in machine translation. A complication is that human beings react in surprisingly different and unpredictable ways to evolving technology, and an insoluble situation is sometimes reached when people do not like a certain development and refuse to make use of it. Line believes that in 2025 there will still be printed journals, but rather fewer, with many of them being available in both printed and electronic form. Much material that is printed at present will be stored in databanks on a co-operative basis. 'Popular' periodicals will also continue to exist in their present form. Line forecasts that books will not be greatly affected either.

The paperback, affordable and convenient, is certainly here to stay. Some books (with limited markets) will be published on demand, but several categories of books are sure to benefit from the electronic revolution. They are reference works on CD ROM, books on fine art and music which can benefit from mixed media, and student textbooks, which can easily be stored on discs which can readily be used with 'electronic books'.

Line's forecast is that printed books and journals will continue to exist alongside a variety of electronic media and online access to much material. Information media, whether printed or electronic, will still need to be stored and accessed through libraries, as there are no alternative facilities which are so well fitted to fulfill these functions. Electronic media will continue to be available to academic campuses and industrial complexes through networks, with online access possible from home, laboratory, office desk or from within the library itself. Line completes the scenario by reminding readers of the high cost of hardware, of the fact that most library catalogues will have been automated by 2025 with their contents being entered in national files (such as SABINET), and with these files universally accessible. Expensive economics will favour remote access rather than costly local storage, with strong central units (and small satellites) winning favour. Expert systems and information analysis will be major activities. Industrial, academic and public libraries will have become management information centres. The private information section will have been fully developed by 2025 with libraries themselves becoming more commercially orientated than they have ever been. Libraries in the public sector will be expected to earn from 40 to 60% of their keep. The new South Africa will in all probability experience difficulties in servicing the hitherto deprived sections of society, and cost-effectiveness will be hard to achieve.

Public libraries will help to equalize access to information by subsidizing access to the disadvantaged. Service given, rather than the size of the stock, will be the crucial factor. Librarians themselves will also have changed by 2025. The conventional librarian of today will have been replaced by a person with expertise in automation, in marketing, in costing, in information technology, and above all in management ability; librarianship as we now know it, will have been largely deprofessionalized.

In an essay on artificial intelligence and expert systems, Lancaster reaffirms what he told South African audiences during his visit to South African in 1992 (Lancaster 1993a). The benefits of expert systems include making scarce expertise more widely available, freeing the time of human experts for other activities, promoting standardization and consistency, providing incentives for creating a database of knowledge in a permanent form and performing at a consistently high level. He finds that despite these advantages, the true intellectual tasks associated with the library and information profession: subject analysis, interpretation of information needs and search strategy, are not easily delegated to machines. He concludes that whatever may happen to the library as an institution, it seems unlikely that the expertise of the skilled librarian will be replaced by artificial intelligence in the foreseeable future. Creativity, talent and brainpower are the real capital assets of the information economy, not information handling machines.

An extremely radical forecast of the next quarter century is given in an essay written jointly by a scholarly user of libraries, Lauren H. Seiler and a professor of library and information science, Thomas H. Surprenant (Seiler & Surprenant 1993). The end of the print library is in sight. Print-on-paper is becoming extinct and by the end of the twenty-first century, all information will be stored as digits. They believe that print libraries are reaching obsolescence, that as long as information is readily available, users do not care how it is provided, and that scholars have virtually unlimited but definable information needs. They feel that the library world is moving very definitely in the direction of what they call a Virtual Information Centre. Their belief is that scholars and researchers will have the ability to sit in front of their computers and access *all* the information that is currently available in all of the libraries of the world, as well as having the capability to incorporate information from electronic databases. Their Virtual Information Centre takes a world of printed books perfected over 3 000 years and delivers it intact to a small room. One cannot accept without serious reservations their observation that print-on-paper can now be seen as a brief development along the way to our user of information. Nothing could be further from the truth and we need to thoroughly digest Line's vision to restore sanity to this situation!

Penniman (1993) makes the important point in his essay that if librarians are to survive and play a creative role, they must again become teachers and innovators and not custodians, lest the treasures in their custody are made obsolete by

alternative services that fail to serve humanity as imaginatively as they could. Librarians in their turn, are strategic to the fabric of any society as well as strategic to the institution in which they reside. Like Lancaster, Penniman believes that libraries are in jeopardy because of a failure in leadership, and where storage systems take priority over delivery systems. He adds that we need to redefine the boundaries of our studies to recognise the viewpoint of the user, not just the librarian, the reseacher of the systems designers. Perhaps we who live and work outside the USA, should take a close look at the activities of the Council on Library Resources and the Andrew Mellon Foundation which play a significant role in encouraging research in areas that can help libraries not only to survive but thrive in our changing environment. It is clear that libraries must be viewed first and foremost as information delivery systems, not warehouses. Our leadership must have the necessary skills to implement those systems.

Molholt (1993) reaches much the same conclusion. She feels that we need to plan for a change in emphasis from being the keepers of the book to being guides through the universe of knowledge. We need to create environments that serve the needs of our users in ways that are natural for them. The ability of librarians to be imaginative, to move outside of the library and into broader information roles will be a measure of the future librarian.

Dowlin (1993), representing public libraries, also stresses the need for change in the profession. He expresses the interesting view that the present libraries are fortresses which should rather be pipelines. Dowlin feels that our library schools are producing graduates who are skilled craftsmen and general contractors, but they are not producing architects of vision.

Raitt (1993), a leading European information technologist, shares this view of librarians. They will have to be more imaginative, more willing to experiment, more open-minded – only then can they have a library of the future of their own creation. As for users of libraries, the way to get people to become involved in these new technologies is by education and awareness. They have to first have knowledge about the new technologies and then be continually educated about them and how they can be used and applied to provide and enhance information services. People have to be made aware of the benefits of information use.

Neelameghan (1993), writing from the perspective of the third world and less developed countries, feels that technology will greatly benefit the Third World nations. Access to a wide range of information is assured through networks at the national, regional and international levels and by the use of databases in electronic and optical media such as CD ROM.

A Brazilian expert, Kremer, believes that technology may well help libraries to achieve their goals, but one should guard against new technologies becoming a goal in and of itself (Kremer 1993). The essays by Neelameghan and Kremer have special relevance for the new South Africa.

Kilgour's (1993) view of the future is less conventional than the consensus. He envisages an electronic library system which consists of a centralized database of full texts of books and articles, with remote library access databases that provide various indexes to this full text.

The great debate continues! Whose vision will be most correct? What is certain is that significant changes will occur in the way in which sources of information, inspiration and entertainment will be made available. These changes will have a major impact on the library and the library profession.

What is most disturbing about these 'visions' is that most of the respected and senior librarians who express them feel that the library profession lacks the leadership needed to turn these changes to its advantage. Even more alarming is the prognosis expressed by several of them that libraries are in jeopardy because they lack true leadership. If this situation is true for the world at large, how much greater a challenge does it pose for third world countries?

Future of the publishing industry

As the twentieth century moves towards a close, much is made of the idea that printed media (or 'dead tree dinosaurs' as they are sometimes called) are doomed to imminent extinction at the hands of electronic media. This view owes its currency in part to a certain self-hating sect within the book, periodical and newspaper industries, who regularly publish their own obituaries. Any day now, runs their argument, the Internet is going to make the periodical that you are holding, obsolete.

The good news for the print media is that there is plenty of life left in them yet. The bad news, at least for the people who enjoy reading print on paper, is that print publishers have often been their own worst enemies and seem to have been accelerating their own demise in the face of technological changes.

The Internet is not about replacing print, but about doing all sorts of things that print cannot do, and improving things that print presently does badly, by providing faster and cheaper services to the user. The point about print, often overlooked by protagonists of the electronic revolution, is that print is sensual and conveys thought. High thought content is rarely found in any media other than paper. Even if the next generation of infants is as likely as not to be taught to read first on computer screen, it will take at least a couple of generations for Western society to shake off its millennium-old attachment to paper and ink. In any case, publishing is not an endeavour that always conforms to the strictest economic Darwinism – a lack of readers has never yet deterred anyone from publishing a book or periodical.

It so happens that one of the most successful businesses on the Internet is the online retailer Amazon-com, a three-year old child prodigy that is now selling more than a million dollars worth of books per day over the Internet. That makes this virtual bookshop the third-largest bookseller in the United States without having had to open a single retail outlet involving expensive requirements such as inventory, heating and staff. Amazon's deftly designed site allows customers to browse or search for books which they pay for by credit card

and receive by express delivery. It goes even further by offering personalized recommendations based on a reader's interests and purchasing history. Far from discouraging people from reading books, the Internet has actually made it easier and cheaper to obtain them.

The real threat to print media is the gradual replacement of certain of their functions and their inability to come up with new ways to justify their existence. Newspapers have more to fear than books or periodicals but, perhaps surprisingly, less to fear than television. Of 100 000 Internet users surveyed, 25% said that they watched less television because of the Internet, while only 14% said that they read less. In fact, almost 100% claimed that the Internet did not diminish their other media consumption at all.

Indeed, the publishing industry has at times seemed to be doing more than anyone else to discourage the purchase of their own printed products by giving their contents away free on the Internet instead of using it, as Amazon-com has, to sell more copies of the paper version. The Internet is a wonderfully convenient excuse for the decline in sales of publications that have lost their way.

There is no doubt that in the century which lies ahead, people will continue to read books, newspapers and magazines, but only as long as they are worth reading.

Writing in 1987, Heather Edwards, then Deputy University Librarian and currently University Librarian of the University of the Witwatersrand Library, ventured this opinion and forecast:

> 'When planning ahead with a new century it is as well to consider what kind of library service will be offered at that time ... we feel that it would be premature to believe that we could be faced by a paperless society by the end of the century, as some scientists have speculated. Our plans are based largely on the status quo that is computerized technology, networking and online information retrieval with provision for growth of existing facilities on the one hand and incorporation of the new technology on the other' (Edwards 1987:85).

Epilogue

There is no end to dramatic scenaria which continue to be forecast for the future of the book. The world's first electric book was launched in September 1998 by a US publishing firm. The book, launched by Softbook Press, is basically a paperback computer, powered by a rechargeable battery.

The user plugs it into a telephone outlet, touches the screen to select books from a prepaid subscription list, downloads, unplugs and is ready to read. The book-without-paper can store as many tomes as anyone is ever likely to need all at once ... up to 100 000 pages. The Softbook, designed by mouse creator James Sachs, will retail for about R1 920. But the buyer must then take titles worth a minimum of R64 a month for two years from the firm's on-line bookstore (Mitchell 1998).

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