Keeping Your Head in a Revolution

by Frederick J. Friend

> **If you can keep your head when all about you are losing theirs . . .**
> -- *Rudyard Kipling*

Some dramatic changes in human society are all too obvious when they happen, as they are accompanied by violence or by social upheaval. Other changes may have effects that are just as revolutionary, but only with time do we realise quite how big a revolution has taken place.
If we are to use such changes in a positive way, to benefit our personal development as well as the development of human society, it is essential that we understand what is happening around us. The theme of this article is that most of us in the information world have not as yet been able to benefit from the revolution that is happening around us. In fact there is a danger that we shall lose our heads in the sense of the French Revolution -- killed off as obsolete members of society -- and our response needs to be to keep our heads in the sense of Kipling's poem, giving urgent but careful consideration to the situation we face.

The first movers of the current revolution were the scientists and engineers who gave us access to information in electronic format; now users of information are becoming the principal drivers of change. A new generation of library users expects to use the Internet for all information needs. The explosion in use of the Internet is well-documented and predictions are that use will continue to escalate. While there are still many people in the developed as well as the developing world who do not have access to the Internet, already there are many more people using the networks to obtain information than would ever have entered a library to look at a book. And while there are still people who would always prefer reading a book to looking at a computer screen, most users are voting with their feet and their fingers. They are *not* using their feet to visit libraries but instead using their fingers on a keyboard.

If I am right that we have only seen the tip of the iceberg in respect to this change in user behaviour, what are the implications?

The basic implication is that librarians have to adapt much more quickly than they have done in the past or they will not survive as information intermediaries. Technical progress, it could be argued, might be ignored or absorbed slowly if the opportunities offered by technical progress were open only to the professionals. Instead we are seeing the tools of technical progress being used by people of all ages from all sections of society. Grandparents are learning to use the family computer at the same time as their grandchildren. These users are finding that vast stores of information are available to them. One recent estimate is that 800 million pages are available through the Internet. That is a quantity of information equivalent to a largish university library, now available in your own home. Whatever the future role of paper as a publication medium, one certainty is that it will be much less important than hitherto. It is likely that within ten years all academic journals will be available in electronic format and that the number of scholarly monographs available in print will be negligible. Even if a university librarian wished to continue to purchase as much information on paper as in the past, it would not be available to purchase. And many users will be so used to searching the Internet for information that a paper-based library will appear a poor second route to information.

How Should We Adapt to Survive?
The survivors in any revolution are those who can adapt old skills to meet the needs of the new environment. For a service-oriented profession like librarianship this adaptation has to come from an understanding of the needs of users of information in the new environment.

The first point to acknowledge is that not all library users wish to change their route into information. In every revolution there are some who wish to continue in the old ways. To some people libraries are already not what they were in the good old days. Those people continue to expect that if they visit a library they will see shelves full of new books. They are increasingly disappointed in that expectation. Fewer books are purchased due to the fact that books and journals have risen in price faster than library income. One effect of the electronic revolution may be to open up a division between print-based collections of historical value and collections of recent publications accessed electronically and requiring a new approach to library management. Perhaps those librarians who feel that their skills are more suited to print-centred library service will continue in a historical library, but they must recognise that they will be serving a declining number of users with a declining number of publications.

For those who see the revolution taking place in the information world as an opportunity, and wish to grasp that opportunity, the simple question is: How? It is easy to write or to talk about the need for libraries to change, but not easy to effect change, whether you are a library director trying to turn around an institutional structure the size of an ocean liner or a new recruit to the profession feeling like a small cog in a large machine.

The key to taking advantage of that opportunity is to understand the needs of users of information in this new environment. The new generation of library user expects information to appear on a screen as a result of a search that involves no more than half-a-dozen clicks on the mouse, with a final click on the mouse to produce a print copy. If information professionals can supply information in that way on a reliable basis, they have a future. If librarians can provide information in that simple way, they will keep their heads and survive the revolution. If not, users will turn to other suppliers of information. Users are not interested in who or what produces the information on the screen; the role of librarians is to keep their complicated role invisible, and make the results simple.

Another requirement as important as simplicity will be to supply enough information to meet the user's needs. Libraries' reputations have suffered in the print era because too many user visits to libraries result in failure: The book is not in stock, or out on loan, or the important pages have been cut out, or the photocopying machine has broken down. In the electronic environment librarian intermediaries must provide users with information as a result of every search. Users expect that a search on the Internet will produce a result, and librarians have to meet that expectation with the resources they make available. The quality of the information provided will be important, but users are likely to be more tolerant of poor quality than of no information. Providing too much information will be more acceptable than providing too little.

New Acquisitions with New Partners
The new user profile suggests that librarians should be purchasing as much electronic information as possible and making it available through a single interface. The quantity of information purchased by libraries has been declining in recent years as price increases have outstripped information, but if librarians are to satisfy the thirst for electronic information they will have to break out of that downward spiral. Simply blaming publishers for price increases and asking funding authorities for more cash is not the answer. Librarians have to take more action to make more rather than less information available to their users.

For the past twenty years or so the cost of publications has been a restricting factor in providing information. If it continues to be a restricting factor, libraries will not be able to make available electronic sources of information, and access to information will be determined by the ability of individuals to pay. The role of libraries in providing access to information for people on low incomes or for the disadvantaged will be at risk. On the other hand, if the cost of information can be turned from a negative into a positive factor, the role of libraries would be strengthened and more information made available to more people. The reason the cost of information is such a negative factor in the print environment is that scholarly communication is a virtual monopoly, each information unit being available only through one publisher.

The negative factor of rising prices does have the potential to become a positive factor for the future of libraries. The key lies in the multiple formats and the multiple routes by which information can now be made available. The same information may be available through preprint servers, established journals, or packaged selections; the various publication packages may come through libraries, direct from publishers, through other agencies, or via free Internet sites. Each information package and each route to information will have its own price, and this diversity may work to users' advantage, enabling us to break the virtual monopoly that exists in the present system of scholarly publication. Such a system could open access to information for many more people than would use a traditional library. It could open libraries to people where they are at the time that they need information. It could give people choices, offering options of information at various levels. The skill lies in developing the new formats and the new routes to information in a positive way.

Librarians have often felt helpless in the face of rising costs for books and journals. We protest; prices continue to rise. Part of the challenge in turning the cost of information from a negative into a positive factor has to be an attitudinal change. There are policies we can adopt to ensure that we can provide, at a reasonable price, more information electronically than we have ever provided in the past on paper.

Forming partnerships with academic authors should be a vital part of a librarian's strategy. The faculty members we meet in the Senior Common Room are the people who write the information many users of our libraries need. Those faculty members still need the traditional publication route for promotion and tenure, but we can work with them on parallel routes for making their research available and still allow for traditional publication. Already it is common for research done for a doctoral thesis to be published both as a thesis and as a journal article or book, two routes to essentially the same information. An important requirement will be that those faculty members do not assign all rights to a commercial publisher but retain the right to publish part of that material. Assigning all rights in any piece of information creates a monopoly in the use of that information. If authors assign rights only for particular publication outlets, competition replaces monopoly as the dominant financial model in the world of information. Some libraries have maintained collections of the printed publications of their distinguished academic staff; the electronic equivalent is to make available on the library Web site copies of journal articles by their academic staff, perhaps not identical to the version published in a traditional journal but containing the core information a user will need. One of the uses for such alternative information units could be in electronic teaching packages.

The need for a new strategy for access to academic information was realised several years ago by the Association of Research Libraries in Washington, D.C. ARL initiated a dialogue with key academic institutions on the future of scholarly communication. One result of that dialogue has been the SPARC programme, a positive response to the cost of information. SPARC set up alternative

routes for scholarly publication in collaboration with the academic community. Although only a small number of specific publications are generated by SPARC, the importance of the programme lies in securing co-operation between academics and librarians across the world in tackling the problem of the high cost of information. SPARC is demonstrating that collaboration with authors returns profit to the academic community, and that international collaboration pays an even higher dividend.

More and Better Cooperation Among Libraries
One vital area of change will be in increased cooperation between libraries. Librarians have always had a cooperative instinct, up to a point. Librarians cooperate in most areas of their services, inter-library loan being perhaps the most successful and long-running example. But cooperation meets only a small proportion of demand for library services in any country. Librarians, and I write as one myself, like to have as much control over the purchase of information as possible, and most academic library materials are supplied from local resources purchased though direct orders placed by local libraries with suppliers.

If libraries are to survive the electronic revolution they will have to make cooperative mechanisms their major tools in purchasing and access. There will be too much information available at too high a cost for any single library to maintain policies centred upon holdings within its walls. Perhaps this is no more than an extension of the long-standing situation that no library is self-sufficient, but the availability of networked information will force libraries to shift from a holdings policy to an access policy to a degree that librarians have been unwilling to do hitherto. By purchasing through consortia, libraries will have a reasonable chance of affording access to a wide range of publications; if they continue to purchase independently they will have little chance.

It is for this reason that the recent growth in consortia is one of the promising developments for libraries. The International Coalition of Library Consortia currently has 109 consortia in membership, and new consortia are being formed in almost every country in the world. These consortia vary greatly in size and role. As countries see the potential of consortial services and wish to adapt the consortial model to their own culture and official structures, they have looked to national arrangements for the purchase of electronic information. Two good examples of such national arrangements, one on either side of the Atlantic, are in Canada and in the U.K. The Canadian National Site Licensing Project, funded by the Canadian Foundation for Innovation, has as its goal "to dramatically increase the quantity, breadth and depth of the most current research literature available to Canadian academic researchers" (quoted from the press release on its Web site. That goal is shared by other consortia, whether or not they are national in scope. It illustrates libraries' yearning to use collaborative purchasing not simply to maintain the flow of information but to improve access to information. Those who look back to the "good old days" of academic libraries sometimes forget that for some users of libraries the library was perceived as a barrier in the way of information even if for other users it was the key to information. In a user's mind the red stoplight might come on when confronted by an imposing building, one unhelpful staff member, cataloguing rules designed the way librarians think, or a mysterious arrangement of books on the shelves. Even more frustrating is the experience of passing the early traffic lights and meeting "book not in stock" or "book on loan." Purchasing through consortia may help to turn a few red lights to green and offer access to more people by increasing the range of information available.

The U.K. National Electronic Site Licence Initiative has very similar objectives to the Canadian project. NESLI is "a service designed to promote the widespread delivery and use of electronic

journals in the UK Higher Education and research community. NESLI is an initiative to address the many issues which at present hinder the most effective use, access and purchase of electronic journals in the academic library community." The mechanisms and structures used to deliver information under the Canadian and UK national site licences will be as different as the two national educational structures are different, but the unanimity of purpose is striking.

The funds available to individual large research libraries will continue to be an important lever in moving from paper to electronic collections, but even the largest research libraries are finding that they can manage their expenditure more effectively in a consortial context. There is no conflict of interest between large and small libraries on this issue; no library can make available huge electronic databases of academic content without collaboration. The challenge is to devise consortial arrangements which benefit the users of both large and small libraries, both general and specialist libraries. The traditional groupings of libraries have often been of "like with like." For example, the members of the Consortium of University Research Libraries in the U.K. have in common the fact that they are the top twenty research universities. And yet the consortia which have been most effective in widening access to electronic information have been those such as OhioLink, which have a broad membership. Perhaps the "like with like" approach to collaboration works for cooperation on specific projects but does not suit the revolutionary situation we find in the electronic world.

We Need a Global Business Model

The formation of library consortia has forced both librarians and publishers to think about new business models and the questions they raise.

- ☐ What is the relationship between the offer a publisher makes to a consortium and the sum of the individual subscriptions previously placed by the individual members of the consortium?
- ☐ What is the relationship between the cost of a bundle of journal titles and the sum of the individual subscriptions?
- ☐ How should a consortium divide the cost of a consortial subscription between the members of the consortium?
- ☐ Should purchasing be based upon individual journal articles rather than subscriptions to journal titles?

The answers to these questions will determine the success or failure of consortial purchasing deals and therefore contribute to the success or failure of librarians and publishers in adapting to the electronic revolution. Consortial purchasing is not the only feature of the new way of working, but it is a central feature that we have to get right. We shall only get it right if the new business models provide enough income for publications to remain viable and enough of a saving for consortia to allow libraries to increase the range of information available to users. The new business models would be necessary if we were working solely in a local or national environment, but the global nature of electronic information provides us with opportunities and imperatives to devise those new business models in an international context.

The factors leading to change are global in nature. Gone are the days when a publisher could concentrate primarily on a home market. Gone are the days when the service a librarian provided would be influenced largely by campus or national factors. The economic and access imperatives leading to change are affecting publishers and libraries across the globe. We must find global solutions to global problems. Publishers are organizing their businesses to cope with this global dimension. Librarians have been slower to cooperate internationally because their organizational structures are locally based. However, the formation of new groups such as the International Coalition of Library Consortia and the increasing use of e-mail lists such as Liblicense are signs that librarians are now taking a global approach to information provision.

One vital strategic area we have been reluctant to enter on a global basis, however, is the design of a business model that allows global access to our resources. We have been content to sign licences that cover users who walk into our libraries, but have not worked with publishers on a business model that allows remote access to people who -- if they were physically close to our libraries -- would be admitted as walk-in users. Walk-in electronic users are perceived as a threat to publishers' income, but they could become an opportunity for both publishers and librarians, given the right business model. This is not necessarily an argument for free global access to information, although the public good is a vital principle for librarians to protect. As electronic credit-card payments become more secure, there is no reason why global walk-in electronic users who are not affiliated with the library should not be asked to pay for use of some library resources. That could make the library a business partner, sharing the income with the publisher or author.

Opening Access and Reaching Out
Increasing cooperation among libraries will be essential in ensuring access to electronic material. Consortia have a vital role as purchasing agencies, but their role does not cease with the purchase of information sources. In many countries, closer links are being formed between academic libraries and the communities in which they are situated.
Governments are taking more interest in access to information for their citizens and asking universities and their libraries to cater to the information needs of the public who, as taxpayers, often pay for the ivory towers of their universities. The U.K. Government, for example, has an ambitious programme to expand the use of networked information in public libraries and in schools. Some U.K. academic librarians are taking a positive attitude towards this programme and working towards sharing academic content with public libraries and schools. While funding and licensing issues are still to be addressed, this effort signals the closer collaboration across sectors of society to increase access to electronic information.

Within universities also there is increasing impatience with the restrictions upon access to information imposed by library opening hours, books not in stock or already on loan, and all the other barriers to providing information when the user needs it. Many of these barriers are the result of declining library budgets and the increasing cost of materials. Those factors will create some barriers to access to electronic information, but the electronic medium allows the user to bypass many of the traditional barriers. There are few restrictions upon opening hours in the electronic library, and no worry that the book will be out on loan.

The revolution in information provision may include a storming of the gates of information. The symbolic action carried out by political revolutionaries who stormed the Bastille in 1789 may have its counterpart in the pressure from users of information to gain access to the intellectual riches they know are in the world's databases. Although no librarian would condone illegal action to gain access to a database, we shall be pushed to find legitimate ways of opening electronic resources to library users, to open up the gates before the revolutionaries storm them.
As people of all ages and all nationalities become familiar with the Internet and realise its value, the intermediaries in the flow of information, publishers and librarians together, may be seen as the dam-makers rather than the dam-busters, as the defenders of barriers rather than those tearing down the gates. As the numbers of people demanding access to electronic information grow, the pressure to open up access will become impossible to resist. The library community needs to plan for this eventuality. Opening access to information has major implications for the ways we relate to authors and publishers, as well as for the ways we deploy our resources, human and financial. Even the

publishers, cast in the role of the aristocrats profiting from the desires of the masses for the bread of information, are aware that their interests also lie in opening access to information. Librarians must also ensure that they end up on the right side in the revolution.

Librarians: Champions of the Public Good
To cope successfully with the switch from paper to digital information, libraries and librarians must provide new services. Providing these services will depend on a raft of issues: the level of library budgets, the control of the published information by commercial interests, governmental attitudes towards copyright, and so on. Much will also depend on user expectations of libraries. There is so much information on the Internet already that seekers of information may be glad to have the services of librarians to help them find the information they need. But most seekers of electronic information, like the users of traditional libraries, prefer to find their own way around, and as search engines improve they will do so more efficiently in electronic libraries than they have often done in traditional libraries. Librarians have seen a role for themselves as navigators, projecting into the electronic world their traditional role as guides to library resources, but this may prove to be a short-lived role. The revolution in information provision contains as many threats as opportunities for librarians. There is a real danger that librarians will lose their heads under the information guillotine as they are seen as superfluous to the new information society.
On the other hand, librarians who are aware of the changes that are taking place may adapt to the new environment. Librarians should heed Kipling's advice to keep their heads in giving careful consideration to new policies to meet the new situation. Libraries represent the public good and of all information-based institutions are most likely to assist the information-poor to become information-rich. The future for librarians could be linked to the future for mass access to information. In fighting for public good to be recognised in copyright legislation, for example, we are also fighting for the survival of libraries. As we align ourselves with the public good on this and other issues, we are taking control of our future. We are not totally helpless in the face of forces of change. Indeed, there is an argument that if there is a revolution in information provision, it is the information professionals, or some of them, who are leading and encouraging the revolution. Information revolutionaries are likely to be the senior executives in the international publishing houses and the leaders of library consortia. Such individuals realise that global information must be accessible globally -- and locally.

Yet some of us are only playing with change instead of embracing it wholeheartedly and allowing change to permeate all that we do. In writing this paper I have been conscious of looking at access to electronic information as an extension of access to information on paper. We need a new vision, one that is not tied to the past, as we seek to use the opportunities provided by technology. Reading predictions of the future written by previous generations, we can see that it was in arguing from their present that they got it wrong. Perhaps it will only be as today's children -- fed by information from the Internet rather than from traditional libraries -- become information professionals that libraries will change to meet the new expectations.