Back to the Future: A Look at the Past to Get a Glimpse of the Future

By Doris Small Helfer
Chair, Technical Services Library
California State University, Northridge

Back in early 1978, while interviewing for a job at the RAND Corporation's Library, I vividly remember the interviewer asking for my predictions as to the future of libraries. Being a fairly recent, and idealistic, library school graduate at that point, I remember responding that I hoped one day whatever library someone entered would provide access to whatever information the person needed. Mind you at that point, even though the RAND Corporation was one of the first nodes on ARPANET, the system that would evolve into the Internet, I had never heard of it. I just wanted everyone to have access to all information.

How such universal access could be delivered did not dawn on me until 1993, when I first used Mosaic (precursor of Netscape and the first ever World Wide Web browser) to access the Vatican Library collection. I remember the moment as an epiphany. Immediately and completely, in that moment, I understood how the future for libraries and librarians would change.

History is full of examples that prove that no one medium will completely take over and obliterate the next medium (with the possible exception of the 8-track tape). Rumors of the death of books have circulated for a while, but e-book vendors still do not dominate the marketplace. Books work and work well for most people. You don't hear everyone clamoring to read War and Peace on their computer. You really don't find yourself wanting to curl up in bed with your computer to read a novel. Will people eventually prefer to read books from their computer or Palm Pilot? Some people, absolutely, but others will still want to take their books to the beach and not want to risk putting their Palm Pilots that close to sand and surf or sandy surfers. Better to risk the loss of $7 paperback then a much more costly PDA.

Librarians have changed profoundly in the 25 years since I became one. My library school certainly taught me about automation and MARC records, systems like OCLC and RLIN, online databases like MEDLINE, and supermarket search services like SDC's Orbit and Lockheed's Dialog, but only experiencing them could bring the realization of how each could change the way libraries would work in the future. For the first time, librarians could share cataloging records online and add their holdings to a centralized database. For the first time, all librarians, regardless of their collections, could answer a vast array of questions by accessing computer databases. Many of these databases grew out of print indexes, but some were things librarians had not seen before, e.g., full-text searchable articles from newspapers, court cases, and magazines. Clearly we were only at the infancy of automation, and more and more automation would change how librarians served their public in the future.

Reference Trends

Throughout the '70s and most of the '80s, the possibility had not fully emerged that one day librarians would answer questions for patrons they might never see or even talk to over a phone line. Nor could all of us foresee the day coming when a patron might never have to visit a library or even leave home to find not only citations to the information needed, but the full text of it. Many libraries today routinely offer virtual reference services. With the rise of Web-delivered databases and as the computer generation increasingly makes its presence felt in universities and the workplace, demand for this delivery method continues to escalate.

Since almost the earliest beginning of the World Wide Web in the early '90s, the rumor went forth that you could find anything and everything you wanted on the Web and, of course, all for free. This rumor has been the bane of many librarians training future users and has even had some dire consequences for some librarians laid-off by a boss who believed the myth and foolishly thought they could save a lot of money replacing library resources and talent with nothing but all those wonderful free resources on the Web. These bosses clearly didn't grow up listening to my mother saying, "If it sounds too good to be true, it probably is!"

At the reference desk at my university, I have frequently encountered students who come in saying, "I know I must be doing something wrong, be-
cause I spent hours searching on the Web, but still couldn't find any articles on my topic, or I found stuff, but nothing that would really help me do my research." These are people who no longer believe that its all free on the Internet or, maybe they just believe that even if it's out there, they sure can't find it. As I frequently ask classes I teach, why would any scholar who would get credit from his/her university or research organization for a publication in a scholarly journal put such an article up on the Internet for free and not get any credit from their institution? There are many opinions on the Internet, but not a lot of full-text scholarly articles freely available, with the notable exception of preprint servers, which students may or may not find easily. I always make a point in classes to dissuade students of the belief that the databases the library provides to them as students are free!

Way back in the 1960s, my junior high school science teacher told us that someday many of us would work in jobs that didn't even exist then. Now I know he could have conjectured further that many of the jobs which did exist back then would change so significantly, people who were in those professions then would hardly recognize or know how to do those job today. While many of us still work in traditional librarian positions, doing traditional kinds of library functions, cataloging and reference librarians from 50 years ago would hardly recognize the way we perform our jobs today.

As we get to offer more and more virtual services, we may find that we require fewer reference librarians to handle the virtual reference desk, as we find many ways to "automate the answers," especially for the frequently asked questions done in electronic environments. This will increasingly happen as the virtual reference software gets more sophisticated and librarians get more adept in using it. Today the software remains in its infancy, but it will soon change the way we answer reference questions and, potentially, how we staff the reference desk. Nor do I suggest we won't need well-qualified reference librarians, but where before we may have had three librarians at the reference desk, we soon may need only two in a traditional setting, while we made need enough librarians available to answer questions round the clock on a 24/7 virtual reference service.

Many people will still want to come to the library for a variety of reasons rather than get all of their information from computers, even if they can. Personal preferences and even learning styles will dictate why people will make the choices they do about how to access the information. Some are visual; some might need to hear the information. Social interaction is not the least of the reasons. Sometimes I suspect that the questions I answer for some people at the reference desk came, in part, because those people wanted to interact with someone or needed to hear the answer to understand it. The library often offers small-group study rooms and provides many with the only quiet place to study.

Many of the questions received now, whether in person or electronically, deal not with where to find the answers to question, but how to connect electronically to the resources from home. I expect those kinds of questions will slow down as the general population becomes more computer literate, but the questions about where to find the right resources among the thousands, nay millions, of choices that the Internet and libraries will offer, electronically or in print, will continue and grow as our access to more resources grows.

Some librarians today no longer work in a traditional type of library job. Librarians are working in knowledge management teams, virtual libraries, competitive intelligence units, Web development projects, and content management roles, among others. Again our roles as information organizers and pathfinders will continue to be important, but the choices and options as to where to find the answers will have greatly expanded. Many times, while answering a simple reference question, I am struck by the fact that it might have been a lot simpler to have turned around and picked up the print version of Statistical Abstract of the United States than to spend minutes trying to find the right governmental Web site.

Cataloging Trends

First and foremost, of course, the rise of OCLC and the networked automation of cataloging have significantly improved the quantity and quality of cataloging. The number of librarians required to do original cataloging has declined sharply, due to the sharing of cataloging records. For the vast majority of all the new books, copy cataloging is either outsourced or done by copy catalogers who are not professional librarians. More and more libraries outsource part or all of their cataloging functions to vendors and maintain much smaller staffs than ever before. Once Acquisitions orders an item, the cataloging records and the processed books come directly into the library catalog from the vendors who sell the books. The records certainly do not come problem free, but the in-house staff that remain increasingly handle only problems, database maintenance, and clean-up functions. My major concern about this trend is the effect this tends to have on the quality of the database.

There is certainly a larger and larger amount of useful resources on the Internet, but just as people had difficulty finding material in print, they still have difficulty finding material on the Internet. Frankly, if librarians had not stepped in to catalog and organize Web sites and make them findable through our Web site and/or library catalogs, many of the most useful Web resources — because of the sheer size of the Internet — would be nearly impossible for all but experts and Internet gurus to find. Heaven help even experts when you

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only have a very common word to search on the Internet.

Organizations such as OCLC have gotten into the act with their CORC project, which makes libraries commit resources to cataloging Web sites. As the project grows, more and more people will find library catalogs not limited to books or journals not physically held in the library. More and more catalogs will include Web sites, archival resources, and eventually, as the capacity grows, videos, DVDs, and media not yet invented. OCLC is working hard on expanding member participation and sharing resource information with archives and museums. We may soon see more and more of its holdings in resources like the OCLC WorldCat database.

Collection Development Trends

As in other arenas, the trend towards the acquisition of e-journals and e-books continues, and I certainly don't see it stopping in the future. The trend toward publishers selling us their entire collections of e-journals continues unabated, and frequently the collections are priced only slightly higher than a library would have paid for the few journals it did receive from the publisher in hard copy. However, as much as librarians may have resisted buying entire collections, the offers have been too good to pass up, and, surprisingly, librarians often find their user populations (at least at my university) delighted with the full-text electronic collections. From the user's point of view, such collections provide information faster and easier. Waiting 2-4 weeks for an Interlibrary Loan, or even 2-4 days for a document delivery, doesn't cut it for students with papers due tomorrow. Librarians also recognize the advantage of not having to check-in, bind, and replace lost print periodicals.

The issue of ongoing and continuing access to digital archives certainly remains a concern, but many have negotiated rights in perpetuity. Of course I remember acquiring my lifetime membership to a local discount store, which has now gone out of business. Clearly it was their lifetime, not mine, that they had in mind. So I still wonder whether or not libraries are truly prepared to mount their own electronic periodical archives.

Collection development has also been automated to a large extent. Librarians can now select the books they want to buy electronically. Reports from the vendors arrive in electronic formats. All of this automation has greatly shortened the time for our customers from when they place an order to when the item arrives on our shelves. Access to information about what other libraries hold has greatly increased interlibrary loan efficiencies and allowed librarians to send patrons to other libraries, if the patron cannot wait the time required for an interlibrary loan.

More and more, librarians see deep archives offered for sale. The Times of London from 1785 to 1985 as well as the retrospective collection of the Reader's Guide back to the early 1890s are greatly facilitating historic research. If vendors feel a market exists for these retrospective projects, we may yet get large amounts of historical newspapers and documents electronically accessible.

The Roles of Librarians

Beyond traditional reference and cataloging, more and more librarians work outside traditional libraries and traditional library functions. Many librarians now bear responsibility for developing the database content that libraries buy. Many organize data for their company, leading knowledge management initiatives, providing competitive intelligence on their company's competition, and supplying staff with electronic information of all sorts. I know librarians working at high levels in marketing for major corporations who attribute their library skills to what makes them so good at their marketing job. Many librarians serve as licensing and contract negotiators for their organizations.

Even those who still work in traditional libraries may not work with traditional library tools anymore. Physically, some librarians have nothing but a few reference books near their desk, as most of what they deliver to their organizations travels electronically. Most importantly, many do not have the "L" word in their titles. This is one of the issues the SLA (Special Libraries Association) is currently struggling with in terms of changing its name. The Association wants to reflect the fact that many people not in traditional "library" jobs still utilize the skills learned in library school, and that those skills translate well in this information economy into lots of other nontraditional roles. Whether those in nontraditional jobs will continue to hold the values and professional commitment remains an issue that will vary from librarian to librarian. Librarians in nontraditional jobs frequently find it difficult to get their bosses to approve attendance at a library conference, because the bosses do not understand why attendance could help people no longer in a librarian role. By changing its name, SLA could welcome those people to an organization where they belong every bit as much as those in traditional roles. Whether nontraditional librarians will continue to identify with the library profession and library organizations poses a question and a challenge, especially for associations like SLA, where many members may not be called a librarian in the future, yet really perform a librarian's role.

In turn, as "library skills" experience greater demand in the information age, this will become an increasingly important problem for those seeking to hire well-qualified librarians for traditional library roles. Frequently, the money paid by the nontraditional library jobs significantly tops the starting salaries in libraries. Coupling this with the closures of library schools and the tidal wave of baby boomers rapidly approaching their golden years means the shortage of librarians could create
serious problems for many libraries in the near and foreseeable future.

Technology and Libraries

The impact of technology has affected every aspect of library work with the possible exception of shelving books in the stacks. It has allowed libraries to share cataloging, increase productivity, and know quickly what other libraries have. Electronic journals and full-text databases will continue to have profound effects on libraries in terms of saving space, bindery costs, and staff time. Serious concern focuses not only on electronic archive reliability, but also on the transfer of electronic collections to new technological formats when (not if) newer and better technological advances come along. No one has yet answered all these problems. Hopefully, librarians will think through and plan for conversions from older formats to newer ones, but since we haven't seen the newer technologies, it remains a great unknown and a serious issue of concern. We already have many examples of digital data no longer accessible because the computer or system to read the data no longer exists or no one knows how to fix it.

Technology has greatly speeded up the research process from locating bibliographic citations to providing the full-text articles. What used to take days and weeks to gather can now be collected in minutes and hours, and, as we add more to those electronic collections, the time needed to do research will speed up. Has this made our users happier? Well, not necessarily. User expectations have risen a great deal. They expect to get everything they need full text and immediately and are frequently disappointed by anything less. This is especially true of students with papers due in 24 hours.

Future Directions

Is there one answer and one direction or trend to which I should point in particular? Only the fact that change is the only constant that anyone working in the library field can count on, and into the future. I believe public and academic libraries, while certainly changing the way they operate, are not nearly as endangered as those in large corporate libraries. I do not suggest all the functions and missions of the corporate library will completely disappear, however, the large corporate library will be broken into smaller parts and more closely aligned with the different areas librarians serve. Reasons for this are many-fold, but, in some cases, are driven by how corporations budget and are organized.

The large corporate library is too tempting a target for budget-cutting middle managers. In addition, because the large corporate library has only one unit to report to, it is a frequent target: No one department is altruistic enough to pay for information services (especially expensive ones) used by other units or departments in the company. Legal is unlikely to want to pay for marketing research and visa versa. Managers understand paying for information they can use, but not for information they cannot.

Some cuts of libraries we have seen have reflected much more the nature of the business cycle than the functionality of the libraries. Companies which can't afford it do not and will not have libraries. Libraries usually, in the short-term, myopic view of some managers, do not contribute to the bottom line, the driving force of business. Only librarians who can show they really contribute to the bottom line and make an excellent return on the company's investment will survive. Librarians in corporations have to be expert at marketing and selling their libraries to employees and, most importantly, to management.

Academic libraries hold a more enviable position, because the major product of the university is research, and you simply cannot do quality research without a library. Individual researchers in the university cannot possibly know all the databases that could assist them in finding the information the need without the assistance of the library. University services may become more electronic and the university may serve more students from a distance, but libraries will continue to serve the university.

The public library has added public Internet access to its traditional services, including helping the public learn how to use e-mail and access electronic information, even though the individual users may not have access to a computer at home. The public library will continue to expand services to remote users as well and provide the community with public access to many electronic databases.

Future libraries will look very different. If you had seen any U.S. government depository library 5 years ago versus that same depository library today in any type of library, you would be struck by the absence of print materials. Those print materials have been replaced by the electronic access to the document, which can be downloaded on demand from the library's catalog. The U.S. government is perhaps the leading electronic publisher today, but the biggest threat remains access to the digital archives. We have to guard against the digital Dark Ages if we don't handle technological advances correctly.