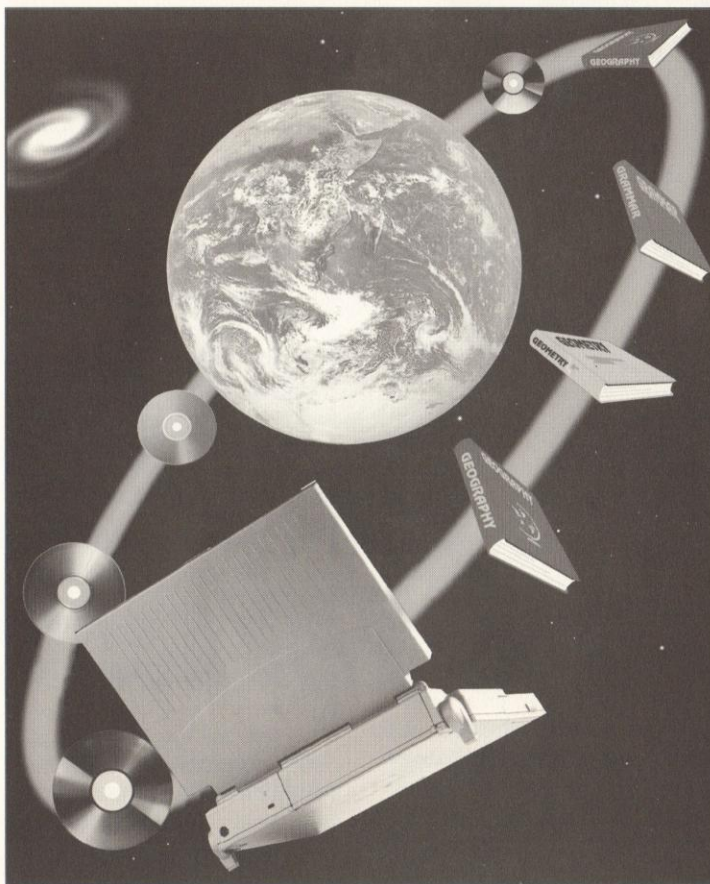


# Scholarly Communication: From Codex to Virtual Book?

By Anna H. Perrault

**B**eginning in the mid 1980s, changes in the information marketplace and technological changes in information dissemination have exerted pressure on academic and research library budgets. Traditionally, libraries have been the acquirers, the organizers, and preservers of the output of the scholarly information channels. Up until the mid 1980s, the printed monograph and journal were the primary vehicles for dissemination of scholarly/research findings. A steep escalation in the cost of both journals and monographs caused the "serials crisis" in academic libraries in the 1980s. This budgetary crisis was both helped and hurt by the rapid changes in technological infrastructure. By the early 1990s, indexing and abstracting services were migrating to electronic products, at first, mainly in CD-ROM format. More recently, the provision of those services and the dissemination of full-text journal articles have shifted to online electronic networks. Because it was thought publication would be in electronic formats in the future, a new danger arose in that funding for print collections could be reduced. Since the mid 1980s, I have been studying the effects of these developments on libraries, the scholarly/research literature and, in turn, on university scholars and researchers.

My research in the analysis of library collections began at the Louisiana State Uni-



declining in proportional share of total by and preservation problems. Although univer-

which is just text, push technology is graphical via the World Wide Web. In accessing websites, the user must be an active seeker of information. Busy academics and professionals cannot be depended upon to constantly check websites for updated information. With push technology, the information is sent automatically to the user via channels set up to receive the information. As an example, it can be used in distance courses to assure the arrival of assignments rather than dependence upon the initiative of the student to seek information from a class website.

There is much still to be learned about the dissemination of scholarly information in the electronic environment. There are plans to launch a pilot newsletter utilizing push technology. The newsletter would be sent or "pushed" to faculty in schools of library and information science because these educators are generally technologically advanced. The pilot newsletter would serve as a research project for the study of the reactions of the recipients to this form of information delivery for virtual publications which do not have to obey the laws of periodicity in the manner of print publications. The pilot would also reveal technological problems associated with this delivery mechanism.

While the technology for electronic journals and virtual books exists, there are still many issues to be resolved. The role of the "virtual book" in virtual library collections is still not clear. While it is possible to have a virtual book, reader acceptance is lagging behind



collections began at the Louisiana State University Libraries in the early 1980s. Along with a colleague, Beth Paskoff, I analyzed the book collections of eleven academic libraries in Louisiana. The dismal findings from this project assisted library directors in securing additional funding for their collections.

Since coming to USF, I have worked with the Florida College Center for Library Automation, which provides a centralized database and network (LINCC) for all twenty-eight public community colleges in the state. In 1998 we completed a comprehensive study of the book collections of the community colleges using data extracted from LINCC. The findings of this study were that the collections are shockingly out-of-date, with median ages for books in the 1970s for most subject areas, including science, health sciences, and technological materials. These findings have been the basis for a special legislative request from the Division of Community Colleges to obtain funding to redress the inadequacies of the collections, especially with regard to current scientific and professional information.

My dissertation has received considerable recognition for studying the effects of economic factors in the latter 1980s on the book collections of the eighty-seven largest research libraries in the United States. Such economic factors as the escalation in journal subscription prices, increasing book prices, increasing book production abroad, and static library budgets were drastically affecting the ability of academic libraries to purchase materials. Among the findings were that book acquisitions in research libraries declined over 27% in five years, 1985-1989. The humanities experienced a steeper decline in the number of books purchased than the social sciences or sciences, with foreign language acquisitions having the highest rate of decline at 43 percent. A shift in collecting patterns had occurred, with the humanities

declining in proportional share of total by 2.35 percentage points and the sciences increasing share by 2.99 percentage points. The implications were that access to scholarly information was narrowing as more libraries were buying the same core materials, with fewer unique materials being purchased. This line of inquiry has been expanded and is continuing. I am presently working on a monograph which will be a study of the collections of three size groupings of academic libraries from 1985-1995. The study will look at the effects of the escalation in the prices of library materials and the shift to electronic formats on the library collections. The implications of the changing nature of academic library collections on scholarship will be considered.

In recognition of my research on academic library monograph collections, I was an invited participant in a symposium in 1997, "The Specialized Scholarly Monograph in Crisis or How Can I Get Tenure if You won't Publish My Book?" sponsored by the American Council of Learned Societies, the Association of American University Presses, and the Association of Research Libraries. The symposium addressed the problems that declining opportunities for print publication of monographs due to high costs and low sales are causing for faculty seeking tenure. A sequel was recently held in March of 1999. These meetings have served as catalysts to bring scholarly publishers, representatives from higher education administration, and information professionals in academic and research libraries together to understand the economics of scholarly publication and to seek solutions to the problems. In the early 1990s, the prevailing thinking was that both books and journals would migrate to electronic formats and the pricing problems associated with print would become moot. The first symposium established that electronic refereed publication is just as costly as print formats and even more fraught with copyright

and preservation problems. Although university faculty are becoming more accustomed to accessing journal articles from electronic databases, the academy remains reluctant to accept solely electronic publishing for tenure and promotion. Aside from the academic problems, there are concerns among information professionals about the permanent availability or archiving of electronic information. And commercial publishers have thus far insisted on copyright regulations which are more appropriate for print than electronic publication. Distance education utilizing electronic reserves and access to course materials has caused great concern in the publishing arena. The economic model of the print environment does not translate immutably into the electronic environment.

A colleague in the USF School of Library and Information Science, Vicki Gregory, and I have been developing a research agenda in the broader arena of electronic scholarly communication. A new economic model has been posited: an "electronic information commons" to which higher education institutions would become members. Within the electronic commons, refereed publications would be freely available for use by the membership, and ownership could be sponsored by research libraries which would be responsible for the creation and maintenance of the database. The publications would be copyrighted by the commons and use outside of the membership would be for fee. The commons would be supported by membership fees and sales of electronic "packets" of course materials and research articles. Virtual books with hypertext links to other commons materials could be provided on CD or DVD or through utilizing push technology as a delivery mechanism.

We view push technology as one avenue for the consortium to disseminate information directly to faculty and students. Unlike e-mail

book, reader acceptance is lagging behind. Changes in technology have not sufficiently altered the academic culture to accept electronic publication as the primary dissemination venue of scholarship and research. The current thinking in the academic library arena is that print will continue to be the dominant medium for lengthy texts and also the archival medium of those texts for quite some time into the future. Practitioners and researchers in the library and information science profession will continue developing virtual libraries while at the same time building print collections. The study of library resources and scholarly communication into the foreseeable future will be focused on both electronic and print formats. **L**



*Anna H. Perrault, associate professor in the School of Library and Information Science, studies changes in the dissemination of scholarly information and the effects of those changes on the composition of academic library collections. Perrault obtained her Ph.D from the Florida State University and came to USF in 1994. She is a recognized scholar in research on academic libraries. As a library professional she held elected office at the state and national levels. She is currently a member of the Executive Board of the international honor society for library and information science, Beta Phi Mu.*