Academic librarians practice in an increasingly turbulent information environment. Writing in the NACUBO Journal, Brian Hawkins recently laid out an alarming scenario for the future of academic libraries as collectors of the world's cumulative published knowledge. While most academic librarians had thought of information as doubling at an alarming rate of every 10 years, Hawkins asserts that the body of information now doubles every two to three years. His data indicate that while information production is increasing exponentially, library budgets have not and will not be able to keep up with the rising costs. His analysis shows that the aggregate of all academic libraries now collects about six percent of total available knowledge and that within 20 years that figure will drop to one half of one percent. The implications of that drop for librarian's roles as selectors will be the focus of a future editorial.

This editorial addresses innovative alternatives for the scholarly communications system as a whole. Librarians are discussed as producers of their discipline literature. The Journal of Academic Librarianship serves as an example of how these alternatives might evolve in the literature of library and information science.

NEW ALTERNATIVES FOR SCHOLARLY COMMUNICATIONS

In March the California Institute of Technology under the leadership of Steven E. Koonin, Vice President and Provost; Richard C. Flagan, Professor, Chemical Engineering; and Anne M. Back, University Librarian, hosted a "Conference on Scholarly Communication." Provosts, faculty, scholar society leaders, information technologists, and librarians met there to discuss the magnitude of the information explosion, the electronic alternatives, and the possible solutions. Conferees agreed on these three ideas for further discussion in the scholarly community:

1. Certification of the value of scholarly work should be decoupled from paper publication. Some work should be sent to scholarly societies, refereed, and then mounted on the Web instead of being printed.
2. Submission fees might be developed as an alternative to increasing journal prices. Such fees might be paid by granting agencies or institutions.
3. University libraries should take responsibility for archiving electronic publications. Each publication must have multiple archives to avoid the outcome of the Alexandria Library fire.

Since March, I have been discussing these ideas at academic gatherings with a variety of constituents in several different universities. One or two faculty have scoffed at them, assuring me that the scholarly communications system works optimally, needs no reform, and even if it needed reform, could not be reformed. This response underlines the third-party payer nature of the current arrangement in which the discipline scholars produce and consume scholarly information while the library pays, in the same way that individuals consume health care while insurance companies pay. Faculty, who do not pay for the journals, are not easily motivated to economize. Other faculty, administrators, computer experts, and librarians believe these ideas should be pursued.

APPLICATIONS TO THE DISCIPLINE OF LIBRARIANSHIP

Most academic librarians design their serials cuts to reduce the cost of journals equally across all disciplines. A recent regular feature article in American Libraries outlined the current differences in serials prices by discipline. At the low end are General-interest periodicals at an average price of $40.72, Library and Information Science journals at $78.00, and Literature and Language at $46.72. Predictably, the high part of the spectrum is held by Chemistry and Physics at $957.36 and Medicine at $461.60. This regular American Libraries' article reports figures for 1977 to 1997.

In 1977, General-interest journals were $16.19, Library and Information Science journals cost $16.97, Literature and Language $11.82 while Chemistry and Physics journals were...
Academic Libraries as Electronic Archives

The academic community, as represented at the Caltech Conference on Scholarly Communication, believes that only academic libraries can be trusted to provide a suitable archive for an electronic scholarly communications alternative. Commercial publishers have already demonstrated their indifference to archival issues. Even scholarly societies which view the production and publication of discipline knowledge as a preeminent responsibility do not seem well equipped to handle electronic archiving. The reputation of libraries as repositories of the knowledge of the ages and librarians as the keepers of that record is high among academic colleagues. They believe that we can, should, and will meet the challenges to provide continuing access to electronic scholarly information.

This responsibility is nontrivial. The rapid change of computer platforms and software packages may require annual refreshing of electronic archives. Storage, retrieval, and dozens of other issues must be addressed and readdressed as the technologies change. That Gutenbergian fire that destroyed accumulated knowledge of the ancient world in Alexandria still burns in the minds of scholars who will want a wildly redundant approach to electronic archives. Electronic versions of journals will need to be archived in several academic libraries around the world in order to reduce the risks of catastrophe. Both scholarly societies and commercial publishers should enter into partnerships with appropriate academic libraries to establish archiving relationships.

Conclusions

While librarians as the creators of their discipline literature are less economically motivated to change than some other more rapidly expanding and expensive disciplines, nevertheless librarians should provide leadership both in their discipline and in the academic community for scholarly communications system reform. These ideas, which will be discussed in committees of the Association of American Universities (AAU) and the National Association of State Universities and Land-Grant Colleges (NASULGC), offer an opportunity for academic librarians to demonstrate their understanding of the issues in the system and of possible alternatives to the status quo. Academic librarians’ commitment to provide information for the scholarly community in such a turbulent environment requires us to conceptualize, plan, and implement a more innovative future.—Gst.C.

Notes and References

2. Conclusions reached during panel discussions, work groups, and the general wrap-up sessions by participants at the Conference on Scholarly Communication co-sponsored by Caltech and the Engineering Information Foundation, held at the California Institute of Technology, Pasadena, California, March 25-27, 1997.