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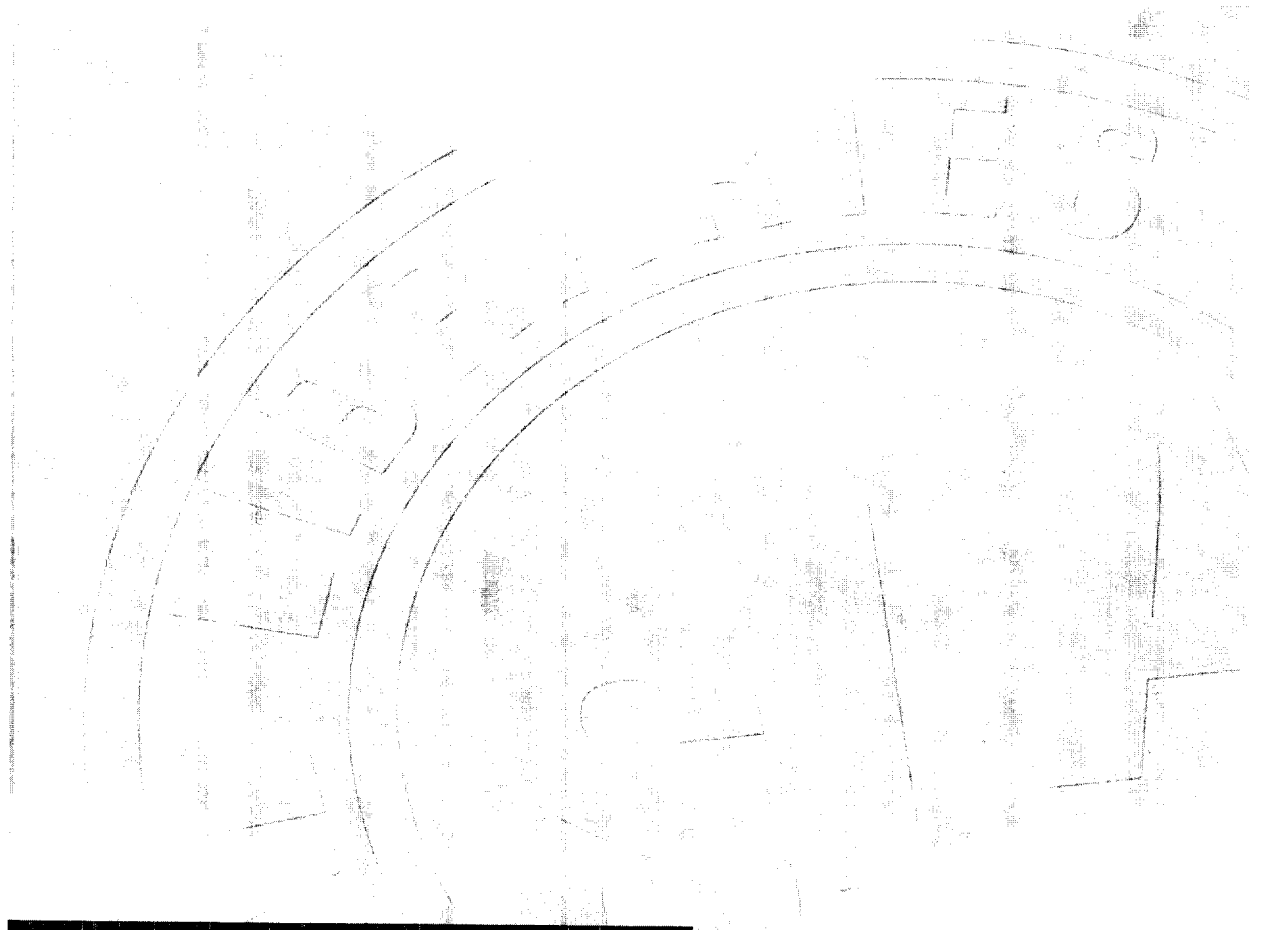


Inside this issue

Call for 1996 Conference Papers

Cost Billing in a Company Library

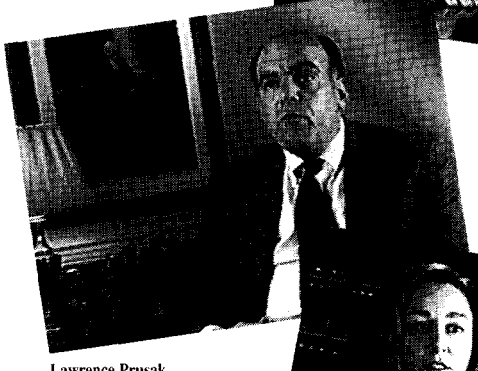
The Origins of Power and the Susceptibilities to Powerlessness

Wondering how to make new technologies work for you? We have experts on tape.

Frosty Owen, Manager
Library Services
Hunton & Williams Law Firm

Jane L. Rich, Senior Marketing Specialist (left), and Kristen Liberman, Manager, Information Resources Group, Lotus Development Corporation

Thomas H. Davenport
Professor of Information Systems and Director of Information Systems Management, University of Texas at Austin



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Ernst & Young Center for Business Information

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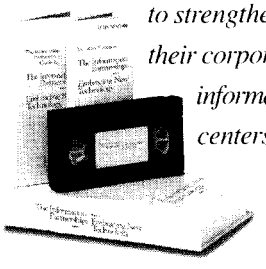

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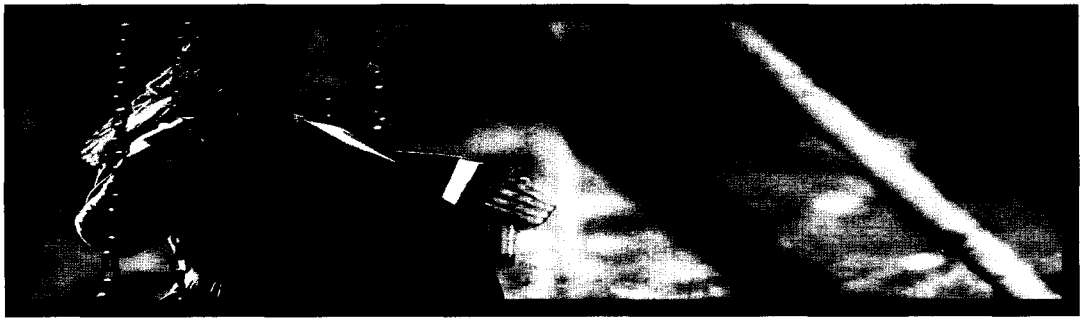

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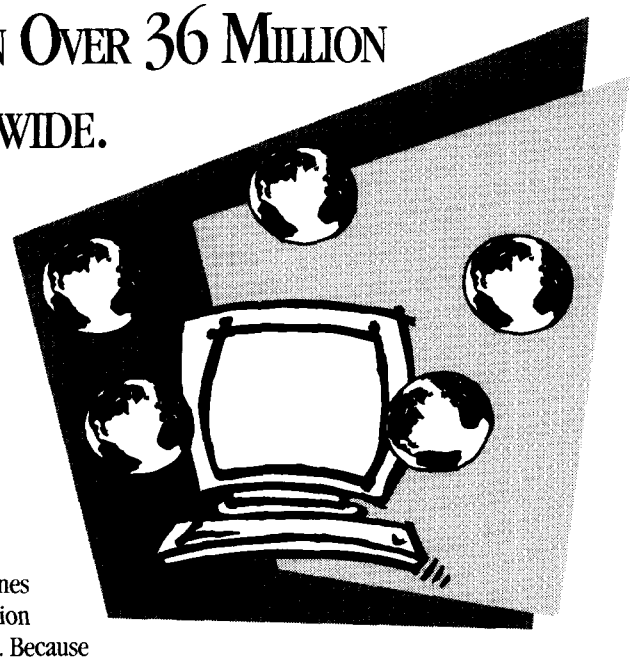

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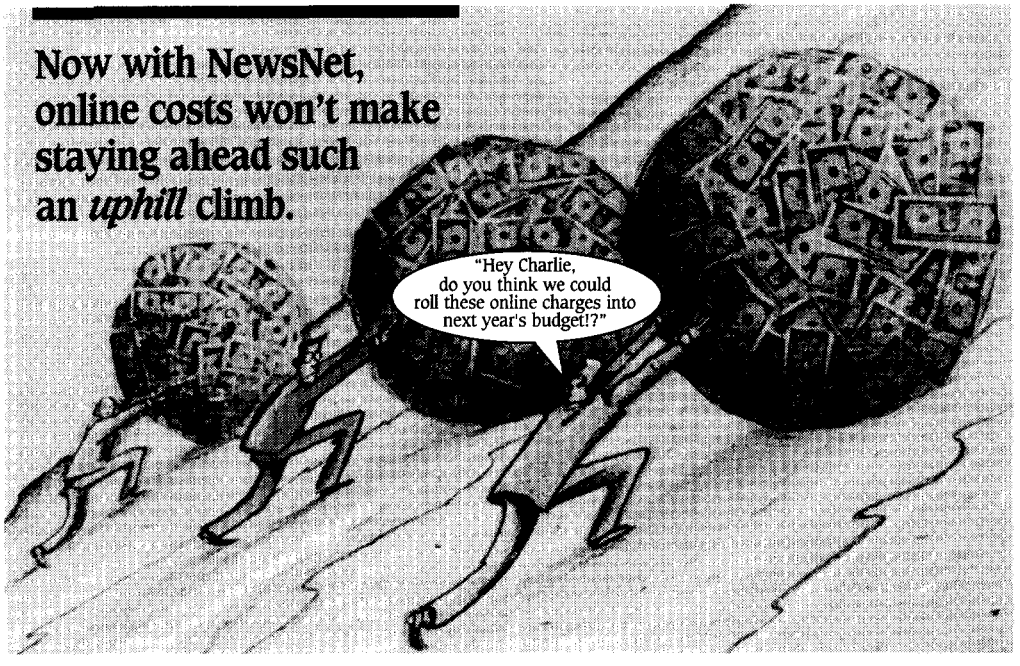

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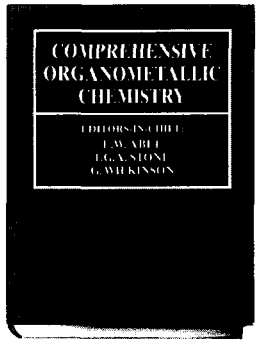

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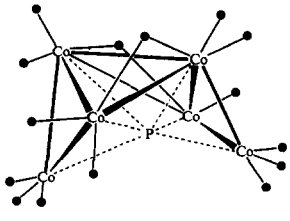

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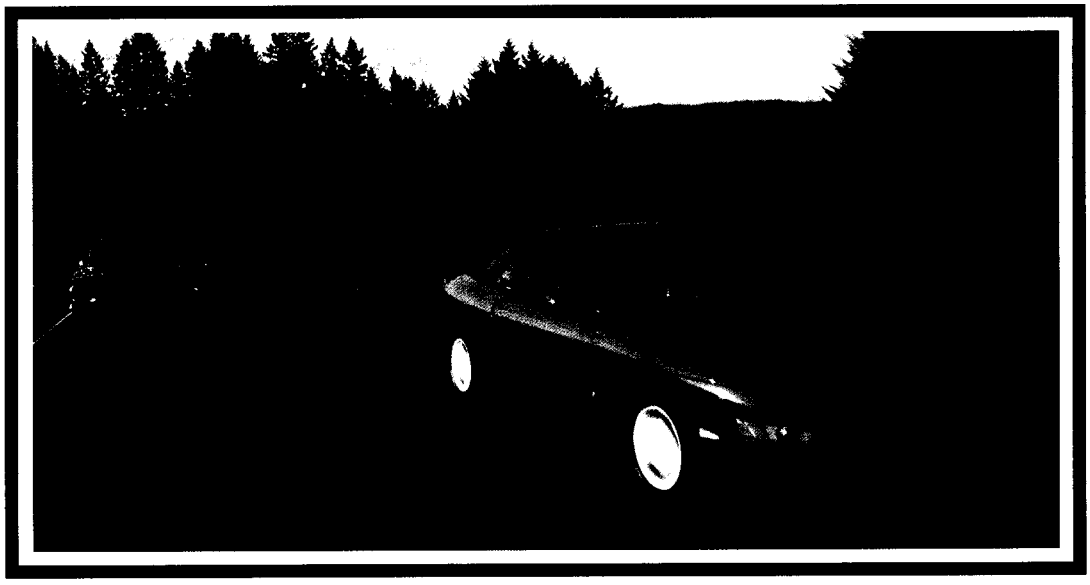

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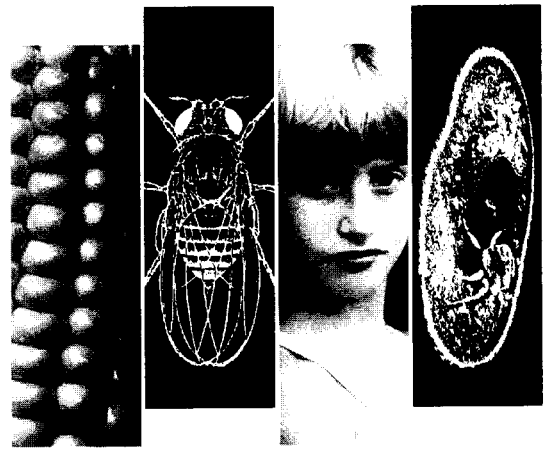

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Impact of Curriculum Revision on Media Collection

by Zana C. Etter

• *Au fur et à mesure que le cursus des facultés de médecine met moins l'accent sur les conférences et davantage sur l'utilisation des ressources informatisées pour encourager les étudiants à apprendre indépendamment, les bibliothécaires des bibliothèques médicales doivent affronter les changements dramatiques dans les sortes de matériaux dont les étudiants ont besoin et dans l'utilisation des collections. Elles doivent également réévaluer leur rôle de gestionnaires de l'information étant donné les différences dans la manière dont les utilisateurs accèdent aux nouveaux matériaux. Ce mémoire décrit l'intégration des cours multimédia dans la collection d'une bibliothèque médicale traditionnellement audio-visuelle et la manière dont ces changements affectent nos règlements relatifs aux collections et nos relations avec les utilisateurs. Vu que de nombreux formats que nous considérons comme «traditionnels» sont maintenant remplacés par des produits intégrés interconnectés, les conséquences pour les bibliothèques sont d'une portée considérable. Par exemple, comme les livres électroniques et vidéodisques résident dans les ordinateurs aux postes de travail, les bibliothèques n'ont plus besoin de prêter de livres. Les étudiants qui achètent leurs propres programmes ou qui possèdent un ordinateur ont moins besoin d'aller à la bibliothèque s'ils peuvent accéder aux renseignements sur les collections par modem ou employer le matériel qu'ils possèdent. Les bibliothécaires doivent découvrir de nouveaux moyens de s'adresser aux changements dramatiques dans l'utilisation des collections et poser des questions difficiles sur l'avenir du centre audiovisuel. Le mémoire conclut avec un aperçu de ce que seront les centres de médias du 21e siècle et le profil*

As medical school curriculums shift emphasis in teaching from lecture formats to the use of computer-based resources to promote self-directed learning, medical librarians must cope with dramatic changes in the types of materials students require and in the use of the collections. They also need to reevaluate their role as information managers in light of the differences in the way new material is being accessed by users. This paper describes the integration of multimedia courseware into a traditional medical audiovisual library collection and how these changes are affecting our collection policies and our relationships with users. Since many formats we consider "traditional" are now being replaced by integrated networked products, the consequences for libraries are far-reaching. For example, electronic textbooks and videodiscs which reside on computer workstations eliminate the need for the library to lend this material. Students who purchase their own programs or who own computers have less need to visit libraries when they can access collection information via a modem or use material that they own. Librarians need to discover new ways to deal with these dramatic shifts in the use of collections, and need to ask hard questions about the future of the audiovisual center. The paper concludes by offering glimpses into media centers of the 21st century and job descriptions of future information specialists.

A survey of North American medical schools in 1990 led to a report two years later that assessed change in medical education and recommended a number of improvements. The explosion of medical knowledge combined with the need to foster self-directed learning has put in motion curriculum revision

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de l'emploi pour les futurs spécialistes de l'information.

• *A medida que los programas de las escuelas de medicina cambian el énfasis de su instrucción desde un formato de clases teóricas al uso de computadoras para fomentar el aprendizaje autodirigido, los bibliotecarios médicos deben enfrentar los cambios dramáticos en los tipos de materiales requeridos por los estudiantes y en el uso de las colecciones. Necesitan además, evaluar nuevamente su rol como administradores de información, frente a las diferencias en la manera en que los usuarios acceden a información nueva. Esta publicación describe la integración de la información de cursos presentada a través de medios múltiples en una colección bibliotecaria audiovisual médica tradicional y la manera en que estos cambios están afectando nuestras políticas de colección y nuestra relación con los usuarios. Ya que muchos formatos que consideramos "tradicionales" están siendo reemplazados por redes integradas de productos, las consecuencias para las bibliotecas son de gran alcance. Por ejemplo, los textos electrónicos y videodiscos que se utilizan en las estaciones de trabajo de las computadoras eliminan la necesidad de prestar esta información por parte de la biblioteca. Los estudiantes que compran sus propios programas o los que poseen computadoras tienen menor necesidad de visitar la biblioteca cuando pueden acceder a información en la colección mediante un modem o el uso de material propio. Los bibliotecarios deben descubrir maneras nuevas de encarar esos cambios radicales en el uso de las colecciones, y deben hacerse las preguntas difíciles acerca del futuro del centro audiovisual. El artículo termina por presentar una revisión rápida de los centros de medios del Siglo 21 y de descripciones de trabajo de los especialistas en información del futuro.*

which involves new approaches to teaching, aided by computer applications.

The ACME-TRI Report on educating medical students states that "to practice medicine in the twenty-first century, medical students educated in the twentieth century must be given a strong grounding in the use of computer technology to manage information, support patient care decisions, select treatments, and develop their abilities as lifelong learners." [1]

An expanded information base in medicine has led to a reliance on self-directed study, incorporation of case-based learning sessions and a focus on computer literacy in medical education. In addition, the shift toward managed care, away from inpatient service has impacted on the educational setting, requiring new training programs for allied health professionals like nurses and physician assistants. This in turn affects libraries, who must strengthen collections to include materials for these students. More affiliated programs with local colleges, and an increase in students accepted for the allied health degree programs such as the Physician Assistant program have widened the scope of the traditional medical library, adding demands to the available budget, computer facilities, and study space.

Another factor affecting change in medical education is the importance of outcome measures. Medical schools now need to assess clinical competencies of students, to provide outcome analysis since it is required for the accreditation process. Some managed care organizations also require establishment of outcome performance criteria, which is leading to more "management by outcome" for clinical practices. Finally, increased state and federal attention and funding for public health and preventive medicine will necessitate a focus toward training in these areas.[2]

All of these changes impact on library administration and especially on collection management. Curricula which emphasize computer resources and problem-based methods of learning, coupled with radical changes in technology of information retrieval and storage, pose great challenges for the medical librarian. Library collections and the use of materials are rapidly being transformed, and the librarian's role is destined to change accordingly.

In the January 1994 issue of the *Bulletin of the Medical Library Association*, the editor stated that "progressive medical libraries were confronting philosophical and economic issues associated with preserving emphasis on collection development while adapting new operational procedures related to electronic publications and printing on demand."

In discussing the changing library, Naomi Broering declares that the concept of ownership of a large library collection and a facility that must be open a minimum of sixteen hours a day may no longer be realistic.[3]

The Media Library where I am director is currently open 15 hours a day during the week and eight hours a day on weekends when classes are in session. We have a permanent staff of three full-time employees with some additional hourly student help. Although some items in our collection are used year after year, others are sitting idle on shelves due to the phenomenon known as "interactive multimedia."

History of the Media Center

Today's modern "Media Center" is a far cry from the early audiovisual library: a shelf of 16 millimeter motion picture canisters and plastic containers of filmstrips which gradually moved aside for film loops and super8 reels, only to be supplanted by microfiche products and teaching packages comprised of two inch by two inch slides in carrousels and audio tapes accompanied by a guidebook. Videotapes arrived and became a mainstay of the AV collection, providing quicker and easier access to users and requiring less maintenance for the librarian. Although most libraries retain vestiges of these relics from the past, they are quickly being integrated with laser disc products and computer programs, changing forever the meaning of "audiovisual."

The Media Library at Robert Wood Johnson Medical School began in the mid-1970s, growing out of a need to provide audiovisual curriculum support in the basic sciences to first- and second-year medical students. Initially, the collection was comprised of texts, models, 16mm films and commercial slide packages purchased in the days when state budget allocations were more generous. It has grown from a tiny collection housed in a closet, supplemented by rental films, to a larger, more diverse one, incorporating faculty created slide programs, lecture notes produced by a student note-taking service, a variety of vertical file reserve items including copies of previous examinations, and a lecture taping service which generates one year's worth of lectures on audio tape.

One of the items on my agenda when I became director in August 1987 was collection assessment, which was initiated four months after I arrived. The collection had not been weeded in 10 years and much of it was sadly out of date. It is crucial for a medical library to update materials and remain current, since it is said that "the half life of some medical information is about 5 years."[4]

After course directors made decisions and obsolete items were removed, I reevaluated the collection. Efforts were made to purchase some new materials while we struggled to reorganize and create a computerized circulation system, which we accomplished a year later.

Introduction of Computers

Down the hall from the library in small study rooms, six XT and six AT IBM computers provided students with 24-hour access to word-processing and a few question databanks which were loaded onto the hard drives. These were based on the "Quizmaster" program from the University of Iowa, and were made available to students in 1986 by the Pathology Department, who for the past few years had been in the forefront of attempts at integrating technology into their curriculum. In 1984, a member of the teaching faculty began exploring the use of videodiscs for the Pathology curriculum in a collaborative project with the National Library of Medicine. In the fall of 1988, the department introduced several videodiscs from the NLM and also participated in the production of the "Slice of Life," a videodisc produced at the University of Utah which contained 50,000 images pertaining to pathology and which could be accessed through "LectricPath," a Hypercard stack for the Macintosh which was written by Dr. Robert L. Trelstad, Chairman of the Pathology Department.[5]

These videodisc programs ran on two workstations adjacent to the computer rooms. The following year when a Macintosh computer was added, its popularity was enormous and students vied for computer time. Free time for such activities was built into the course, rather

than requiring attendance at lectures, which was optional. Using "small group" formats and incorporating problem-based learning were other innovations that the Pathology Department introduced quite effectively, which tended to increase library use of textbooks and MEDLINE searching.

Other departments slowly followed, creating test question banks on the computer hard drives and depositing copies on floppy disks in the library to lend to students for copying onto their own computers.

Effect on Library

What did this mean for the library? When I became director, I found one drawer of floppy disk programs that were rarely used. Copies of these commercially produced diagnostic case studies had been received through a site license agreement with the main library. Faculty had not incorporated them into their teaching programs and most students were unaware of their existence.

The interactive, visually stimulating laser discs were another story. They were demonstrated during the first week of class and could be connected to monitors in the lecture halls. Although assignments using these programs were not mandatory, most students wanted to try them. The discs were placed in the library to be checked out. Unfortunately, not every student complied with the two-hour time limit, making our job even more difficult, trying to schedule and monitor use of library materials on equipment that was located outside of the library and for which we were not responsible.

The following year, several more copies were purchased which required additional equipment, so the department bought several more workstations. This still did not allow enough computer time for students, since there were 168 students spending an average of two hours working through the program.

In addition, other departments were now investigating similar programs. One was purchased for the Histology course, which ran on the same equipment as the Pathology program. Both courses were offered in the fall semester. This added about 170 students to the second year group already using the computers.

In 1992, one faculty member decided to author his own software, and entered into an agreement with a publisher to produce a program that would interact with the Slice of Life videodisc. Three copies were made available and several workstations were procured. This program was even more popular since the author taught the course and based some examination questions on the material. Although some students worked in groups, competition for equipment was keen since computers were shared by two departments. At that point, we instituted a reservation system and required students to sign up in advance for a two-hour time period. Checking discs in and out became a nightmare, especially when all material was to be returned by 11 p.m. when the library closed.

Ownership Issue

In the fall of 1993, a decision was made to lock the discs into the players, to allow 24-hour access. The library staff was not consulted and had no part in the decision. In addition to this change, the pathology discs used since 1988 were useless, since they ran on IBM computers, and the department had replaced all equipment with new Macintosh workstations which ran different versions of the software.

Essentially, the library no longer housed videodiscs, since they now resided in players. This relieved us of the time-consuming and aggravating job of scheduling viewing time, and we tried to look at it in a positive light. However, it also removed our control of the material. Students no longer needed to come to the library to borrow discs. We were no longer aware of new versions, copies or titles, technical problems students might be encountering, or which computers contained what programs, unless we inquired to departments or to the new dean of curriculum, who was now involved in purchasing computer assisted instructional material.

These discs were once part of our collection, and the library had lost ownership. Pur-

chase and control of computer programs were beginning to be handled by academic departments or higher level administrators. I venture to guess that this situation is not unique. At the University of California in San Francisco, Gail Persily, head of the Interactive Learning Center reports that they are working closely with faculty in identifying course need and appropriate tools to incorporate computer-based learning.[6] Although this center presently is more involved that the RWJ Media Library, the director indicates that in many cases, departments purchase the programs.

Is this a trend? Will academic departments and/or administrative units assume responsibility for purchase and maintenance of instructional programs that were once the domain of the library?

Technology's Impact

Videodisc technology also affected the use of more traditional library materials. The Histology course relies heavily on 2 by 2 slide viewing, and every fall semester is a challenge, coping with replacement of slide projector bulbs, broken carrousel trays, and retrieval of warped slides which were trapped in slide projectors. Slide viewing decreased somewhat with the introduction of videodisc products, which present cells and tissues more vividly and with less difficulty than a slide. However, until more computers are made available and until faculty emphasis on slide viewing decreases, I do not see a great deal of change immediately.

In 1993, with the purchase of A.D.A.M. (Animated Dissection of Anatomy for Medicine), an interactive multimedia program, our collection of anatomy dissection videotapes received little attention, quite a change from previous years.

Several major textbooks were also acquired in electronic format, available on disc or accessible via networked computers. Although this has had little effect on textbook use so far, I am sure this trend will continue, especially if copyright issues are resolved concerning transmission of graphics over the Internet. Along with the need to trim budgets and downsize, a decrease in printed text purchase will most likely occur in the future.

While new technology continued to occupy the spotlight, other changes were taking place which would affect us. In late 1991, a wet laboratory across the hall from the library was redesigned into a computer lab, and final renovations took place a year later. This facility was a necessity which provided additional student workstations for word-processing and accessing networked programs. However, computer assisted instruction for course work for the most part remained on computers outside the lab in the smaller study rooms, since the lab did not provide laser disc readers.

Network's Role

During 1990, two terminals were provided to the library to enable us to search library catalogs of our member branches. The following year, connections to the Internet became a reality, and the medical school witnessed a global change which would bring with it infinite possibilities for growth for both faculty and student. In August of 1993, every first-year student received an orientation to the computer lab and a network account.

In the Spring of 1993, a faculty member who teaches the Neural Science course used this system heavily, requiring students to use electronic mail so they could receive and send assignments, take exams and receive grades via computer. The major challenge with this approach is to provide enough computer time for students, especially those who do not own computers with modems. The library is witnessing more use on the two library terminals and a decrease in use of printed atlases and brain models, since the curriculum is not requiring such strict memorization of anatomical structures this year. The curriculum has always dictated what the library purchased, and the library's policy is to collect only materials relevant to the course of study. We plan to continue collecting in that manner, but will consider multimedia computer software if possible rather than formats such as slides or videotape.

Changing Role for Information Specialist

How should librarians cope with these shifts in types of material and the new generation of user? Librarians and information specialists need to first accept this change, and analyze the impact on collection management, staffing and space needs, borrowing policies and budget. They must realize that it will be necessary to change in order to survive.

Slide projectors must move aside for computer workstations and compact disc players. Staff will need to learn new technical skills and begin to relate to users in a very different way, relinquishing a lot of face to face contact. Instead, they will need to become more adept at interpreting codes and analyzing the written word on a computer screen. Data entry, file transfer, troubleshooting, and maintenance of computer facilities will occupy a larger portion of staff time.

The librarian's role will be transformed, away from being the provider of information, toward one as interpreter, evaluator, and facilitator. There will be many opportunities for librarians to provide valuable assistance with navigating the electronic networks, finding appropriate instructional material, and perhaps evaluating its potential for classroom use for faculty who do not have the time or expertise. Providing adequate computer equipment and material will remain a challenge to librarians until funding bases improve and until prices become more reasonable.

Vision of Modern Media Center

What will the media center of the 21st century be like? Will it be called a media center? And will librarians play a major role in these virtual libraries or information arenas?

By the year 2000, I predict that the Media Library as I know it today will not exist. Many textbooks in print will be replaced by electronic versions available on laser disc or via a network, and students may carry pocket sized digital books (the *Physician's Desk Reference* and several other titles can already be purchased this way). There will be no need for a separate computerized circulation station to track borrowed items, since most materials will be used on a computer and usage figures can be gathered electronically as someone uses the program or title.

Slides and videotapes will be replaced by laser disc products or digital versions available over a network, showing images at much clearer resolutions. Peter Lewis, in the *New York Times* column "CD-ROM Review" states that "the combination of higher-speed drives and higher-capacity disks opens the possibility of laser-quality movies on a single disk, which in turn could hasten the demise of VHS videotapes. When the rewriteable 3.3 gigabyte optical disk drives reach the consumer market in 1998 or so, the VCR itself will begin to fade."[7]

Models and printed atlases will not longer be necessary if students can dissect the body more visually and actively using computer models that are multidimensional.

Compact disc products like MEDLINE will be replaced by networked versions that users can tap into from home or office.

Paper copies of examinations and notes on file now will be available on computer hard drives and eventually over the network. Printed items can be scanned into a computer easily and quickly and new materials can be typed directly onto computers, eliminating the need for xeroxing, filing, labeling, and maintaining vertical files. Electronic reserves for academic libraries is presently a topic of much concern, and medical faculty will simply create files and send them via electronic mail to student mailboxes.

Essentially, the library of bookshelves, file cabinets, and AV shelving will cease to exist. In their place will be huge networked computer centers, requiring less supervision, less labor intensive output, and less staff. Users will access many services at remote locations, and the ones who visit the computer centers will probably be self-sufficient most of the time.

Future of "Library" As Entity

What will happen to librarians? Will they be absorbed into academic computing departments or information service staffs? According to information I gather from a medical

library listserv, MEDLIB-L (MEDLIB-L@UBVM.CC.BUFFALO.EDU), this practice is very common in the United Kingdom, Australia, and New Zealand. In Pennsylvania, Lehigh University plans to merge its libraries with the telecommunications department and administrative computing, and Jefferson Medical School libraries have administratively merged with university computing facilities. Some hospital librarians in the United States are now reporting to Medical Records or Information Systems departments.

Will librarians join forces with media equipment service centers? This was accomplished in 1980 at the University of Miami School of Medicine, when the library merged with the Biomedical Communications Department.[8] Or will special librarians be strong enough to head these emerging computer facilities with the technical expertise required?

Summary

A realistic look at the future should convince information specialists that in order to remain competitive and perhaps even employed, they must begin now to acquire or polish technical skills relative to computer systems, local area networks, and electronic transfer of information; they must network services and be willing to share access to materials; and they should become more involved in training and teaching about electronic information environments.

Try to visualize your print collection as electronic information—How would your library look? What would you need? What could you do without? What would it mean in terms of staff and space?

The March 1994 issue of *Money* magazine ranked librarian as a profession number 51 out of 100. A Computer Systems Analyst was ranked number 1. The short term outlook for Librarians was designated Fair, with a job security rating of Average. Computer analysts received an Excellent short term outlook as well as job security. [9]

I think this says a great deal to any information professional. Whether we call ourselves electronic resources librarians, information managers, electronic analysts, or technical facilitators, we need to be responsive and proactive, welcoming the vision of future information technology with an open mind and an attitude that includes creativity and flexibility to succeed in the 21st century.

This paper was presented at the SLA Annual Conference in 1994 at the contributed paper session sponsored by the Biological Sciences Division, under the title: "From Filmstrips to Videodisks: Influence of Medical School Curriculum on AV Collection Management."

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References

[1] Association of American Medical Colleges. *Educating Medical Students: Assessing Medical Education-The Road to Implementation (ACME-TRI).* Washington, DC: AAMC, 1992. 62 p.

[2] *University of Medicine and Dentistry of New Jersey. Strategic Directions 1995-2000.* Newark, NJ: UMDNJ, 1994, p. 60.

[3] Broering, Naomi C. "Changes: Moving Toward the Years Ahead." *Bulletin of the Medical Library Association* 82(1): 81 (January 1994).

[4] Trelstad, Robert L. "Cognition, Computers and Competence." *The Prescription* 3(1):1 (October 28, 1988).

[5] Ibid., 1.

[6] Communication with Gail Persily. Interactive Learning Center, University of California, San Francisco. (1993).

[7] Lewis, Peter H. "CD-ROM's to Get Better and Faster But Even So They May Not Survive." *New York Times* 15(1): C15 (December 13, 1994).

[8] Lemkau, Henry L. "An Intrapreneurial Approach to Integrating Information Production Services into an Academic Medical Center Library." *Bulletin of the Medical Library Association* 79(3): 273 (July 1991).

[9] Gilbert, Jersey. "The Best Jobs in America." *Money* 23(3): 70-73 (March 1994).

Synagogue Libraries: Making it on Their Own

by Laura Berner Cohen

• *Il y a des bibliothèques dans les synagogues des Etats-Unis depuis des décennies, et leur nombre augmente. La bibliothèque typique est une entreprise modeste qui fournit de la documentation aux fidèles de la synagogue sous plusieurs formes: livres, périodiques ou autres médias. Les quelques études qui ont été faites indiquent que d'une part, les bibliothèques des synagogues ont un personnel qui n'est pas de la profession, bénévole et à temps partiel et d'autre part, qu'elles fonctionnent sur le principe du libre-service. Dans la présente étude, les bibliothèques des synagogues situées dans le nord de l'état de New York ont été examinées dans le but de déterminer leur succès malgré l'influence professionnelle minimale. Les critères du succès ont été identifiés dans les domaines suivants: circulation, croissance de la collection, heures d'ouverture et pratiques de catalogage. Les résultats indiquent que ces critères satisfont les besoins fondamentaux de leurs fidèles. Les données suggèrent aussi que les bibliothèques des synagogues pourraient profiter de l'adoption étendue de normes de procédure.*

• *Las bibliotecas de las sinagogas en los Estados Unidos han sido mantenidas durante décadas y están creciendo en número. La biblioteca típica es una empresa modesta que provee material impreso y sobre otros medios para la congregación de la sinagoga. Los pocos estudios realizados muestran que la mayoría de las bibliotecas de las sinagogas tienen personal no profesional, voluntario, de tiempo parcial y operan mediante el auto-servicio. En este estudio se hizo un relevamiento de las bibliotecas de las sinagogas en el estado de Nueva York para determinar su nivel de éxito a pesar de un aporte profesional mínimo. Se identificaron criterios para definir éxito en las áreas de*

Synagogue libraries in the United States have been maintained for decades and are growing in number. The typical library is a modest enterprise that provides print and other media materials for the synagogue's congregation. The few studies conducted show that most synagogue libraries are staffed by nonprofessional, part-time volunteers and operate on a self-serve basis. In the present study, the synagogue libraries in upstate New York were surveyed to determine their success despite minimal professional influence. Criteria for success were identified in the areas of circulation, collection growth, staffing, hours of operation and cataloging practices. The results indicate that these criteria have been met and that these libraries are meeting the basic needs of their congregations. The data also suggests that the widespread adoption of standards of practice could benefit synagogue libraries.

Synagogue libraries have received scant attention from the wider library community. The literature on this type of special library is extremely limited.[1] Little research has been carried out, most of it conducted before the 1980s. To add to the problem, most studies encompass both church and synagogue libraries together. As a result, there is a scarcity of useful data. Most library schools have ignored the field of religious librarianship altogether.

For synagogue libraries, professional influence can come from two major sources: staff and library associations. In both these areas, synagogue libraries are lacking. Most synagogue libraries are staffed by nonprofessional, part-time volunteers. Two professional associations serve the interests of religious libraries, but few synagogue libraries are members. Further, contact by synagogue librarians with other library associations is

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circulación, crecimiento de la colección, personal, horas de operación y prácticas de catalogado. Los resultados indican que se han logrado estos criterios de éxito y que estas bibliotecas están sirviendo las necesidades básicas de sus congregaciones. Los datos también sugieren que la adopción generalizada de los criterios en uso podrían beneficiar las bibliotecas de las sinagogas.

minimal. It is understandable that nonprofessionals might find it difficult to associate with professional librarians on the state or national level. There is also a practical consideration: congregations may be unwilling to pay conference expenses for their library volunteers.[2] Without religious librarians present at state and national conferences, it follows that programs and workshops to support them are lacking. Consequently, there is insufficient contact between religious and other types of librarians with the resulting lack of documentation.

Throughout Jewish history, synagogues have held collections of books.[3] Today in the United States, the typical synagogue library provides print and other media materials to the members of the synagogue's congregation, primarily on a self-serve basis. These materials are associated with the institution's religious, cultural, and educational activities. Most religious libraries are modest enterprises and concentrate their activities on providing access to their materials.[4] This is in contrast to current trends in librarianship, which also emphasize the provision of information along with a variety of patron services. While there are large synagogue

Table 1

Weekly Circulation by Membership Totals

Number of families	Circulations				
	Less than 10	10-25	26-50	51-100	Not Reported
Less than 50	1	1	—	—	—
50-100	8	—	—	—	1
101-200	7	6	1	—	4
201-500	3	4	2	1	2
501-1000	—	2	1	1	1
1001-1300	—	1	—	3	1
Not Reported	1	—	—	—	—
	20 %: 38.5	14 %: 26.9	4 %: 7.7	5 %: 9.6	9 %: 17.3

Mean: 22
Median: 10

libraries which offer such services, these activities are beyond the skills and resources available to the nonprofessionals who are the backbone of most synagogue library staffs. A synagogue library may therefore be defined as one or more rooms containing print and other media materials arranged in an organized way, with a system to provide for their use.

Potentially large populations are served by synagogue libraries. As of 1990, there were 3,416 synagogues in the United States serving 5,981,000 members.[5] Exactly how many libraries exist within these institutions is unknown, as a comprehensive survey has never been done.[6]

The number of synagogue libraries is increasing. Synagogue libraries may remain static for a period of years, but they are rarely eliminated. Ordinarily, a library in a church or a synagogue will be abolished only when the institution itself ceases to exist. Therefore, the number of such libraries can only increase as new institutions are founded, or as libraries are started in established institutions.[7]

The U.S. religious library movement began 30 to 40 years ago. Its evolution has been influenced by the growth and prosperity of suburban churches and synagogues, which have provided opportunities for the expansion of libraries in these institutions. Another influence is the growth and increased professionalism of school and public libraries. Finally, the movement has seen a slow rise in the number of professionally trained library staff. The sluggish pace of this last factor, however, continues to have a negative impact on religious libraries.[8]

Helen Greif has made an attempt to describe the typical synagogue library, based on responses to her 1976 survey from 73 synagogue librarians in 20 states. Most of these libraries were founded in the 1950s or 1960s. The average library represented a congregation of 500-600 families and had an annual budget of $1,300 to $1,700. A quarter of the collection was devoted to children's literature. Book collections averaged 3,200-4,200 volumes, or five to six volumes per family. Most libraries held media material, periodicals, and newspapers. Not surprisingly, collections were dominated by Judaica materials. Funding was provided by the congregation, the sisterhood, and donations. The most frequently used classification systems were the *Dewey Decimal Classification* and the *Weine Classification Scheme for Judaica Libraries*, a modification of Dewey. Subject heading lists by Kurland and Weine, Library of Congress, and Sears were the most often used. Part-time volunteers were the most numerous library staff members. Of the head librarians reporting, 40% were graduates of library schools and half of these were paid employees. The libraries were open an average of 10 to 13 hours per week.[9]

Greif's survey did not explore circulation figures. A study conducted by the Church and Synagogue Library Association (CSLA) in the 1970s found that congregational libraries circulated about 17 volumes per week, with most circulating between 10 and 25 volumes per week.[10] It should be noted that many of these libraries are open on a self-serve basis. The self-service aspect is a unique feature of religious libraries, one which reflects an emphasis on collection usage as a primary library activity.

Existing classification systems present problems for a Jewish library. A specialized Judaica collection requires extensive subdivision within a limited area of classification. In addition, some of these subjects do not fit well into general systems. As a result, a number of classification schemes have been devised for the small Jewish library. Overall, however, no cataloging standard exists. Greif's 1976 study found that many libraries utilize homemade systems,[11] though no studies found in the literature have confirmed if this still holds true.

Perhaps the most problematic issue facing the field of synagogue librarianship is that of staff. It is no surprise that part-time, nonprofessional librarians are not held in high esteem. The Association of Jewish Libraries (AJL) surveyed its member libraries in 1971, and found that librarians had little status in comparison with that of other Jewish professionals. Those who were paid had correspondingly low salaries. The authors concluded that this problem will remain as long as so much of the library work

is done on a volunteer basis.[12] It must be recognized, however, that only the most heavily endowed religious institutions can afford to pay a professional librarian. This factor can be expected to hold back an advance in the professional status of synagogue librarians.

Due to the scarcity of opportunities for formal education, some librarians are turning to religious library associations. Since 1967, CSLA has provided educational guidance for the creation and maintenance of congregational libraries. The association has worked to provide opportunities for continuing education, and has established contacts with the wider library community.[13] CSLA currently lists two dozen titles available for sale. Perhaps most important is its Guide series, a collection of 16 inexpensive booklets that provide practical instruction to the religious librarian.[14]

Though CSLA offers an admirable array of resources, very few synagogue libraries have joined the association. Of its 1,900 members, only four or five are synagogues.[15] This may be explained by the fact that CSLA does not publish anything geared to synagogue libraries alone.[16] Its main value to synagogue libraries, then, lies in its advocacy of the religious library field.

AJL was founded in 1966, created by a merger of the Jewish Librarians Association (founded in 1946) and the Jewish Library Association. AJL is grouped into two divisions: Research and Special Library, and School, Synagogue and Center. Among its activities, AJL publishes a journal and other periodicals, offers publications for sale, confers book awards, and sponsors a discussion list on Internet. The association also certifies librarians through its Continuing Education

Table 2

Books Added to Collections Annually		
Books Added	**No. of Libraries**	**Percent**
3-5	5	9.6
6-10	9	17.3
11-25	7	13.5
26-40	6	11.5
41-60	7	13.5
61-80	1	1.9
81-100	3	5.8
101-150	1	1.9
Not Reported	13	25.0
	52	100.0
Mean: 34 Median: 20		

program, and grants library certification on Basic, Intermediate, and Advanced levels.

Of AJL's 1,000 members, 416 are synagogue libraries.[17] Although this figure may be substantial within the association, it most likely represents only a small percentage of the synagogue libraries in the United States. Ralph Simon, president of the association, reports that nonmember synagogue librarians frequently seek his advice on establishing and maintaining their libraries, but are unwilling to join AJL. He describes a resistance on the part of these librarians to understand how they might gain from the association's professional advocacy.[18] This illustrates an aspect of the nonprofessional approach taken by a segment of the synagogue librarian community.

AJL currently offers 23 publications for sale, primarily classification schemes, subject heading lists, instructional manuals, and bibliographies. AJL offers both the Weine and the Elazer classification systems, as well as Weine and Kurland's *Subject Headings for a Judaica Library.*

Both CSLA and AJL offer their publications to nonmembers. They may therefore serve as potential resources to any synagogue library. To what extent nonmember libraries purchase these materials has not been studied.

Despite the efforts of CSLA and AJL, synagogue libraries have yet to receive full recognition for their role, and potential role, in Jewish identity and education. As a related problem, synagogue libraries must compete with the effectiveness of school and public libraries.[19]

In the current study, the synagogue libraries in upstate New York were surveyed to determine their success despite minimal professional influence. Success is defined by the

Table 3

Weekly Library Hours		
Hours	**No. of Libraries**	**Percent**
Less than 8	10	19.2
8-13	7	13.5
14-20	7	13.5
21-30	2	3.8
31-40	2	3.8
Whenever building is open	18	34.6
Every day except Saturday	2	3.8
During office hours	2	3.8
During activities	1	1.9
Not Reported	1	1.9
	52	99.8

following criteria: 1) library materials circulate regularly; 2) new materials are added to the library's collection; 3) at least one individual oversees operations; 4) the library is regularly open the equivalent of at least one day per week; and 5) materials are organized by the use of a codified system of classification and/or subject headings.

Following pretesting, a questionnaire was mailed to 87 synagogues in upstate New York in September 1993. This number represents virtually all the synagogues in the state except those located in Westchester, Rockland, Nassau, and Suffolk counties, and in New York City. Sixty-three synagogues returned the questionnaire, representing 72.4% of the total synagogues queried. Ten synagogues, or 11.5%, reported that they have no library. An additional questionnaire was not used in data analysis, as the synagogue library in question was just becoming operational. The number of usable responses totaled 52. The results of this study's analysis may be seen as representative of approximately 60% of the synagogues in upstate New York. It is unknown if the nonresponding synagogues operate libraries.

Results

Analysis of the data shows a range of library founding dates from 1900 to 1991, with a mean of 1960. Synagogue libraries in upstate New York are therefore established enterprises within synagogue institutions. A few respondents indicated that their libraries had been stagnant or closed for a period of time and had been recently revived.

The libraries in this study held an average of 1,923 books, with a median of 1,000. These libraries are smaller than those responding to the Greif and CSLA studies, which averaged holdings of 3,200 to 4,200 and 3,000 volumes respectively. The data shows that 23 libraries contain books shelved for the use of the students enrolled in their synagogues' religious schools. The total holdings of just over 52 percent of these libraries are in the 1,000-5,000 range. The presence of student books in a congregational library, therefore, does tend to increase the total number of library holdings.

One measure of success of any library is the level of use made of its collection. In order to view such activity in context, it is necessary to determine the potential number of library users. In an synagogue environment, most if not all the users are members of the congregation. Membership is categorized by unit family, which may represent one or more individuals.

Table 1 on page 92 presents circulation figures by groupings of unit families. It can be seen that these libraries are experiencing circulation levels on a par with those found in the CSLA survey, in which approximately two-thirds of the libraries circulate 25 books or less

Table 4

Library Staffing – Composites		
	No. of Libraries	**Percent**
Volunteers Only	26	50.0
Paid Only	4	7.7
Volunteers & Paid	6	11.5
No Staff	16	30.8
	52	100.0

per week. There is a positive correlation between circulation and the size of a synagogue's membership. Only two libraries reported an absence of circulation, but these appear to be maintained for reference use.

The addition of new books to a library is another important measure of activity. Table 2 on page 94 shows that the responding libraries add new books to their collections and are growing enterprises. The range of annual additions is three to 150 volumes. Most of these libraries increase their holdings by 50 books or less annually, with the single greatest percentage adding six to 10 volumes per year. It is not possible to compare these figures with those in other studies, as no surveys found in the literature measured this activity beyond giving a proportion of budget monies spent on books.

In order for a library to serve its patrons, the facility must be open for a sufficient number of

Table 5

Profile of Libraries Without Staff by Size of Collection				
No. of Books	**Weekly Circulation**	**Books Added Annually**	**Days/Hours Open Per Week**	**No. of Families**
50	5	5	7 days	45
200	2	?	7 days	80
225	2	?	2	85
300	3	20	10	50
300	2	3	during activities	120
300	10	10	7 days	140
300	2	10	6	200
350	0	50	20	68
500	?	10	4	145
500	5	5	7 days	150
600	15	?	7 days	20
1000	0	30	6 days	265
1500	3	3	7 days	260
1500	15	12	25	300
2000	?	20	20	145
10,000	5	50	7 days	90

hours so that its collection may be conveniently accessed. Table 3 on page 95 shows that 80.8% of the synagogue libraries responding to this survey are open more than the equivalent of one day per week. The next higher range of hours was grouped so that a rough comparison could be made with the Greif survey, in which the libraries were open an average of 10 to 13 hours per week. Only 13.5% of the libraries in the present study fell into this range. Almost half these libraries are open five or more days a week, a far greater total than that found in the Greif study.

As can be seen in Table 3, many respondents supplied information about hours with a worded statement rather than with numbers. It is uncertain whether just two libraries shut down only on Saturday or whether other respondents neglected to explain this. Since writing is prohibited on the Sabbath, some libraries have devised a system whereby patrons may borrow materials without making a written record. Others, particularly those in Orthodox synagogues, may be opposed to such a practice. Table 3 shows that over 34% of the libraries operate whenever their synagogue buildings are open. This category represents the largest single proportion of responses. Further analysis reveals that nearly 90% of these libraries operate on a self-serve basis.

The number and professional status of library staff is crucial to the success of any library. Several analyses were conducted on synagogue library staff. The issue of paid staff versus volunteers is of particular interest in the field of religious librarianship. Table 4 on page 96 shows that just over 19% of the respondent libraries employ paid staff, compared with 12.7% reported in the CSLA study. Half the libraries in the present study are staffed only by volunteers, while just under 81% do not employ any paid staff. Further analysis of the data shows that seven of the 10 libraries that employ paid staff have one paid employee.

The data shows that 30.8% of the libraries report operating without staff. Table 5 on page 97 gives a profile of these 16 libraries. In general, it is the smaller libraries with low circulations that have no staff. It might be argued, however, that half these unstaffed libraries have weekly circulations of three books or less because they are not being effectively stocked, organized, administered, or publicized.

Table 6

Paid Staff by Membersip Totals		
Families	**No. of Libraries**	**No. of Libraries w/Paid Staff**
Less than 50	3	—
50-100	10	1
101-200	17	1
201-500	12	1
501-1000	5	4
1001-1300	4	3
Not Reported	1	—
	52	10

Nevertheless, someone must administer the borrowing privilege and take in new books. It would be interesting to know who is performing these activities. Many synagogues employ office help, and possibly this duty is assigned to such staff.

In order for a synagogue to afford paid library staff, there must be a sufficient membership base. Table 6 on page 98 shows that seven of the 10 libraries with paid staff have membership totals of over 500 families. It is also notable that seven of the nine synagogues with more than 500 families have paid library staff.

Libraries with large collections are likely to need the services of a staff person and might be willing, if funds are available, to pay for such staff. Table 7, below, shows that synagogues with the largest library collections have hired paid staff. It can be seen that five of the eight libraries with holdings of more than 3,000 books have paid employees on staff.

The attractiveness of employment for a professional librarian in a synagogue library would depend in part on the number of hours offered by the job. Because of the design of the questionnaire, it is not possible to determine the number of hours that salaried employees are paid. It may be extrapolated from the records, however, that few if any of the paid staff are working full time. Table 8 on page 100 shows this data.

It is likely that paid staff would spend most if not all of their paid hours in the library while it is open. Five of the libraries with paid staff are not self-serve, and these are open 20 hours or less per week. The data shows that only two libraries are open sufficient hours to support a full-time librarian's time. Furthermore, these libraries are self-serve, and may not necessarily have a librarian on the premises during all the hours when they are open. It therefore appears that most of these paid jobs are not full-time positions. Thirteen staff persons receive library salaries. Of these, at least three are professionals. It can be concluded that only a few of these synagogue library staff are

Table 7

Paid Staff by Size of Collection		
No. of Books	**No. of Libraries**	**No. of Libraries w/Paid Staff**
50-100	2	—
101-300	11	—
301-500	6	—
501-1000	5	—
1001-3000	15	4
3001-5000	5	3
5001-10,000	2	1
10,001-13,000	1	1
Not Reported	5	1
	52	10

paid, and that even fewer are graduate librarians. Most of these synagogues are simply too small to afford to hire library staff. Such limited work opportunities can be expected to attract few career librarians. There is no reason to believe that this situation will change significantly in the future.

It is notable that the libraries with the highest weekly circulations are among those with paid staff. This supports the notion that an actively-used library may have both the need and the resources to hire paid help.

A synagogue's interest in and need for a professional librarian may be influenced in part by the size of the synagogue itself. The data has shown that larger synagogues have an active circulation of library materials, and are more likely than smaller synagogues to pay for library staff. The survey questionnaire was designed to determine the professional status of a library's staff in four categories: current professional, current nonprofessional, past professional only, and no professional at any time. Table 9 on page 101 shows a comparison of these four categories by synagogue membership size.

The data shows that just under 79% of the synagogue libraries are currently staffed by non-professionals. It is notable that no synagogue with less than 50 families has a professional working in its library. The greater proportion of libraries utilizing professionals is found at the higher membership levels.

The right half of Table 9 gives a breakdown of the data for libraries currently staffed by nonprofessionals. It is useful to look at professional staffing in the past, since the previous work of a professional can influence current

Table 8

Profile of Paid Staff by Weekly Library Hours				
Days/Hours Open Per Week	No. Paid Per Library	Self Serve	Current Professionals	Weekly Circulations
4.5	1	Y	N	20
8.0	1	N	Y	50
9.0	2	Y	Y	20
10.0	1	Y	N	?
12.0	1	Y	N	5
15.0	1	N	N	89
16.0	2	N	Y	90
20.0	1	N	N	100
7 days	2	Y	N	100
7 days	1	Y	N	15
	13			

library practice. The questionnaire defined a past professional as either a staff person or a consultant. Not surprisingly, it is the larger synagogues that have utilized professionals in the past. It is notable that almost 60% of the synagogues have never utilized a professional librarian, either as a staff person or a consultant. It is also worth noting that no library with a membership of more than 1,000 families is in this category.

The literature has shown that synagogue libraries utilize a variety of classification schemes and subject heading lists, both published and homemade. It is expected that a professional librarian would be more likely to consult a published source. Table 10 on page 102 shows the sources in use by the four professional categories described above. The data is arranged by the cluster of cataloging tools utilized in individual libraries, as this yields more meaningful results than a consideration of each tool separately.[20]

The data shows that 30.5% of the libraries use a published classification scheme or a scheme in conjunction with a subject heading list. Combined with the 25% of libraries that use their own cataloging system, a total of 55.5% of these libraries use a codified system to catalog their collections. In the three cases in which the respondent was unable to identify the cataloging system in use, the classification was described as numerical or decimal-based. When these are taken into account, just over 61% of the respondent libraries use codified cataloging schemes. Library of Congress and Weine-based systems, both the classification schemes and subject heading lists, are the most frequently used published sources.

As expected, all the libraries staffed by professionals utilize some form of cataloging system, most of them published. On the other hand, 38.5% of the libraries without professionals on staff do not. An examination of the

Table 9

Staff Professional Status by Membership Totals

Families	No. of Libraries With Current Professionals	%	No. of Libraries With Current Non-Professionals	%	No. of Libraries With Only Past Professionals	%	No. of Libraries With No Professionals	%
Less than 50	—	—	2	3.8	—	—	2	3.8
50-100	1	1.9	8	15.4	—	—	8	15.4
101-200	1	1.9	17	32.7	3	5.8	14	26.9
201-500	5	9.6	8	15.4	3	5.8	5	9.6
501-1000	2	3.8	3	5.8	2	3.8	1	1.9
1001-1300	2	3.8	2	3.8	2	3.8	—	—
Not Reported	—	—	1	1.9	—	—	1	1.9
	11	21.0	41	78.8	10	19.2	31	59.5

Table 10

Cataloging Tools in Use by Professional Status

Cataloging Tool	Current Professional	%	Current Non-Professional	%	Past Professional Only	%	No Professional	%
Dewey	—	—	1	1.9	1	1.9	—	—
Modified Dewey	—	—	1	1.9	1	1.9	—	—
Elazer	—	—	2	3.8	—	—	2	3.8
LC	1	1.9	1	1.9	1	1.9	—	—
Modified LC	1	1.9	1	1.9	1	1.9	—	—
LC/LCSH	—	—	1	1.9	1	1.9	—	—
UAHCC/SHJL/C	—	—	1	1.9	1	1.9	—	—
Weine	3	5.8	1	1.9	1	1.9	—	—
Modified Weine	1	1.9	—	—	—	—	—	—
Weine/SHJL	1	1.9	—	—	—	—	—	—
Own System	3	5.8	10	19.2	2	3.8	8	15.4
Don't Know	1	1.9	2	3.8	1	1.9	1	1.9
None	—	—	20	38.5	—	—	20	38.5
	11	21.1	41	78.6	10	19.0	31	59.6

LEGEND:

Dewey: *Dewey Decimal Classification*
Modified Dewey: modified *Dewey Decimal Classification*
Elazer: *A Classification System for Libraries of Judaica*
LC: *Library of Congress Classification Scheme*
Modified LC: modified *Library of Congress Classification Scheme*
LC/LCSH: *Library of Congress Classification Scheme* and *Library of Congress Subject Headings*
UAHCC/SHJL/C: *Union of America Hebrew Congregations Classification* and *Subject Headings for a Judaica Library* and *Cutter numbers for biographies*
Weine: *Weine Classification Scheme for Judaica Libraries*
Modified Weine: modified *Weine Classification Scheme for Judaica Libraries*
Weine/SHJL: *Weine Classiffication Scheme for Judaica Libraries* and *Subject Headings for a Judaica Library*

records shows that 11 of these 20 libraries report having no staff of any kind. Also notable is the large percentage of homemade cataloging tools used in libraries which have never had professional help. These figures reinforce the ongoing need for the standardization of cataloging practices in synagogue libraries.

As suggested above, the standards set by a professional librarian in the past may have an on influence on current library practice. Table 10 shows such an influence on cataloging practice. All the libraries that had the services of a professional only in the past are cataloging their collections, most with published classification schemes. An examination of the records indicates that, with the exception of the Elazer system, all current nonprofessionals utilizing published classification schemes work in libraries that had the benefit of professional services in the past.

Among the libraries that have never had professional staff, only two report the use of a published classification scheme, in this case the Elazer system. It is also notable that all the

Table 11

Cataloging Tools in Use by Library Association Membership			
Cataloging Tool	**AJL**	**AJL/CSLA**	**None**
Dewey	—	—	1
Modified Dewey	1	—	—
Elazer	—	—	2
LC	—	—	2
Modified LC	1	1	—
LC/LCSH	—	—	1
UAHCC/SHJL/C	1	—	—
Weine	1	—	3
Modified Weine	—	—	1
Weine/SHJL	1	—	—
Own System	1	—	12
Don't Know	—	—	3
None	—	—	20
	6	1	45
	%: 11.5	%: 1.9	%: 86.5

libraries currently staffed by nonprofessionals that do not catalog their collections have never had professional help. Again, this serves to point up the importance of past professional influence on current cataloging practice.

The meaning of a modified cataloging system is uncertain, as no examples of such modifications were given. The author examined a copy of the Elazer scheme utilized in a Troy, NY synagogue library. The entries were extensively expanded by the addition of numerous subclasses. The librarian who filled out the questionnaire, however, did not report the use of a modified scheme. As this librarian is not a professional, the qualification may not have occurred to her. This may be the case with other responses. The meaning of cataloging modification, and the accuracy of the current figures, is therefore uncertain. It would be useful to study the various modifications reported. If these were found to be of high quality and broadly useful, they might point the way toward the development of a classification scheme that might eventually meet general acceptance for synagogue library use. Such a scheme could eventually become incorporated into a set of standards for synagogue libraries, thereby providing recourse to librarians dissatisfied with the currently available options.

A few librarians reported that they had utilized published classification schemes such as Dewey and Weine in the past, but have since developed their own. This is further evidence of the need for an improved classification system for synagogue libraries.

The use of a published classification scheme or subject heading list in a synagogue library might be influenced by the library's membership in a professional library association. As mentioned earlier, both CSLA and AJL offer many of the available Judaica and religious library cataloging tools for sale. Table 11 on page 103 shows that three of the six AJL members are using materials that may be purchased from the association. Another member librarian reported that she had ordered a classification scheme from AJL. The data also shows that six of the 44 nonmember libraries are making use of cataloging tools offered for sale by AJL. Whether they actually purchased these materials from the association is unknown.

Significantly, every library that is a member of a library association utilizes a cataloging system of some kind, whereas 20 of the 45 nonmember libraries report using no classification scheme. As noted above, these are libraries that have never had professional staff. Finally, it can be seen that only seven of the 52 libraries have joined a library association.

The professional status of the staff is a factor in this total. Table 12, below, shows that a far higher proportion of libraries staffed by professionals have joined a library association as compared to those staffed by nonprofessionals.

Table 12

Library Associations Joined by Professional Status

Association	No. of Libraries w/Professionals	%	No. of Libraries w/Non-Professionals	%
AJL	4	36.4	2	4.9
AJL/CSLA	—	—	1	2.4
None	7	63.6	38	92.7
	11	100.0	41	100.0

Discussion and Conclusion

The present investigation was a regional study. The responses have allowed conclusions to be drawn about approximately 60% of the synagogue libraries in upstate New York. This study was undertaken to determine the success of synagogue libraries in this region despite minimal professional influence. Such influence can come from two major sources: staff and library associations. In both cases, the influence has been scarce. The libraries studied are staffed primarily by part-time, nonprofessional volunteers who are working out policies and practices in isolation. Despite a minimum of professional influence, these libraries are successful enterprises, as measured by ongoing circulation, the addition of books to their collections, the presence of staff to manage the facilities, extensive hours of operation, and the use of codified cataloging systems.

In upstate New York, the largest cities are Albany, Buffalo, Rochester, and Syracuse. An examination of the records shows, not surprisingly, that most of the synagogues with memberships of more than 500 families are located in these cities. The libraries in these institutions possess the greatest proportion of professional staff. A study conducted in larger metropolitan areas would therefore be expected to yield different results. With greater resources at their disposal, large synagogue libraries are in a position to provide the kind of user services not possible in smaller libraries where self-serve operation is the rule.

The national figures that currently are available reveal that only a small proportion of synagogue libraries seek membership in library associations. At the cost of $25 per year, the equivalent of one book, virtually all congregations can afford membership in AJL. Especially in smaller communities, the other major source of professional influence—a librarian with a graduate degree—is far harder to come by. It is only by chance that a member of a congregation might be a graduate librarian willing to donate her or his time. In upstate New York, most synagogue libraries are forced to rely on nonprofessional help, yet few have joined a library association. As CSLA and AJL gear many of their publications toward the nonprofessional librarian, it is ironic that those individuals who potentially need the assistance more are those less likely to possess it.

If synagogue libraries in this study are functioning successfully with little or no professional help, it may well be asked whether such support is in fact needed. The answer will determine the fundamental nature of the synagogue library. There are advantages to be gained from a more widespread membership in professional associations. Most notably, it would be possible to work toward a general acceptance of synagogue library standards.

AJL sells a set of standards for school, synagogue, and community center libraries. Developed jointly with the Jewish Book Council, these standards address several areas of library administration, including library goals and policies, collection development, budget, staff, special programs, physical plant, and inter library relations. The standards stress the importance of formulating a written statement of purpose and policies, and employing the support and guidance of a library committee. Several subject areas for collection development are mandated. Each library is required to be run by a professional librarian, with staff assistance available in the library at least 25 hours a week. The library must have an adequate salary budgeted for a qualified librarian, as well as an annual acquisitions budget of at least $2,500. Libraries must utilize a standard classification system and maintain a subject authority list from a standard source; though examples are given, no particular sources are required. The library must be a member of AJL and cooperate with neighboring Judaica, school, and public libraries.[21]

Although useful, these standards correspond to the AJL requirements for Advanced Level Certification. The application form states that the "number of Judaica libraries that serve a sufficiently large population to support the collection resources and library services listed here are few... Request either the Intermediate Level or Basic Level application until such time as your library reaches the standard implied by Advanced Level Certification."[22] A majority of synagogue libraries, however, will

most likely always remain too small to meet the advanced requirements. It is therefore recommended that AJL publish additional, more modest guidelines apart from the application forms to reinforce them as worthwhile standards in their own right. This would serve to both guide and support the numerous small libraries that operate with only limited resources, and as a result encourage a more general acceptance of synagogue library standards.

The widespread implementation of AJL's standards is not possible if only a small percentage of libraries nationwide are association members. While AJL membership is a requirement of these standards, it is also true that the existence of the standards may not be known without such membership in the first place. Further, it is a questionable policy for AJL to sell the standards rather than distribute them without cost to its members. Though the price is only $4, the sale of such an item does not encourage member libraries to apply these standards as an integral part of AJL membership.

Rather than being a burden to the librarian, standards can provide much-needed guidelines on the fundamentals of library administration. Certainly leadership needs to be taken on the problem of cataloging, which is currently in a state of disarray. Requiring AJL membership as a component of these standards is a further advantage, as the association serves as a primary resource about Judaica librarianship. It remains to be seen if the nonprofessional librarian, when made aware of these choices, will pursue change or remain satisfied with the status quo.

The author expresses her appreciation to Bruce Kingma for his advice given throughout the course of this study.

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SYNAGOGUE LIBRARY SURVEY

Synagogue Name _____
City _____

Does your synagogue have a congregational library?
_____ YES _____ NO
Total number of unit families in your congregation: _____
Year your library was founded: _____
Number of books in your library (an estimate is fine): _____
Does your synagogue have an affiliated religious school?
_____ YES _____ NO
If you have a school, are books for its students shelved in your congregational library and counted as part of its holdings?
_____ YES _____ NO
Average number of books circulating each week: _____
Average number of books added to your collection each year: _____
Total number of hours your library is typically open each week when books may be borrowed: _____
Total number of library volunteers: _____
Total number of paid library staff: _____
Is your library primarily self-service?
_____ YES _____ NO
Has your library ever utilized the services of a professional librarian, either as a staff member or a consultant?
_____ YES _____ NO
Are any current staff members graduates of library schools?
_____ YES _____ NO

Please name any books used as guides to cataloging your collection. These may include classification systems and subject heading lists. If you use your own system, please indicate.

If your library is a member of one or more library associations, please list their names:

If you would like to receive a copy of the results of this research, please write your name and address below:

References

[1] Harvey, John F. "Introduction: The American Church and Synagogue Library World." In *Church and Synagogue Libraries*, ed. John F. Harvey. Metuchen, NJ: The Scarecrow Press, 1980, vii-xix.

[2] Harvey, xv.

[3] Wiener, Theodore. "History Of Religion, Education, And Libraries." In *Church and Synagogue Libraries*, ed. John F. Harvey. Metuchen, NJ: The Scarecrow Press, 1980, 3-9.

[4] Harvey, vii-viii.

[5] U.S. Bureau of the Census. *Statistical Abstract of the United States: 1994*. Washington, DC, 1994, 1011 p. 6. Simon, Ralph. President of the Association of Jewish Libraries, telephone communication with author, 1 September 1993. Simon concurred with the author's finding.

[7] Harvey, xvii.

[8] Harvey, xi.

[9] Greif, Helen B. "Synagogue, Temple And Jewish Center Libraries." In *Church and Synagogue Libraries*, ed. John F. Harvey. Metuchen, NJ: The Scarecrow Press, 1980, 49-58.

[10] White, Joyce L. "The Demography Of American Church And Synagogue Libraries." In *Church and Synagogue Libraries*, ed. John F. Harvey. Metuchen, NJ: The Scarecrow Press, 1980, 19-33.

[11] Greif, 58.

[12] Weine, Mae. "The Association Of Jewish Libraries." In *Church and Synagogue Libraries*, ed. John F. Harvey. Metuchen, NJ: The Scarecrow Press, 1980, 232-240.

[13] Hannaford, Claudia. "Church and Synagogue Library Association: Fifteen Years of Ecumenical Concern for Quality Service in Religious Libraries." *Special Libraries* 74(3): 271-277 (July 1983).

[14] The author viewed the following Guides: Kersten, Dorothy B. *Classifying Church Or Synagogue Library Materials*, 2nd revised edition. Portland, Oregon: Church and Synagogue Library Association, 1989, 18 p. Kersten, Dorothy B. *Subject Headings For Church Or Synagogue Libraries*, 2nd revised edition. Portland, OR: Church and Synagogue Library Association, 1990, 48 p. Pritchett, Jennifer. *Providing Reference Service In Church And Synagogue Libraries, With Bibliography*. Portland, OR: Church and Synagogue Library Association, 1987, 57 p. Smith, Ruth S. *Getting Books Off The Shelves: Making The Most of Your Congregations' Library*. Portland, OR: Church and Synagogue Library Association, 1985, 40 p.

[15] Janzen, Judy. Secretary at the CSLA central office in Portland, OR, telephone communication with author, 20 August 1993.

[16] Lubetski, Edith and Lubetski, Meir. *Building a Judaica Library Collection: A Resource Guide*. Littleton, CO: Libraries Unlimited, 1983, 185 p.

[17] Astrinsky, Aviva. Vice President for Membership of the Association of Jewish Libraries, letter to author, 12 October 1993.

[18] Simon, Ralph. Telephone communication with author.

[19] Kaegi, Merril. "The Nature of Contemporary Church and Synagogue Libraries." *Drexel Library Quarterly* 6 (2): 119-133 (April 1970).

[20] In addition to the commonly-known *Dewey Decimal Classification, Library of Congress Classification Scheme* and *Library of Congress Subject Headings,* the following sources were reported. As editions were not indicated in the responses, the most recent ones are given: Elazer, David H. and Elazer, Daniel J. *A Classification System For Libraries Of Judaica,* 2nd ed. Lanham, MD: University Press of America, 1988, 214 p. Kurland, Mildred and Weine, Mae. *Subject Headings for a Judaica Library,* 4th ed. New York: Association of Jewish Libraries, 1982, 25 pages. *Library Classification Scheme Per Union Of American Hebrew Congregations.* New York: Union of American Hebrew Congregations, n.d., List, 11 pages. Weine, Mae. *Weine Classification Scheme for Judaica Libraries,* 7th ed. New York: Association of Jewish Libraries, 1982, 16 pages.

[21] Standards Review Committee, Association of Jewish Libraries. *A Guide To Excellence: Standards for School, Synagogue and Jewish Community Center Libraries.* New York: Jewish Book Council, 1989, 7 pages.

[22] Standards Review Committee, 5

The User Pays: Cost Billing in a Company Library

by Albert J. te Grotenhuis and Selma J. Heijnekamp

• *La bibliothèque de la KEMA fournit des services de documentation à l'organisation. Sa fourniture de services doit être basée sur les principes du marché externe. Un système de facturation a été établi pour arriver à un contrôle adéquat des coûts et à fournir aux clients des renseignements exacts. Des exemples d'un certain nombre de services sont exposés en détail. Au début, de nombreux utilisateurs étaient choqués d'être facturé pour les services de la bibliothèque et d'avoir à les payer; maintenant l'utilisation de quelques-uns des services s'est stabilisée à un niveau quelque peu inférieur. D'autres services sont encore en expansion. Les relations avec les clients sont devenues plus claires. Les services de la bibliothèque sont mieux appréciés maintenant qu'il faut les payer. Il semble qu'en faisant payer ses services, la bibliothèque prouve qu'elle a le droit d'exister; par conséquent, il sera impossible de discuter sa continuité. Ce sont les clients qui déterminent que les services de la bibliothèque sont nécessaires.*

• *La Biblioteca KEMA provee servicios internos de información documentada a la organización. Su provisión de servicios se basa en principios externos de mercado. Para lograr un control adecuado de costos y proveer información correcta a los clientes, se ha establecido un sistema de facturación de costos. Se discuten en detalle ejemplos de una variedad de servicios. Al principio, muchos usuarios se sorprendían muchísimo por tener que pagar una factura por servicios de biblioteca, pero, actualmente el uso de algunos servicios se ha estabilizado a un nivel un poco más bajo. Otros servicios están aún en expansión. La relación con los clientes se ha esclarecido mucho. Se aprecian más los*

The KEMA Library provides in house documentary information services to the organization. Its service provision is to be based on external market principles. To achieve adequate cost control and supply clients with accurate information, a cost billing system has been set up. Examples of a number of services are discussed in detail. Initially, many users were shocked at having to actually pay a bill for library services, but now the use of some services has stabilized at a slightly lower level. Other services are still expanding. The relationship with clients has become much clearer. Library services are better appreciated now that they have to be paid for. It appears that by charging fees for its services, the library proves its right of existence, so that no discussion will be held about its continuation. It is the clients who determine that library services are necessary.

Introduction

KEMA is an independent, internationally active company whose object is the commercial provision of services in the fields of electrical energy systems and environmental care, as well as in quality-related fields such as product and system inspection and certification. Many changes in the independent provision of commercial services are taking place at KEMA.

Until 1989, the cost of maintaining the library was classed as an overhead, and the users had no control over the level of support which they provided. In 1989, however, four service units, with about 260 staff, were established. The task of these units was *'To provide commercial services, in conformance with market requirements, at competitive prices and with a balanced budget, as if the unit were an external operator.'* KEMA's Information Centre (IC), as a part of service unit Information Transfer, includes the Archive Department, the Literature Search Department, and the Library. The switch from support via

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servicios bibliotecarios actualmente, dado que se deben pagar. Pareciera que al cobrar una tarifa por sus servicios, la biblioteca fundamenta la razón de su existencia, por lo cual no habrá discusión alguna acerca de su continuación. Son los clientes los que determinan la necesidad de los servicios bibliotecarios.

the central budget to billing users on the basis of actual use generated a great deal of emotion as well as a great deal of business data. During the transformation process, the mission of the IC was specified as follows:

> 'The Information Centre's purpose is to provide the documentary information needed to support KEMA in its mission. Services are provided in conformance with market requirements, at competitive prices.'

Theory

From a survey of published work, it is apparent that there are many arguments for and against billing systems. The main advantages of a charge system are that it leads to greater awareness of cost-benefit considerations, that it gives the library greater financial independence, and that services are brought more into line with customer requirements. Arguments against introducing such a system include the fact that library services have traditionally been provided free of charge, and that with a charge system only those who can pay will make use of library services.[1,2,3]

Before deciding to introduce a cost billing system, one has to be clear about what one hopes to achieve by doing so. For instance, one might wish to:[2,4]

- make a profit;
- achieve a certain market share;
- encourage the generation of information; or
- encourage more selective information use.

A library's objectives will to a considerable extent depend on the nature of the organization to which that library belongs, whether that organization is a:[5]

- profit center, where all services are sold to customers external to the organization;
- protected profit center, where the library is a division of a larger organization and the provision of services to external customers takes place on a limited scale. The library does have income objectives;
- internal billing profit center, where library costs are charged to users via an internal billing system; or an
- cost-accounting profit center, where the library receives a budget from the organization. The system simply involves accounting for costs incurred.

The differences between these types of organizations stem from the way in which money is earned, and the sums involved.

Where costs are billed to the user, the library has to apply four important rules:[6]

- Response times must be short;
- Services must be reliable;

- Prices must be competitive; and
-Services must represent value for money.

The definition of products and services

Theory

Having identified the reasons for introducing a charge system, a library has to decide which services it will charge for. This question is related to the identification of the costs (overheads, staff, materials) which are to be covered. In most cases, the more expensive services such as literature searches and interlibrary loans are billed.[7]

Practice

The work of the library involves three types of interrelated activity, defined and referred to as "shops":

- Collection: acquisition, title description (database input), management;
- Loans: document delivery; and
- Circulation: control and circulation of a range of periodicals.

In relation to the shops, the library acts like a holding company; the staff work for it and it assigns them shop tasks.

The library sells its services primarily to KEMA's operational units (business, support, strategic, and service units). Services are also provided to three organizations which are closely involved with public energy supply in the Netherlands. These organizations pay a standing charge (each about five percent of the library's budget) which entitles them to purchase services at the rates charged to KEMA's internal customers.

Setting rates

Theory

Rates may be based on three elements:[1,2,3,4]

- the *cost* of service provision;
- the *demand* for the particular library services; and
- the rates applied by *competitors*.

A combination of the three is also possible.

It is hard to say what the basis of the rate should be, if it is to be cost- or demand-based, since library services are not easily tangible or measurable. A library's contribution to the success of a company cannot always be expressed in monetary terms. A strictly commercial approach (performance/product + costs incurred = rate) is difficult.

The rate charged is closely related to the value placed on products and services. This valuation may have as its basis:[1]

- the time invested in the library;
- direct costs incurred;
- time savings for users;
- financial savings for users;
- specific information yields; and
- measures of the scope and quality of the services provided (e.g. the number of users).

The value of a library is always closely related to the quality of its services.[8] This quality can be determined by distinguishing between the quality of the process and the quality of the product.[9]

Practice

- calculating productive hours

After deducting leave, public holidays, sick leave and unproductive hours, we came to a figure of approximately 1,600 productive hours for each full-time staff member. 'Productive' here means hours directly available for the provision of services to the customer.

- calculating the hourly rate

Total costs of housing (a) + overheads (o) + staff costs (c) + total productive hours (h) = rate per hour (r/h).

$$(a + o + c) \div h = r/h$$

This hourly rate is used to cost shop activities.

- calculating rates per product/service

The costs specific to the shop (s1, s2, s3) + the cost of the time (t) put in by that shop reveal the total cost picture + by the number of products/items of service sold (p) = the rate per service/product (r/p).

$$(s + t) \div p = r/p$$

It is not possible to set rates for all services. Thus, the basic process of collection is centrally funded. Handling minor inquiries is treated as general customer service, the cost of which has

Table 1

Shop	Task	Cost	Income
1-Collection	acquisition, management, title description	staff costs (c), book purchase (s1)	central funds orders (library coupons) book purchase costs billed to customers
2-Loans	document provision, news bulletins	staff costs (c) copying, NCC (s2)	library coupons
3-Circulation	periodical management, circulation	staff costs (c), subscriptions + binding (s3)	circulation subscriptions

Library coupons: Library coupons are prepaid orders for the provision of documents, sold in blocks of twenty-five
NCC: NCC is the Dutch Central Catalog
Circulation subscription: Each reader of a periodical counts as a circulation subscription

For calculating costs in a given shop, the formula used for staff costs is hours put in by the staff (h) times the rate per hour (r/h) plus the specific costs of the shop (s).

h x r/h = c + s = total costs

For calculating income, the number of items of service sold (p) times the rate per service (r/p).

p x r/p = income

The two formulae must yield broadly the same result, or the rates need to be adjusted.

As an example, the method used by the Circulation Shop to calculate the rate for a circulation subscription is set out below:

- Total cost (s3 + c)	$ 500,000
- Anticipated sales (p)	10,000
- (s3 + c) ÷ p = $ 50 for each subscriber per year.	

In the Loans Shop, the rate for a news bulletin is calculated as follows:

- Staff costs (selection and processing) (c)= 4 hours per week =	$16,000
- Materials costs (paper) (c1) = 26 issues, 35 subscriptions, 50 pp @ $ 0.03/page =	$1,365
- subscription costs (extra periodicals) (c2)	$2,200
- Unforeseen costs (c3)	$400
- Reserve (r)	$2,500

The rate is then:
(c + c1 + c2 + c3 + r) ÷ 35 = $ 640
Given the built-in reserve of $ 2,500, at least 31 subscriptions must therefore be sold.

to be covered by the income from billable services. The development of new services also has to be funded from within the operating budget. The picture which then emerges for the various shops is shown in Table 1 on page 113.

Administrative billing

Theory

There are three methods of billing:[3,7]

- charging back, a mechanism whereby charges are raised and processed internally by the accounts department;
- charging out or billing out, where charges for particular services are added to the amount already charged for basic services.
- pay-as-you-go, where information is sold directly to the user; a system which involves considerable administrative complications.

Practice

All facilitative service providers (service units) within KEMA faced the same problems. A system was set up for them, whereby data is input locally and processed centrally (internal billing profit center). The system can handle both subscriptions (charges raised on a monthly basis) and one-off charges. Customers receive monthly summaries of the charges billed to them by the facilitative service providers. Other facilitative service providers charge the library for services such as maintenance of equipment, energy, telephone, weekly provision of floral foyer display, services provided, etc.

Problems

The problem affecting the Collection Shop was that the cost of maintaining the library's collection and placing it at the users' disposal could not be billed to those users. KEMA's Board therefore decided to provide a central subsidy to cover these activities (approximately 10% of the library budget).

The Circulation Shop had a shock when fewer circulation subscriptions were sold than had been anticipated. Four thousand subscriptions too few meant an operational shortfall of $200,000 (4,000 x $50). By canceling a number of duplicate subscriptions and subscriptions to journals with few KEMA subscribers, the shortfall was reduced to $180,000, but further cancellations were not considered reasonable. The Board subsequently provided a supplementary subsidy equal to the shortfall. Following an efficiency study carried out by an external consultancy, a new tariff system was introduced on the consultant's advice.

The rate now charged is as follows:

The previous year's subscription cost (j) plus a $70 handling charge, divided by two, gives the annual subscription costs, subject to a minimum charge of $70 per year.

(j + $ 70) ÷ 2 = subscription costs

Other units are not obliged to obtain their subscriptions via the library; however, a unit will pay at least twice as much if it takes out a subscription itself. Circulation is now much better coordinated within the business units. The amount of work which the library has to do has consequently been cut, with certain activities now taking place within the units which receive the periodicals. Monthly subscription rates are given in periodical listings, so that the reader is fully aware of the cost of taking out a subscription. Subscriptions can be canceled at a month's notice, allowance for the associated risk having been made within the subscription rate.

Cost-consciousness Amongst Users and Library Staff

Theory

A study of billing in British libraries[6] showed that the use made of services generally dropped when a billing system was introduced. However, many libraries experienced a recovery of demand once the billing system had been in use for a while. Libraries need to be confident that demand will recover, and to find ways of persuading users that they are getting value for their money. Another point which became clear was that many people felt the principle of billing to be inconsistent with the basic philosophy of the

library. User surveys are important because they not only provide information on customer requirements, but also focus attention on library services. Prior studies can also be useful for establishing the extent to which people are prepared to pay for a service. The results of such studies are, however, of doubtful value, since there is a difference between considering a price reasonable and actually purchasing the service.

Practice

To find out how users felt about the billing system, a student was set the task of carrying out a survey amongst a representative group of users. Sixty-eight percent were found to be aware of the prices charged for each service. A few did not know the prices of all services. Fifty percent of users considered the prices reasonable, 27% expressed no opinion, and 23% considered the prices unreasonable. Most of those dissatisfied with the prices objected to the circulation rates. A few felt that the costs should not adversely affect turnover, since the library was indispensable. Some users felt that obtaining and submitting library coupons was irksome and inefficient, and it was suggested that the costs should be billed to departments individually. This used to happen five years ago, but the system was abandoned and cannot be revived. A few expressed concern about the future of the library, on the basis that unit managers would cut back on the use of library services for reasons of cost. The tendency for some units to involve themselves in certain tasks traditionally performed by the library also gave rise to concern. A clear stance on this matter is required from the Board. Despite some critical remarks, most respondents were very positive about library services. Customers are generally satisfied and continue to see the library as an important part of the organization.

The views of library staff were also sought. They were kept well-informed about developments both inside and outside KEMA. Because of changes to the way KEMA was funded, the library had to become more cost-conscious and customers had to be billed for services. The staff generally approved of the greater clarity regarding income and expenditures that the billing system provided. They had adjusted to the new system, though a few considered it at odds with their role as service providers. Chasing up library coupons was perceived as a nuisance and doubts were expressed about the effect which the billing system would have on quality. The survey revealed that staff wished to be kept informed about the library's income, expenditures, and price amendments via the monthly operating summary, so that they could decide for themselves whether the library was operating in a cost-conscious manner and see their efforts expressed in financial terms.

Conclusions

The KEMA library succeeds in covering its costs. It is, therefore, fulfilling its task of *'providing commercial services, with a balanced budget.'* Furthermore, the library is adhering to the four important rules which a library must apply in operating a cost billing system (response time, reliability, competitiveness, and value). Use has stabilized following an initial decline, and cost billing has effectively silenced the discussion about the library's existence. Moreover, KEMA management recently named the library one of its corporate strategic units.

A.J. te Grotenhuis is Chief Librarian at KEMA in Arnhem. S.J. Heijnekamp is a Librarian at KEMA in Arnhem.

References

[1] Eijffinger, M.A.M. *De Bekostiging van Bibliotheekdiensten: Een Exploratie van Literatuur en Praktijk (Allocating the Cost of Library Services: An Exploration of Literature and Practice).* The Hague: RABIN, 1992.

[2] Kibirige, H.M. *The Information Dilemma: A Critical Analysis of Information Pricing and the Fees Controversy.* Westport, CT: Greenwood Press, 1983.

[3] Pearson, D. and Yates-Mercer, P.A. "Charging Policies and Practice in Corporate Information Units in the UK. 2: How to Charge?" *Journal of Information Science* 18(2): 127-37, 1992.

[4] Talaga, J.A. "Concept of Price in a Library Context." *Journal of Library Administration* (14)4: 87-101, 1991.

[5] Houthuijs, A.W. "De Weg Naar Een 'Profit Center': Bedrijfsbibliotheek met Inkomstendoelstelling" ("Towards the Profit Centre: A Profit-Oriented Company Library"). *Open* 21(11): 380-83, 1989.

[6] Brill, F. "A Business Perspective: or, What am I Doing in the Middle of this Debate?", Drake, M.A. *User Fees: A Practical Perspective.* Littleton, CO: Libraries Unlimited, 1981, pp. 117-20.

[7] Hyde, M. *Library and Information Services to Business and Industry: Study on Levels of Service, Related Costs and Charging Systems.* London: British Library Board, 1988.

[8] Savolainen, R. "Fee or Free? The Socio-Economic Dimensions of the Charging Dilemma," *Journal of Information Science* 16(3): 143-56, 1990.

[9] Kantor, P.B. "Library Cost Analysis." *Library Trends* 38(2): 171-88, 1989.

Articles on cost billing

[10] Abell, A. "Developing an Information Business: the HERTIS Experience." *Business Information Review* 6(3): 27-35, 1990.

[11] Brittin, M. and Sykes, D. "Commercial Information Services in the Academic Environment: a Case Study." *Aslib Information* 18(4): 121-25, 1990.

[12] Whelan, H. "The In-House Information Shop: the Corporate Information Unit as a Profit Centre." *Aslib Information* 18(3): 85-87, 1990.

SGML Documents: A Better System for Communicating Knowledge

by David Stern

• *L'emploi de données de base et de documents basés sur le SGML (Standard Generalized Markup Language—langage de marque standard polyvalent) peuvent améliorer les capacités d'accès et d'affichage aux fichiers et index par rapport à celles des fichiers et index disponibles à l'heure actuelle par les données de bases locales ou à distance. Ces options augmentent considérablement grâce à la nature structurée des fichiers en SGML. Cet article essaiera de délinéer quelques-uns des aspects fondamentaux du SGML et de parler de leur portée par rapport aux logiciels utilitaires d'autres types de documents et de bases de données. Il essaiera aussi d'identifier les domaines dont il faudra poursuivre le développement afin de permettre à ces systèmes d'information sur les connaissances d'améliorer la recherche des chercheurs, l'affichage et la manipulation des données rangées en mémoire électroniquement. L'accent sera mis particulièrement sur les perfectionnements éventuels de l'imitation imprimée par la visualisation actuellement limitée de la plupart des revues électroniques les plus courantes.*

• *El uso de documentos y bases de datos basados en el SGML (Lenguaje de Marcado Generalizado Estandar) puede proveer una capacidad mejorada de acceso y visualización comparado con los archivos y los índices disponibles actualmente en la mayoría de las bases de datos locales o remotas. Estas opciones han aumentado muchísimo debido a la naturaleza estructurada de los archivos del SGML. Este artículo intenta delinear algunas de las características básicas del SGML y discute sus implicancias al compararlo con la utilidad de otros tipos de documentos y bases de datos. Intenta además identificar las áreas que necesitan*

The use of SGML-based (Standard Generalized Markup Language) documents and databases can provide enhanced access and display capabilities when compared to the files and indexes now available through most local or remote databases. These options are increased tremendously due to the structured nature of the SGML files. This article will attempt to outline some of the basic features of SGML and discuss their implications when compared to the utilities of other document and database types. It will also attempt to identify the areas needing further development in order to allow these SGML knowledge information systems to improve researchers' searching, display, and manipulation of electronically stored data. Particular emphasis will be placed upon possible enhancements to the currently limited print display imitation of most current electronic journals.

What is SGML?

SGML (Standard Generalized Markup Language), also referred to as ISO 8879, is an international markup standard that provides a basis for identifying both content and display factors for all types of media. A standard Document Type Definition (DTD) layout using predetermined fields and conventions has been created for each media type document (e.g. periodical article, book chapter, etc.). SGML document records are machine independent and therefore quite favorable for search, manipulation, display, and data transfer operations across networks and platforms.

Figures 1 and 2 demonstrate that standard SGML records are composed of tagged fields and data. There is a standard protocol used for arranging hierarchies of content (title, headers, chapters, etc.) and identifying alternative data types (images, audio, video, cited references, etc.). These field delimiters allow for complex

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mayor desarrollo para permitir que estos sistemas SGML de comunicar conocimiento mejoren el proceso de búsqueda, visualización y manejo de datos almacenados electrónicamente por parte de los investigadores. Se da especial importancia a los mejoramientos posibles a la reproducción de la visualización electrónica de material impreso de la mayoría de los periódicos, la cual es limitada en la actualidad.

searching, sorting, manipulation, analysis, and display. The primary limitation to this type of information system is the creativity of the database designers.

Examples of data types include standard hypertext links (used for accessing online help, definitions, images, and citations); value-added non-displayable data (such as caption and image descriptions); editor comments; subject hierarchy codes; and post-dissemination comments and revisions.

Database Structure

The maximum usefulness of a system is ultimately determined by the quality and accessibility of the individual data elements. To a large extent, database record formats determine the retrieval power of a system. There are a variety of record formats that can be used to store

Figure 1

Sample SGML file

<Title>A Nearly Antiferromagnetic Fermi Liquid Description of Magnetic Scaling and Spin Gap Behavior <\Title>

<Authors> P. Monthoux and D. Pines<Authors>
<Address>(It>Institute for Theoretical Physics
University of California, Santa Barbara,
CA 93106
and
Physics Department, University of Illinois
at Urbana-Champaign
1110 West Green Street,
Urbana, IL 61801--3080<\It><\Address>
<Intro>
<P>
We present a Fermi liquid description of magnetic scaling and spin gap behavior in strongly correlated electron systems. We show that ... The spin gap is a consequence of these frequency dependent vertex corrections: it takes on a constant ... properties and the superconducting transition temperature.<\Intro><\P>

<Subcode>PACS numbers: <\Subcode>

<Body>
A unified magnetic phase diagram of the cuprate superconductors has recently been proposed by Sokol and Pines(1) ...
<\Body>

data. Some primarily provide page layout (display) data while others contain structural (content) data that may be used for additional purposes. This first section is a review of some of the major information formatters and their characteristics.

Markup Languages

A markup language should handle data in a document for both the physical layout of the data and the content description. One set of conventions could mark both presentation and content. Powerful front-end software could be developed to handle any data stored in this generic format. The data could be transmitted over the Internet as packets of related data and recomposed when received by the client software. In this way, users could easily transfer both the simple presentation of the data across a variety of hardware platforms and provide for enhanced manipulation of the intellectual content.

Markup languages allow for the tagging of data elements in a document into logical content sections (such as titles, headers, paragraphs, captions, etc). These elements have specified characteristics, such as font size, margins, and spacing. Less time needs to be spent on composition (e.g. lists of items with equally spaced and numbered items) and therefore, more time can be spent on the author-added intellectual data (e.g. imbedded added-value data such as caption descriptions, subject hierarchies, and other searchable, enhanced content factors).

PostScript is a popular markup language containing many timesaving display conventions. It also allows for the integration of non-text data. However, PostScript requires proprietary printer driver software. The sharing of data across platforms is seriously hampered when such requirements are imposed.

The TeX markup language, which is used by mathematicians and other scientists requiring

Figure 2

Sample SGML file

```
<letter>
<sendinfo>
<address> Physics/Astronomy Library
University of Illinois
Champlaign, IL 61801<\address>
<\sendinfo>
<recinfo>
<receiver>Special Libraries<\receiver>
<address>1700 Eighteenth Street,NW
Washington, DC 20009<\address>
<\recinfo>
<date>29 March 1994<\date>
<content>
<salu>Dear Editor,<\salu>

<para>
Please consider the following manuscript ...
<\para>
<\content>
<vale>Sincerely,<\vale>
```

Figure 3

Sample TEX file

```
\magnification=\magstep1
\baselineskip=24 true pt

\centerline{\bf A Nearly Antiferromagnetic Fermi Liquid Description }
\centerline{\bf of Magnetic Scaling and Spin Gap Behavior }

\vskip 1.0 cm
\centerline{ P. Monthoux$^\dagger$ and D. Pines$^\ddagger$ }
\medskip
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\centerline{\it University of California, Santa Barbara,
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We present a Fermi liquid description of magnetic scaling and spin gap behavior in
strongly correlated electron systems. We show that ... The spin gap is a consequence of
these frequency dependent vertex corrections; it takes on a constant ...
the derived spin-gap behavior for calculations of normal state properties and the
superconducting transition temperature.\hfil\break

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\noindent PACS numbers:

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\underbar{I. Introduction}\hfil

A unified magnetic phase diagram of the cuprate superconductors has recently been
proposed by Sokol and Pines$^{(1)} $ (hereafter SP).

$$\rm\chi_{\vec Q} = {\tilde\chi_{\vec Q}\over 1-F^a_{\vec Q}\eqno(1)$$
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complex equations, charts, and graphs, is no longer proprietary; however, there are a variety of versions in the publishing world, each with nonstandard conventions. Conversions, for example, from standard TEX to RevTeX or LaTex, can be quite time-intensive and exasperating when one simply desires to display a preprint manuscript identified via the Internet. Slight macro differences can create unreadable files. In the following TEX sample document (Figure 3), notice the amount of effort required to create display parameters.

Text Formatters

These tools provide primarily text reproduction capabilities. They can be quite easy to use, as the complex display instructions are handled in the background. Standard options are preprogrammed, but special options such as tables, charts, and special characters require specific definitions that may be time-intensive to create.

The most common text formatters are word processors. The more recent WYSIWYG (What You See Is What You Get) variety have made manuscript preparation quite painless, and have therefore transferred the creation of final documents to the researcher rather than a secretary or an editor. Unfortunately, there are a variety of limitations to these basic text formatters. Many incompatible word processors on the market have nonstandard protocols for text display that make sharing files cumbersome (although the introduction of Rich Text Format (RTF) output has made the transfer easier). Even conversions from previous versions of the same word processors can create difficulties, especially in the area of macro definitions. Most also do not handle non-text data very well. The emphasis on display often limits the ability to embed non-displayable remarks and links to other items which may be helpful for advanced searching and retrieval.

Desktop Publishers

Desktop publishers allow the integration of text and graphic images in a simple cut-and-paste approach. The behind-the-scenes manipulation of various document types makes display layout and composition relatively straightforward. Standard desktop publishers such as PageMaker are somewhat expensive and require practice and exploration in order to create professional output. Each desktop publishing software package has its own internal commands and therefore the raw database is not transferable. This emphasis on customized output markers makes the production of sophisticated printed material possible for nonspecialists, but creates a limiting database in terms of shared search and retrieval uses.

Complex Search and Retrieval, Analysis, and Display Engines

The following section will discuss the relationship of the data structure to the searching, retrieval, and manipulation possibilities in an enhanced information tool.

The development of highly defined data documents allows for very sophisticated manipulation of entire knowledge information systems. Added-value data elements such as descriptive caption data and hierarchical subject links allow for much more powerful searching of full-text databases. The creation of formatted and ranked results from within specific data fields (such as tables, charts and graphs) means researchers can develop new data products themselves. Over time, a researcher could create new customized "virtual databases" or "electronic journals" from a variety of sources. Think of automatic "journals" being delivered to your mailbox each week based on predetermined search strategies. With the right software, such as Mosaic or Panorama, a researcher could also receive integrated media items in this way.

Many current online journals tend to base their product on word-processed files and simply reproduce the original paper format. They may incorporate bitmapped images to display non-ASCII text. Some forward-thinking information tools such as the *CORE* and *Current Clinical Trials in Medicine* electronic journals are now produced from more powerful basic formats such as SGML documents. The results are more user-oriented interface options such

as hypertext links to images and other citations, and on-screen connections to logical portions of the text such as introductions, methodology, and conclusions. Selective searching replaces simple browsing in this enhanced environment.

Making SGML Systems Work

Early experiments have shown that SGML-based systems provide enhanced user options. This next section will explore areas that need to be explored in order to fully implement this approach.

Challenges to implementing SGML-type sophisticated data manipulation and display systems include:

- a lack of standardized knowledge information systems and databases;
- a lack of access to useful advanced search/manipulation software (what is available is not user-friendly and easily networked);
- limiting Internet network transmission capabilities; and
- copyright restrictions.

Creation of SGML-based Knowledge Information Systems and Databases

Conversion routines for previously generated documents in other formats, and author interfaces for original document creation, need to be enhanced and distributed for wide acceptance of the SGML standard to occur. There are currently many publisher and research groups working on the development of SGML-based databases. Among the most advanced groups are the American Physical Society and the American Mathematical Society, which have developed online journals available via the Internet from SGML archives. Other example systems would include the Perseus Greek history CD-ROM project, the CORE online chemistry journal project located at Cornell University in Ithaca, NY, and the WORM database developed by Bruce Schatz, now at the University of Illinois in Urbana-Champaign, IL.

The migration to SGML documents involves changes in routines and thought processes. Any change in paradigm involves the discomfort associated with attempting to understand and accept new methods and ideas. A primary responsibility of learned/professional societies, educational institutions, and corporations is to counteract this resistance--to promote new opportunities through education, encouragement, and requirements (when necessary). All organizations would benefit greatly by convincing authors to provide enhanced manuscript data. Once the members are well along the learning curve, they will undoubtedly see the long-term benefits of their new actions. A possible scenario could be a future in which third party indexers (such as IEE, which produces the INSPEC database) may be replaced, and their profits may be redirected, depending upon the degree of standardization required when authors and in-house editorial staff assign subject codes and keywords.

Enhanced Search/Manipulation Software

Significant improvements need to be made in natural language searching with GUI interfaces, in forms-based search screens, and in the refinement of query statements using post-search relevancy analysis. Mead's FREESTYLE and Dialog's TARGET are examples of natural language interfaces. The North Carolina State University library (URL "http://ncsulib4.lib.ncsu.edu/drabib/niso_forms") has an example of a forms-based system. The ability to manipulate search results (be they text, image, or integrated media) will become standard in the future. A standard interface for discipline-wide resources is needed so users will not have to learn multiple interfaces for the various products that are currently being developed (such as TULIP, CORE, Right Pages, OCLC's Guidon system, etc.). The competing and confusing situation in CD-ROM interfaces cannot be allowed to continue. A scalable navigational system must be developed; the journal image approach is not feasible on the interdisciplinary scale.

Display Software

Networked display software needs to be enhanced to handle a wider variety of data types with better resolution than currently available. Mosaic and Netscape only handle HTML (a less sophisticated SGML format) and still have problems with decompression of certain items. The quality of screen images will have to rival that of print sources before users can seriously rely on the Internet for primary data transmission. The current state-of-the-art in electronic journals can be seen by accessing a sample online journal at URL "http://muse.mse.jhu.edu/journal.lst.html". Panorama is an example of an enhanced display tool that handles SGML directly.

Data Compression

The efficient transfer of large numbers of data packets across the Internet requires much better compression techniques than what is available today; especially for bitmapped images and color video.

Network Capabilities

The bandwidth (carrying capacity) of the Internet needs to be upgraded to all nodes in order to avoid bottlenecks at gateways. There is already a noticeable slowdown in Internet transmission speed with the increased use of WWW browser software.

Copyright Considerations

The exclusivity and proprietary nature of copyrighted material, even with current fair use exemptions, seems to directly conflict, in some cases, with the cooperative distribution techniques afforded by the networked environment discussed in this article. Changes in the interpretation of laws and regulations, changes in the pricing schemes for access to data documents, and/or migration away from commercial distributors may be necessary in order to guarantee access to material intended for educational purposes.

Future Implications

With the development and spread of true information/knowledge transfer systems as described above, very little preparation time will be necessary for the display and transfer of data, thereby significantly lessening the present journal production lag-time and reducing costs while providing an enhanced product. Undoubtedly, there will be new challenges to face. As collaborated databases are created by researchers, librarians, and users, there will be a need for interface standards, although there will always be a need for subject-specific customization of products.

The ability to attach later revisions and reader comments to an original document introduces new archiving and security concerns (beyond the static peer review scenario) to this dynamic medium. Also, the creation of multiple database clearinghouses and gateways between document delivery services will certainly bring the copyright issue to the forefront.

The large-scale adoption of the SGML standard for information storage and delivery will certainly result in better access for users. More specific and enhanced retrieval, more standardization, lower cost, and quicker distribution are some of the benefits to be gained. It is time to move from full-text displayable databases to added-value enhanced knowledge information systems. Librarians can be involved in the collaboration process through active participation or excluded from the creation of these new information tools through passive resistance. It is up to our profession to recognize and act at this early stage of the paradigm shift.

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Suggested Reading

Bryan, Martin. *SGML: An Author's Guide to the Standard Generalized Markup Language.* Reading, MA: Addison-Wesley Pub. Co., 1988.

Goldfarb, Charles F. *The SGML Handbook.* ed. by Yuri Rubinsky. New York: Oxford University Press, 1990.

Wu, Gilbert S.K. *SGML Theory and Practice.* London: British Library Research and Development Dept., 1989.

Mangan, Katherine S. "'Perseus' helps students see links between aspects of ancient Greece. (information on ancient Greece stored in CD-ROMs and videodisks," *The Chronicle of Higher Education* 38(4): A26(1), Sept. 18, 1991.

Special Librarians: The Origins of Power and the Susceptibilities to Powerlessness

by Alison J. Head and William Fisher

• *Dans une large mesure, c'est de leur expertise dans la manière d'accéder aux informations critiques et de les organiser que les bibliothécaires spécialisés dérivent leur pouvoir organisationnel. Cependant, étant donné la nature des postes qu'ils occupent, les bibliothécaires spécialisés ont une grande tendance à l'impuissance organisationnelle. Ceci est dû à ce que la nature du travail que font les bibliothécaires est souvent accessoire aux tâches principales quotidiennes de l'organisation; les contributions sont difficiles à mesurer; l'expertise est souvent sous-exploitée; lorsqu'il s'agit de rendre des comptes à leurs supérieurs, ils se trouvent loin de l'élite de la gestion; et il y a peu de personnel. Les directeurs des bibliothèques peuvent opposer l'impuissance en employant conscience, organisation et stratégies coordinées, désignées à amplifier leur puissance.*

• *Bibliotecarios especializados derivan poder dentro de una organización, en gran medida, como resultado de su capacidad de acceder y organizar información crítica. Debido al tipo de cargos que ocupan, sin embargo, los bibliotecarios especializados son altamente susceptibles a la falta de poder dentro de una organización. Esto se debe al hecho de que el tipo de trabajo realizado por los bibliotecarios es, a menudo, secundario a las tareas primarias cotidianas de la organización; es difícil medir las contribuciones realizadas; a menudo, el conocimiento especializado se utiliza menos de lo debido; la presentación de informes está alejada de la cúpula administrativa; y hay un número reducido de empleados. Los administradores de bibliotecas pueden contrarrestar la falta de poder mediante la concientización, la planificación y el uso de estrategias de manejo orquestadas cuyo objetivo es aumentar su poder.*

Special librarians largely derive organizational power from their expertise at accessing and organizing critical information. Due to the nature of the positions they fill, however, special librarians are highly susceptible to organizational powerlessness. This is because the nature of work that librarians perform is often adjunct to the primary day-to-day tasks of the organization; contributions are difficult to measure; expertise is often underutilized; reporting relationships are far from managerial elite; and staff sizes are small. Library managers can counter powerlessness through awareness, planning, and orchestrated management strategies designed to enhance power.

"Power is America's last dirty word. It is easier to talk about money—and much easier to talk about sex—than it is to talk about power."

—Rosabeth Kanter [1]

Introduction

Power may be the most misunderstood concept in management theory. Uniquely, individuals bring their strongest connotations to definitions of organizational power. From a jaundiced view, power is a manipulative force that is commonly misused by its possessors. Yet within a larger organizational context, power is what most managers—whether they openly admit it or not—want more of because power is highly correlated with the ability to accomplish. When it is used productively, power influences, motivates, leads, and effects change. It is the grand enabler that gives managers the resources and supplies that are needed to obtain objectives and reach goals. In short, power is the lifeblood of any manager's organizational existence.

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Yet managers are not the only ones concerned with their stockpiles of power. Workers, too, often hope that their bosses will possess ample power that is put to productive use and that extends beyond departmental walls.[2] To staff members, managerial power means a likelihood that their bosses will share and delegate tasks, reward talent, and engage in team building.[3] In effect, bosses with "clout" inadvertently enhance workers' senses of self-esteem and status, too.

By contrast, in organizations where managers are without power, they, along with their workers, typically lack cooperation from the rest of the organization and suffer in isolation. Lines of supply, support, and information, which are necessary in making objectives deftly executed, are keenly severed. In many cases, powerless managers retreat from the organization and focus their energies inward on their staff. In the worst-case scenario, some managers grasp the last shreds of power and use it negatively to coercively rule a shrinking fiefdom. When negative power is exercised, staff cooperation rapidly diminishes.

Power, most basically, is described as "the capacity to affect the behavior of others."[4] Yet power is derived from *somewhere* in an organization and so it follows that some managers have more power than others. The origins of power are often linked with individuals and the leadership behaviors they exhibit. However, research typified by Rosabeth Kanter looks at whether power is directly related to the kind of positions some managers occupy in an organization. In other words, does the position, not the person, determine whether a manager has power?[5]

The profession of special librarianship is far from being unaffected by the complexities of organizational power. With shrinking budgets and heightened competition for increasingly scarce resources, special librarians, more than ever, have sought ways to understand the complexities of organizational power. Discussion about the origins of power are particularly relevant as desires for obtaining power and methods for managing its acquisitions have increased.

In this paper, we begin by describing power and its sources. Next, we apply Kanter's theory and explore whether special librarians may be susceptible to falling into pockets of powerlessness by the nature of the work they perform and the positions they hold. Then we analyze recent SLA survey data as a measure of organizational power. Finally, we describe tools special librarians may use to increase their organizational power base.

Origins of Power

The debate over *where power comes from* is far from being new. As early as 1532, Machiavelli wrote about how to attain and hold onto individual power and about related "strategic, local, and practical concerns."[6] Some years later, Hobbes focused on sovereign power or a kind of established authority over subjects.[7] Although they wrote their treatises over one hundred years apart, the authors' viewpoints largely define the commonly held dualist framework. One view is of power that generates change among individuals (behavioral) while the other view is of power that is over a particular group in a structural arrangement (structural).[8]

Social scientists in the 1960s merged these basic tenets and defined power as being highly correlated with fixed attributes of position and/or personal traits.[9] This school of thought, still put forth in most management texts, holds that while power is related to one's position in the organization, it is not totally dependent on position. Originally, five categories of power were defined so that individuals could possibly have power by virtue of just one category or by virtue of all five categories, or by virtue of some combination. A sixth category of power, which is generally accepted, was added some time later.[10] The six categories of power appear in Table 1 on page 127.

Using Table 1 as a guide to measure sources of power, special librarians tend to have little reward or coercive power because the special library is usually so small that there are few opportunities to use these categories beyond their departmental walls. Referent power is

also underutilized by special librarians, because being associated with the special library, in most organizations, is not highly sought after and most special librarians are not perceived as "charismatic." Some special librarians do have legitimate power stemming from their actual position within the managerial hierarchy. But overall, if special librarians tend to derive their power from anywhere at all, power usually stems from their expertise at accessing and organizing critical information.

More recent research about the origins of power can be split into three major perspectives: 1) processual, 2) institutional, and 3) organizational.[11] Processual power, like Machiavellian thought, considers that organizational power is contingent on coalitions that are developed and nurtured through time and the power strategies that are put into play. Quite differently, institutional power views managerial power as mandated authority that is based in external social structures in which organizations are embedded including class, gender, and occupations. The final viewpoint of power, organizational power, sees managerial power as rooted in internal, hierarchical mechanisms such as prevailing ruling interests, dominant groups, and selection or closures to the path of the managerial elite. Some authors consider these perspectives mutually exclusive while others argue that the perspectives are closely interrelated.[12]

Kanter's discussion of power is multifaceted. At times, she takes a structural point of view of power. This approach is like the ideas put forth by the organizational view of power or Raven's and French's earlier description of legitimate power in organizations. Kanter argues that power is derived from legitimate position but that there are various positions

Table 1

Sources of Power	
• **Reward power**	A person has power based upon the ability to control and to grant rewards (i.e. raises and training programs). The greater the control over valued rewards, the greater the power.
• **Coercive power**	A person has power based upon the ability to invoke sanctions (i.e. demotions or suspensions). The greater the freedom to punish others, the greater the coercive power.
• **Legitimate power**	A person has power based on the belief that the person has the "right" to supervise them. This kind of power is almost always associated with position and usually stems from the managerial hierarchy.
• **Referent power**	A person has power based upon others' desire to be identified with that person. Often referred to as "charismatic" power, referent power results from being admired and personally identified with.
• **Expert power**	A person has power based on expertise and/or skills that have organizational value. Managerial expertise is often crucial to subordinates' success; therefore it is highly valued.
• **Information power**	A person has power based on access to and control of information that is crucial to the functioning of the organization and future plans.

that inhibit the acquisition and exercise of certain kinds of power, no matter how adept an individual is. Her argument supports that there are dominant groups that exist in organizations that perpetuate career selection and opening and closure to pathways of managerial power bases.

At other times, Kanter's discussion of power also reflects elements of the institutional power perspective viewpoint. She argues that the external issues of gender, particularly for women, gives rise to special power failure among women managers.

Special Librarianship: A Position of Powerlessness?

Special librarians largely derive organizational power from their expertise at processing information. Management thought, in general, holds that expert power is regarded as one of the most potent sources of power. However, for special librarians, the expertise that gives rise to their power may combine with the positions they hold to cause levels of powerlessness.

Kanter focuses on how first-line supervisors, staff professionals, and top executives are susceptible to the condition of powerlessness in organizations. Included in her discussion is a section that specifically addresses the issue of power failure as experienced by women managers. Kanter's comments and insights into the powerlessness of staff professionals in general, and in women managers in particular, are highly correlated with the conditions facing many special librarians.

Staff Professionals

One of the three groups profiled by Kanter is staff professionals and she highlights some of the factors this group faces that lead to organizational powerlessness. Kanter characterizes staff professionals as "useful adjuncts to the primary tasks of the organization but inessential in a day-to-day operating sense."[13] Largely due to this work characteristic, staff professionals make contributions to the organization that are difficult to measure which, in turn, leads to a lack of visibility and recognition by other organizational members. Similarly, special librarians provide information services as an occupational goal, and since few practiced mechanisms exist for measuring this kind of input, librarians (unless they make it a priority and develop some measures) rarely get the recognition that might heighten their profiles throughout the organization.

Kanter argues that staff professionals are hired based on some specialized experience and/or training. Yet their expertise is often an isolating factor furthering their powerlessness. General management skills are left undeveloped which results in rather short career ladders. Like staff professionals, special librarians often bring a set of skills to their job that include organizing schemes, rules, and tools. Although these tools are intended to increase access, the tools can be rigid and inhibit access and cooperation from some users. Special librarians may be left with their tools and set of organizing principles and rules while individuals in the organization work around them. Finally, when the situation calls for non-routine work, such as high-risk projects or complex problem solving, management is likely to bring in outside consultants (or an advanced software package, in some cases) to fulfill the task.

Special librarians may experience this kind of isolation with the mass introduction of an automation system. An outside vendor may become largely responsible for installation and implementation or in many cases, the parent organization's internal information technology systems department may be brought in to automate the library's operation. Success for the implementation is often attributed to the systems department or the vendor. For the library, whether implementation is successful or not, staff ends up spending a considerable amount of time working with systems staff and subsequently falls behind in their own work. As a result, the integrity of their operation suffers.

Overall, the conditions discussed in this section are factors that exacerbate levels of powerlessness for managers who are staff professionals or as we have described, special librarians. The factors of powerlessness among

staff professionals that Kanter describes and the factors we suggest for special librarians are reviewed and compared in Table 2 below.

Special librarians, whose work is characterized by factors described in Table 2, tend to have a dearth of bargaining power because they have no favors to exchange. They are usually uninvolved and overlooked as candidates for innovative programs so there is little opportunity for growth for themselves or for their workers. They tend to be cut off from lines of supply, support, and information. Kanter suggests that these conditions lead staff professionals to become ". . . turf-minded. They create islands within the organizations. They set themselves up as the only ones who can control professional standards and judge their own work."[14]

Table 2

The Susceptibilities to Powerlessness

Factors	Staff Professionals	Special Librarians
1. Advisers behind the scenes	Frequently	Very frequently
2. Useful in primary tasks and not in day-to-day operations; adjunct function	Sometimes	Frequently
3. Bring a special and unique expertise to the job	Sometimes	Very frequently
4. Must sell programs and bargain for scarce resources	Sometimes	Sometimes
5. Short career ladder within an organization; limited jobs they can perform in organization	Frequently	Very frequently
6. Contribution to the organization is difficult to measure	Frequently	Very frequently
7. Have tendency to become turf-minded	Sometimes	Sometimes, if not frequently
8. Excluded from risk-taking action and innovation	Sometimes, if not frequently	Frequently
9. Work farmed out	Sometimes	Sometimes

This is a graphic adaptation of Kanter's findings about staff professionals combined with similarities the authors of this article find in special librarian positions. This chart is for descriptive purposes and reflects the authors' viewpoints about special librarians.

Women and Powerlessness

Most authors agree that power is still very much contingent on organizational position because that position provides or denies the incumbent direct access to certain resources (like information) that increases one's power. Position and the organizational culture of hierarchy also allow an individual to behave in a powerful manner regardless of gender.[15] When women do obtain positions that confer at least legitimate power to them, there is little difference between female and male managers when dealing with subordinates.[16]

Yet the regularity in which women are placed in positions of power compared to their male counterparts is widely disproportionate. Kanter presents three reasons why women tend to fill positions of powerlessness. First, women tend to be first-line supervisors or staff professionals, so that they are initially placed in positions of powerlessness with few opportunities to exert influence.

Second, even if a female manager is in a position of potential power, this potential is often eroded because the woman may be typically "overprotected" by her male supervisor. If one way to amass corporate power is by completing "high-profile, high-risk" projects and by compiling an account of "corporate assets," many women managers remain outside the inner realm and are assigned "safe, low risk" projects. And even if they are highly successful with these kinds of functions, female managers rarely receive the same recognition as their male counterparts who may be less successful but in higher profile assignments. Lastly, Kanter notes, even when women are able to achieve some stock of organizational power, they are still seen as someone else's protégé rather than as someone with personal clout who can empower both subordinates and peers alike through their association with her.

In general, organizational power is crucial to special library managers because it affects motivation. Special librarians without power tend to be caught up in a cycle of menial tasks that are viewed by other departments as unimportant to the operation of an organization. Powerless special librarians are regularly cast aside to the bottom of the organization where their work becomes unrecognized, their chance at developing coalitions is nil, and their own self-esteem is minimized. Overall, powerlessness can breed psychological distress, discontent, loss of productivity and in some cases, even sabotage.[17]

SLA Data as a Measure of Power

While there are notable examples of special librarians who have amassed organizational power, they are unfortunately still the exceptions rather than the rule. Too many special librarians work in situations similar to the staff professional described by Kanter. Select data from two studies by the Special Libraries Association largely support this last contention.

In 1989, a small SLA study set out "to portray the library/information center function, in all its variations, within major United States and Canadian corporate headquarters."[18] Eighty questionnaires were mailed to participants chosen from sales ranking charts in *Forbes 500 Annual Directory* and *Financial Post 500*. Thirty-two U.S. and eight Canadian usable questionnaires were returned, for a response rate of 40%. The sample represented libraries and information centers in 39 different corporations. Data was collected from 37 respondents in one question about special librarians' immediate supervisor and in turn, the reporting relationship of that supervisor.

Reporting relationships are applied here as a measure of how central to the "power core" a department and its manager are. Kanter would further argue that the closer in proximity to the power elite managers are, the more likely they are to have access to resources. In this study, only 15, or less than half of the sample, have reporting relationships that would appear to keep them in the mainstream of the organization's activities. This limited group has access to the chief executive officer or other senior administrators whose positions appear to be central to the main "line of business" of the organization. The remaining 22, or nearly two-thirds of the special librarians in the sample, have reporting relationships that

are usually associated with overhead expenses, other corporate services, or facilities management. This reporting relationship puts nearly two-thirds of the special library mangers in the kind of staff position that leads to the kind of powerlessness described by Kanter.

Further data about the size of staff supervised in special libraries is provided by a recent salary survey of SLA members in the U.S. and Canada.[19] Staff size is highly correlated with a manager's power in three major ways. First, staff size is powerful not only in head count alone, but also with regard to the space needed for a large staff to work. The more staff a manager supervises, the more that individual is viewed as a manager by the rest of the organization and the greater probability that management training and leadership development will be provided.

Second, a manager with a small staff that is barely adequate to maintain current workload is unlikely to take on special projects that might bring more visibility and credibility. Third, a small staff is harder to bring up through the ranks because fewer opportunities tend to arise. When staff does not move on to other positions of responsibility within an organization, an effective manager's reputation and the loyalty the staff member might have toward the managers does not move beyond the department.

Of the 10,439 questionnaires mailed to SLA members in the U.S. and Canada in 1992, 45% or 4,649 of the respondents returned usable responses. Usable data from 3,954 respondents collected about staff supervision shows that special libraries, in general, tend to be small shops with four employees or less. Nearly 80% of the Canadian sample supervise four employees or fewer and of that subset, nearly half of the respondents supervise either just one employee or supervise no one. In the United States, the trend is similar. Seventy-six percent supervise four employees or fewer and of that subset, half of the respondents supervise either one or none. The results of the survey question appear in Table 3 on page 132.

The SLA data from both studies offers descriptive findings about library and information center managers and proximities for measuring power. The data is limited and is by no means intended to be conclusive. Yet the findings indicate a trend among special librarians to fill positions susceptible to powerlessness. Further research with additional measures about special librarians and their proximity to power in organizations needs to be developed and carried out.

Overcoming Powerlessness

Special librarians have a susceptibility to powerlessness in organizations based on the positions they fill. Contributing factors to powerlessness include the nature of special library work, which is often adjunct to the primary day-to-day tasks; a service orientation where contributions are difficult to measure; and a set of unique tools and expertise that is often unrecognized and underutilized beyond the library. The previous section further suggests that special librarians, their reporting relationships, and the number of staff they supervise also affect power bases. When these factors come into full play in special libraries, resources become restricted, the goals of the department are difficult to meet or even attain, and isolation tends to increase.

Although pockets of powerlessness exist for special librarians in most organizations, the situation is not entirely hopeless. Library managers can counter the factors of powerlessness through awareness, planning, and orchestrated management strategies which make use of tools and actions that enhance power.

Special librarians trying to widen their power bases need to explore the foundation of their operation. This can begin by defining a library mission.[20] Writing a mission statement is an often undervalued identifying exercise that can unify staff and communicate purpose and direction beyond departmental walls. A mission statement can reshape image for those inside and outside the library because the document defines the uniqueness of services and the way in which they are provided. Mission statements give direction to library staff by providing a template on which current and future actions may be based, and can also shrewdly alert special library patrons about

the scope of possible services. The communication of these services often extends beyond what patrons commonly think a special library does to serve them.

Special librarians seeking to enhance their organizational power must also assess potential power bases that are expandable. One opportunity for increasing their expert and/or information power is a growing role in information technology (IT). In many organizations, special librarians are early adopters of information technologies. With the implementation of more automation projects throughout the organization, librarians have fertile ground for cultivating power if they develop their expertise of what resources are needed, how systems work, and what training new users require.

In general, most computing occupations have underdeveloped power because of the staff's heavy technical and maintenance tasks. Yet there is a growing link between technical skills and the expanding area of networking and user support. Organizations increasingly require someone who is able to merge technical expertise with general organizational management, decision-making, and in turn, corporate power.[21] This role as liaison between technology and users is certainly not a new one for special librarians and is an opportunity for increasing organizational power.

Involvement with high-risk innovative projects is another pathway to power. Most innovative development at organizations occurs in teams compiled by higher management. Executives advocate teamwork because teams require both individual and mutual accountability which results in higher productivity and greater performance.[22] Special librarians are desirable inter-company candidates for teams because of their research expertise,

Table 3

Special Librarians in Canada and the U.S. and the Number of Staff Supervised

Employees Supervised	Canadian	Percent	U.S.	Percent
None	104	26.8%	1,148	32.1%
One	84	21.6%	622	17.4%
Two	53	13.6%	430	12.0%
Three	34	8.7%	267	7.4%
Four	33	8.5%	239	6.7%
More than four	80	20.8%	860	24.4%
Totals:	388	100%	3,566	100%

n = 3,954

their ability to access, organize, and filter information; and their understanding of information-seeking behavior. Yet these skills must be widely communicated to potential team members before librarians will be considered for teams.

Conclusion

In a recent article, Kanter argues that the source of structural power sources show signs of erosion.[23] Within the new organization, hierarchies continue to flatten, resources are combined and shared between departments, the use of cross-departmental teams is on the rise, and subsequently, the distinction between managers and non-managers has begun to blur and the ability of managers to command has diminished.[24] She advises that managers will have to restock their "motivational toolbox" by helping workers see the value of their work, by allowing workers to have agenda control on projects, and by increasing training opportunities.

Regardless of what the new organization holds, there will always be a level of powerlessness linked to individuals in organizations because resources and the lines of supply to them are finite. The only way to overcome this kind of structural powerlessness, one author suggests, is "by acting assertively and aggressively to gain the information, resources, and support that are needed to reposition themselves in the cycle of power. No one gives away power; one has to create it."[25]

In particular, the need is imperative for special library managers to take stock, develop, and communicate their department's strength to the rest of the organization. Power may be enhanced through stronger communication of resources that the library has to offer and through expanding individual bases of expert power. The first step to overcoming powerlessness, however, may be in recognizing its existence.

Special thanks to the Poynter Institute for Media Studies and Library Director and faculty member Nora Paul. The ideas underlying this paper were first presented by Alison Head when she was Visiting Faculty for the Poynter Seminar, "News Libraries: Management for the Year 2000," in St. Petersburg, FL, March 6-10, 1994.

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References

[1] Kanter, Rosabeth Moss. "Power Failure in Management Circuits." *Harvard Business Review* 57(4): 65 (July-August 1979).

[2] Pelz, Donald C. "Influence: A Key to Effective Leadership in the First-line Supervisors." *Personnel* 29(11): 209 (Nov. 1952).

[3] Kanter, Rosabeth Moss, op. cit., p. 65.

[4] Mintzberg, Henry. *Power in and Around Organizations*, Englewood Cliffs, NJ: Prentice-Hall, 1983, pp. 4-5.

[5] Kanter, op. cit., p. 65. A block of text below the title of Kanter's article offers our question in statement form.

[6] Machiavelli, Niccoli. *The Prince and the Discourses*. New York: The Modern Library Edition, 1940 (originally written in 1532).

[7] Hobbes, Thomas. *Leviathan; or the Matter, Forme and Power of a Commonwealth, Eccelesiasticall and Civil*. New York: Collier Books, 1962 (originally written in 1651).

[8] Fincham, Robin. "Perspectives on Power Processual, Institutional, and 'Internal' Forms of Organizational Power." *Journal of Management Studies* (29)6: 742 (Nov. 1992).

[9] French, John and Raven, Bertram. "The Bases of Social Power." In D. Cartwright and A. Zander, eds. *Group Dynamics: Research and Theory*. New York: Harper and Row, 1960, pp. 607-623 provide the general classification of the first five kinds of power listed in Table 1.

[10] Later the idea of another source of power, information power, was added to the list by a number of authors, for example, see B.H. Raven's and A.W. Kruglanski's "Conflict and Power" in P. Swingle (ed.), *The Structure of Conflict*, New York: Academic Press, 1970; or Dennis Selvin's *The Whole Manager*. New York: AMACON, 1989, pp. 82-115.

[11] Fincham, op. cit. Although power can be described from a number of interdisciplinary standpoints, Fincham identifies three predominant themes of organizational power.

[12] Fincham, op. cit. The author argues that although each theme has genuine merit, the ideas may be interrelated instead of exclusive and therefore, different levels of analysis for studying power in organizations are required.

[13] Kanter, op. cit., p. 70.

[14] Kanter, op. cit., p. 70.

[15] Brass and Burkhardt, op. cit.

[16] Johnson, Cathryn. "Gender, Legitimate Authority, and Leadership." *American Sociological Review* 59(1): 122-135 (Feb. 1994).

[17] Horowitz, Allan. "Sex Roles Expectations, Power and Psychological Distress." *Sex Roles* 17(8): 607-623 (1982).

[18] *From the Top: Profiles of U.S. and Canadian Corporate Libraries and Information Centers*. Compiled by Tobi A. Brimsek. Washington, DC: Special Libraries Association, 1989.

[19] *SLA Biennial Salary Survey: 1993*. Washington, DC: Special Libraries Association, 1993.

[20] For direction on writing mission statements, see Duane Ireland's and Michael Hitt's article, "Mission Statements: Importance, Challenge, and Recommendations for Development." *Business Horizons* 35(3): 34-43 (May-June 1992).

[21] Fincham, Robin. "Computing Occupations, Organizational Power, Work Transition and Collective Mobility," *New Technology, Work and Employment* 9(1): 44 (1994).

[22] Katzenbach, Jon R. and Douglas K. Smith. "The Discipline of Teams." *Harvard Business Review* 71(2): 111-120 (March-April 1993).

[23] Kanter, Rosabeth. "The New Managerial Work." *Harvard Business Review* 67(6): 85-92 (Nov.-Dec. 1989).

[24] See also Peter Drucker's "The New Organization." *Harvard Business Review* 66(1): 45-53 (Jan.-Feb. 1988).

[25] Mainiero, Lisa A. "Coping with Powerlessness: The Relationship of Gender and Job Dependency to Empowerment-strategy Usage." *Administrative Science Quarterly* (31): 637 (1986).

The Magnitude of Conference Proceedings Published in Physics Journals

by Robert S. Allen

• *Cette étude mesure l'ampleur de la publication des séances des congrès dans le cadre des revues de physique. Les problèmes associés à la publication des séances des congrès dans les revues sont examinés. La collection des revues de la bibliothèque de physique de l'université Perdue sert d'échantillon représentatif des revues de physique qui se trouvent communément dans les bibliothèques de recherches. Deux intervalles de temps séparés ont été employés dans cette étude. Un intervalle couvre les revues de 1986 à 1990, et l'autre se limite à 1990. L'étude a mesuré le pourcentage des titres contenant des séances des congrès dans l'intervalle de 1986 à 1990. Le pourcentage des pages consacrées aux séances des congrès pour les titres contenant des séances des congrès a été déterminé pour l'intervalle de 1986 à 1990. Le pourcentage des pages consacrées à la population entière de la documentation figurant dans les revues de physique est mesuré pour 1990. La mesure dans laquelle les grands éditeurs de documentation sur la physique incluent les séances des congrès est également indiqué pour chaque éditeur. Les raisons pour et contre la publication des séances des congrès font également l'objet d'une discussion. La direction éventuelle que prendra la future publication des séances des congrès est explorée.*

• *Este estudio mide la frecuencia de publicación de actas de conferencias en revistas científicas en el campo de la física. Se discuten los problemas asociados con la publicación de actas de conferencias en revistas científicas. Se utilizó la colección de revistas de la Biblioteca de Física de la Universidad de Purdue como ejemplo representativo de revistas de física que se encuentran con frecuencia en las bibliotecas de investigación. Se utilizaron dos intervalos de tiempo diferentes en este estudio. Un intervalo abarcó las revistas publicadas entre 1986 y*

This study measures the magnitude of occurrence of conference proceedings published as parts of physics journals. Problems associated with publishing conference proceedings in journals are discussed. The journal collection of the Purdue University Physics Library was used as a sample representative of physics journals that are commonly held by research libraries. Two separate time intervals were used in this study. One interval covered journals from 1986-1990, while another interval covered 1990 only. The study measured the percentage of titles containing conference proceedings for the 1986-1990 interval. The percentage of pages devoted to conference proceedings for titles containing conference proceedings was determined for the 1986-1990 interval. The percentage of pages devoted to the entire population of physics journal literature is measured for 1990. The extent to which major publishers of physics literature include conference proceedings is also shown for each publisher. Reasons for and against publishing conference proceedings in journals are discussed. Potential directions for future publication of conference proceedings are discussed.

Introduction

Purchasing conference proceedings that reflect the interests of library users can be a problem. The literature of physics contains a large number of published conference proceedings. These proceedings generally are published as monographs or as parts of journals; some are published as both. There are some problems associated with conference proceedings published as parts of journals.[1] First, conference proceedings published in journals may sometimes tend to be more expensive than those published as monographs. Second, the process of peer review might be less stringent for journal papers

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1990, y otro intervalo abarcó revistas publicadas en 1990, únicamente. Este estudio midió el porcentaje de títulos que contienen actas de conferencias para el intervalo entre 1986 y 1990. Se determinó el porcentaje de páginas dedicadas a actas de conferencias para títulos que contienen actas de conferencias durante el intervalo que se extiende entre 1986-1990. Se calculó el porcentaje de páginas dedicadas al conjunto de revistas de física publicadas en 1990. Se presentó una medida de la frecuencia de inclusión de actas de conferencias en las revistas para cada una de las principales editoriales de textos de física. Se discuten las razones a favor y en contra de la publicación de actas de conferencias en revistas. Se discuten las direcciones potenciales para la publicaciones de actas de conferencias en el futuro.

resulting from conference proceedings than for other papers in the same journal. Many authors present preliminary research findings in papers at conferences with the intention of later publishing the final research results in a peer reviewed journal. This is also true of "letters" type journals, but the publication cycle is much quicker for papers in these special journals. Third, there is often a considerable interval between the time a conference is held and the time at which the proceedings are published.

Conference proceedings are a very important part of physics literature. The significant portion of both the journal and monographic literature composed of conference proceedings is testimony to this. The invited papers presented at conferences are often very important to the field.[1] The problem facing collection development librarians is which conference proceedings to purchase with the limited funds they have available. Librarians must choose from a very large number of available conference proceedings those which best fit into their collection development initiatives. This problem is further complicated by their need to purchase other monographs with the same funds. When conference proceedings are published as parts of journals, the librarian is prevented from choosing those which best reflect the subject interests of library clientele and is forced to purchase those that are in the journal.

The purpose of this study is to measure the magnitude of the physics journal literature that is composed of conference proceedings. It is hoped that these findings will be of interest to librarians, authors of scientific articles, and publishers of scientific literature.

The Nature of Conference Derived Literature

The role of conference attendance in the information gathering of physicists has been discussed.[2] Conference attendance is usually beneficial as a means of formal oral communication through the papers which are presented. These papers are usually intended to report on research in progress or review broad subdisciplines of physics. This makes the intellectual content of a conference proceedings publication similar to a "letters" type journal or a "review" type journal. Many authors present papers at conferences with the intention of publishing them in final form in a peer reviewed journal. Papers presented at conferences, however, are often put together hastily and not refereed in the usual sense.[3,4]

One of the guiding principles concerning publication of conference proceedings is that publication should

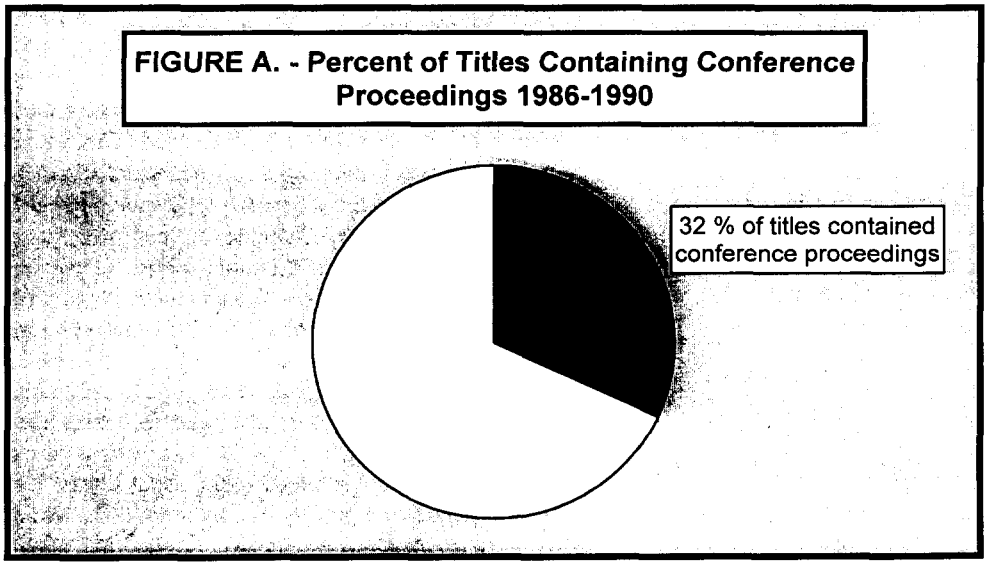
occur quickly, so that the material presented is still of interest to researchers. Perhaps for this reason, papers presented at conferences do not usually undergo an extensive refereeing process prior to presentation. Some issues of journals that contain conference proceedings do indicate that a refereeing process was employed prior to publication, while many of these issues indicate that only the invited papers are published and do not mention a refereeing process. Some issues contain both invited and contributed papers. Though the extent of the refereeing process varies for physics journals that publish conference proceedings, it seems that less attention might be paid to the refereeing of papers from conference proceedings as compared to papers from "regular" contributions.[4,5]

Study Methodology

The journal collection of the Purdue University Physics Library was used as a population representative of physics journal literature. Purdue University is a Land Grant University and the library is a member of the Association of Research Libraries. The Purdue University Library System has a history of maintaining a strong journal collection in the sciences and engineering. It is assumed that the Purdue University Physics Library's journal collection is fairly typical of other similar institutions, though its collection might be weaker in astronomy and plasma physics than some. The sampling method for this study was designed to answer the following two questions. First, what portion of physics journal literature is composed of conference proceedings? Second, what portion of the journals that contain conference proceedings are made up of conference proceedings?

The first part of the sample examination involved quickly scanning each title in the collection through the years 1986-1990. This phase told which journals published conference proceedings and which did not. A five-year period was used because most journals publish conference proceedings irregularly, with some years having no conference proceedings included. Care was taken to note title changes or incomplete holdings. If any title changed during the five-year period and the new title was present in the collection, both old and new titles were combined into one for the data

Figure A



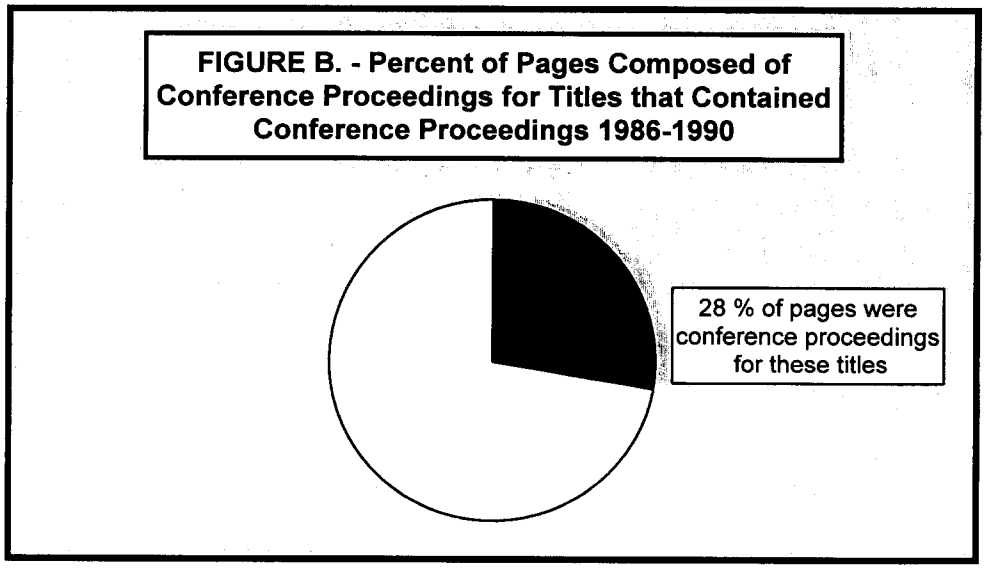
examination. If any one title split into multiple titles during the five-year period, both the original and the split titles were combined into one for the data examination. Titles without complete holdings due to cancellation, cessation, or new acquisition were not included in the study. Titles with contents not in English were also excluded. The total number of titles examined was 222. The publisher for each title was noted. If a conference proceeding was found in a title in that range of years, that title was recorded. This phase of the study yielded a measure of the ratio of titles that contained conference proceedings to titles that did not.

The definition for conference proceedings used in this study is restricted to groups of entire papers presented at conferences, workshops, summer schools, symposia, or other similar gatherings. Abstracts of papers or programs of meetings were excluded. The most prominent indicator that a journal issue is a conference proceeding is a statement to that effect either on the cover of the issue or as a foreword or statement from the issue's editor. A portion of a journal containing a conference proceeding is often much thicker than other portions of the journal.

When it was determined which titles contained conference proceedings, the sample was stratified to concentrate on these specific titles in greater detail. For the titles that contained conference proceedings, the total number of pages per title for the years 1986-1990 was recorded, as was the total number of pages devoted to conference proceedings per title. This phase of the study yielded a measure of the ratio of conference proceedings pages to the non-conference proceedings pages for these selected titles.

A third phase of the study was designed to measure the portion of the entire population of physics journal literature that was composed of conference proceedings in 1990. English language titles for which complete holdings were present during the year 1990 were examined. The total number of titles examined in this portion of the study was 261. It must be noted that there is a higher number of titles included in this portion of the study than in the 1986-1990 portion because there were fewer instances of incomplete holdings for one year versus five years, and because titles that split during the five-year period were considered separately in the 1990 sample. The total num-

Figure B



ber of pages and the total number of pages devoted to conference proceedings were noted for all titles. This allowed the percentage of pages devoted to conference proceedings within the total population of physics journal literature to be calculated. It is hoped that the percentage would not change greatly from year to year, so that the data can provide a rough estimate of this factor for other years.

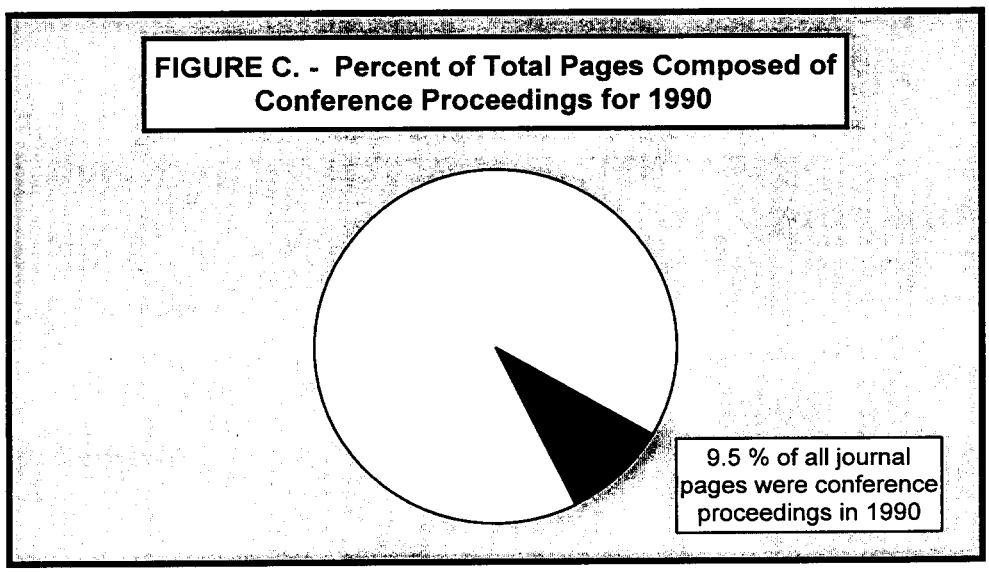
Study Results

Figure A on page 138 shows the percentage of titles for the 1986-1990 sample that contained conference proceedings. As the figure indicates, 32% of the titles in the study contained some conference proceedings. Clearly, this practice is not isolated in a few journals. The number of titles containing conference proceedings in a single given year is somewhat less due to the irregular nature in which some journals publish conference proceedings. Only 21% of the titles contained conference proceedings in the 1990 sample alone. Figure B on page 139 shows the percentage of pages composed of conference proceedings for the titles that contained them. It is apparent that a large portion of the content of these journals is composed of conference proceedings.

Figure C, below, shows the percentage of all journal pages published in the 1990 sample that are made up of conference proceedings. As the figure shows, 9.5% of all pages within the sample is composed of conference proceedings. This is a substantial portion of the journal literature in the Purdue University Physics Library. If the assumption can be made that the journals held by the Purdue University Physics Library are fairly typical of a university library physics journal collection, then this percentage figure can be applied generally to other libraries' collections of physics journals for 1990.

Figure D on page 141 shows the number of titles containing conference proceedings versus the total number of titles for major publishers in the 1986-1990 sample. Note that only the publishers of six or more titles are included in this figure. Some publishers had only one title included in the study and even though this title may have included conference proceedings, it was not included in the figure. The

Figure C



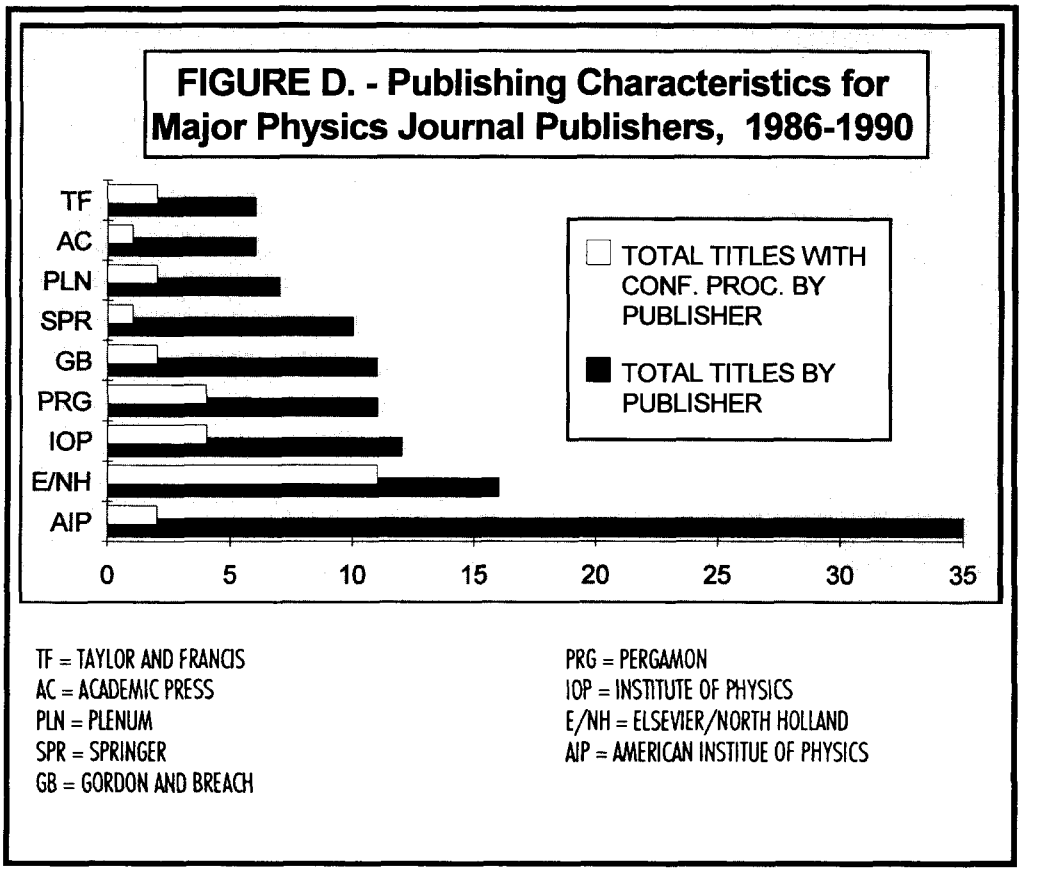
intent of the figure is to demonstrate the extent of this publication practice by major publishers of physics journals.

Discussion

As this study shows, the physics journal literature contains a large number of conference-derived papers. Though this study does not measure the quality of this portion of the journal literature, the difference in refereeing and intent of conference material mentioned previously might indicate that these papers could be of lesser quality—quality being loosely defined as a sought after paper that remains sought for a long time—than non-conference papers.

Using the 1990 data as an example, 9.5% of pages published in the journals sampled are from conference proceedings. Some very expensive titles include conference proceedings, and the potential exists for some conference proceedings published in journals to be more expensive than those published as monographs. Whether the portion of these journals devoted to conference proceedings is of lesser quality than other portions of the journal remains to be seen. It can be said that 9.5% of the pages that were purchased with serials funds in the Purdue University Physics Library in 1990 could have been chosen more selectively had those conference proceedings been published as monographs rather than as parts of journals. As the author browsed through the conference pro-

Figure D



ceedings published as parts of journals, he noted that many of them would not have been purchased if they were marketed as monographs.

Though the percent of pages devoted to conference proceedings in the 1990 sample is 9.5%, the actual percent of a library's acquisitions budget taken by conference proceedings published in journals might be higher. This is due to the occurrence of many of these proceedings pages in very expensive journals. Given the constrictions currently being placed on library serials budgets, this is a significant percentage of total serials cost. Many library administrators lament the migration of materials funds from monographs to serials due to the high inflation of serials costs.

When examining the available monographic titles for potential acquisition, a large percentage were found to be conference proceedings. Given the restrictions of the acquisitions budgets for monographs in most libraries, many of the available conference proceedings are not acquired for reasons of obsolescence, expense, obscurity, or incompatibility with the collection development goals of the library. Conference proceedings published as monographs offer this freedom of choice, while conference proceedings published as parts of journals do not offer this freedom, and consequently diminish a librarian's ability to develop a collection to meet the interests of library users. If funds are being moved from monographs to serials, then the freedom to choose conference proceedings based on collection development priorities is further removed. If publishers were to offer journals at a lower cost with the option to purchase conference proceedings separately, it might be possible to lower the price of the journals.[1]

Publishers face a number of problems when publishing conference proceedings.[6] The two most serious problems are the difficulty of getting out the publication rapidly and the small market associated with narrow conference themes. The often similar physical appearance of a conference proceeding published in a journal to that of a conference proceeding published as a monograph would indicate little difference in time needed for printing the physical item. Many of the papers in both publishing forms are obviously taken directly from the desktop of the scientist as camera-ready copy. It would seem that the rigorous refereeing or peer review that journals are known for would slow down the publication process for conference proceedings published in journals. This might be the driving force behind less rigorous reviewing of conference-derived papers that appear in journals. If rapid publication is of extreme importance, conference proceedings might be better published as monographs.

Publishing a conference proceeding as part of a journal solves the publisher's problem of a small market due to narrow subject scope. The proceeding is sold automatically through the journal subscription. This sale can be made at a potentially much higher price per page in many cases. A greater profit margin should be possible as there is no need to attempt to market proceedings published as journals. Even greater profits are possible if the proceedings are sold both as a book and as part of a journal.

There are numerous problems encountered with conference proceedings in relation to bibliographic verification and retrieval. The difficulty patrons and library staff can have finding conference proceedings is well documented.[7,8] These problems are further complicated when proceedings are published as parts of journals. Most libraries today have varying degrees of access to indexing and abstracting sources that cover the conference literature. If given complete bibliographic information from these sources, librarians usually can quickly determine if a desired article from a conference proceeding is available locally, whether it is in a journal or book. The situation becomes somewhat gloomier when searching for a paper cited in a primary publication as "presented at the Conference on..." The paper can sometimes be found using the library catalog when the conference proceeding was published as a monograph, though a number of permutations of a similar search strategy must be employed to find the correct item. If the proceedings were published as part of a journal, but were not cited as such, verification and retrieval becomes more difficult. In this case, secondary sources must be checked to determine in which issue of a specific journal that article appears. The truly unfortunate part of this scenario occurs when a

patron wants to read an entire conference proceeding that was published in a journal not owned by a library. It is difficult to obtain an entire issue or volume of a journal through interlibrary loan. Sometimes it is possible to purchase the entire conference proceeding by going through the appropriate copyright clearance requirements. The patron is usually quite frustrated by this situation, which could be avoided by not publishing conference proceedings as issues of journals.

The author of a conference paper probably benefits more from a conference proceeding published as a journal issue, depending on his or her views of prestige associated with journal versus monographic publication. Having a paper published in a "refereed" journal usually offers more benefits in regards to promotion and tenure for academic scientists. If the assumptions that less stringent reviewing is given to conference papers published in journals and that papers presented at conferences are often published in more complete form at a later date are correct, scientists can reap professional benefits by having conference proceedings published in journals. This allows the scientist to include an extra "peer-reviewed" paper on his or her vita.

Conclusion

The fact that over 30% of journal titles in this study include conference proceedings shows that this is not an isolated practice by a few publishers. Many indicators today point toward the future of libraries and information services being less archival and more access oriented. The choice of what to archive will be more difficult for librarians as buying power diminishes. If papers from conference proceedings become less desirable with age more rapidly than other papers, it would seem that these would be less desirable to archive. As serials budgets tighten in today's libraries, the decision regarding which journals to purchase with limited funding often comes down to head to head comparison between similar competing journals. There are many factors which are compared, and this obsolescence might certainly come into play.

If the number of subscribers to some of these journals diminishes, it will probably be less appealing for scientists to have their papers published in these journals. This change might bring about the demise of some journals. Rather than have journals cease completely, publishers should consider not including conference proceedings in their journals. This should strengthen the market for their journals, make them less expensive, and provide libraries with more purchasing options.

Journal publication and subscription are currently in a state of flux. As serials inflation continues to outpace more static serials budgets, the choice of what to purchase for library collections becomes increasingly difficult. The choice of what and how to publish and market scientific literature will become more difficult as electronic publication and access-on-demand literature provision becomes more commonplace.

Scientific conferences will continue to be held and scientists will continue to be interested in obtaining copies of the papers presented there. Due to the need for rapid dissemination of conference proceedings, these papers should make excellent candidates for electronic publication. As the nature of scientific journals changes with changes in technology and market demands, the inclusion of conference proceedings as parts of journals may be less common. If access-on-demand, rather than archival maintenance of scientific literature, becomes more popular for libraries, librarians will be concerned with providing patrons the cheapest access to desired items. Scientists as authors will seek to offer their work to the body of scientific knowledge while receiving professional rewards and recognition for this work. Publishers will continue to act as a conduit between scientific authors and their audience.

The popularity of electronic preprints in the physics community may well be sounding a death knell for the most profit-hungry publishers of physics literature. The authors of scientific papers do not generally profit financially from publication in journals. Should electronic publication offer the same rewards and recognition that publishing in traditional paper journals offers, there should be no reason for

scientists to prefer the traditional journals. This is especially true for conference proceedings due to the need for rapid publication. It seems logical that publishing conference proceedings electronically and making them available via the Internet will become more and more popular in the future. There may also be a trend for conference organizers to prefer to have their conference proceedings published electronically by not-for-profit professional societies. These societies rely heavily on the income generated from their publishing activities to support services that benefit scientists. This choice might provide scientists with some financial reward for their published articles through lower membership fees and lower conference registration fees, etc.

The author would like to acknowledge the staff of the Purdue University Physics Library, who assisted in part of the data collection. The study presented here was funded by a research grant provided by the Purdue University Library System.

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References

[1] Barschall, Henry H. and Willy Haeberli. "Conference Proceedings in Physics." *College and Research Libraries* 53(6): 563-566 (1992).

[2] Allen, Robert S. "Physics information and scientific communication: Information sources and communication patterns." *Science and Technology Libraries*, 11(3): 27-38 (1991).

[3] Berry, Michael. "What's wrong with these conference proceedings?" *Physics World* 4(7): 12-13 (1991).

[4] Barschall, Henry H. and Willy Haeberli. "What's wrong with these conferences?" *Physics Today* 45(12): 79-81 (1992a).

[5] Crease, Robert. 1993. "Fallout from paper on working mothers." *Science* 259(5101): 1530-153.

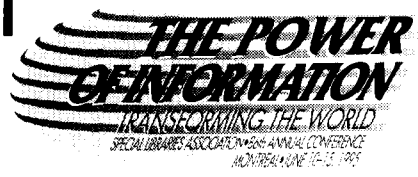
[6] Smith, James L. "Publishing of sci-tech conference proceedings: Viewpoint of an editor." *Science & Technology Libraries* 9(2): 21-28 (1988).

[7] Alldredge, Shirley. "Techniques and Strategies used by seasoned librarians for the identification and verification of incorrect or incomplete conference citations" in *Conference Literature: its role in the distribution of information*. Marlton, NJ: Learned Information, 1981, pp.110-117.

[8] Mendelsohn, Loren D. and James A. Ruffner. "Living with conference proceedings: an analysis of the problems, pitfalls, and successful techniques for access." *Science and Technology Libraries* 12(2): 1-19 (1988).

On the Scene

An Invitation to Montréal



by Claire Kelly
Chair, Montréal Host Committee

The second largest French speaking city in the world after Paris, Montréal is called the "green city" because of its numerous parks and large green spaces. The site of SLA's 1995 Annual Conference, Montréal's temperature in June generally ranges from 65 degrees to 85 degrees F, 20 degrees to 28 degrees C. Bring cool comfortable clothing for outdoors and sweaters and jackets for air conditioned buildings and evenings. Rain showers are a possibility, so bring an umbrella.

All daytime SLA Annual Conference activities will take place at the Palais des Congres (convention center); evening activities will be held at a select number of conference hotels—The Queen Elisabeth, the Sheraton, and/or the Meridien (exact locations for all events will be listed in the *Final Conference Program*). If you are staying at one of the conference hotels, you will have the option of walking or taking the Metro (subway) to the convention center. The Montréal metro's sleek, rubber-wheeled trains whisk passengers along on more than 30 miles of concrete tracks to 65 stations. The system is fast, clean, quiet, and safe. Tickets and transfers are valid on both means of transportation. Exact change is required on the bus. Adult admission is $1.75 (Canadian); strips of six tickets are available for $7.00 (Canadian). Tourist Cards are also available for 3-day ($12.00 - Canadian) or one-day ($5.00 - Canadian) unlimited travel on bus and Metro. Please note that these passes cannot be purchased at the Metro Stations, only at the Infotouriste Centres (1001 Square-Dorchester or 174 Notre Dame E.), and some hotels. For route and schedule information, call 288-6287 in Montréal. For Tourist information for Montréal and the rest of Quebec, call 1-800-363-7777 (toll-free from anywhere in North America).

Getting From the Airport to Downtown Hotels

Air

Montréal has two international airports, Dorval and Mirabel. You will most likely arrive at Montréal International Airport (Dorval) which services flights from the United States and Canada. All flights other than North American flights will arrive at Montréal International Airport (Mirabel). Be sure to check

Highway distance and costs from downtown airports:

	DORVAL	MIRABEL
Distance (km/mi)	22/13	55/33
Length of trip (minutes)	20-30	45
Taxi	$25	$58
Autobus AeroPlus Mirabel to downtown or b/w airports Autocar Connaisseur (bus)	$9 one way $16.50 round trip	$14 one way $20.50 round trip

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the *Preliminary Conference Program* for information on special air rates on Air Canada and Delta Air Lines.

A free shuttle bus is available to pick you up at Dorval Airport and take you to the Via Rail Dorval Station. The commuter train takes about 10 minutes and arrives at Winsor Station, next to Central Station. The cost is $1.75 one-way (Canadian).

Train

Via Rail and Amtrak link the Province of Quebec with other Canadian provinces and the United States and trains arrive at Central Station. Via Rail features a Canrailpass card which provides unlimited trips throughout the province within a given period at attractive rates. For U.S. attendees, check with your travel agent for rail service to Canada, as AMTRAK is currently cutting services on the East Coast and plans call for eliminating the train to Montréal.

Bus

Visitors can travel to Montréal by bus from other Canadian provinces and the United States. The Voyageur Terminal is located centrally and is the agent for Voyageur-Greyhound.

Rental Car

Major car rental firms such as Avis, Budget, Hertz, Thrifty, and Tilden have branches at the international airports (Dorval and Mirabel), Central Station, and in the major hotels. Quebec is metric so you will notice the road signs are all in kilometers—just multiply by 0.6 to get the approximate equivalent in miles. Gas is sold by the liter. There are 4.5 liters in one Canadian gallon and 3.8 liters in one American gallon. Speed limits are in kilometers per hour. 50km/h equals approximately 30 mph, 80km/h equals approximately 50 mph.

Sales Tax

In Quebec there is a federal tax on most goods and services (S.S.T. or T.P.S.) and a provincial sales tax (Q.S.T. or T.V.Q.). However, foreign visitors may benefit from the tax refunds for certain purchases in Canada. Ask for the Tax Refund for Visitors booklet at any Canadian port of entry.

Montréal is the crossroads for French and English culture. The lifestyle is North American but its accent is French. We welcome you to enjoy our varied landscape, our rich heritage, and legendary hospitality.

Bienvenue à Montréal!

Preliminary Planning Information

Registration Rates*:

Member "Early Bird" (May 1)	$150.00
Member Full	$190.00
Member One Day	$110.00
Retired and Student	$ 85.00
Nonmember "Early Bird" (May 1)	$245.00
Nonmember Full	$290.00
Nonmember One Day	$140.00

*The above rates are quoted in U.S. dollars.

Special Note: Member rates apply to members of the associations listed below:

American Association of Law Libraries (AALL)
American Society for Information Science (ASIS)
Art Libraries Society of North America (ARLIS/NA)
Canadian Library Association (CLA)
Medical Library Association (MLA)

Hotel Accommodations*:

Co-headquarters Hotels	single	double
Le Meridien	$128	$150
Queen Elizabeth	$129	$149
Centre Sheraton	$123	$138

Additional Properties*:

Hotel Arcade	$ 70	$ 75
Chateau Champlain	$110	$110
Hotel La Citadell	$ 96	$ 96

	single	double
Days Inn	$ 83	$ 93
Hotel Furama	$ 65	$ 70
Holiday Inn Crowne Plaza	$115	$115
Holiday Inn Centre-ville	$125	$125
Howard Johnson	$ 95	$ 95

* Please note: The above hotel prices are quoted in Canadian dollars.

Transportation Discounts:

SLA and WorldTravel Partners are pleased to provide specially negotiated fares on Air Canada and Delta Air Lines to Montréal. Discounts of 5% off the lowest fares or 10% off the unrestricted fares will be offered to all SLA meeting attendees. Discounts for travel will be available on Continental Airlines when flown in conjunction with Air Canada. Remember: The earlier you make your reservations, the greater your potential savings.

For more information and reservations, call:

WorldTravel Partners: (800)336-0227, 8:30 a.m.-5:30 p.m.

Air Canada: (800)361-7585, File No.: CV957006

Delta Airlines: (800)241-6760, File No.: 1072

Plan Now!

Your participation at SLA's 1995 Annual Conference is beneficial to you, your profession, and your organization. Look for the *Preliminary Conference Program* in March. Non-members interested in SLA's Annual Conference should write to Special Libraries Association, Annual Conference, 1700 18th St., NW, Washington, DC 20009-2508 and request a copy of the program.

Plan a Side Trip to Quebec City!

In December 1985, UNESCO declared the Old Town of Quebec City (Vieux Quebec) to be a World Heritage Treasury. Indeed it is a treasury for those who want to experience real contact with the people from Quebec and its cultural life.

And since Quebec City is only two and a half hours by car or bus from Montréal, we hope that many of our SLA guests will take this opportunity!

Among its many attractions, Quebec City offers impressive early French-Canadian architecture, out-door cafes, house-drawn carriages (caleches), artists and street performers - not to mention the elegant Chateau Frontenac, which was host to Prime Minister M. King, President F.D. Roosevelt and Prime Minister W. Churchill at the historical 1944 Quebec Conference.

For those who love to shop, Quebec City is home to Canada's second largest commercial shopping centre, Place Laurier, which offers a wide range of stores and boutiques, selling everything from designer clothes and shoes to fine home accessories.

And just in time for SLA 1995 big-screen theatre buffs, QUEBEC City will be opening the world's largest IMAX theatre, located in another shopping centre, which operates a year-long indoor amusement park and skating rink.

QUEBEC City is also ideally located for taking half and full-day side trips. You can visit the beautiful agricultural community on New Orleans Island in only two and a half hours, leaving time free to tour Canada's "Quarantine Island," Grosse Ile, which has recently been declared a National Historical Site. For whale-watching enthusiasts, a day-trip to Tadoussac can be easily arranged.

As your SLA Hospitality Committee contact person, I would be happy to help you plan your visit. To get started, you may contact the Quebec Tourism Ministry for brochures and price estimates at: 1-800-363-7777.

For more specific questions, please feel free to contact me by phone (418/843-6171), e-mail (deirdre_moore@infopug.uquebec.ca), or regular post.

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Call for 1996 Conference Papers
Information Revolution: Pathway to the 21st Century

The theme for SLA's 87th Annual Conference focuses on the city of Boston's long relationship with information. From early broadsides, town criers, and Paul Revere to its vast academic collections, the high-tech corridor along Route 128, and the current academic and corporate involvement with information, Boston remains a leader.

Conference attendees will revel in the history and explore the rapidly changing information profession as they forge a pathway to the 21st century. The theme embodies the following key concepts:

- Virtual libraries;
- Electronic publishing, intellectual property, and copyright;
- Disaster planning;
- Effective end-user partnering; and
- Exploitation of imaging and modeling.

You are invited to submit papers addressing the theme, *Information Revolution: Pathway to the 21st Century*, for the 1996 Annual Conference in Boston, MA. Multimedia presentations and poster sessions related to the conference theme will be considered. Papers accepted will be presented at the contributed papers sessions. Very specific presentations will be referred to the appropriate divisions.

Guidelines

- **Abstract**—A 250-500 word summary, accurately conveying the subject of the paper, its scope, conclusions, and relevance to the conference theme, must be submitted by September 25, 1995. The text should be transmitted by e-mail to sgclifford@ccgate.hac.com. If this is not possible, print copy of ASCII file on 5.25 or 3.25 inch disk should be sent to Susan Clifford, Hughes Aircraft Co., El Segundo Library, S24 D538, P.O. Box 92919, Los Angeles, CA 90009. Abstracts may also be faxed to Clifford at (310)334-1101.

- **Text**—The complete text of the paper is due at the Association office by April 1, 1996.

- **Length**—Paper presentation should take no longer than 20 minutes.

- **Acceptance**—Papers will be accepted only if the abstract has been submitted and evaluated, the author is a member of SLA, and the author intends to present the paper at the Annual Conference.

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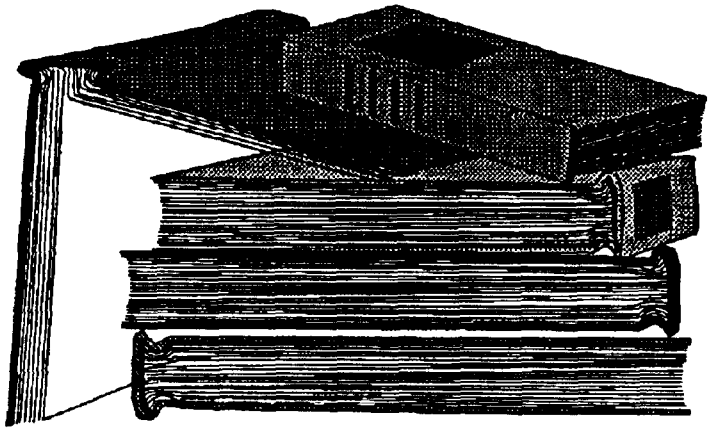
Book Reviews



Davis, Trisha and James Huesmann. *Serials Control Systems for Libraries.* Westport, CT: Mecklermedia, 1994. 175p. ISBN 0-88736-033-5. Also published as: *Essential Guide to the Library IBM PC,* Volume 12.

Serials management is a complicated area of library specialization that has benefited from the computerized technological advances made since the mid-1980s. Many of today's serial professionals assist library administrators in selecting from a wide choice of outstanding computerized systems. In this complicated world of integrated automated control systems, *Serials Control Systems for Librarians* is a useful tool for the selection and understanding of a microcomputer-based serials control system.

The intent of this work is twofold. First, it provides a vision of what a microcomputer-based serial system can, and should be able to accomplish. Second, it furnishes examples of functions and features currently available. The content, focusing on these two objectives, easily achieves these broad goals. The information provided is clearly written and presented in a logical sequence. The book includes a helpful glossary and an extensive index.

The first five chapters concentrate on providing background information about basic serial management functions like material ordering, check-in, claiming, and routing. The authors then connected these functions with a simplified explanation of the basic microcomputer functions necessary to execute these tasks properly. The authors further explain the relationship among the various computerized control files of bibliographic records, library locations, vendor addresses, and fund accounts.

Chapter 5 acts as an interface between the first part of the book, which explains the various functions of a microcomputer serial control system, and the five concluding system examples. The rapidly changing technology requirements for system installations force a cursory usage of system installation, testing, and Local Area Network considerations in this chapter.

The last five chapters provide a detailed examination of five currently available serial microcomputer based control systems. These systems are Ameritech's SC350, Faxon's MicroLinx, SMS Canada's DavexPC, Dawson's PC MAX, and Readmore's REMO. Each chapter includes an overview and a brief explanation of the system and how it executes ordering, check-in, routing, claims, and binding functions. The chapters also include information about how each system handles bibliographic control records and fiscal management reports.

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The authors give practical advice throughout the text, explaining everything from why most control systems limit a list of 10 to 20 items in the check-in display, to the importance of local note fields in the bibliographic record being plentiful and allowing for nontraditional local applications.

Serials Control Systems for Libraries provides professionals contemplating the selection, or review, of a microcomputer-based serials control system with a fundamental understanding of what a system should be able to support. The sole problem of this book involves the time sensitivity of the constantly changing technology and specific system information provided. However, the authors acknowledge this problem and compensate by writing a book filled with valuable insight for the library science student, or library professional with limited serials understanding, by providing a basic background about the complexity of serials management. The logical systems operation approach of this text transforms it into an excellent primer for serials librarianship. As an experienced serials librarian, this book is a welcome addition to my professional library.

Linda Marie Golian, Serials Department Head and Assistant University Librarian, Florida Atlantic University, Wimberly Library, Boca Raton, FL.

Kinder, R. *Librarians on the Internet: Impact on Reference Services.* Binghamton, New York: Haworth Press. 1994. 410p. ISBN: 1-56024-672-3.

Librarians on the Internet is a groundbreaking book with contributions from practicing librarians. The editor is a reference librarian at the William Allan Neilson Library at Smith College in Northhampton, MA. An Internet project from the start, authors were recruited from a call for papers posted on several library-oriented listserv discussion lists. The results are compiled in *Librarians on the Internet.*

The papers are presented in five areas: 1) Introducing Internet Services; 2) Selected Sources on the Internet; 3) Internet's Impact on Reference Services; 4) Evaluating Internet Sources; and 5) Progress with the Internet.

There are four papers in the first section. The first is an introductory essay, "Getting Started on the Net." The other three explore the use of Gopher (a menu-driven interface to the Internet) and Veronica (a search tool designed to search Gopher menus). Six papers in the "Selected Sources on the Internet" section cover geoscience, economic and statistical data, science, and the Bulletin Board for Libraries (BUBL). The paper on using the Internet for access to current political and campaign coverage shows how the Internet can be used effectively to cover current events in a timely manner.

"Internet's Impact on Reference Services" is the most diverse and interesting part of the book. The first paper looks at the impact of the Internet on communication between reference librarians, and the second explores the concept of the virtual library based on an interactive program called LambdaMOO. Originally designed for interactive games, MOOs are being used to develop virtual libraries. The remaining articles discuss key issues such as the electronic reference transaction, in-service training issues for library staff, and a new training partnership involving librarians and computing services.

"Evaluating Internet Sources" addresses the important issue of quality. The OCLC Internet Resources project is discussed, and criteria for printed sources are applied to Internet sources. An article that interviews five leading Washington NREN (National Education and Research Network) leaders seems misplaced in this section but makes interesting background information on the NREN. The interviewees voice opinions on such issues as financing, privatization, and the role of libraries. The final section, "Progress with the Internet," covers a variety of projects. Some of the highlights are: developing a CWIS (Campus Wide Information Service), a librarian's workbench using X-Win-

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dows, fulltext projects, MIME (Multipurpose Internet Mail Extensions), and OCLC's Internet ventures including fulltext journals.

Several themes emerge from the collection of papers. To quote the editor, "Librarians ignoring the Internet are at a distinct disadvantage in the world of information." *Librarians and the Internet* conveys the need for proactive leadership from librarians in using, teaching, organizing, and evaluating Internet resources. Librarians and library services are uniquely positioned to evolve with the emerging technology and can serve as a link between the user and the information, regardless of format.

This publication, which includes a detailed index, represents an accurate view of the impact of the Internet on reference services. Also published as *The Reference Librarian*, vol. 19, no. 41/42 in 1994, it will rapidly become dated. However, it pulls together a variety of articles on a timely topic. Any librarian with an interest in the Internet will find this thought-provoking. It is recommended for library and information science libraries.

Kellie N. Kaneshiro, Acting Head of Reference, Ruth Lilly Medical Library, Indiana University School of Medicine, Indianapolis, IN.

John, Nancy R. and Edward J. Valauskas. *The Internet Troubleshooter.* Chicago, IL: American Library Association, 1994. ISBN: 0-8389-0633-8.

The subtitle of this work is *Help for the logged-on and lost*, a phrase which aptly describes its intent. This easy-to-use guide is for those who have begun to explore the Internet but, as the authors' note, have discovered that "trouble lurks at every turn." Set up in a question and answer format, the book seeks to solve problems encountered as users begin their exploration of the information highway.

The authors assume general knowledge of the Internet and its tools (Telnet, FTP, Gopher, etc.). This is not a basic instructional manual. Instead, it seeks to answer the questions that all users of the Internet encounter sooner or later. The 13 chapters follow a typical user learning curve—first, basic information on Internet in general, then e-mail, followed by listserv and ending with World Wide Web and Mosaic. The book's final chapter is a comprehensive bibliography of guides, dictionaries, directories, magazines, electronic resources, and commercial online services. Also included are a very helpful glossary of Internet and related terms and an index.

Because the Internet is not "user-friendly," an ever-increasing supply of guides have been published. This guide fills a void for the intermediate user who encounters problems and potholes along the way. Designed to lay flat, the book can be placed alongside the computer terminal for ready access when troubles arise.

Dealing with typical troubles such as too much mail, bounced mail, and unsubscribing from listservs are covered as well as more complex problems such as commands used in WAIS and starting a World Wide Web search. The authors' expertise in training is evident in their clear, easy-to-follow instructions. Their response to the question, "... can I FTP with WWW?" is a springboard for providing a simple explanation of file transfer problems due to variances in file types. They explain that files can be postscripted, compressed, or binary and then refer the reader to other sections in the guide that explain how to deal with the different file types. Examples of printouts from various software providers give readers a good idea of what to expect when trying the instructions.

This guide is extremely useful for all intermediate users of the Internet. It will answer those "I've always wondered why" questions and help the reader get unstuck when in the middle of a search. It is highly recommended for all Internet users.

Wendy Clark, Archivist, Library of Virginia.

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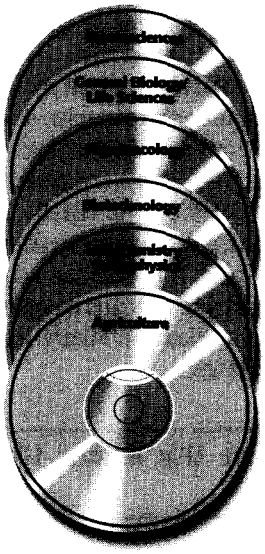

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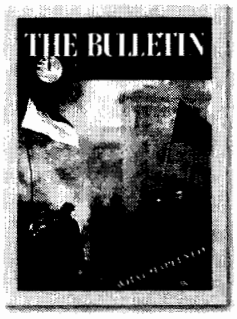

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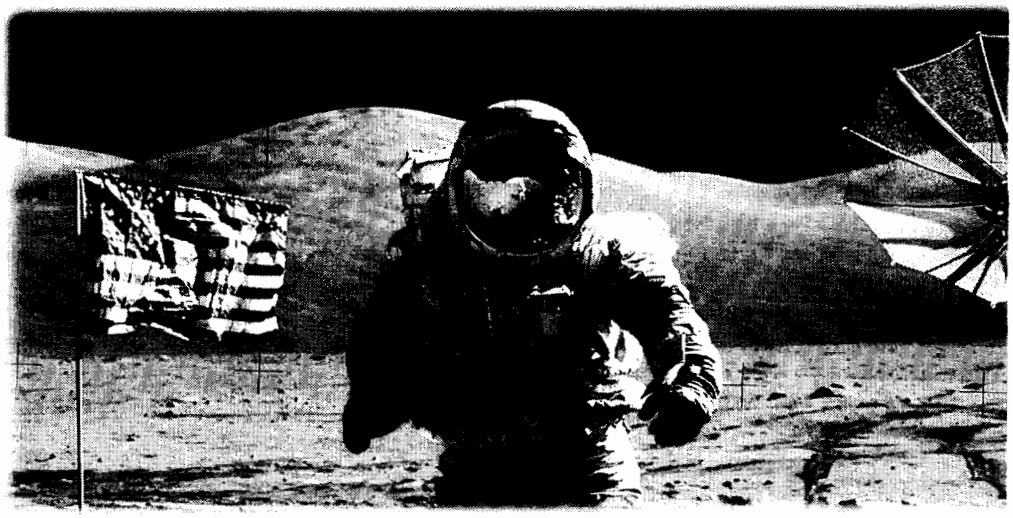

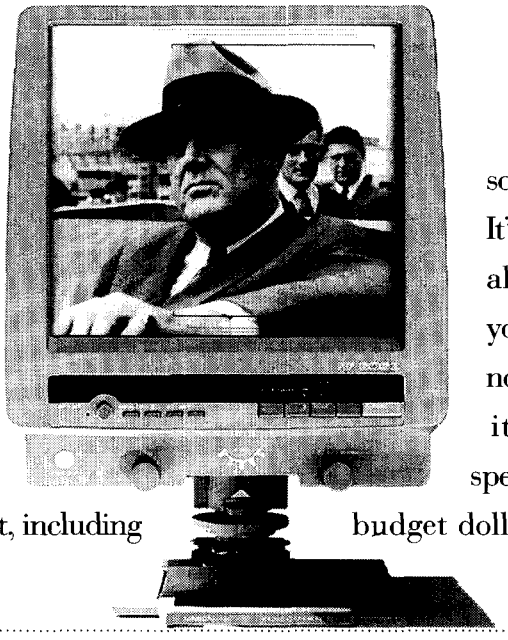

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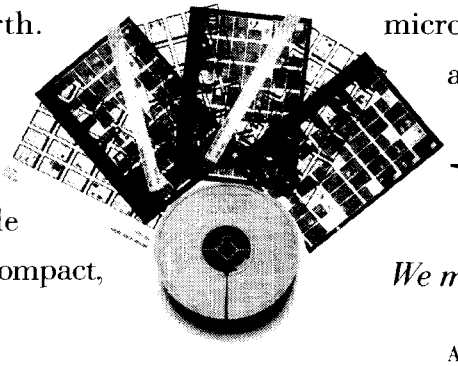

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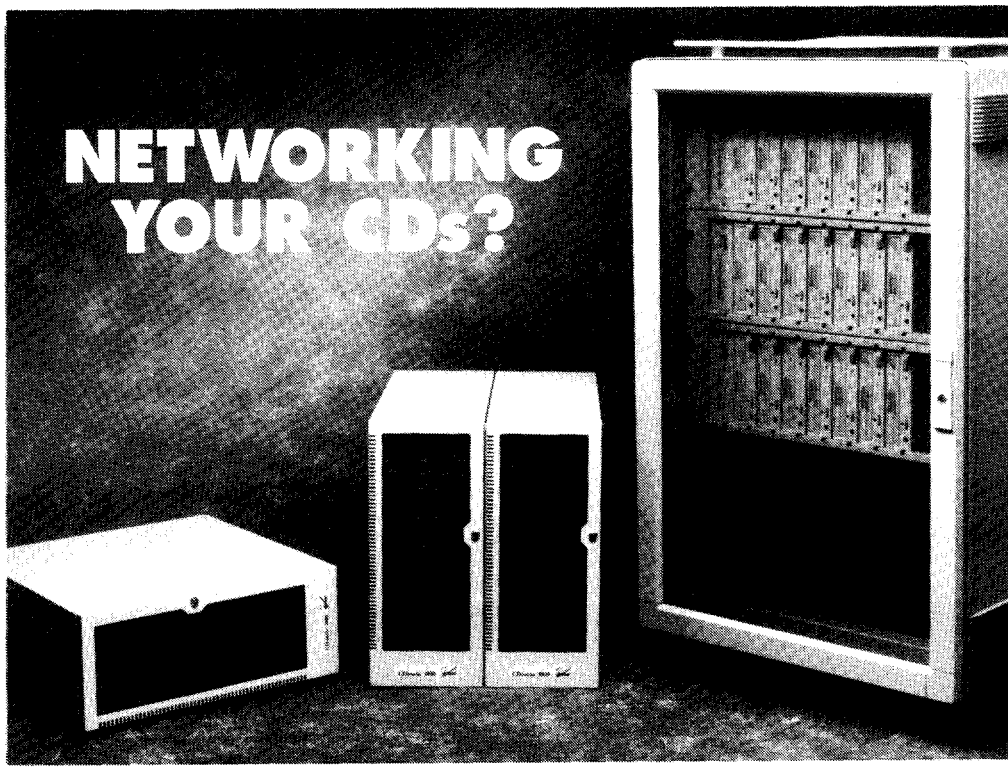

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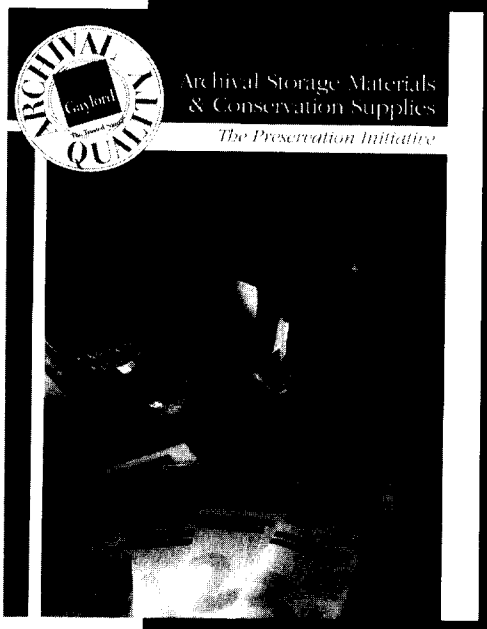

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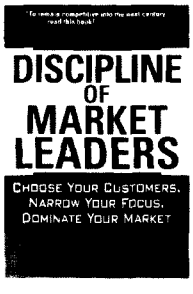

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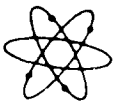

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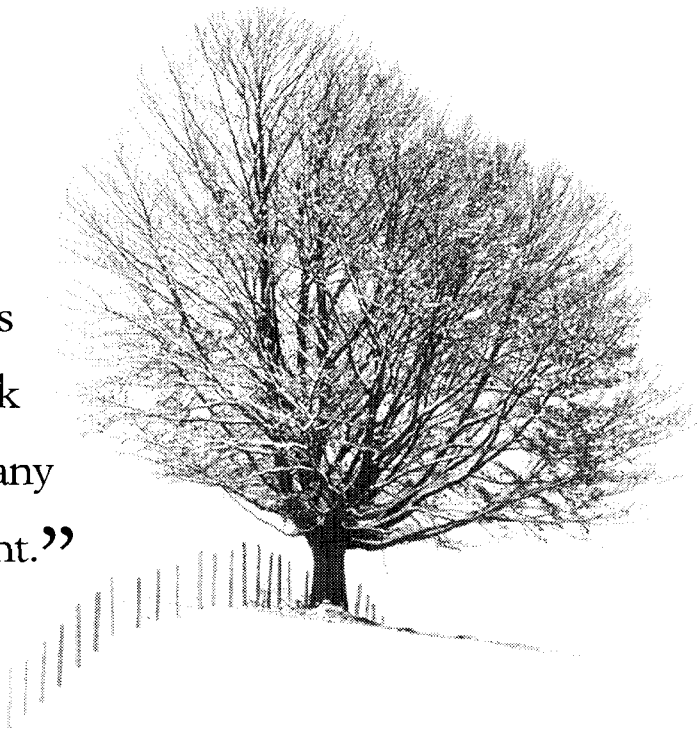

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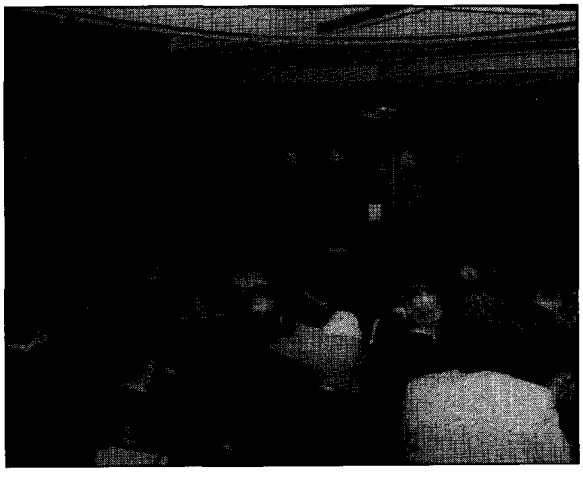

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