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"Facing the challenges of transition: the next generation library"

Nancy V. Green
The Linda Hall Library

FACING THE CHALLENGES OF TRANSITION:
THE NEXT GENERATION LIBRARY

Green, Nancy V.
The Linda Hall Library of Science, Engineering and Technology
Kansas City, Missouri, USA

On the verge of the 21st century, librarians recognize that fears of irrelevancy were greatly exaggerated. Today they carry on their work in a hybrid library environment. The revitalized role played by librarians in the Internet economy has forced an examination of processes and functions within libraries and librarianship. As the dust from the information revolution settles, the staff at the Linda Hall Library, like library workers elsewhere, provide a continuous tradition of service with an entirely new attitude.

Librarians worldwide spent the last decade scrutinizing the past and speculating on the future. IATUL members from the University Library Twente, Maarten Van Bentum and Johanneke Braaksma explore the future of libraries through an analysis of changing user needs. Stuart Sutton of the San Jose State University reviews the past and conjectures about the future through a presentation of reference service as provided in model library types. In an effort to gain an understanding of our position and achieve the most we can under new circumstances, a holistic examination of library models is in order.

The traditional library of the past century was a physical entity with a specific geographic location and a defined local user group. The users were affiliated with the body that controlled the financial status and budget of the library through taxes, government funding, tuition, or subscription. The user group defined the type of library and its contents. The library primarily contained print books or serial publications and in the latter half of the 20th century expanded to micro formats. Reference service was performed on-site to walk-in or telephone patrons. Access to the materials in the collection was made available through paper indexes, holdings lists, and the card catalog. Interlibrary loan was performed for affiliated users whose information needs were not fulfilled by the local collection. When the Linda Hall Library opened its doors in 1946, it appeared to be a model of the traditional library. A notable distinction between the Linda Hall and other libraries was that it was born from the generous bequest of a Kansas City grain merchant and his wife, Herbert and Linda Hall. The Halls defined the users of the library in their Wills as "the people of Kansas City and the public generally." Joseph C. Shipman, the first director, secured the library's foundation as an institution known for both its quality science and technology research collection and its exemplary reputation for service.

The next evolutionary step taken by libraries has been called the "automated library." In retrospect, the automated library was identical to the traditional library with the minor distinction of computer-based catalogs and indexes, and access to online library utilities such as OCLC and RLIN. This was a distinction in format alone. The user group remained the same and services provided remained the same; nonetheless, the new access tools shook the foundations of the library world and "technostress" was a common and frightening complaint. Librarians

everywhere reevaluated their roles within the profession, asking fearsome questions. Would the profession become irrelevant? Could they learn new technological skills as rapidly as required? Would the book itself, an item of iconographic stature, cease to exist?

More recently, discussions in the literature have centered on the "hybrid library." The hybrid library further advances the idea of the automated library and most librarians today describe their institutions in terms that define this concept. In a hybrid library, materials in electronic formats are used as readily as paper and micro formats. The online catalog and electronic indexes are standard. Reference service is still primarily conducted through traditional avenues, but reference services are also accessible in new ways. By embracing the new technologies, librarians have discovered that thoughtfully composed web pages can provide gateways to information required by their patrons, web forms present a new means by which users can ask questions, and lists of frequently asked questions are common timesavers for librarians and patrons alike. The library is no longer limited geographically, but opportunities for expansion of services continue to be severely curtailed by limitations on membership to the community of users. In recognition of the changing role of librarians and changing use patterns of the library clients, the Board of Trustees formalized the position of the Linda Hall Library in a mission statement. The statement touched on all areas vital to the existence of a premier, hybrid library. More importantly, the mission encouraged adaptation, growth, and leadership in the new information environment, recognizing that "the public generally" included "local, regional, national, and international education, research and development" communities.

Today the professional literature of library and information science is dominated by discussions on the "digital" or "virtual" library. The concept of the virtual library is that of an entirely digitized collection. Given the prevalence and relative permanence of printed information, the short life of electronic information, the ramifications for copyright, and the cost of digitizing 400 years of accumulated printed information, it is unlikely in the near future that an entirely digital library will replace the hybrid type as a whole, with the possible exception of some small collections. The definition of the virtual library as a collection continues to neglect an integral part of libraries, the non-traditional patrons. While creating the bridge between the hybrid and the virtual library, librarians need to reject old, rigid patterns of affiliated membership to include the virtual user who exists outside the traditional, closed community.
Librarians and patrons alike are frequently dissatisfied with the limitations of the hybrid library. In a world where access to information is no longer bound by hard covers, why should the community of users be limited? In its efforts to push the limits and develop a virtual clientele, the Linda Hall Library has gone beyond the hybrid model to become what might be called the "Next Generation Library." This distinction differentiates between the hybrid library's focus on material storage and access, and the Next Generation Library's emphasis on delivery and value-added service to all potential users.

At the Linda Hall Library, the process of engaging change was incremental. In the early 1990s, the staff and Board of Trustees of the Linda Hall Library recognized that it was time to move forward if the library was going to become a premier institution. Unencumbered by many

of the pressures confronting most libraries serving universities and with a willingness to take advantage of the new information economy, the Linda Hall Library was ripe for change. This juncture in library history coincided with the birth of the World Wide Web and for the Linda Hall Library, a change in leadership. C. Lee Jones joined the library staff as its President. Under new progressive leadership, it became imperative to take a fresh look at old procedures.

One of the most important steps for any institution desiring permanent, fundamental change is the reassessment of traditional job functions and the accompanying revision of staff structure. The Linda Hall Library was comprised of departments that conformed to established library patterns: reference, loans, and technical services. These patterns were given careful scrutiny and based on that reassessment, each department developed its own internal structure, functioning under the most efficient way to conduct operations. For example, through an assessment of the job functions within the Reference Department, in addition to traditional reference service, each librarian gained oversight for a program: Education, Search Service, Patents and Trademarks, etc. The Loans Department became Document Services. This department was arranged around processes: receiving requests, copyright compliance, verifying and marking requests, etc. Recognizing the new direction of user services, Document Services and Reference merged under the umbrella of Information Services while retaining their unique identities. The Systems Department was created for supervision of the online catalog and other computer systems. The administrative Operations Group was established, bringing inter-departmental communication to a new level. Flexibility of structure within and between departments has allowed for the most efficient use of staff and engendered a broader sense of responsibility. It has instilled a culture of adaptability to a changing environment. This initial push brought the library to the level where it fit the hybrid model and provided staff with the essential tools and skills needed to excel in that environment.

The next step in the evolution of the library began in the mid-1990s. The library staff set in motion a concerted effort to understand and attract a new clientele. This was accomplished in three ways: membership with library and information organizations, relationships with science and engineering associations, and the implementation of flexible services. Activities at library conferences exposed the staff to other professionals in the information business. A promotional video shown at these conferences gave outsiders an inside look at the library. Through liaisons with science and engineering societies, the administration identified key clientele and arranged interlibrary services to meet their needs. The quality of the collection had already attracted the notice of a worldwide audience. Local users were aware of the library's reputation for quality service, and librarians at the Linda Hall Library began to take advantage of the Internet to extend that service to virtual customers. Four tiers of reference service became available to library patrons. These services were particularly useful to remote patrons who could not conduct their own on-site research. First, in a move that was typical of hybrid libraries, traditional reference service became available to patrons using email. In addition, two services were added, the Search Service and Bibliographic Verification Service. The former service provides literature research as specified by the client. The latter is performed specifically in conjunction with a document delivery request when a patron has incomplete citation information. The

fourth kind of reference service is performed behind the scenes, without patron request. Any document order that is unable to be filled is always subject to the scrutiny of the reference staff, assuring accuracy and continuous quality service. Cost recovery charges are made for specialized services only when the patrons needs are met.

As a direct result of these efforts, professional societies regularly approach the library to take on their collections of formally published and gray literature, and to provide services to their membership. Individual members of these societies are generally unaware that the physical location of the library is Kansas City, Missouri because electronic services make the physical location irrelevant. In this way, a virtual clientele was developed and simultaneously the collection was enriched. Due to the reinvigorated reputation of the library for its collection and service, the virtual clientele continues to expand, unfettered by traditional constraints. The library's usage statistics over the past decade speak to the success of these strategies. In 1989, operating in the automated stage, the library received 30,588 requests from off-site patrons. In 1999, the number grew to 107,461 requests. Only through deliberate efforts has the library grown into the Next Generation stage of development.

Librarians recognize that in order to survive the tumult occurring in the information industry and to adapt to the new Internet economy, an examination of neo-traditional operations must continue. For example, publishers of short life span e-journals could collaborate with libraries capable of meeting specified criteria to arrange a permanent archive. Another case in point, in an electronic environment, issues of access become issues of delivery. In an effort to improve delivery procedures, the Linda Hall Library is migrating its operations to the ILLiad system. ILLiad is a document delivery management and tracking system, which will allow transparent and seamless delivery of electronic documents. It will be faster and more cost efficient, a benefit both to the users and the library. The Linda Hall Library's implementation of this system is called DocServ.

The Linda Hall Library has established itself as a leader in the provision of information to researchers worldwide by taking steps to create change. The library engaged in an analysis of its mission and procedures; adapted its use of technology and services to achieve its goals; promoted its collection and services to information and research communities; and developed a work environment conducive to change. Having aggressively pursued a new face during the last decade, that of the fast-paced, high-volume, document delivery library with a worldwide, remote client base, it serves now as a model for technological research libraries seeking a virtual presence. Changes made in the past decade have dramatically increased the number of items provided through document delivery and the number of library users, enhancing its presence and institutional stature in both local and remote research communities. The Next Generation model allows the Linda Hall Library to fulfill its mission successfully. This model is adaptable to most library environments. It satisfies the needs of library customers in the current Internet economy, while maintaining the flexibility to evolve for future generations.