

Libraries: Stability and Change

Nicholas C. Burckel retired at the beginning of last year as the University's Dean of Libraries and Associate Professor of History. Dean Burckel served during the conception and construction of the new Raynor Library at the University. Although Dean Burckel was not responsible for the Law Library, his remarks at a reception hosted by the Helen Way Klingler College of Arts and Sciences on the occasion of his retirement are of interest, especially for a law school such as Marquette exploring the possibility of a building project that would affect, among other things, its own library.

Remarks by Nicholas C. Burckel

Libraries and their historical antecedents have preserved the record of literate societies over the centuries. Changes in libraries have also both reflected and affected the democratization of information and the increase in general literacy—not always with the support of philosophers and kings. In the words of Father William Leahy, President of Boston College, Aristotle apparently “feared that the spread of literacy in his time would harm learning” because “it would free men of intellectual ambition from the responsibility to memorize great written works.” During the Middle Ages in Europe, Christian monks transcribed classical texts in scriptoria, thus preserving the accumulated wisdom of Greek and Roman culture and sacred texts on vellum and parchment—a medium more malleable than clay tablets and more durable than papyrus. While this laborious process effectively preserved and more widely disseminated information, access to that information remained severely limited—available for examination only in the monasteries and mainly by clerics and kings.

By the fifteenth century, Western Europe's Age of Discovery led to a wider interest in, and exploration of, a world beyond the Mediterranean. The Renaissance emphasis on a humanistic perspective and a rediscovery of classical antiquity meant that man again became the measure of all things, in the translated terminology of Protagoras, a contemporary of Socrates in the fifth century B.C. Scientific discoveries and inventions buoyed the spirit, providing further proof of man's ability to understand his world and control his destiny. For the world of learning and libraries, the introduction of the movable-type printing press marked a significant advance in the preservation of information and, even more so, its dissemination. Text was freed of clerical control and the Latin language. Though still expensive and not uniformly available, the printed word made possible a level of access undreamed of in the Middle Ages. Even so (again to borrow from Father Leahy), “religious authorities in Europe feared that printers of vernacular Bibles would undermine faith by allowing individuals to interpret scripture without first undergoing theological training.”

As recently as the nineteenth century, John Henry Cardinal Newman, among others, “feared that the mass production

of books through machine technology would harm higher education, because it would lead individuals to adopt informal self-teaching in place of university study. And his eloquent effort to define the purpose of universities was in part driven by this concern.” By then, however, libraries were already serving a wide range of needs. The free public library movement in the United States gave tangible expression to the democratic ideas of the Declaration of Independence and the Constitution.

By the nineteenth century, most academic libraries resembled a gentlemen’s club library rather than a research collection. Most colleges were private male-only institutions; their libraries were closed stacks and the contents available only to the educated elite. The apocryphal story of a conversation at Harvard illustrates the prevailing attitude about the role of the library in the life of the college. On the morning of graduation, Harvard President Charles Eliot encountered Librarian Justin Winsor as he crossed the quadrangle. Eliot asked about the library, and Winsor replied that all was well: All the books were safely back on the shelves except for three, and he was just on his way to retrieve them. In short, library books belonged in the library.

By the latter half of the twentieth century, academic libraries had become more accessible to users and more inclusive in their collecting scope. Most academic libraries had open stacks, longer hours of operation, and more-generous borrowing privileges. Their collections extended well beyond classical texts in traditional disciplines. Even so, the growing collection of research journals did not circulate, food and drink were prohibited on the premises, talking was discouraged, study was considered a solitary enterprise, and libraries maintained a virtual monopoly on systematic access to published information.

This was less a function of libraries seeking that control than it was simply a matter of economics. Access to most reliable information, especially scholarship, was through publications—a monograph published by a respected press or an article in a peer-reviewed journal.



In either case, the production technique was print on paper and distribution was through the mail system. The copyright doctrine of “first sale” meant that libraries could buy a single copy and make it available to anyone. Faculty and students could not afford to buy everything they needed; they had no place to store the information; and they did not have a systematic method for retrieval. Under these circumstances, libraries were the ideal solution for serving faculty and students.

Not only did libraries have a virtual monopoly on research material, but they also provided a filtering service. Libraries have never been able to acquire all published information, and so they have used a variety of tools to select the most important and useful information for current and future researchers. While not perfect, the acquisition of material by libraries provided an informal imprimatur that the information had been published by presses and professional associations that assured quality control.

One major impact of the digital revolution and the exponential growth of the internet has been the loss of the library’s traditional monopoly on published research

information. In a distributed digital environment, especially after commercial entry into the internet, the library's information monopoly changed. Libraries still maintained a gate-keeping function, but that role was useful only if researchers continued to rely heavily on the libraries for their information. Not only is an incredible amount of information freely available on the internet, but increasingly easy and sophisticated search engines are delivering satisfactory results to millions of users. In such an environment, many students and some faculty find ease of use and speed of response more important than quality of information. "Good enough" is becoming a substitute for "best."

The growth in volume of publications is enormous, and libraries are staggering under the weight. In his book, *Information Anxiety*, Richard Wurman estimates the annual number of volumes published at 850,000. Over 6,500 scientific, technical, and medical articles are produced in the United States every day, 24,000 (1,000 an hour) worldwide. Wurman further estimates that information doubles every five years. Libraries have never been truly comprehensive, and they are now collecting a smaller proportion of available publications. While digital technology has contributed to this proliferation of information, it also offers the promise of some relief. The most obvious advantage is the possibility of immediate simultaneous access to a vast amount of information formerly accessible only in certain buildings, usually libraries, at certain times, and for a limited period.

Not only has the growth of available information put a strain on acquisitions budgets, but so too has the spiraling cost of scholarly journals. While most library acquisitions budgets are funded at or slightly above the general rate of inflation, the journal literature inflates at a cost two to three times that rate. The Association of Research Libraries reported that between 1986 and 2000 the unit cost of journals rose 215 percent. Monographs, by comparison, rose only 68 percent. During that same period, purchase of journals actually declined by 5 percent and monographs by 9 percent. At major research libraries, the journals' budget accounts for over 75 percent of the entire acquisitions budget.

Libraries, with the assistance of foundation grants or

in partnership with publishers, are trying to deal with the myriad issues surrounding digital publications, including long-term access to back files when subscriptions are cancelled or archival access when publishers no longer find it profitable to maintain them—or even go out of business. The former Dean of the University of Michigan School of Information Science, an engineer by training, predicted that 98 percent of all new information would soon be created and stored in digital formats. Several years ago, Clifford Lynch, Executive Director of the Coalition for Networked Information, observed that the half-life of a website was 45 days and dropping. This creates a very unstable research environment and suggests the complexity of maintaining fixed information points in a rapidly changing digital world. While not settled, the direction is clear—frequently revised reference material, scholarly journals, a host of special data sets, and audio-visual material will be purchased or leased only in digital form. That translates into fewer volumes to process and bind and less space needed to house. Collections will continue to be important, but the format for most of it will be digital.

Let's take a brief look at academic library trends in this new environment.

Convergence. Libraries increasingly reflect the emerging convergence of three complementary elements—content, conduit, and communication. Content is information, both local (physical) and remote (virtual), in a bewildering variety of formats—manuscript, microfilm, print, electronic, video, audio, digital, and analog. Libraries have always accommodated to new information formats, recognizing that they often do not displace other formats, but provide another dimension. Conduit, the second element, provides access to much of this information—equipment that makes the material intelligible to the user: microfilm readers, record and compact-disc players, televisions and video playback units, slide and film projectors, tape recorders, and, increasingly, computer hardware and software. The combination of content and conduit facilitates the third element—communication. Learning and discovery are important for students and faculty, but unless that learning is shared, it is lost to others. Knowledge is cumulative,

and that cumulation depends on communication—the ability to share the product of research and creative effort with a wider audience. Libraries are in a strategic position to coordinate that convergence. Certainly, in the coming years, specific technology will change, but students will continue to need help both in navigating the information sources and in utilizing the technology. Libraries will remain relevant to the extent they provide the essential elements—the information, the technology, and the expertise—to facilitate intellectual inquiry (student learning and faculty research).

Collaboration. The exponential growth of information, increased user expectations, and the greater technical demands on library staff make it clear that libraries cannot meet these challenges alone on their respective campuses. Collaboration with other campus units and among libraries nationally and internationally offers the only hope for libraries to maintain or reclaim the central role on campuses they enjoyed in the last century as the intellectual heart of the campus. On campus, that means working closely with campus units responsible for information technology—academic computing as well as educational or instructional media. What may be less obvious is the need to partner with campus teaching centers, writing centers, disabled student services, and academic units responsible for formulating and promulgating policies on academic honesty. Collaboration recognizes the blurring of boundaries and seeks alliances to achieve results that alone no single group could achieve.

User Focus. The recent emphasis on undergraduate education, the competition for students who demand more amenities, the increased generation of information in digital form, and the wide availability of information on the internet have combined to create new expectations

about libraries. Collections, virtual or physical, still remain important to academic libraries, but the perspective has shifted from a collection to a user focus. That has profound implications for academic libraries. For that reason, it is useful to look at the research and teaching patterns of our faculties and the learning styles of our students. Some needs are shared; others are specific to a group; and still others conflict with each other. The challenge for libraries is how to serve this diverse clientele.

It may be true that students and faculty have always wished for the information they want, when they want it, where they want it, and in a format they want. Technology and consumerism, however, have combined to change a velleity to an expectation. Meeting this array of user needs even in a stable environment is difficult; doing so in a time of economic constraints, rapid technological obsolescence, and exponential growth in information can overwhelm. How are academic libraries responding?

Access and Ownership. Usually this topic is phrased dichotomously—access versus ownership. From the perspective of the user, this is seldom an issue. She wants accurate information quickly and reliably, when and where she wants it! The issue for libraries is the continued availability of that information. The attractiveness of purchasing a physically discrete, eye-legible body of information (e.g., a book or journal) is that it assures access nearly in perpetuity. Digitally available information offers the promise of nearly instantaneous multiple simultaneous access from any location, along with the ability to download, analyze, manipulate, and store the information. From the user perspective, this is ideal. For libraries, the challenge is meeting their archival responsibility—assuring the continued availability of

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digital information when no longer commercially viable. This raises a host of legal, technological, and financial issues that time constraints and your stomachs don't permit us to explore.

Physical and Virtual Collections. Much has been made of the emergence of digital collections and the predicted decline in physical collections. That trend has shaped not only plans for new libraries but also renovation and expansion of existing libraries as well. Especially in the last 50 years of the twentieth century, collections took up an increasing amount of library space at the expense of user seating. In an environment of limited access to information, this was a logical trade-off. In the rapid migration to digitally generated information and the consequent increase in its availability outside the library, planners have begun to de-emphasize on-site browsable access to vast collections. The focus has moved to the user, whose demands for comfortable and useable space have forced libraries to reconsider how space is allocated. Before the widespread dependence on digital collections, it was assumed that academic libraries could safely house approximately 15 percent of their collections at remote sites. By 2003 that figure had doubled, if not tripled. Even if material is not moved off campus, much has moved to compact mobile shelving or to dense storage where material is bar-coded, arranged by size, and stored in book bins that electronically retrieve desired items through an online paging system. Physical collections have not been eliminated, but they no longer have first claim on space in libraries that typically occupy the center of campus. Some faculty decry the loss of the physically browseable collection. Online catalogs, however, do allow for browsing by call number and include related material in different formats that is often housed separately and missed by physically browsing the collections. Libraries are adding table-of-content information and reviews of monographs to the bibliographic record, thus dramatically enhancing users' ability to locate and evaluate useful information.

Academic libraries have always served the needs of faculty and students, but they have traditionally done so by focusing on acquiring printed material that is catalogued and shelved in a physical structure. Users came to the

library to use the collections or, at minimum, to retrieve material for use outside the building. Libraries were among the first buildings on campuses and have remained at the physical center of the campus, emphasizing the centrality of their role in serving the intellectual needs of the university. Until recently the 25–30-year expansion cycle for building additions to libraries was driven not by enrollment increases, but rather by dramatic increases in the size of collections. The drive to improve the heating, ventilation, and air conditioning of libraries came from a concern for preservation of the collections, not the comfort of users. Libraries were constructed with little natural light to protect collections from harmful ultraviolet light.

While we librarians think of the physical collections as research materials that need to be readily available, trustees, many campus administrators, and donors may look at the library as a warehouse, books as inventory, and the cost per square foot to house little-used material on prime campus real estate as a poor investment. In announcing the construction of a seven-million-volume remote joint storage facility for Princeton, Columbia, and the New York Public Library, the provost at Princeton observed, "In the main libraries, books have crowded out people. . . . That's not the optimal situation." As the architect who worked with our librarians to meet this challenge, Geoffrey Freeman, observed, "Collections will continue to evolve but not at the expense of providing services and an environment for learning. While the library remains a preserve of information, it is assuming the greater role of generator, exchanger, and server of information."

Instruction. Public libraries have traditionally met their users' needs by providing them with the answers to their questions; academic libraries have met their users' needs by helping them locate sources that will answer their questions. Academic librarians, in short, contribute to the educational process by helping students learn how to locate information for themselves. The Association of College and Research Libraries defines information literacy as the ability "to recognize when information is needed and . . . to locate, evaluate, and use effectively the needed information." The goal of such training is to help

students assume greater control over their own learning.

Information Commons.

One tangible manifestation of the conceptual model I have described is the evolving design of library services around an information

commons. Just as, during the colonial period in America, the town commons was a place for people to meet socially, the information commons provides an analogous intellectual space for students and faculty to meet. Until recently, libraries have been logically organized around discrete functional responsibilities. This often resulted in a proliferation of service points, each serving a separate function. Some were organized around broad subject areas or disciplinary clusters, such as humanities, social sciences, or sciences. Others were organized around a specific service—interlibrary loan, reference, reserve, media, and circulation. When libraries faced staff reductions, these service points were staffed less intensively, for fewer hours, or with lower-paid support staff or students. In many cases, the service point had to be abandoned, and the function shifted elsewhere.

The convergence of content and computing has made the functional distinctions of the past less relevant. Instead of the user's going to several points in the library to retrieve information, she can bring those resources to her computer—in effect, letting her fingers do the walking. The information commons model embraces this approach. It recognizes that in a user-centered library, users want convenient access. When they need assistance, they do not readily distinguish between help in identifying a specific piece of information and help in using software to access, manipulate, and download information. Users prefer one-stop service to the extent possible, and this has obvious implications for how we staff the information commons.

Software Instability and Obsolescence. In a presentation highlighting the differences between librarians and computer center personnel, consultant Joan Frye Williams listed a number of characteristics. Library staff strive for completeness; information technology staff for timeliness. Librarians want a



flawless product; technologists want a functional one. The clash of professional values creates problems. Librarians do not want a software product until it is stable; technologists respond that they would prefer to produce a timely

product, rather than wait until it is perfect. The product can continually be improved incrementally through new releases and “patches.” Obviously such a portrait is overdrawn, but it illustrates different perspectives about how to provide service. As much as we may seek stability, the trend is in the opposite direction. The challenge to librarians, therefore, is how to adapt new and upgraded software to user needs. This requires librarians to improve their instructional skills and their skills as mediators between users and the digital information they need.

Even if sellers provide libraries with digital files of retrospective material on CDs or DVDs, how will the information be maintained? The medium itself is subject to rapid obsolescence. It will be increasingly difficult to find hardware and software to mount and manipulate the information. To avoid the eventual loss of data, librarians are wrestling with how to migrate it to new software or develop new software that emulates the obsolete software. These techniques are costly and time-consuming and not nearly so risk-free as print on paper or microfilm.

In summary, all of these issues—convergence, collaboration, user needs, access/ownership, physical and virtual collections, the evolving information commons, technological obsolescence, and the role of librarians as instructors—raise questions about the future of academic libraries. The dynamism and rapidity of change have made planning for academic libraries increasingly difficult. In such an unstable environment, we are rethinking our ideas about what libraries should be, how they will function, how they can enhance teaching, research, and learning. Raynor Memorial Libraries—the building, collections, services, and staffing—reflect our attempt not only to serve the present but to anticipate the future. Time will tell how well we have done it. •