Patience & Fortitude

A Roving Chronicle of Book People, Book Places, and Book Culture

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a point where all of a sudden they are scarce, and then they start swinging over to rare, where the price suddenly starts to go up dramatically."

Two years after we had our first conversation, Myers called me at home one afternoon with some exciting news. "The board of trustees has just approved the new library," he said ebulliently. "We break ground in November." Most of the $23 million had been raised, he added, and the Boston architectural firm of Shepley Bulfinch Richardson and Abbott had designed a five-story structure centered around a circular core on the upper two floors, to be known as the Great Reading Room. Computer work stations will be present in abundance, but there also will be space available to shelve 400,000 books. "Great universities cluster around great libraries," Myers said. "If you want to be a great college, you need a great library. It's as simple as that."

Myers emphasized that he is not building up Illinois Wesleyan's infrastructure and print collections simply to achieve higher recognition among peer institutions. "It's not just a matter of status, it's a question of teaching, research, and imagination. The things you have available at hand for students on an immediate basis are just as important as teaching or research. What I want is something gloriously useful that offers a dazzling source of information for students. Rather than wait two or three weeks for something to come in on interlibrary loan, I want a lot of real live books, and I want them here. Serendipity is the imagination factor I am talking about. It is the material you find in the stacks when you aren't prepared to find anything. This may sound increasingly quaint in this day and age, but my idea of a college is a collection of students and faculty gathered around a great library, and here we will have a great reading room at the center of it all to make it happen."

II.

Deep Sleep

Books are faithful repositories, which may be awhile neglected or forgotten; but when they are opened again, will again impart their instruction; memory once interrupted, is not to be recalled. Written learning is a fixed luminary, which, after the cloud that had hidden it has passed away, is again bright in its proper station. Tradition is but a meteor, which if once it falls, cannot be rekindled.

—Samuel Johnson, A Journey to the Western Islands of Scotland

Thomas Carlyle's frequently quoted sentiment of the 1840s that a "true university" is "a collection of books" has been echoed by many professional educators over the years, though not always in the same crusty terms. For Archibald Cary Coolidge, a pioneering library director at Harvard College during the early years of the twentieth century, academic greatness was possible only if an "indispensable nucleus" of books was provided at the core. Coolidge's frequently stated credo—"There is no such thing as a dead book at Harvard"—is often credited with shaping what is now the strongest academic library in the world, and the largest library anywhere that allows authorized users the privilege of browsing through the stacks at will.

Unlike other institutions that see wisdom in constantly weeding their collections down to more manageable proportions, Harvard makes a determined attempt to keep everything it acquires, including material that has been lying around unused and gathering dust for decades.
Coolidge—who during times of budgetary restrictions was known to buy important material for the general collection with his own funds—believed that the best library combined quality with quantity. A wealthy bachelor who centered his life around Harvard, Coolidge was a "tireless exponent of the principle that every venture into a new area of university scholarship has to be backed with books," according to the historian William Benton-Smith. George Lane Kittredge, a member of the Faculty Library Council during Coolidge's tenure, once said of the Harry Elkins Widener Library stocked so admirably by his colleague that every other building in Harvard Yard "could burn to the ground and we would still have a university." Coolidge was warmly remembered by his friends for a speech defect that rendered him unable to pronounce the letter R. Asked once to identify the source of his extraordinary knowledge of the world, he is said to have replied, "Oh, I wead and I weweand and I b wewound.

As it entered the twenty-first century, Harvard reported 14.4 million books, magazines, journals, newspapers, and reels of microfilm among its holdings, making it a source of tremendous pride to faculty and students alike. "But even these amazing numbers do not measure the surpassing excellence of the collection," Michael McCormick wrote in the Harvard Library Bulletin. "For they are the best selected millions of volumes even the greatest scholar could imagine." Inevitably, McCormick made clear, a professor's perspective on the Widener Library centers on research and teaching and having the perception to make meaningful connections between the two. "To stand in Widener Library is to stand in one of the great achievements of civilization. To be a scholar and to stand in this place is an almost ineffable experience. I think it is the greatest research library in human history. This is the one place in the world where you can see almost any book that matters—any book, that is, any unit of knowledge, devised by man and preserved by man—usually within a matter of minutes, if not seconds."

Sometimes, if a title is unusually obscure and is stored off-site, a little more time is necessary, but the delay is rarely more than twenty-four hours. That is because a sizable portion of Harvard's books are kept not in Cambridge or Boston but on a satellite campus in the town of Southborough, Massachusetts, some thirty miles to the west in Worcester County. There, off a long narrow road in the middle of a 140-acre tract of dense woods, are two academic operations that go about their business with quiet efficiency, each functioning apart from the unending scurry of classroom activity in Cambridge, and each fully involved in the interests of teaching and the support of research.

The primary occupant of the property is the New England Regional Primate Research Center, operated by the Harvard Medical School in collaboration with a number of other Boston-area universities and teaching hospitals. Established with grants from the National Institutes of Health, it opened in 1966, and on any given day some two hundred scientists, support staff, and graduate students pursue various projects in comparative pathology and physiology, working with owl monkeys, squirrel monkeys, rhesus monkeys, and a dozen other species of nonhuman primates, about seventeen hundred animals in all. Work at the center has led to the discovery of a syndrome in monkeys that resembles AIDS; other findings have established that AIDS is caused by a virus, that nicotine is addictive, and that the herpes virus can cause leukemia. Because the center's work is criticized by activists who oppose medical research involving animals, it maintains a low profile, and no signs direct the way through the New England countryside to the Southborough Campus.

In 1986 another tenant, the Harvard Depository, took custody of six acres from the medical school, which has title to the land, and began shelving thousands of low-circulation volumes sent over from Cambridge inside an austere storage facility called a module, the first of six environmentally controlled buildings that would sprout up on the site over the next fifteen years, with plans afoot to erect another four at measured intervals. A tour of the immaculate, almost antiseptically clean complex, known by the acronym HD, evokes the halcyon experience of
visiting the Valley of the Kings along the Nile River in Thebes, only here the resting place is for seldomly consulted books, not dead pharaohs. When ideals for the Southborough depository were being developed in the early 1980s, a small reading room was included in the blueprints at the behest of faculty members who were keen on retaining some bond, if only in spirit, with the volumes being sent off to deep sleep. Today the room is used for coffee breaks and conferences with visitors who come regularly to Southborough from around the world, most of them emissaries from other institutions eager to see at first hand the workings of what has become known in library circles as the Harvard Model.

Before moving out to Southborough, Harvard stored many of its low-circulation books at a poorly ventilated warehouse across the Charles River in Boston known as the New England Depository, which was established by a consortium of local institutions in the 1940s to free up shelf space in their primary facilities. In that arrangement, books were stored by size on conventional shelves. Widely referred to by library professionals as off-site storage, the practice of warehousing books has become increasingly attractive to universities reluctant to commit more and more space to shelving books on their central campuses. Yale University, Case Western Reserve University, Vanderbilt University, the Johns Hopkins University, the University of Missouri at Columbia, the University of Texas at Austin, and the University of California at Berkeley are among many American institutions with large research collections that have chosen to warehouse books that might otherwise be deaccessioned. In some instances, existing buildings have been acquired and modified. Ohio University converted a former car dealership into a book repository, and the University of Pennsylvania took over an old newspaper warehouse in Philadelphia. At Cornell University, a former apple orchard about a mile off campus became the site for its Harvard Model storage facility.

For its imaginative solution to the problem, the University of Minnesota looked no farther than the gently sloping bluffs that grace the west bank of its Twin Cities campus by the Mississippi River in downtown Minneapolis. On July 31, 1997, heavy earthmoving equipment began digging two parallel caverns underneath a 60-foot layer of limestone and topsoil, removing 2.5 million cubic feet of sandstone and shale over the next year. The completed shafts measure 600 feet in length by 65 feet wide, and each is 22 feet high. When the $46.3 million Minnesota Library Access Center opened in April 2000, it had a total storage capacity of 2.5 million volumes, with sufficient land reserved nearby for three additional tunnels as the need arises; a prospect officials feel will come sooner rather than later. The north cavern, set aside for university archives, was reported to be 85 percent filled within a year of operation; the south cavern opened with 15 percent of the storage capacity accounted for. A subterranean strategy of similar scope was undertaken in Stockholm by the Kungliga Biblioteket, or Royal Library of Sweden, between 1992 and 1997, when room for ten spacious bokmagasiner, or book chambers, was created by blasting 110,000 cubic feet of granite out of the ground, enough pulverized rock to fill 33,000 dump trucks; the rubble was hauled off for use in the construction of new railroad beds.

The Minnesota solution differs from its counterparts elsewhere in the United States in that it is not off-site at all, and its immediate proximity to campus allows for delivery of books by conveyor belt within an hour of receiving requests. Aboveground, another new facility, the four-story Elmer L. Andersen Library, houses eight special collections and archival units and the central offices for the subterranean center; the building is named for a former Minnesota governor and ardent bibliophile who donated an excellent collection of 12,500 volumes to the university and supported library development during his administration.

In a joint venture, officials of Columbia University, Princeton University, and the New York Public Library announced plans in 1999 to build a Harvard Model facility outside Princeton, New Jersey. “We will have the acreage for sixty years,” Columbia’s provost, Jonathan R. Cole, said, calling the agreement “a triumph of collaboration and cooperation.”
Karin Trainer, university librarian at Princeton, made clear that printed books will remain integral to the school's mission. "We love acquiring," she said. "That's our job; to put our hands on as much material as we can. And then we have the responsibility to make sure that it is well preserved and accessible."

About the same time that Princeton, Columbia, and the New York Public Library were joining forces, four academic programs in Colorado were making plans for a collaboration of their own, one that added a new twist to the scenario by combining the books selected for off-site deposit by the four institutions into one centralized collection, creating in effect an entirely new library known as PASCAL, short for Preservation and Access Service Center for Colorado Academic Libraries. Joined in the venture are the University of Colorado, Boulder; the University of Colorado, Denver; and University of Colorado Health Services, each a publicily funded state institution; and the University of Denver, which is private. While such a strategy unquestionably will conserve space on the four campuses, a few eyebrows in the library community have been raised at a decision to avoid replication of titles by keeping just one copy of any particular book earmarked for storage, and discarding all the others.

"The whole point of this project is to free space in our libraries for new books and patron services," Scott H. Seaman, associate director for administrative services at the University of Colorado, Boulder, told me. Ideally, the copy that is in the best condition will be the one that is retained in the depository, but as a practical matter that will not always be possible, he conceded. "I expect that if we have one copy of a book, say, from the University of Denver already in PASCAL, and we are told a couple months later that we will be getting another from Boulder, my sense is that the first one is the one that will be the copy of record." The $4.4 million facility, a modified Harvard Model, was built on a parcel of land at the former Fitzsimons Army Medical Center in North Denver; the base was closed by the Department of Defense in 1998 and turned over to the state, which is using the site for a new $1.5 billion University of Col-

rado Health Sciences Center. Construction of the first PASCAL unit was completed in November 2000, and books began arriving in January 2001. "We have been assigned sufficient room on the property for four more modules," Seaman said. "This project does two things. The first is that it provides a long-term home for the scholarly record, and the second is that it accomplishes this very inexpensively."

In cases where seldom-used materials are no longer kept in central repositories, or where they are not even welcome in off-site storage facilities, one option has been to send books on the margins to an independent depository located on the campus of the University of Chicago known as the Center for Research Libraries. Established in 1949 by ten midwestern universities, the center's mission has evolved to the point where it is now regarded as a sanctuary of last resort for titles that might otherwise be headed for the shredder. Today, this "library for libraries," as it styles itself, receives material from several hundred institutions throughout North America, all of it "rarely used" and largely unwanted. "We have about five million items that we hold in common for our members," Beverly P. Lynch, the president of the consortium, known by the acronym CRL, told me.

"If we find that a title being offered to us is held in more than five institutions, we make a judgment on whether or not we will want to keep it here. Usually we will suggest that some provision for the book be arranged elsewhere, since scarcity is one of the components we work with. We have become a unique collection by virtue of the fact that everything we have is not, for the most part, retained in other research libraries. A curious sidestep to all this is that we are not a collection that was built by careful selection, but by what you might call careful deseletion, since what we do is accept deposits of unwanted and superseded materials from our member institutions. But after fifty years, the collections have become collections of international importance, because nobody else has them."

During my visit to CRL, I saw thousands and thousands of books in
long rows of compact shelving, large runs of obscure foreign newspapers wrapped in brown paper and stacked on wooden skids, mounds of government reports, hundreds of course catalogs from colleges and prep schools, many of them dating from the early nineteenth century. Maintained alphabetically on one floor alone are 750,000 printed dissertations, a good percentage of them in foreign languages, and the largest collection of its kind in the world. “There was an antiquarian bookseller who had the chutzpah to offer us a thousand dollars for our copy of Walter Benjamin’s doctoral thesis,” Lynch told me. “I have decided to keep that one in the vault where it will be safe.” Once books are sent to Chicago by any of the three hundred participating institutions, they become the property of CRL and are available for use by scholars, either in a small reading room maintained in the building, or on temporary loan. Traffic averages about forty thousand requests a year, confirming the viability of the collection. “I think that all collections should be alive,” Lynch said, “and this is one creative way to do it.”

At the Harvard Depository in Southborough, books arrive daily by truck and are unloaded in a central processing unit where staff members prepare them for storage. The $3.3 million it now costs to build the modules—the first four storage units erected in the 1980s and early 1990s cost about $2 million each—remains a remarkably reasonable figure, given the fact that each is capable of storing between 2 and 3 million books, although some space is allotted to institutional archives, files, correspondence, and other records. By the beginning of 2001, six modules and one cold-storage vault for film and magnetic-based materials were in place, with space available to accommodate four more units in the initial six-acre complex, for a total capacity of 26 million books, or “book equivalents.”

One reason the Harvard Model works so smoothly, the manager of the facility, Ronald A. Lane, told me during a tour, is because the approach is one of storage, not scholarship. “A basic underlying concept is that this is not a library,” Lane said as he led the way through Module 1, a squat building of pure function laced with warrens of book-bearing bulkheads engineered to use every inch of available space, and the paradigm for all variations that have followed since its installation. “We don’t deal with cubic feet here, we deal with what we call BSF, or book storage feet.” The shelves rise to a height of forty feet, with the largest volumes stored in plastic trays on the bottom, and the smallest books, reachable only by a battery-powered forklift known as a “man-aboard,” on top. “This module is fitted with nine thousand shelves, giving us a total of 150,000 BSF. Each shelf is thirty-six inches deep by fifty-three inches wide, and if you look closely, you will see very little open space on top of the books. That is because we shelve books strictly by size, not by subject. If you picture a normal library shelf, you have tall books and short books kept together because they deal with the same topics, and it’s half air. Most libraries keep books together by subject matter. What we do is eliminate the air, and we do that very simply by sorting the books for size, not topic.”

The environment in each module is cycled seasonally by computer to maintain precise levels of temperature and humidity, then scrubbed through charcoal filters to remove impurities; all lighting is by sodium vapor lamps. “We’re not just a storage facility, we’re also a preservation facility. The controls we have in place here increase the life of paper-based media considerably,” he said, though exactly by how much remains to be determined. Lane’s background is in industrial warehousing, not education, an important distinction to emphasize in the context of his assigned responsibilities. He refers to each of Harvard’s libraries as “customers,” and the books entrusted to his care as “inventory,” which he manages in individual “accounts.” Law school books are kept with law school books, medical school books with medical school books, divinity school books with divinity school books, and so forth down the line for the entire university. “We don’t mix customers together when we sort, we don’t mix them in trays, and we don’t mix them on shelves. It keeps the customers and their media together; the customers are very edgy about having their books mixed in with anyone else’s.”
If Lane is asked to locate a book by title or author, he maintains that he "wouldn't have a clue" on how to find it. "That is because every book that comes in here is identified by the different customers with their own bar codes. We unpack books as they come off the loading dock, we take them to that processing area you see over there, and we use a very simple template to determine what size tray we are going to put them in. Then we put our own bar code on the tray to identify the location." Every day, Lane's crew follows a carefully structured timetable. Books sent in from Cambridge are processed for storage in the morning, books requested for return the next day are retrieved starting at three-thirty in the afternoon.

"Let's say someone from Widener calls up and says they want 'Harvard Widener FTX9,' " Lane said, reading an item off that day's work schedule. "All they give us is their own bar code number. The computer is going to tell me it's in Aisle 2 on the left, Ladder 2, Shelf 6, TA10357 on the front." About 2,000 books are retrieved each week in this manner, some 100,000 titles a year, and in the first fifteen years of operation, every book that has been requested has been located. "We are not allowed to lose books," Lane said. "We maintain an unblemished retrieval record, knock on wood."

Because the Houghton Rare Books and Manuscript Library is one of his "customers," Lane assumes that some books of value are sent to him. "We have no idea what they are because we don't deal with selection, and all the cataloging is done on the customer's end. I could have the Gutenberg Bible here, and I wouldn't know I had it. All I know is the bar code, and what kind of tray I'm going to put it in." While the likelihood of any uncommonly rare book being stored in Southborough is not particularly high, what Lane does know is that books sent to the depository usually go there because they are "low-retrieval" items, meaning they are books, journals, periodicals, and rolls of microfilm that nobody has asked to see in years, and are not likely to want any time soon. Harvard has chosen to keep these items rather than deaccession them as so many other libraries in the United States have been doing with increasing regularity. The policy at some libraries pressed for space has been to discard books that have not been used by students or faculty, in some cases for as few as five years. For his part, Lane has nothing to do with deciding whether any of the volumes sent to him are candidates for deacidification and rebinding, or for conversion to microfilm or electronic format. "That is not my job or my concern; we just store."

Barbara Graham, the associate director of the university library in charge of administration and programs, whose responsibilities include preservation, supervision of university archives, and oversight of the Harvard Depository, cited the human factor as being critical in the success of HD. "We have a wonderful staff, which is absolutely essential, because this is a labor-intensive operation. One of the ways that technology will assist the scholar is to provide enhanced intellectual access to material that might not be close at hand. We're talking about really robust, persistent, and enduring metadata here." Graham has been involved with HD since its inception, and has noted several significant changes over the past two decades.

"Book storage is very much an evolving science," she emphasized, particularly in areas involving HVAC—"heat, ventilation, and air-conditioning"—systems designed to extend the life spans of books by centuries. "Basically these modules are huge environmental boxes. This complex of buildings looks like a sophisticated warehouse, but it really is a laboratory, and the zero-defects rule is taken very seriously here. I think we are constructively reflective about our responsibilities. Our concern is that we are doing the right thing in the right way with regard to the materials."

One tangible modification to the original Harvard scheme was the recent adoption of a design that allows for greater storage capacity. The concept was pioneered at Yale University, where two units 50 percent larger than the first four Harvard modules went on line in 1999; Modules 5 and 6 in Southborough followed a similar pattern, enlarging available space in the new units from 8,500 to 13,500 square feet, increasing capac-
ity from 2 million items to substantially more than 3 million per unit.

A future innovation in remote storage could involve the use of robotics for retrieval, an approach being developed at a facility operated by the University of California at Northbridge. As seductive a solution as automation may be, however, it has been tried before in the library world with varying degrees of success. In one infamous instance at the Health Sciences Library at Ohio State University, a huge machine designed to shelve and retrieve up to 200,000 volumes was dismantled and removed after twenty years of sputtering operation. Known as the Randtriever, the device was designed by engineers at the Sperry-Rand Corporation and marketed in the late 1960s and early 1970s as a first-generation compact storage-and-retrieval system. Five were sold altogether, the first installed in the Netherlands at Erasmus University in Rotterdam, the second at a new Health Sciences Library built by Ohio State University in Columbus in 1972 specifically to accommodate it. The three others were placed in smaller libraries in Bloomington, Indiana; Logansport, Indiana; and Ankeny, Iowa. Each system housed a tower of metal shelving, two floors in height. Books were stored in random order in colored plastic baskets that could be mechanically stacked and retrieved via conveyor tracks. When a title was requested at the circulation desk by call number, an attendant would enter a corresponding number into the Randtriever, initiating the process.

At Ohio State, a 120,000-volume collection was placed in random order in the $812,000 system, code-named RT. From the very beginning, according to one university report, "it was apparent that the RT could not handle the mechanical stress of retrieving items," and heavily used materials were removed from the system and placed on conventional shelves. The university made every attempt to make the machine work efficiently over the twenty years it was in operation, but finally gave up in frustration. Maintenance costs averaged $300,000 a year, while books were damaged or lost altogether. On August 23, 1992, the RT was shut down for good, and the bulk of the collection was moved to remote storage. "The very last book removed from the RT was Orthoptics: A Discussion of Binocular Anomalies," the university reported with obvious relief, its ill-fated adventure in automated book storage mercifully ended. For the next four years the unwieldy contraption remained immobile behind a glass wall, a monument to mechanical folly. Its removal in 1996 was celebrated with a total rehabilitation of the building and the installation of compact shelving. The other four Randtriever systems, meanwhile, were abandoned as well.

Sidney Verba, the Carl H. Pforzheimer University Professor at Harvard, and director of the Harvard University Library, agrees that there is no "single, simple solution" to the dilemma facing research libraries, noting that collections "continue to grow," at accelerating rates, "but facilities do not." The HD concept, he said, is "designed to provide a safe environment for the secure preservation of materials, and with a mandate to be responsive to libraries and researchers, is our best possible solution." Depending on whose count you accept, Harvard University has anywhere from ninety to one hundred "libraries" in its system, a number that is very hard to pin down because of varying definitions of what constitutes a formal library. Factors involve such considerations as whether or not a specific collection is maintained by its own staff, whether it is part of a particular college or department, or whether it is a distinct element of a larger collection. The university also has a library in Italy that serves medieval scholars, and another at Dunbarton Oaks in Washington, D.C., specializing in Byzantine history. "What I do know is that we have millions of books, and it is the policy of the university to keep them, not dispose of them," stressed Kenneth E. Carpenter, assistant director for research resources and the person responsible for deciding which books will stay in the university's largest book sanctuary, Widener Library, and which ones must go off to the depository in Southborough.

While Lane's job is to "just store," the far more delicate task of deciding which books are removed from general circulation in the Widener Library belongs to Carpenter. "Let me say first of all that Har-
yard has done some weeding over the years, but very, very little, and it tends to have been done in outlying libraries of the system. I know, for instance, that we used to have a copy of the proceedings of the Royal Academy of Sciences in Stockholm, a huge set of books that went back to the eighteenth century and was the journal of one of the leading scientific societies of Europe. At some point, someone in a science library or someplace like that, I don't know who because there is no paper trail, decided, 'Who reads this, we need the space,' and got rid of it. And now we don't have it anymore. We do have the German translation of the eighteenth-century edition, but we don't have that Swedish edition. And that bothers me a lot, because Harvard is a place where there are going to be people who will be interested in those books. As a matter of fact, I read Swedish, and I wanted to consult those journals. That's how I discovered they were gone."

Prior to moving over to Widener in 1980, Carpenter was for twelve years curator of the Kress Library of Business and Economics at the Harvard Business School, one of the finest collections of books on economics maintained anywhere in the world, and notably strong on materials published before 1850. "I used to buy eighteenth-century books on economics that were uncut, meaning that they had never been used in the two hundred years since they had been printed, and could very easily go another two hundred years before someone wanted them, which was just fine with me. I figured that a day will come along when someone needs them, and they will be there. Some books have not been used because of their rarity, and adding them to a great library increases the chances of their being discovered. When you begin to have a significant percentage of all the economic literature that has been published in the world, which happens to be the case at Kress, it becomes all the more useful when you continue to increase the quantity. I have the view that it matters very much where a book is located. If a given book is outside the major research libraries, of which there are not all that many, then it can very well remain outside the body of literature that gets cited in footnotes and is used repeatedly by scholars. When it gets into one of the great libraries, that increases its chances of becoming part of the body of literature in a particular field."

Because a library, as Vartan Gregorian maintained, is the soul of a university, scholars take very seriously the suggestion that any books, regardless of how infrequently they are used, should be removed from campus and sent to a warehouse where they are not going to be discovered by students and researchers poking their way through the stacks. At least one prominent librarian, David C. Weber, the director emeritus of libraries at Stanford University in Palo Alto, California, feels that "just because books are 'retired' is no reason to strip them of their intellectual associations." At the Stanford Auxiliary Library, an off-site facility that opened during his stewardship, "access to the shelves is routine and browsing continues to help the scholar pursue his or her reasoning. Not keeping most books in classified order will sooner or later be realized as deplorable." Weber's adamant belief is grounded in the conviction that "book collections are and will remain the primary treasures in which scholars in humanistic disciplines mine intellectual ores."

Harvard's position on the wisdom of maintaining a preeminent research collection is clear, and the university's librarians are confident they have enacted procedures that will assure access to its most obscure items. "We have developed specific guidelines for choosing the books that go out to the depository," Carpenter said as he led me to Room D-N91 in the basement level of Widener, a transit area where books recently culled from the stacks had been loaded onto metal book trucks and were being readied for transit to Southborough. A random look at some of the spines disclosed such titles as Economics of Agriculture Production, Beef Cattle, Land Use, Part-Time Farming, all of them undoubtedly pertinent to their respective subjects at some distant point in time, but none of them recent titles. Another metal truck was filled with several dozen books in the Ukrainian language and printed in Cyrillic, which had also been selected for some reason other than their language.
“It takes me about an hour and a half to fill up one of these dollies here,” Carpenter said. “With specific regard to literature, when I first started doing this, I wanted to make sure that the best books were staying, and not leaving. So I would go to encyclopedias and draw up lists of authors who were important, making sure they remained in the library. Then one day it dawned on me that what I was really doing was reinforcing the established canon, and that I was shaping scholarship in a very traditional and conservative way. I realized that I needed to develop some very flexible guidelines that would not get in the way of serendipity. I have a daughter who was working on her Ph.D in French literature here at the time, researching French women authors of the eighteenth century, authors she found here in these stacks, but authors you will never find mentioned in any encyclopedia. This was one of those epiphanies you hear so much about, and it made a huge impression on me. What I had been doing was reinforcing traditional canons. By removing some of these books, I was preventing any possibility of a student discovering new authors of importance, and this has always been a part of the process of scholarship.”

After consulting with faculty, Carpenter developed a policy that seemed fair to everyone. “What finally made sense is that even these canonical authors often were on the shelves with lots of their books unused, or editions of their books unused, so that instead of bypassing them, I should send out some of the books of the people who are not going to be forgotten. The point is that we know who they are, and if we need additional copies, we can always bring them in from the depository—and also keep on the shelves at least one book of every single author.”

Books sent out to the depository are on twenty-four-hour recall, but a student or teacher first has to know they exist. Removing an obscure author entirely from Cambridge reduces the possibility of a chance discovery. “Harriet Beecher Stowe is not an obscure author, but she is a good example of what I am talking about. We will without question keep Uncle Tom’s Cabin in Widener, for instance, but we probably will send her first book, a totally outdated volume on world geography that nobody ever asks to see, out to the depository. And we are following this policy now with all our literature collections, Danish, Finnish, Latvian, Estonian, Greek, Arabic, the whole works.” Because some academic departments are smaller than others, anxious faculty sometimes will be opposed to any move that might be seen as a threat to their continued existence. “A recent example was Celtic,” Carpenter said. “The people there are already edgy because it is a small department. They fear that sending their books off to exile could be perceived as a first step to eliminating the department. So you have to talk to them and reassure them that they are not being picked on. I don’t happen to read the Celtic languages, but a graduate student who does is using the guidelines that the faculty members and I agreed on, and that student is pulling the stuff and listing it for storage.”

Included among the books Carpenter chose for deposit in Southborough were some recently purchased titles, a circumstance that in most institutions would raise questions about why they had been acquired in the first place. “I was terribly worried about drawing up guidelines for sending new material off to the depository, because I thought someone might say, ‘Well, if we are sending these books out there right from the beginning, maybe we shouldn’t even be buying them at all.’ For some blessed reason, nobody has ever said that to me; this is Harvard, after all. These are things we feel we should have, and they are there for the future.” According to the guidelines drawn up by Carpenter and reviewed by the faculty, the kinds of new books Harvard buys and sends straight off to the depository include institutional histories, amateur local histories, books printed on acidic paper that are “clearly going to self-destruct,” works written about recent events in foreign languages, and books “that are likely to be stolen from Widener, books, let’s say, like histories of erotic art.”

Other candidates for storage are even easier to select. “Do we need
five hundred volumes of philatelic material here?” Carpenter asked. “We had twenty-six shelves of technical and training manuals produced by the U.S. War Department, a collection that was not kept up, and is rarely consulted, if at all; that was an easy choice. Certain reference books that are no longer current are strong candidates as well, but I make sure that biographical dictionaries and anthologies stay here.” While duplicate copies of certain books would seem to be suitable prospects for transfer, Carpenter said that for some authors the library’s policy is to keep in Widener every copy that has some form of variant text. “Regardless of which books we send out for storage, they are never more than twenty-four hours away. We guarantee intellectual access to all of our books.”

Carpenter’s figures bear that out. There were 1,369,144 items in storage at the Harvard Depository occupying 92,296 book storage feet in fiscal year 1997. Of those, 54,845 titles, or 4.01 percent of the total holdings in Southborough, were retrieved at some point and brought back to Cambridge. Books are being transferred to the depository, meanwhile, at an orderly rate of about 200,000 volumes a year. Capacity at Widener is fixed at 3.2 million, about a third of all the books on campus. Carpenter’s workload increased early in 1999, when Harvard began a major renovation of the building, which opened in 1912, requiring the removal of 750,000 books during the construction. “We have to send out enough so that we can begin to get large chunks of empty shelves here,” Carpenter said. “It can’t be just one or two titles at a time. And once we can get large chunks, then we can begin to reorganize the stacks in a way that makes more sense. Up until the last ten years or so, all of the moves we made in the stacks had to do with ways to squeeze in more books. We need to open up a fair chunk of space here to make room for new books.”

Several weeks after we had that conversation, Carpenter invited me to tag along with him as he made volume-by-volume evaluations of material being considered for storage in Southborough. Before we went on our sortie into the stacks, he showed me the results of an experiment with a program designed by a university computer scientist that uses calculate records to identify likely candidates for storage. For this day’s drill, Carpenter suggested that the program concentrate on economics. About two hundred books pulled by staff members were lying on a metal book truck, awaiting his inspection. “What I find is that I can look at these books very quickly and determine whether or not the program is on target,” he said as he leafed quickly through the volumes. “Now here is something that caught my eye immediately. This is one book I feel ought not to go out to the depository. It is about German economics during the Weimar Republic, and even though it hasn’t been signed out in a good while, I feel it probably belongs here, so it will stay.” Of the books on the truck earmarked for off-site storage, Carpenter ended up approving all but seven. Many were volumes of essays known as Festscritos, anthologies of commissioned pieces usually published in honor of an eminent figure, and he unhesitatingly signed off on all of them. A five-volume set dealing with such arcane subjects as interest fluctuations in Basel and the history of the Levant paper trade during the early 1500s, though obviously “a hard-core scholarly work and covering all kinds of topics that historians and medievalists are going to be interested in,” went into storage as well. “It’s my sense that this is the kind of book that will be used only because someone has a particular reference to it, and if that’s the case, they’ll find it easily enough. So the program has some promise, and since I spent only about ten minutes on this truck, I have to conclude that the computer didn’t do such a bad job.”

A demonstration of more traditional selection methods came next, and we set out with an empty metal truck in tow for a quadrant on the first level known as 1 West to look at various works of Baltic literature; Carpenter had little difficulty consigning twenty volumes of fiction, drama, and poetry to storage, applying his rule that at least one title by each author remain on the shelves. “One of these books I just left behind has been charged out twice, so that was relevant to my deliberations,” he said. “Here we’re into Soviet stuff,” he announced when we arrived at 1 South. “Look at that book there.” He was pointing to a volume with a
pictorial cloth cover featuring a group of children gazing with patriotic fervor into the sky as a formation of Russian war planes passes overhead. "You can tell right away that this is pretty lightweight stuff and not a scholarly work. I don't need to spend very much time at all with that one." Moving along to 1 East and German literature, Carpenter found three copies of one obscure novel; he kept one in Widener and sent the other two out. He then spent about thirty seconds deciding whether or not to dispatch a Czech translation of some verse by a German author named Robert Hannerling that had been inscribed to a former Harvard professor. "What I see here is that it came into the library in 1935, it was borrowed once in 1960, and hasn't been touched since. Since we have two German editions here of the same work, I'm going to send the translation to HD, and keep one of the original editions here."

Taking a tiny elevator up to the fifth floor, we went to 5 East, where a massive collection of American literature is kept. Once again, duplicate copies of little-used books made for easy choices. When Carpenter came to The Spartan, a 1922 novel by a woman named Caroline Dale Snedeker, he paused. "We can see the book hasn't been borrowed since 1992, but it has been rebacked, which means that it has gotten some use over the years, so I'm not so sure that I would want to send this book out to the depository. I have to be very cautious about possibly diminishing the utility of the collections." Nearby were two copies of The Inverted Pyramid (1924) by Bertrand W. Sinclar; Carpenter determined that only one should stay in Cambridge. On a good day, Carpenter figures he can pull a thousand books from the stacks, which puts him well on the way to processing 250,000 a year. "I try to pick books from all the sections in the library because I want everyone to know that it is being done in an even-handed fashion," Carpenter said as we headed back with a full truck. "When I get going, I can move along at a pretty good clip, and I work in all areas. Everyone has to give some—but no one is going to be decimated."

In the fall of 1996, Cornell University librarians—custodians of the tenth largest academic research library in the United States—were given four years to remove about 2 million books from their central repository in Ithaca, New York, and place them off campus in a new storage facility then being built on an old apple orchard about a mile away. "Our board of trustees has made it very clear," Ross Atkinson, deputy university librarian for collection development, told me one crisp autumn evening in his office overlooking the scenic campus. "We have been adding two and a half to three miles of shelving a year here, and we are just a normal research library. The trustees have now come back and told us there will be no more new shelves on Central Campus beyond the year 2000, that five million volumes on Central Campus is enough. 'If you want any more books than that,' they told us, 'you are going to have to put them out in the orchard.'"

Cornell's collections in 1996 totaled 6.8 million volumes, which meant that 1.8 million books, at the bare minimum, would have to go into storage, and that did not account for any new acquisitions. Because of restrictions on tampering with the open space that still remains on the historic grounds overlooking Cayuga Lake in south-central New York, the most recent Cornell library, a striking three-level repository for rare books and manuscripts in the humanities and social sciences, was built entirely underground. Named for its principal donor, Carl A. Krook, class of 1935 and former chairman of the Krook & Brentano's bookstore chain, the 97,000-square-foot facility was designed to house 2.5 million books, more than 167,000 maps, several million rolls of microfilm, and a constantly growing complex of electronic paraphernalia. From the surface, the only hint that a cavernous library has been sunk into the earth below are the two skylights that poke up through the soil like a pair of periscopes on the conning tower of a submarine.

The university's complaint of constantly dwindling shelf space is one echoed at universities throughout the United States, and many officials admit that concessions are being made. "I may be crucified for say-
ing this, but I honestly can imagine a library of the future without books,” Charles B. Faulhaber, director of the Bancroft Library at the University of California, Berkeley, said when I asked him to comment on the dilemma and speculate on the future. At Cornell there is no question that books are a part of the overall plan, but they are also part of a larger concept, and are being treated accordingly.

“We have reached a point where we can’t go on adding shelves indefinitely,” Atkinson insisted, even though the university is one of the largest property owners in the region, and availability of land is not a major problem. Neither, for that matter, is money; in January 1996 the university announced completion of what at that time was the largest fund-raising campaign in the history of higher education, raising $1.5 billion in five years, $250 million more than its original goal. If storing more than 5 million books on the Central Campus were a crying priority, there is no doubt that it could have been funded.

One option, of course, would be to deaccession low-use books outright, a course of action that the university “does very little of,” according to Atkinson, although such a strategy is by no means out of the question, and is done periodically, albeit with very little fanfare. “When we describe a quality library, I think that we need to articulate the intelligence and the care that goes not just into growing that library, but pruning it when necessary as well,” explained Sarah E. Thomas, the Cornell University librarian. “We have to be selective. We are not a vacuum cleaner gobbling things up. We are looking for materials that either supplement our existing collection, or fill in gaps where we are not as strong.”

Before assuming the Cornell librarianship in 1996, Thomas was the head of cataloging at the Library of Congress. Among her first chores in Ithaca was to hear what people throughout the university’s nineteen libraries had to say about dealing with unwieldy collections. “We are looking into electronic deposit of dissertations,” she said, citing just one example that remains under review. “From the student’s perspective, it might be cheaper to have a dissertation that has already been typed on a word processor deposited on disc. They would not be required to have so many bound copies on acid-free paper, and at the same time it would solve some of the library’s storage problem for these materials. We are looking into that.”

Another proposal Thomas briefly considered involved the far more drastic measure of making computer copies of the fifteen-thousand-volume Nestlé collection at the university’s School of Hospitality and Hotel Management, and then selling the printed books. “Some people over there are saying, ‘Why don’t we just digitize everything in this collection, why don’t we make ourselves the electronic research center in the world for this area?’ I’ll be honest with you, I got excited about the proposal when I first heard about it, because this is a very small discipline, hotel management and the literature of hospitality, and I thought it would be an excellent test case of what it would be like to be a totally electronic library; it could be a world resource on the subject. It’s an intriguing idea to consider, but it just seems a little too simple for me to sign off on right now.”

An inherent danger in this approach, Thomas agreed, would be the temptation for people to say, “Today hotel management, tomorrow Shakespeare.” Other, more immediate, problems would involve copyright issues that digitally scanning books that are not in the public domain might provoke, and whether or not one library should assume such a heavy responsibility on its own. “I straddle the fence as someone who is an administrator, one who is always looking at the cost-effective ways to do things, and trying to be in a leadership position where I have to keep my eyes five to ten years out. Then there are people down there on the front lines who have to do the job for today. I come out of that world, and I still have a great allegiance to it. I still feel it is my responsibility to be evaluating all of these ideas that come up—those that are practical, those that are harebrained.”

While getting rid of an entire collection of books on food preparation and hotel management may not be a viable option for the immediate future, Cornell has been involved in other programs that are among the most innovative in the world, attracting the attention of some observers
worried that the university has embarked on a path that will lead inevitably toward total reliance on computer-generated material. Of particular moment has been a Cornell program that makes new copies of decaying materials known as "brittle books" through computer imaging.

Begun in 1989 with the backing of the Xerox Corp., which has headquarters in nearby Rochester, Cornell technicians scanned more than 2.5 million pages from ten thousand books and journals during the first ten years of the project. Every item copied had to be free of all copyright restrictions and be in the public domain. Using the digital images, new copies were then made, some printed on acid-free paper, others preserved on what are known as computer-output microfilms. The disbound originals were then discarded.

The person who has supervised the Cornell University Library Digital Conversion Project from its inception is Anne R. Kenney, associate director for preservation and conservation and codirector of the Cornell Institute for Digital Collections, and recognized as one of the most knowledgeable library professionals working in the conversion of printed material to digital images. She oversees Cornell's role in developing, with the University of Michigan, the Making of America digital library, a database of material that documents nineteenth-century life in the United States. Kenney has written widely and lectures often on her specialty, and with a prior background as an archivist—a "dedicated book person," she made clear while we were making our introductions—she speaks with authority about the technological changes that are taking place in research libraries throughout the world. Since 2000 she has also served as director of programs for the Council on Library and Information Resources.

"We estimate that about one million volumes here at Cornell are endangered by their having been printed on acidic paper, and that for them to be preserved, they will have to be reformatted," she said. For the vast majority of books that fall within this threatened category—about a third of Cornell's holdings, by Kenney's calculation—mass deacidification is not an option. Most of these books will continue their inexorable descent into decay without any steps taken to save them. If any of them are "preserved" at all—and they would represent only a fraction of the holdings—it is the information that will be retained, not the artifacts themselves.

The problem with such an approach is that once original paper copies are gone, they are gone forever, and even the most ardent advocates of digital imaging acknowledge that rapid degradation is an unsolved problem. "In all of our projects undertaken in the name of preservation, we have created either paper replacements or computer-output microfilm copies that meet nationally recognized standards for quality and longevity," Kenney said.

Anyone whose first computer used five-inch floppy disks, then upgraded to three-and-a-half-inch disks, and is now getting comfortable with Zip drives has some sense of the complex problems posed by this situation. Information that was once thought safely stored in one medium is no longer easily accessible in another. If digitized information is to be available indefinitely, steps have to be taken to transform it from one format to the next when software changes, or when operating systems change. Kenney agreed that thousands of perforated cards are undoubtedly stored somewhere on the Cornell campus that people would be hard-pressed to read today because the equipment no longer exists to process them.

"Had they been rigorous at the time of creation, we would have migrated that stuff as we went along," she said. "It's a matter of being vigilant about putting safeguards in place to do it. I don't know of any institution that has really fully committed the kind of resources to make that happen. We do it all the time in a paper-and-film-base world by maintaining proper humidity and temperature controls. If we didn't do that, we'd lose those collections as well. But somebody has to be there to do it. Somebody has to be alert. It doesn't take a genius to migrate that stuff. It's a matter of being vigilant about putting safeguards in there. It's not so much a technical problem as it is an institutional problem to create the mechanisms that will assure that it happens. We are going to have to
do that anyway, because an increasing amount of the information that comes to us now comes in electronically."

With the benefit of having spent ten years scanning books, old magazines, periodicals, graphic arts, rare books, manuscripts, maps, and university archives, Kenney said he still feels that digital imaging is not yet the answer to long-term preservation, although research toward that end continues. "This is still nothing more than a way of capturing images, not preserving them," she said. "Let's be clear about that. Digital imaging is not digital preservation. What it offers is a means for capturing with good fidelity the informational content of hard-copy sources. It is used as a reformatting technique, but then an analog version is always produced. I don't know of any institution that has developed an effective digital preservation solution."

For all the work Cornell is doing in the area of digital reformatting, the program remains experimental. Three million digitized pages is a lot of pages, but that number represents only about twenty thousand titles, a mere fraction of the 1.2 million books that Cornell librarians have estimated are "brittle," and which they believe are certain to disintegrate. "We tackle it at the point of circulation through our brittle-books program, and with outside support to reformat the really strong holdings we have, such as in agriculture, Southeast Asian history, mathematics," Kenney said. For all that oversight, the vast majority of brittle books at Cornell are not likely to survive, either as objects or reproduced in other copies. "That is why we rely on consortial activities here," Kenney said. "If Columbia University microfilms a cache of brittle books, we are not going to do the same books. The fact is that we cannot do them all."

When a decision is made not to preserve a particular book, it is impossible to save the volume once it passes a certain degree of decay. Cornell calls this process "phased deterioration," an innocuous way of saying that books determined to be of lesser intellectual value than others will be allowed to die a slow death, with no heroic lifesaving attempts and no digital copies likely, either. "The medical analogy is fair," Atkin-

son said. "Let's say we will try to make these books as comfortable as we can; we will give them a nice place to rest, make sure the temperature and the humidity are ideal, but allow the natural process to take its course."

For the fortunate few chosen for rescue at Cornell, deacidification is the answer in only some cases. To preserve by "reformatting" means, essentially, that the information is transferred to some other surface, either on photographic film, or on a new paper version. Since the 1970s, when the "brittle book" crisis was becoming increasingly apparent, major preservation grants, principally from the National Endowment for the Humanities, have been directed largely toward the microfilming of decaying volumes. Because microfilm is proven to last—the process has been in general use since the 1930s, and copies have not deteriorated appreciably—it remains the method of choice among many librarians and archivists. Given the costs and the storage space that microfilms consume, making a digital image of a printed page with a scanning device is an especially attractive option, but it does have its drawbacks, the most pressing being that nobody can say for certain how long digital images will last.

"The fact is that they're not very permanent at all," Kenney readily acknowledged. "And it's not the technology that's the problem. I sleep at night as a preservation administrator knowing that I have an analog backup. This very much remains a period of transition, and I don't know how long it will last. Right now I don't trust Cornell or any other institution to ensure that what we scanned last week will be available to my children's children."

The idea of converting material from paper copies to electronic versions also presents philosophical difficulties, as G. Thomas Tanselle, a noted bibliographer, educator, and editor, argued out in a 1996 essay, "The Future of Primary Records: Technology's Impact on Publishing and the Printed Record." Even though he is an outspoken advocate of keeping all primary records in their original form, Tanselle makes clear
that he embraces the promises of new technology: "The electronic handling of texts offers so many advantages that it is hard to see why anyone would not welcome it." But that position, he maintained, "has nothing to do with recognizing the importance of all primary records and understanding that the preservation of individual surviving electronic forms of texts will be just as imperative in the future as the preservation of handwritten and printed forms is at present." Of immediate concern to Tanselle "is the question whether old texts should be repackaged in new forms," and to reaffirm the notion "that a converted form can replace the original is to disregard the role of primary evidence in pursuing the past."

In 1999 the Council on Library and Information Resources (CLIR), a nonprofit foundation based in Washington, D.C., formed a seventeen-member commission to study what factors argue for retaining works in their original form, and to advise on the kinds of strategies that might be used to preserve them. Named to chair the Task Force on the Artifact in the Library of the Future was Stephen G. Nichols, the James H. Beall Professor of French and Humanities and chair of the Romance Languages Department at Johns Hopkins University, and also director of the School of Criticism and Theory at Cornell. An admitted conservative when it comes to keeping original materials, Nichols told me shortly after his appointment was announced that the group was formed in response to "a serious argument that has been brewing among preservationists as to what constitutes preservation. That is the issue, really, and it goes all the way back to Plato, who was greatly concerned about the context of articulated thought, because he felt that if you did not know what the occasion was when a thought was uttered, you would not be able to understand it. When you photograph a book, you have a microfilm, but the microfilm does not preserve the historical materiality of that manuscript. It doesn't have the binding, the other things that you would look at. So what is the definition of an artifact? You start with the materiality of the object. Anything that destroys the materiality of the object is going to destroy the historical specificity of the object."

Nichols said his task force would concentrate on developing a protocol to preserve not only physical objects but visual materials such as film and prints, and newer materials that exist only in digital formats. "The good news is that our task force is very much a task force geared toward trying to figure out ways to preserve as much as we can." In the area of printed books, the group is concentrating on material that has appeared in the last two centuries. "Where we come in is what happens after 1800, since anything printed before that date, by general scholarly convention, has been established to be important, and worthy of preservation for that fact in and of itself." Early in 2001, a preliminary draft of the group's findings, The Evidence in Hand: The Report of the Task Force on the Artifact in Library Collections, was posted on the World Wide Web at the clir.org site.

During my first visit to the Ithaca campus, Kenney took me to a room in Olin Library where half a dozen "scanning technicians" were making digital copies of brittle books. Several shelves were filled with material, and every volume had been "disassembled" for the procedure. The spines had been sliced from the bindings—"guillotined," in the jargon of librarians—and every page was now a single sheet of paper ready to be placed on a flat surface that looks for all the world like a sophisticated xerographic copying machine. "Each page will be scanned, a quality-control check will be made, the electronic data will be stored, a hard copy will be printed and sent out to be bound, and the original discarded," Kenney said.

At one work station, a technician was making digital copies of handwritten pages bound in a volume of nineteenth-century letters. I asked what the material was, and learned that this was one of seven volumes of outgoing correspondence kept by the secretary to Ezra Cornell, the prosperous financier who founded the Ivy League university in 1868, and for whom the institution was named. Some of the letters were in Ezra Cornell's hand, and amounted to early versions of carbon copies, reproductions made by a process that used water pressure to elicit an image.
The young man making the digital copies demonstrated how he could remove stains and smudges that had discolored the sheets over the years. Kenney said she believed the originals would be discarded once the copies were made, but that the decision remained with the university archivist. Some time later, I asked Elaine D. Engst, director of the university archives, for a status report, and was relieved to learn that the seven letterpress books for Ezra Cornell had been scanned into a database, but that the originals remained part of the collection.

"Most of those letterpress books are in terrible condition, but the Ezra Cornell papers are a very special case," Engst said. "This is a nineteenth-century copying technique that involved a process whereby the original letter was somehow set on top of a damp piece of paper, and there was a press that somehow made a copy. You had to be very careful about how wet you got the paper, but good images have lasted just fine. The process was used for well over a century until carbon paper came along and is now regarded as a dead technology. Thomas Jefferson had a portable letterpress device that he used for his correspondence. For most of this material, it is the information that is important to us, and we do make decisions on whether to keep the originals on a case by case basis. We are keeping these books as artifacts of the technology. This is Ezra Cornell, after all. The idea that you are destroying a book associated in some way with the founder has the potential to upset a lot of people."

When we spoke again in the fall of 1999, Kenney reported that Cornell was now "outsourcing" all books and journals designated for scanning to private vendors, and that a study had been undertaken to determine if they can "capture the imagery" without having to guillotine the books at the spine. "We're testing some prototype equipment," she said. "The big question now is whether you can get the kind of quality you want, and whether you can get it at an affordable price."

She also said that the university had been funded to "explore issues associated with digital preservation, not just digital conversion," and that an "archiving strategy" was being developed to catalog the university's image collections. "We are running the entire digital collection through what are called optical character-recognition programs, which turn an image file into a searchable text file."

In a much broader context—one that drifted into the tools of scholarship—Kenney asserted her belief that the first stage of research "isn't a matter of looking at what you want," but of "getting rid of the stuff" that is irrelevant and in the way of what has to be done. "I am interested in winnowing out the six million volumes I don't want, and I am interested in finding the ten volumes I need. When you get to the text itself, you are bound to make similar decisions. And what these tools do is provide you with a way of extending the process you do now to looking at the text itself."