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Searching for the Catalog of Catalogs

A LIBRARY IS A HOME FOR BOOKS, a storehouse of collective knowledge, a connection to past generations, and a mental passageway to new worlds.

For me, however, these are second degree realizations. My primary experience of libraries, the starting point of my deep love for them, begins in the predawn of thought, in the realm of the senses. It is my senses that first draw me into the library and form the passageway to the universe of the mind. Before I open a single volume, I am struck by the sheer physicality of the sculpture-like rows of books bound in varying sizes, shapes, and colors.

In addition to its particular form, each book has its own smell. It is a perfect smell, a smell that gives physical life to thoughts and ideas through the interaction of paper and ink. As the book takes in the oils on its users' hands, its readers' perfume, the amalgamated scents of neighboring works, it changes over time.

The unique physical forms of books announce ideas; they embody what was at some time the most pressing issue of someone's life, its author's response to being, his or her reason for perhaps neglecting an "understanding" spouse and children in the name of posterity. In the library, this magical place, the voices of these authors great and small reach a communion with the congregation of readers whose identities are whispered by an archaeology of wrinkled pages, illegal pencil marks, and disordered stamps of return dates long since past. It is the chorus of humanity's greatest aspiration, the challenge of the past to wisely, intelligently, and thoughtfully construct the future.

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147

The library is a shrine to these aspirations, and I have explored as a supplicant two of the world's great libraries—the Bodleian at Oxford and Widener at Harvard. Both are holy sites of literary humanity, containing busts of great writers and engraved names of literary virtuosi. Both post guards at their doors who strictly check the credentials of those who go in and meticulously search the bags of those who go out. While the Widener stacks are open to those with proper identification, the Bodleian does not allow such a mingling of the sacred and the profane. There, books must be ordered on small slips of paper and retrieved a few hours later in chapel-like reading rooms. It is a religious experience that brings my earlier education to mind.

In the Jewish tradition, the congregation stands when the ark is opened and the Torah, the most sacred of texts, is revealed. While the "real" Torah must be housed in the ark, the same words are available in books that are stored in holders traditionally found on the back of each seat. The "real" Torah is not meant to be touched directly by human hands, but these books are meant to be handled, carried, and used to exhaustion. Though the congregation had been standing when the closed scroll was displayed, they sit when the scroll is opened and the reading of its content begins. The object of the Torah, therefore, has acquired a meaning separate from and in some respects greater than the words it contains. The worshippers stand in awe before an object, a literary work whose content establishes meaning but whose sacredness is only fully bestowed by two wooden rollers, anointed parchment, and meticulously handcrafted letters. It is a similar appreciation of the physical presence of books separate from their content that colors my interaction with the Oxford and Harvard libraries. Receiving a book in the Bodleian is like standing while the ark is opened. Wandering the Widener stacks is more like stepping up to the ark.

Within this ark are so many mysteries, a labyrinth of hidden treasures. As I set out to find a specific citation, each book I pass announces a potential personal discovery, an unexpected inroad to an unexplored self. In those moments when I encounter such new surprises, I feel the sense-driven decision to pick up a certain book and begin a journey toward a new self that may in the future seem inevitable and axiomatic. My serial epiphanies become me as I

interact with ideas, but also with ideas embodied in the particular form of the book.

Delving deep into the treasures of these libraries of old, however, my experience reveals glimpses of the new libraries, the libraries that are changing and will change my experience of books, of being in the library, and of being in the world. Even in the ancient Bodleian, one can feel this transformation.

The Bodleian's catalogs are a biblio-archaeologist's dream, where the passage of time and the rise of new technology can be traced in time-sequenced layers of cataloging. A reader looking for the library's older books must search the gargantuan, elegantly leather-bound tomes that contain listings glued onto thickly textured paper. Books published in the 1960s and 1970s are listed in wooden card catalogs, and works from the 1980s onward can be found through the on-line computer network. All of these systems are located in the same area, and there is a constant buzz of researchers shuffling to and fro.

As a member of a generation reared on books and card catalogs, who reluctantly accepted computer word processing to save time in college and fought off exploring e-mail and the Internet when doing graduate work in England (where a fellow doctoral candidate boasted to me that he was writing his entire dissertation by hand) only to later dive headfirst into cyberspace while in law school, the Bodleian's odd demarcation of time seemed to match the course of my own development. The bound volumes seemed the weightiest, the most time-honored, like the thick encyclopedias I had consulted as a child—uniquely appropriate to the imposing titles of old such as Gibbon's and Macaulay's. The card catalogs were the next step, reflecting a more conscious ordering of books, a manipulation for convenience's sake that was hard to imagine in my earliest childhood. The terminals paralleled my efficient, modern self, with access to the four corners of the world. They seemed to match the exploding number of books I had watched march from the best-seller list to the dollar store with seasonal regularity.

In contrast, something about the catalog rooms at Harvard seemed disharmonious to me. Harvard has invested heavily in updating its catalogs, and most materials are now on-line. As a result, the computer terminal room pulsates with the busy sounds of clicking keys and rhythmically-gliding printer jets. It is an effi-

cient, corporate space. In contrast, the long rows of mahogany card cabinets languish, antique-like, in a completely silent and almost always empty room nearby. As I march towards the computers, I reflect that the wooden shelves seem closer cousins to the books—perhaps because they have no other function than to serve them—than do the multipurpose, ubiquitous computers. I miss leafing through the cards, following with my fingers the paths of so many before me.

At the keyboard, however, my physical reality changes. The fingers that searched back and forth in the card catalog become a thousand fingers connected to arms reaching in seemingly infinite directions. I skip around frenetically and search across subjects by combining key words or by specifying languages or certain dates of publication. I search all ninety libraries in the university, doing in five minutes what might otherwise have taken an hour or longer. Instead of scribbling call numbers on a scrap of paper, I print out the relevant information. I am the picture of efficiency as I cut across layers and levels of the library to pinpoint the exact targets of my search. I am the captain at the controls, and with a printout in hand I head into the stacks, but now with a clear target in mind. Of course, I am often sidetracked, but now that visiting the library is something I can do with twenty free minutes between classes, I map out a course and make a beeline to the books I have selected. I have the books in my bag as I sit down to my next class. I am on time and have even picked up a decaf latte to go on the way. But how do we know, I later ask myself, of potential epiphanies that we might have had but did not?

When I have less time, or when I have planned ahead, I search the computer catalog from home after checking my e-mail before bed. In my few free moments the next day, I rush in and pick up my books. This process gives me a glimpse of what seems sure to come. If I can search for the books at home, and the computer keeps track of which books are on the shelves and which are out, it seems unnecessary, inefficient, and economically wasteful for me to fetch the books personally and check them out from a student on work-study. It would make more sense to request the book on-line, order the computer to retrieve it from a storage facility and check it out to me, and pick it up by inserting my ID into a card reader at a take-out window. If the Denver International Airport

with its modern automated baggage system has become one of the most efficient airports in the world, is it not inevitable that libraries will soon shift to the Denver system, one whose main functionaries require no health benefits or sick days? Even this high-tech system seems largely transitional, as it is based on the physical book model—a model that will remain prominent until sufficient percentages of old books are scanned, new books are accessibly placed on-line, and computer terminals are made more comfortable to use. In an electronic environment, I do not need to go to the books as a supplicant before the ark; the books, or rather the words that exist within them, come to me.

In my two years at Harvard Law School, I have searched cases at the law library, one of the world's great legal libraries, perhaps five times. Most everything I have needed was more easily, conveniently, and quickly available on Westlaw, a private on-line information service. When I need to cite a case, I can call it up on my home computer in a second and seek all references to it in other opinions or law articles. I can search all major newspapers or any of the thousands of data bases on a wide variety of topics. I can look for any of these materials by targeting key words whose frequency of occurrence will be revealed to me in materials listed in order of applicability. I can access today's articles on the situation in Bosnia as well as information on where to find the best croissant in Paris. Sure, the law library is still a nice quiet place to read casebooks and write letters, to visit the thick volumes that comprise the background of great justices' photographs, but the library that I really use and find most useful is the cyberlibrary I access in my pajamas.

Westlaw has surpassed the law library for my classmates and me so quickly and made such deep inroads into the legal community because it is efficient and effective for its users and profitable to its providers. Although offered free to law students, Westlaw charges firms about three hundred dollars an hour, a cost justified to the firms because it lets a lawyer accomplish in one hour on-line what otherwise might have taken a day.

Just as economic forces are pushing the electronification of the relevant legal library, so too are they transforming other shelves of the traditional library. In the electronic world, a particular text can be copied an infinite number of times for a virtually negligible

cost (except for that of creating the original). According to simple supply and demand economics, a system of such easy copying, where copyright law becomes increasingly difficult to apply, could drive down the cost of the text dramatically. As more materials are placed on-line and people become more accustomed to searching on-line for the information they desire, this will challenge traditional sales models for physical books.

A large percentage of the works on Westlaw, with the notable exception of cases and other government documents, are permission-granted copyrighted materials. Westlaw pays the newspapers and journals whose materials are posted based on the amount of time users spend with each newspaper or journal article on their screen. It seems almost certain that publishers will do the same in the future, even if some works are initially embargoed in the electronic format so as not to compete with early sales of a physical book. This would be similar to the current movie market, where a film makes money first from a relatively small number of people paying seven dollars for a movie ticket and later from a larger number paying two dollars to rent a video. While nostalgic or specialty publishers may cling to traditional practices and sell entire works for a one-off fixed price, an increasing number of others will follow the Westlaw model and charge users in micro-charges of fractions of cents for time spent actually using a text.

Because illegal copies will thus threaten to cut substantially into an electronic publisher's profits, publishers will have an incentive to encrypt each text so that it cannot be transferred or copied onto a network. They will also want to make sure that no organizations, including libraries, are exempt from copying restrictions because one copy can generate an infinite number of others. Like everybody else, libraries would have to pay for time spent using a copyrighted work on-line. As more books go on-line, the aggregate costs of making these payments will grow, and libraries without unlimited budgets will find themselves having to balance money spent purchasing physical books and money spent paying for on-line services. As new books come out electronically and older books are scanned, this balance will invariably tip in favor of the on-line materials. Slowly, the percentage of on-line books will increase relative to their aging pulp cousins. With the help of

computer networks and the Internet, this will create a global virtual library.

This virtual library will be a miracle of access. It will open the doors of the Bodleian and Widener not only to students wanting to work at home, but to aspiring Mongolian academics, Namibian journalists, and anybody else with the proper equipment and a little money. I realized the potential of this miracle on a recent visit to Cambodia, where I had lived for two years as a UN human rights worker. The libraries of Cambodia were decimated during the three and a half years of Khmer Rouge rule, as clearly evidenced in the "bibliotheque" of the Cambodian National Assembly in Phnom Penh. As I stepped into the small room, I was struck by how pathetic it was. The newly built shelves housed only about ten law books, and a few papers were piled on the floor. The librarian told me that the library had just opened and there was not much of a budget for books. The old law books had been destroyed or lost, she said, and new ones were too expensive to acquire. If ever there was an argument for an electronic library, I thought to myself, this was it. Cambodia was Internet-ready, and with one hookup in this library, the world's laws, access to legislators across the globe, and an endless stream of legal materials would instantly become available. Electronic media promised to bring Widener and the law library to my home but also here, to this remote place with no chance of building a physical library of its own.

As was clear to me in Cambodia, the virtual library that information technology creates has the tremendous potential to democratize access to knowledge, the most precious human commodity, and provide a forum for cross-cultural communication. In short, it stands to universalize the local mission of the library. As the walls of the library expand, however, what we have known as the library moves closer towards becoming what we know as information. Our perceptions and experience of books and libraries will undoubtedly change as a result. It will transform the individual act of reading, the social space of the library, and important aspects of the physical world around us.

I begin gathering materials on Westlaw by listing the key words that I want searched. If I want to examine articles on the best croissants in Paris, I can type "croissant /P Paris /P best," which

will retrieve articles that contain those three words in any of their paragraphs. I can access the full texts of the listed articles in any order I choose. Once I call up a text, I can go directly to the specific paragraph containing the words without having to read any other part of the article.

While I did not read every word of every book listed in the bibliography of my doctoral dissertation, I did at least try to understand the perspective and basic argument of each author. The computer-facilitated ability to search so quickly and directly for so precise a piece of information seems, in contrast, inherently threatening to the idea of the book as an integrated whole. It is not that an on-line user does not have the opportunity to read an on-line work in its entirety, but rather that I feel myself being conditioned to think of articles and books less as integrated narratives and more as groupings of small bits of information that can be accessed independently. This partial change in my own temperament is even more apparent to me in the younger generation. My younger brother, ten years my junior, can barely make it through a book straight from beginning to end and requires six compact discs loaded at all times, switching incessantly from one to another. These are exciting and lively qualities; they are not, however, scholarly. A literary world is divided into books, an information world into bits. Books take time and patience. They need hidden corners of the Bodleian.

While both books and bits are central to my thinking life, new ways of accessing information have forced me to divide my experience of the two. For the pieces of information I use to fill footnotes and build the scaffolding around my ideas, I turn on my computer and flash like a semioticist between floating bits of information. To think through ideas, to process my life through the nightly installment of my current novel, I take out "real" books, lovingly feeling the pages that I turn. It is my split personality as a cross-generational reader. As comfortable as this feels, however, I recognize that the special feel of books and the world they create for me is not instinctive but learned—and the younger generation is learning it less. For them, a computer screen may seem more natural than a newspaper, and curling up in bed with a pocket monitor may feel just as familiar as curling up with a novel does to me.

In addition to changing popular conceptions of the book, the virtual literary world will alter the social space of the library. Libraries, in some ways quite uniquely, offer privacy in the most public of fora. Searching the stacks and retreating to a carrel are intensely individual activities; they are the background to private dreams and musings. They occur, however, in a public space where all of the materials—the books, the tables, the chairs—are shared. All of this dissolves when I bring the library home to my solely private world. From the private space of my home, I reach the transnational virtual community of private and electronic spaces. I can search the catalogs of libraries in Moscow, Cairo, or Mexico City and meet others with interests similar to mine in offices and homes across the globe. After connecting with someone at a Southeast Asian studies think tank in Singapore, for example, I was asked to write an article for the center's journal. I attached my article to an e-mail file that went directly into the center's word processor. When I was missing a citation for another article I was working on, I instantly found a listing in Bangkok's Chulalongkorn University Library.

This public international community, however, is very different from the community of human beings who together construct the physical reality of the traditional library. The traditional library, like the salon or the university, is a forum for human communication. Scholars naturally meet and discuss in libraries, but more important is the shared intellectual space that the library helps create, a meeting space between humans and ideas. While the library is not the only space where this can happen, it is an extremely important one. Its demise would not be without cost, even if it was slowly displaced by its virtual cousin.

The transformation of the traditional library and of the book culture into an electronic one changes the physical realities of our lives. Nostalgically observing the frayed prayer books in the background of an old photograph of yeshiva students, Yale computer scientist David Gelernter reflected,

> A religious community creates a spiritual landscape. The landscape includes physical objects. The objects are shaped by the faithful and shape them in turn. They tend to live longer than people, so they connect generations; they absorb one generation's emotions and

radiate them to the next. The things don't last forever, of course; each generation introduces some new ones and retires some old ones. But the spiritual landscape changes slowly relative to a human life span.[1]

"Retiring" books means much more than just changing their form. It means altering, at least in part, the spiritual landscape that we have constructed for ourselves. It means altering our perception and experience of the physical object of a book.

When the electronic revolution removes literary content from the exclusive domain of books, what remains is the book as an object, a pure form given life and meaning by its words but also by its sheer physicality—its touch, its feel, its smell, the way it fits in our hands. It is a carrier of content that in itself becomes a new form of content, an object containing meaning (words) that enters the physical landscape of our lives as a corporeal presence of meaning itself.

Curiously, this advance of modernity entails a return to a world before the printing press, when literary works like the Torah and Christian illuminated manuscripts took on meanings additional to their verbal composition. Gutenberg's world of books as content gives way to the biblical and postmodern world of books as sacred objects.

My desire to join the sacred literary community was very much in my mind as I read through the contract my publisher sent for my first book. The publisher was targeting the book at libraries and had therefore decided on a small print run at a high price. At almost sixty dollars a book, I doubted whether many would buy it except for my grandparents in Miami Beach and my most loyal friends. If the only people who would see it were those with access to libraries, I thought, would it not just be better to put the book on-line and send it out for the world to read? My paltry royalties offered little counterargument. It was an exciting prospect. The more I thought about it, the more depressed I became.

Like Gelernter's yeshiva students, books have charted the landscape of my development. The books in my old room in my parents' house speak of the younger me grappling with new ideas. Piled on top of them are the types of books that I read in college as I tried on identities like hats in a thrift shop. Beside my desk in

my current home are the special books that have made it through all of the selections. There is the thick volume of *Remembrance of Things Past*—the final half pound removed from my crate in order to fit my UN shipping allowance when returning from Cambodia. Though I had already read the book, I hand-carried it through China rather than leave it behind. Sure, I could have bought another book for twenty dollars, but this book was mine. These were the very madeleines I had thought of as I lay sweating in bed, reading through another power outage with my dying flashlight. There are my intimate books by Mishima and Yehudah Amichai that had helped me through painful and passionate times and now existed as objects testifying to the self of such extremes. My book, the ideas I had expressed as well as the physical object of the book, the connection of paper and ink, was destined to take its place among these physical signposts of my life—these constant reminders that I lived and had lived, that I was on a journey going somewhere, somewhere from where I would look back at the present moment. The book was more than an idea, it was an idea incorporated. I would send it with notes of gratitude to past mentors and think of my great-grandchildren finding it in an old rotten box, seeing their last name, reading it and wondering who the old man in the photographs had been, why he wrote such things.

The alternative hardly looked as appealing. With no filter, no publisher deciding what should and should not be published, no careful editors guiding the work, my book would be mixed with a million other works of greater and lesser quality. Yes, I would be on the same system as Shakespeare, but my work would more likely be confused with term papers from Cal State Fullerton and memoirs of obscure accountants. People searching through these vast stores of material would zoom from one piece of information to another without realizing how carefully and deliberately I had crafted my argument. They would pick apart pieces of information from my book like mechanics at an automobile salvage yard. As time passed, the pre-programmed "intelligence agents" that determine which works make it to the top of a computer-generated search list would send my work into obscurity. No, I thought, I wanted my name pasted into a leather book in the Bodleian. I

wanted to smell the new book and visit it in the library. I wanted to experience my ideas as an object.

I knew, however, that I was a hypocrite. I also wanted to access other people's books at three o'clock in the morning. I wanted people in far corners of the earth to read my work and think thoughts that grew out of mine. When a spin-off article from the book was accepted by an obscure international law journal, it did not bother me a bit that the journal was not well known. I knew that in an electronic age, people search by subject and that to the computer all journals are equal. Even if the journal had two subscribers, my article would come up before articles in the most prestigious of journals to those who inputted the right keywords in their search request. If my love of books represented the future of the old libraries, my realization of these truths reminded me of how fast those libraries were changing. The libraries of the twentieth century were perfect for holding the books of the twentieth century. They would not, I knew, be suited for many of the literary works of the next generation.

At a recent dinner party I debated the future of the book with the wife of a former professor who now heads a book publishing company. She maintained that there would never be a market for an electronic novel because a novel requires character development that does not happen on the computer. It is just too easy to move back and forth on-line, to shuttle from one experience to another like my little brother choosing between CDs. I thought about this, and it made sense. The novels I had read were mostly linear, progressing through the development of characters to a predetermined denouement. Putting this type of novel on-line would just transfer the same thing to a new medium, like putting a lively concert on tape or a rousing lecture on paper. Perhaps, I then thought, the electronic novel is not about character but about possibility.

In the hypertext novel of the future, the reader will navigate through an interlinked series of options offered by an author, all embedded in a central text. The course of the reader's personal selections will become the novel, which will be different each time the text is interactively read. This electronic novel, like human life itself, did not know its own future. It contained a range of possibilities for each character to experience one life or another, to

muddle through a series of improvisations that together become a life, to not know where life is going but only to be able to look back at previous choices to know from where it has come. Perhaps the novel of the future was not one entity to be filed away on a shelf but many that needed the vast infinity of cyberspace for its realization. And I wondered who would be the historians of this infinite space.

If the library is the repository of our collective past, where would we place the physical memory of our electronic future? As the amounts of information, filtered and unfiltered, expanded exponentially, I wondered how we would ever track the past literary trajectory to the present and where the ark would be that our children and descendants might want to approach to consult the wisdom of past generations. The library had become the universe and the universe the library, and there were no leather-bound Bodleian volumes to keep track of it all. Perhaps the walls of the library were not wide enough to hold the vast universe of information.

And I thought of Jorge Borges, who tells of his search for the catalog of catalogs in the "The Library of Babel." "The universe," he states,

> (which others call the library) is composed of an indefinite and perhaps infinite number of hexagonal galleries with vast air shafts between, surrounded by very low railings. From any of the hexagons one can see, interminably, the upper and lower floors. . .through here passes a spiral stairway which sinks abysmally and soars upwards to remote distances. In the hallway there is a mirror which faithfully duplicates all appearances. Men usually infer from this mirror that the Library is not infinite. . . . I prefer to dream that its polished surfaces represent and promise the infinite.[2]

Borges's library, like the library of the electronic future and the dreams of the physical past, reaches out of the spacial and the linear, out of the corporeal and the profane. Libraries have never been large enough to contain such aspirations. They will have to grow in new ways to track our collective journey as we seek the catalog of catalogs we will never find.

ENDNOTES

[1]David Gelernter, "The Dark Side of Jews in Cyberspace," *Sh'ma* 25 (483) (9 December 1994): 1–2.

[2]Jorge Luis Borges, "The Library of Libraries," in *Labyrinths* (New York: New Directions, 1964), 51.