

Human Values in a Technological Age

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We live in the single, shining moment of “now,” but our lives are overwhelmingly made up of the past. We must understand that past and learn from it, if we are to understand ourselves, our society, and, in doing so, make progress. The key to understanding the past is the knowledge that people then did not live in the past—they lived in the present, just a different present from ours. The present we are living in will be the past sooner than we wish. What we perceive as its uniqueness will come to be seen as just a part of the past as viewed from the point of a future present that will, in turn, see itself as unique. People in history did not wear quaintly old-fashioned clothes—they wore modern clothes. They did not see themselves as comparing unfavorably with the people of the future, they compared themselves and their lives favorably with the people of their past. In the context of our area of interest, it is particularly interesting to note that people in history did not see themselves as technologically primitive. On the contrary, they saw themselves as they were—at the leading edge of technology in a time of unprecedented change.

I am here today to talk about technology (particularly, but not exclusively, library and information technology) and its effects on society and human beings. In the first instance, I want to challenge the notion that we are living in a time of unprecedented technological change, and to illustrate my point with a description of society, technology, and libraries one hundred years ago. Then I wish to discuss technology in life and libraries today and relate our situation to the values that I believe we need in order to withstand the twenty-first century technological onslaught.

1901 and 2001

My belief is that this is not a time of an unprecedented “Information Revolution,” or similarly transformational events, but we are at a point in the ever-evolving history of technology and society that has been foreshadowed by technological innovations over the centuries. In the words of Brian Winston, “What is hyperbolised as a revolutionary train of events can be seen as a far more evolutionary and less transforming process.”¹

We are very near to the first year of the next century and I want to approach our present and future by speaking of the people of the first year of the twentieth century, 1901, and the difference between their lives and ours. When, at the 103d LITA National Forum, a person of the year 2100 looks back at the quaint old world of 2001, she will probably see a gigantic gulf between then and now, one that will seem much greater than the differences between now and 1901. However that may be, here we are, trapped in this present, peering at the future as in a glass darkly, but able to look back with clarity because libraries have preserved the records of humankind. I hope and pray that the speaker one hundred years from now will have the same ability to read, view, and hear the records of today and tomorrow.

Technology had been wreaking marvels in the twenty-five years before 1901. It is notable that a comprehensive list of innovations and inventions shows that almost all of them came from one of four countries—the U.S., the United Kingdom, France, and Germany—divided almost equally.² In preparation for a century of movement, the 1890s saw the introduction of the electric bicycle, underground electric railway, diesel engine, motorcycle, outboard engine, gasoline-powered truck, gear box, motor barge, motor bus, electric bus, speedometer, taxi, rigid airship, as well as many of the inventions that made possible airplanes and the mass production of automobiles. In a scant few decades, those transportation inventions alone would change the world utterly, for good and for ill, to an extent that appeared to those living at the time to be unprecedented and transformational. That revolution in locomotion is, arguably, at least as far-reaching in its global effect as the computer revolution is today.

The 1890s also produced the aluminum saucepan, machine-gun, premature baby incubator, vacuum flask, domestic electric fire, milking machine, x-rays, dial telephone, ice cream cone, aspirin, high-speed steel production, paper clip, hearing aid, and safety razor. These, and countless other innovations, transformed the domestic and working lives of everyone in the world. That transformation was faster in coming and mainly benign in Western European countries and North America, and slower in coming and often malign in the colonies and less economically advanced countries of Africa, Asia, and Central and South America. In the latter case, it was the Western technological advantage (principally in locomotion, communication, and the technology of war) that made possible the subjugation and exploitation of what we now call the Third World.

Technology was beginning to exert a great influence on the material lives of the Americans of 1901, but it was also preparing to exert a great influence over their interior lives.

- Letter writing was very common at the turn of the century (just one indication of a higher level of

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applied literacy then than now). That high level of communication was made possible by three technological innovations—the mass-produced lead pencil (1890s), the fountain pen (first manufactured in 1884), and the mass production and wide availability of inexpensive writing paper.³

- An astonishing variety of printed serial publications was available to the reader of 1901. It is well known that big American cities had numerous morning and afternoon newspapers (many in languages other than English) and that there were numerous weekly and monthly magazines. It is less well known that equally large numbers of magazines and newspapers with a large readership emanated from small towns and rural areas.
- The age of mass photography was in full swing. Modern photography began in 1887, when Eastman replaced glass photographic plates with celluloid—a necessary precondition of moving pictures. He introduced the Brownie camera (“Pull the string, turn the key, press the button”) in 1888 and everyone could take pictures of her or his family, surroundings, vacations, etc., with no training or skill required.
- America in 1901 was full of visual stimulation. Magazines were heavily illustrated and contained graphic advertisements. Cheap reproductions of art works, battle scenes, portraits, and religious scenes hung in every parlor. Posters and placards decorated almost every public place. Postcards, photographs, calendars, greeting cards, and many other graphic media were everywhere to be found. Stereoscopes and 3-D stereo cards were as common in living rooms as televisions are today. All this abundance of visuality was made possible by the mass production application of new technologies. This closely parallels today’s ubiquity of sound—music in elevators, buzzing in the ears of walkers, making dentists’ offices even worse than they are already, in restaurants, hotels, railroad stations, a 24/7 aural assault.
- The first central telephone exchange was established in 1878 in New Haven, Conn. (in an office that also issued the first telephone directory). By 1901, long distance telephony was a well-established technology. In 1893, the Bell Company leased telephones to 260,000 customers (1 for every 250 people in the U.S.).⁴ Here we have the beginnings of a telephone network that is today the greatest network the world has ever seen, far surpassing the Internet in its ubiquity and in its effect on human lives.⁵
- In 1877, Edison demonstrated the first version of the phonograph. Within very few years, a subsidiary of the Edison Company installed “nickel in the slot” phonographs in soda fountains and saloons, ending the careers of many saloon piano players. Emile Berliner developed the flat disc “record” in 1896.

- By the 1890s, three main kinds of high quality printing—rotary letterpress, rotogravure, and metal plate lithography—were in common use.⁶
- Microfilms were used in the Franco-Prussian War of 1870.
- The 1890s saw the cinematograph camera and projector and photographic typesetting (all the invention of the remarkable Englishman Friese-Green), the cylindrical cipher machine, telephoto lens, portable typewriter, film studio, language teaching courses on wax cylinders, wireless telegraphy, ciné film show (the first movies), photogravure, “visible typewriter” (one with which the typist could see what she was typing), cathode ray tube, pianola, loudspeaker, tape recorder, “cineorama” (which used ten projectors), and electric typewriter. In 1901, Reginald Fessenden designed the heterodyne receiver, a device that made radio possible.⁷
- On June 1908, the British electrical pioneer, Campbell Swinton, published a letter in *Nature* that laid down “the basic principle of modern television.”⁸

These innovations, in Thomas Schlereth’s words, “stimulated what many historians regard as a ‘communications revolution.’”⁹ He quotes Warren Sussman: “Consciousness itself was altered. The very perception of time and space was radically changed.”¹⁰ (Words that could be and are used by pundits and sages today concerning the cyberfuture.) Such epochal comment did not begin just one hundred years ago—a Philadelphia newspaper proclaimed in 1844 that its “Telegraphic News” section was “the annihilation of space.”¹¹ Every technology used in human communication today was present in, at least, embryonic form in the first year of the twentieth century. The computer is a possible, but not complete, exception—since the concept of the computer can clearly be seen in the writings and work of Charles Babbage in the first half of the nineteenth century. When you think of what the radio, television, and the computer have done to communications and human life in the year 2000, do not overestimate their impact when compared to the tremendous impact of the innovations of the late nineteenth century.

The American people of 1901 had a relatively low exposure to the diversions and distractions that absorb so much of our time today. The consumerism and materialism that pervade life today were only in a fledgling state. The people were still mostly rural, though the great cities of America teemed with Europe’s poor and huddled masses, and life centered on small communities and neighborhoods with generations of the same family (even in the case of many of the recent immigrants) living in proximity or even in the same dwelling. This led to the good and bad things that result from low mobility and consequent lack of exposure to other cultures, religions,

and ways of thinking. Far fewer people then than now had access to education beyond the elementary level and the number of people who were literate in the sense of being able to read was far less. However, if by "literacy" one means the ability to engage in, and the practice of, sustained reading of complex texts, it is very doubtful that we live in a more literate society today. On the other hand, health and nutrition were at a far lower level then than now, and life expectancy has increased greatly, due in large part to science and technology. Our lives today are suffused with creature comforts beyond the dreams of even the richest people of one hundred years ago and the amount of information potentially available to almost everyone today is far greater now than it was then. It is even arguable that we have more knowledge today than our ancestors of the late nineteenth century, though we have to acknowledge that most of that new knowledge is scientific, technical, and medical. Do we really know more now about the meaning of life, the nature of humankind, and the mysteries of the human heart and soul? In a world saturated with information and data, are we more knowledgeable or merely more informed? What is the nature of human life today if, crammed with statistics and factoids, we know thousands of trees but have no knowledge of the infinite forest in which we, our ancestors, and our descendants live, whether we and they like it or not?

Technology in Libraries One Hundred Years Ago

Library life one hundred years ago was by no means unaffected by technology. Here are examples drawn from the text and advertisements of *Library Journal*.

- In April 1900 F. M. Crunden of the St. Louis Public Library reported with some satisfaction on his comparison of the Remington, Hammond, and Smith-Premier typewriters, with preference for the Remington, not least because it furnished "a complete card attachment, which works easily and satisfactorily." On the other hand, an advertisement for the Hammond typewriter in September 1900 stressed that it has "a special library type, and furthermore prints in any language, style of type, or color of ink. . . ."
- J. Rufus Wales of Marlboro (Mass.), advertised his patented improved spring-back bookbinding system in January 1901.
- The ALA exhibit at the Paris Exposition of 1900 contained examples of eleven different circulation systems; many styles of printed catalog card; twenty styles of temporary binders; specimen volumes for the blind printed in New York point, American

Braille, Boston line letter, and Moon; and "the travel-stained case and well-worn books of the Stout traveling library, no. 26, both making clearer than many words the full meaning of the new spirit of American librarianship."¹²

- No less a light than Charles Ammi Cutter gave advice on the acquisition, cataloging, display, and preservation of photographs and photoprints in October 1900 at the Montréal Annual Conference of ALA. He noted the way in which the "most advanced libraries" had been laying in large collections of photographs and opined that photographs are to art what concerts are to music.
- Shelving systems (including moveable shelving systems) abounded and the Art Metal Construction Company, maker of the reliable Fenton Steel Stacks, was a frequent *Library Journal* advertiser.
- The Library of Congress's Bernard Green's (March 1900) paper on the planning and construction of library buildings gives a fine illustration of the dizzying pace of change at the time. He described the small, dreary libraries of a few decades before and went on:

Books have increased and multiplied almost beyond comprehension both in number and diversity. . . . Periodical and newspaper literature may yet swamp the world in print. The earth and the heavens are being traversed and surveyed extensively and the growth and value of maps and charts has already become voluminous. . . . Manuscripts are being collected and extensively studied and collated, requiring accommodations in safe, specially constructed cases, while prints and the graphic art of illustration . . . have kept pace with and become an invaluable adjunct of the printed book.

He goes on to discuss the "special mechanical devices" such as automatic book carriers, pneumatic tubes for delivering messages, and electric signals that enabled LC to deliver a book from its shelves to a reader within four minutes of receiving a request.

- In June 1908 John Fretwell reported on "photographic copying in libraries" based on work done in Germany by a Professor Krumbacher. He concentrated on the production of facsimiles of the book and manuscript holdings of great libraries and the copying of illustrations. There were many different methods available at the time, involving the use of a stereopticon, glass plates, bromide paper, orthochromatic emulsions, and reversing prisms. The impression one gains of Herr Doktor Krumbacher is one of teeming technology and remorseless innovation.

Many letters, communications, and editorials in the *Library Journal* in the earliest years of the twentieth century

ry were concerned with new techniques, methods, and applications of machinery. The same articles and pages also carry much rumination on the implications of what they saw as a great rate of change on the profession and on service to the growing and changing population. The tone of these articles is very similar to the tone of articles today. Will libraries and librarianship survive? Will the growth in the diversity and number of means of communication change libraries for the better or the worse? Will a changing society value libraries in the future? All these questions we ask today were being asked one hundred years ago.

Now

Stress is a hallmark of the “anger epidemic,” and the major contributing factors are time and technology, experts say. There is not enough of the first, and there is strong fallout from the second. “Cell ‘phones, pagers, and high-tech devices allow us to be interrupted anywhere, at any time,” [C. Leslie] Charles says, “this constant accessibility, and compulsive use of technology, fragments of what little time we do have, adding to our sense of urgency, emergency, and overload.”¹³

This is our world. It is not a world, in my view, in which the nature of technological change is different, but it is one in which we are, willy-nilly, made conscious of technology to the point at which many people feel that their lives are mastered by technology rather than enhanced by it. It is as though the Cubists were not only great artists but also prophets. We live fractured, many-faceted, discordant lives with a lot of energy devoted to the hopeless task of fitting the pieces of a surrealist jigsaw puzzle together. The music of our lives is atonal, free-form jazz and hip-hop, punctuated with the jagged noise of fax machines, beepers, cell phones, and the cacophony of traffic and jet planes. The center of most lives ceased to hold many years ago and these disarticulated lives seek more and more diversion to deaden the sense of disintegration. The growth in New Age religions is one side of a coin of which the obverse is the flight into fundamentalism. Both represent a search for meaning in a world that is too difficult and complex for most. No wonder self-help books are so popular, as are all the pronouncements of futurists—the seers and sages of our day.

In all probability, the single largest difference between a late-twentieth-century life and a late-nineteenth-century life is the former’s lack of repose and the opportunity for repose. People, ranging from the business person “on vacation” with her laptop and portable fax machine to the oaf in the restaurant jabbering on his cell phone, are bombarded with information and stimulation that militates against reflection, repose, and the enjoyment of life. Just

think of the average teenager today born in, say, 1984. Imagine how her life has been conditioned by the consumer-entertainment complex, by cell phones, faxes, advertisements in every medium, personal computers, the Internet, one-hundred-channel televisions in every room of her home and in every public place (including elevators), and all the other distractions and assaults on the mind. Do you wonder that she may never have developed a rich interior life, may never known the joy of serious reading, and may never have the intellectual equipment that will make her a truly independent, free person?

There is also the question of the adaptability of the human mind and psyche to the greatly increased pace and the many stresses of modern life—largely due, directly and indirectly, to changing technology.

Here are some of the paradoxes of modern life:

- We are exposed to other cultures through mass communications and easy, affordable travel, but increasingly live in a bland, homogenized global culture created by mass communications and the travel industry.
- We have, fifty years after Reisman foretold it, the culmination of society as a “lonely crowd”—mass culture lived in mentally isolated, physically crowded environments; surfing alone, bowling alone, sitting in traffic jams alone with only the cell phone and golden oldie radio stations for company.¹⁴ A modern-day Billy Rose might write “Me and my cell phone/All alone and feeling blue.”¹⁵
- We have more “information” available to us than ever before (and more reason to doubt the authenticity of much of that “information”). At the same time, we have an ever-decreasing ability to cope with it, organize it, preserve it, and evaluate it. Such phrases as “information anxiety,” “information shock,” “information dilemma,” “information gap,” and “information overload” are perennial features of the titles of today’s books and articles. Far from reveling in the increased availability of texts and images, many of us feel overwhelmed by the flood and increasingly incapable of dealing with it. People who use the Internet for hours daily (and there are more of them than ever, if surveys are to be believed) are driven by the ever receding horizon—the Grail of information satisfaction forever just out of their reach.
- For some time now, pundits have been predicting the death of the book, the imminent end of the scholarly journal and the newspaper, and the general passing of the age of Gutenberg. There are two huge problems with which we will have to deal if these predictions come true. On one level, we have no idea what will happen to culture and society if the sustained

reading of texts is replaced by an age dependent on visual stimulation, sound bites, wall to wall sound, and snippets of text. We do not know, but perhaps we shall find out?

The true paradox is on a more practical and urgent plane. Everyone knows that much of what is on the Internet is meretricious, purely commercial, of no value or of fleeting and local value, or generally worthless. These electronic wastelands reinforce the words of the philosopher Barry: "The Internet is the most important single development in the history of human communications since 'call waiting.'"¹⁶ Filterers are just the same old book-banners in new clothing, but we have to admit that, in our touting of the Internet in education and libraries, we have handed them a powerful weapon. The fact is that, in Brian Winston's words: "... the only effective marketers on the vaunted Information Highway ... [are] pornographers."¹⁷ We all stress the importance of the Internet. The Internet is rife with commercial pornography. Can we blame the censors for seizing on the unhappy conjunction of these two facts?

The great shining exception to this intellectual squalor is the mass of information and recorded knowledge that is available because, and only because, it is a by-product of a flourishing print industry. The huge majority of our e-books are computerized transcriptions of out-of-copyright texts in print or the computer versions of modern books that are a standard part of the book production process today. (Another paradox is that computerization has made the production of high-quality print on paper quicker, cheaper, and more accessible to more people than ever before.) The vast majority of electronic journals are by-products of a huge, complex, and financially successful print journal industry. One commonly cited advantage—a real advantage—of the Internet is that it gives almost everybody access to newspapers across the country and the world. That access would not exist if the newspapers themselves ceased to exist when the Age of Print comes to an end.

- Many years ago, Hans Wellisch noted that the number and portability of human records grew in inverse relationship to their durability.¹⁸ Books are far more numerous, portable, and extensive than carved stones, but they are far less durable. Digital records are created in mind-boggling numbers and can be transferred to remote locations in nanoseconds, but they are evanescent and unstable. We may have reached the solution to Wellisch's conundrum during the last two hundred years. Books are not as durable as stones but, when many copies are manufactured (as is almost always the case), the survival of any given text is almost assured. We like to think of the

history of human communication being one of progress, but the paradox is that, in terms of preserving the human record, we are regressing, not progressing. In truth, the Electronic Age may be another Dark Ages—a time in which people think, dream, write, and create as they have always done, but their thoughts, dreams, and writings die with them.

Technology in Libraries Today

It seems to me sometimes that technology used to be seen simply as a way of improving and enhancing library service. That was certainly the case one hundred years ago, when Mr. Crunden compared typewriters in order to form a more perfect catalog card. I would suggest it was true fifteen to twenty years ago when library automation was seen as the only way to improve library service in cataloging, circulation, acquisitions, and many other areas. The online catalog, to take one example, was a highly successful attempt to improve and integrate valuable services. This use of automation as a tool to improve and enhance libraries has now given way to something else. Increasingly, the transition from automation to digitization is resulting in a discontinuity in which the tool becomes larger and more important than the service. Just consider the remarkably ill-informed discussions on cataloging Web resources that have occupied many librarians and others in recent years. If digitization were to be seen as a tool, that discussion would concentrate on two, at least superficially, simple questions. How do we extend bibliographic standards to cover digital resources? Having done so, which Web resources shall we catalog? This has not been the main thrust of discussion.

For my sins, I have had to read and listen to a number of papers on metadata (a primitive species of cataloging), the great majority of which assume the irrelevance of current bibliographic standards and library catalogs. Thus, in their minds at least, the tool (digitization) is greater than the service (the library). This phenomenon is present, at least implicitly, in all areas of modern library service. Is "information competence" about, and only about, competence in using digitized resources? Are "automating reference" and "disintermediation" codes for doing away with reference services? These and many other questions point to the dissonance and discontinuity that is at the heart of our response to technology—as librarians and as human beings. As librarians, we have to decide whether to use technology to improve library service and to give new library services not possible hitherto or to replace all existing library services and programs with something that is all-digital and entirely new. As human beings, we have to resolve the stresses and the discordance of this phase of civilization and technology

so that technology becomes a positive part of society and not a threat to its very existence. There is no reason why technology should be inimical to a harmonious life that balances all aspects of living. However, there is no doubt that few have managed to integrate technology into their lives in a way that enriches those lives. One large group consists of those to whom technology is a source of diversion—digital hula-hoops for the postmodern generation. Another large group consists of those to whom technology has become an obsession that dominates and shapes their lives—fundamentalist worshippers at the digital altar. Surely there is a third way in which technology is a powerful tool for the enrichment of human lives, neither trivial nor dominant?

Libraries in 2001

We are well beyond the age of library automation and, for good or ill, deep into a time in which digitized information and electronic resources dominate our working life and professional discussions. At the same time, we are in an age in which print publishing and the reading of books and magazines is flourishing (not to mention the use of videos, sound recordings, and all the other ways in which human beings communicate and preserve recorded knowledge and information). Moreover, many, probably most, of our library patrons live more in that print world than in the digital world. This is another paradox and discontinuity, but not one that would be apparent from a reading of our professional literature or a perusal, say, of the list of programs at any ALA Annual Conference. Just look at the topics that dominate our professional journals and conferences. From “thin clients” to XML, from “cataloging the Web” to e-books, from wireless networks to digital video, it is as though LITA has taken over the entire profession and librarianship has become technology today, technology tomorrow, and technology forever. I believe LITA to be one of the most important divisions of ALA and its concerns to be central to librarianship. However, I do not believe that LITA’s concerns are librarianship. Have we solved all the nontechnological problems of our working lives? Or, more likely, are we concentrating on the areas of our work that attract funding and the interest of our masters?

In this, as in everything else, I call for harmony and balance. We need to look at our work with clear eyes in order to see the real needs of our patrons and not through the lens of technology invariably dictating a technological solution to all problems and nonproblems alike. How do we attain harmony and balance in our work? I believe we need two things above all—an understanding of the evolutionary history of our profession and of technology and a collective belief in our central and unchanging values. I

have tried to make the point about our evolutionary history earlier. As to values, many of you are aware of the spectacular failure of ALA’s latest attempt to formulate a list of our core values in the wake of the Congress on Professional Education. Those who are not aware should be happy—it was not an edifying story.

I would like to close by listing the eight values that I have put forward in a recent book and relating them briefly to technology in libraries.¹⁹ I would emphasize that these values are a personal statement and not presented in any way as an official statement by ALA or, indeed, any other body.

Democracy

Democracy requires, among other things, that we extend all the benefits of library use to all our library users. This means that we should use useful technology fully but also that we should not force our users into a technological Procrustean Bed because of an ideological inclination on our part. Democracy also requires us to ensure that minorities are protected, including those to whom technology is daunting or stressful.

Stewardship

We are responsible for the human transcript today and tomorrow. When considering technology, we must also consider our duty to ensure that future generations know what we know and, therefore, to ensure preservation and onward transmission of the records of humankind. There is scant evidence that our present focus on digital records and their use is contributing to good stewardship or that this is a concern to the mass of technologically advanced thinkers in the field.

Service

Our use of technology must always be in the context of its usefulness in giving service to individual users of our libraries and to society as a whole. This takes us back to the question of technology, tool or master? If we allow technological developments to drive the agenda, there will inevitably be negative effects on service. It is far better to define the services that we wish to supply and match the most appropriate technologies and nontechnological answers to those services.

Intellectual Freedom

I have already touched upon the great filtering controversy, but there are a number of other intellectual freedom issues that arise from our use of current technologies. Let me just mention two of them. The ability to monitor the specifics of individual use of electronic resources is a tool

with malign consequences in the wrong hands. We lack the invaluable control mechanisms of publishers in the world of the Net and the Web. This means that many of the decisions are shifted to librarians and to the end user. Though not necessarily a bad thing, that transfer of responsibility means that librarians must confront intellectual freedom issues far more often than before. In my view, they must always keep in mind that the principle of library users being entitled access to the texts and images and sounds they need or want is not altered by virtue of the fact that those texts, images, and sounds are in digital form.

Privacy

The threat to privacy posed by modern technology is real. From dotcom companies compiling detailed dossiers on the reading, viewing, and purchasing habits of their customers to law enforcers searching the hard drives of suspects, to constraints on the use of public terminals in libraries, it is evident that we lack a code of conduct that respects the right to privacy. Some of the actual invasions of privacy today may seem benign or at least harmless, but their potential abuses are many and far-reaching. Using electronic records to catch embezzlers, terrorists, and child pornographers may seem an appealing use of technological possibilities. How about, however, a slightly different society that uses those possibilities to track down political dissidents, gays, religious dissenters, and members of any other minority group? It is hard for librarians to influence the wider society but, at very least, we can do our best to preserve the privacy rights of library users and staff.

Commitment to Literacy and Learning

All libraries are predicated on the idea that the imparting, creation, and preservation of knowledge are vital to a civilized society. The sustained reading of complex texts is an integral part of that idea. A number of studies have shown that the true literacy (as opposed to the functional literacy) of the population is declining. At the end of the day, everyone is presented with texts that have to be interpreted and absorbed. Unless you take the extreme view that we are moving rapidly into a postliterate, dominantly visual dystopia, we will have to ensure that libraries use technology to foster literacy and learning. This means confronting some difficult questions and, again, a clear view of technology as a tool to enhance, not an irresistible force to which we must surrender.

Rationalism

Libraries are the children of the Enlightenment. They stand for the triumph of human reason over superstition and mental darkness. We adopt a rational, scientific

approach to all our activities as librarians and the idea of the individual empowering herself through the acquisition of knowledge and information is at the heart of our profession. Technology, used rationally and in a human context, allows us create an even better librarianship, but it needs to be assessed clearly and used in the light of logic and reason.

Equity of Access

Clichés have one positive attribute—they are true. The dominant cliché of modern librarianship is “the digital divide.” Alas, this is not only a glib phrase worn out by overuse, but also an encapsulation of real problems. If you are poor, disabled, rural, young, very old, and/or a resident of the inner city, it is more than likely that your access to “the information age” is limited or nonexistent. Libraries can do things to remedy this injustice and, I would submit, are duty-bound to do so. “Free libraries freely available to all” was the rallying cry of the nineteenth-century public library pioneers. I know there is no such thing as a free library, and I know we often fall short of our ideals, but we should never cease from striving for the ideal of unfettered access to our services for all.

■ Envoi

I have been very much taken by the five challenges of the present age put forward by Jeff Rutenbeck.²⁰

Those challenges are:

- Malleability. By this, he means that we change electronic documents without regard to their intellectual integrity or the necessity to preserve the original content.
- Selectivity. By this, he means the fact that librarians and library users often take the easy route in preferring digital resources to print and, when we choose print, preferring the small proportion that is easily digitized.
- Exclusivity. The digital divide is the most obvious example of the way in which technology today favors the First World, the white, the well off, and the educated.
- Vulnerability. His thesis is that interconnectedness makes us more vulnerable to the destruction, the alteration, and the misuse of documents and to the possibility of local, regional, and even global crashes.
- Superficiality. This is, to my mind, the greatest challenge. How do we improve on the shallow nature of our interaction with recorded knowledge and information and with each other in the world of the Net and the Web?

I do hope that we can conquer these and the other challenges that face us. I do hope we can build a new librarianship of harmony and balance that exalts the human over the technological, that preserves the best of what we have and explores the best of what is to be, and that makes lives (including our own) rich, productive, and multidimensional.

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