these shape the sensibilities that give life to facts.

We need sound information and a great deal of it in our struggle to save the living planet. But that is not all we need. We need to draw on works of thought and wonder that provide the emotional context for wise decisions and compassionate policy. Who better to remind us of that than those who work each day at the sources of culture?

I had considered beginning this paper with some tempting bait: a sketch of the glorious role of librarians and libraries in our high tech future. I was then going to raise questions about the direction that future is taking. But I have come to believe that we are moving far too rapidly away from our historic professional and institutional values of print literacy, social memory, and equal access to resources for an informed citizenry, so I want to state my position up front as clearly as possible.

Henry Giroux, a critical theorist of education, argued in the early 1980’s that there has been a fundamental shift in the guiding ideas behind our policies toward public institutions. He speaks about public schools, but I think his comments apply to libraries as well:

Schools [and libraries] are no longer being celebrated for their role as democratizing institutions. [T]he traditional arms-length relationship between [public institutions] and business is now being dismantled for the purpose of aligning [them] more closely with short- and long-term business and corporate interests. [They] are becoming citadel[s] of corporate ideology... (Giroux 1988, 178).

What we are losing in this process, and what I think we must create and recreate, is the role of libraries as what Giroux calls “critical” or “democratic public spheres.” Again, adapting his analysis of schooling, I would describe public institutions like schools and libraries

...as democratic sites dedicated to forms of self and social empowerment. [They] are public spaces where [people] learn the knowledge and skills necessary to live in an authentic democracy. Instead of defining [them] as extensions of the workplace or as frontline institutions in the battle of international markets and foreign competition, [public institutions] as democratic
public spheres are constructed around forms of critical inquiry that dignify meaningful dialogue and human agency [and] the discourse of public association and social responsibility...recapturing the idea of critical democracy as a social movement that supports individual freedom and social justice (Giroux 1988, xxxii; see also Buschman and Carbone 1991 and Giroux 1984).

In contrast to this vision, I will argue that the current technological trajectory of our profession and our institutions is the primary vehicle behind the shift toward aligning libraries with the technical and corporate agenda to the detriment of libraries' role as critical and democratic public spheres.

Background

To begin to illustrate my argument, let me first give some brief background upon which it rests. There is very little question that the government, corporate, and technical elite have, for some time now, provided the basis for a technological agenda on national information policies that has come to define our work and our institutions. Herbert and Anita Schiller have clearly traced the beginnings of this development back to the 1940's through the 1970's. They cite Lee Burchinal, then Director of the Division of Scientific Information of the National Science Foundation who wrote in 1977 that:

The driving forces [for the] substitution of nonprint forms of distribution...lie outside the library field and its on-line suppliers....The main impetus is derived from the dynamics of the major elements comprising the U.S. information economy. Information processing requirements of business, banking and other commercial enterprises are immense. So are those of the military and civilian sides of the federal government.... [T]he library field will not compel rethinking or reformulation of national information policies. But the converse is true - decisions regarding national communication policies and practices will have profound effects on libraries and their operations (Schiller and Schiller 1988, 151).

Scholars like David Noble have shown that the general history of technology benefits those who invent, own, and control them (Noble 1983), and John Durham Peters has very succinctly shown that the computer was the quintessential product of the post-World War II military-industrial complex. So, by the mid-1970's, the Domestic Council Committee, chaired by Nelson Rockefeller, could state flatly that "While publicly supported library functions providing free information should not be abolished, it should be recognized that there is no such thing as free information" (Schiller and Schiller 1988, 157).

This thread has been picked up by the powerful Information Industry Association, whose primary goal, the Schillers state, "is basically incompatible with the underlying and historical, though inadequately fulfilled, principle of...library service-equal access for all to the nation's informational resources" (154). In other words, it should come as no surprise to us that information technology resources in libraries are structured toward profiting and supporting those who invented, sponsored, and still generally control them. For example, in very recent developments, the Regional Bell Operating Companies (the "Baby Bells" or RBOCs) were allowed into the information provision and electronic publishing business by an October 30, 1991 Supreme Court decision, despite the deep reservations of the presiding judge. The objections of the American Newspaper Association and several high tech companies were stated to a Congressional Subcommittee: "To be forced to rely upon one's competitor for delivery of an electronic product is ludicrous. [T]he RBOCs still totally control local phone services and have a history of well-known, substantial anti-competitive behavior" (Webb 1991, 8; see also Publisher's Weekly 1991).

As a result of the Supreme Court's decision, 2 RBOC's purchased, among other things: the rights to NOTIS (a system used by 110 academic libraries), Dynix (the world's most widely installed library system), and a joint venture with France's Minitel system to offer videotext. All this added to the RBOCs' previous purchases of the rights to the OCLC LS200 and Tacoma Public Library systems (Malinconico 1992). Currently, the Baby Bells are lobbying to kill federal legislation regulating against them offering information services in areas where they provide
telephone service. They wish to "promote" rather than "stifle" competition (Information Today 1992).

As a final example of our government's priorities, President Bush supported "a national network for information sharing...copyright statutes and business information centers" but stopped short of supporting the Omnibus Children and Youth Literacy Initiative recommended to him from the White House Conference on Library and Information Science (Library Hotline 1992). He further stated in comments published in the American Libraries, May 1992 issue that contracting out library and information services is appropriate when it will promote efficiency and lead to improved services. Private industry will work closely with Federal agencies and labs in the planning, funding, and management of the [NREN] initiative to ensure that the fruit of this research network will be brought into the educational and commercial marketplace (Bandelin 1992, 361).

Given the distinctly economic and technical agenda driving information policies, and in turn, library professional practice, what are some of the possible results to our profession and our institutions if we continue on this trajectory? I would like to explore some of the troublesome possibilities in our future in the following section, keeping in mind the vision of libraries as critical and democratic public spheres.

The Problems: A Broad View

In a broad sense, if we look, we can clearly see the economic and technical agenda redefining and restructuring our profession and our institutions. For instance, in a revealing article, Tom Gaughan, editor of American Libraries, visited OCLC headquarters - that benchmark of future directions for libraries - and found that this "non-profit utility" may be for libraries, but not of them. He goes on to describe "the corporate culture of OCLC." If OCLC is a bellweather of change for libraries, then librarians can expect:

- to work in buildings designed for computers instead of people or books. OCLC has 280,000 miles of telecommunications wiring to link and support its operations
- to work in low, acoustically padded workspaces designed for individual "private" computer use. Getting a new, upgraded computer will become the equivalent of a promotion as it is at OCLC
- to work in an atmosphere where ceiling mounted speakers will emit "white noise" to create a "private" zone in one's cubicle while individual workstations are constantly monitored for the number of calls handled, average wait for an answer, and the abandon rate of callers per librarian as they are at OCLC (Gaughan 1991).

OCLC is very concerned about marketing their products to libraries and keeping those "customers" satisfied. But their newest ventures smack more of corporate empire building and profit seeking: the First Search database service which essentially targets end users for searching and direct delivery of documents, making libraries and librarians middlemen in selling the search cards for access to the system. The Chronicle of Higher Education described this as "Bypassing the Librarian" (Malinconico 1992). I would argue that OCLC is a large indicator of where our institutions are heading.

Like OCLC, libraries of all kinds are marketing fee-based services which are primarily driven by and dependent on electronic resources. I am not going to touch the issues of equity and access inherent in this approach. They have been thoroughly critiqued by others. But Michael Carbone and I have written elsewhere that this entrepreneurial direction has consequences. While non-profit entities like OCLC and the Library of Congress are aggressively pursuing markets and fees for services [a model of entrepreneurial librarianship has taken root]. Restructuring toward fees and marketing of services may leave behind ideas of service, value, and scholarship. [James] Govan...states his fear that "libraries will cease to be enlisted in a common educational cause and will come increasingly to pursue separate goals in isolation." The public sphere and democratic traditions and values [are] not well served
by moves in this direction (Buschman and Carbone 1991, 35-6).

Let me state clearly that nothing I have read before or after we wrote that has shown anything different. Information technology-driven fee-based services in libraries are almost exclusively business oriented. In essence they are publicly underwritten research services for business — doing what one corporate library director described as the "legwork [with a] big difference in price (Rogers 1992, 36).

Where money goes, so goes collection building, the purchase of more supporting electronic resources, and human resources. Entrepreneurial management in libraries means putting public institutions like libraries on a "business footing": offering more collections and services that show a return, and fewer that don't. Money from customers or private sources does not come without strings, and the logic of marketing tells the entrepreneurial librarian to invest more in the "profitable" end of the "business" (see Buschman and Carbone 1991, Govan 1988, and Coffman and Josephine 1991).

Finally, I would like to point out that these new fee-based services are being offered in academic and public libraries in an atmosphere of stagnant budgets. Where is the money and staffing coming from? (See McMillen 1992 and Nicklin 1992, 1992a) Perhaps the most egregious example is that of the New York Public Library which is opening a "Science, Industry, and Business" research library in Manhattan at a public cost of $18.5 million (Library Hotline 1991) while the New York Times is running stories on $25 million in budget cuts and curtailing main library and branch hours for after school services to children.

Let me restate something I originally wrote about 3 years ago:

Libraries are not profitable in the cost-benefit mode of analysis, and never will be. Their good is not quantifiable and represents as much a faith and public value than a specific service.... Librarianship, like teaching, law, and medicine is not a private profession. The changes in those professions have great social importance and they are treated as public issues. Should the effects of our decisions weigh less? (Buschman 1990, 148)

I now would like to turn this discussion to some specific and disturbing possibilities for the profession of librarianship.

The Problems: Still a Profession?

Optimists about our future see librarians as information consultants, dynamic navigators (Robinson 1991) or data-surfers (Davis 1992) if you prefer the hip version, in future "virtual libraries." All print resources, past, present, and future, will be digitized and available electronically from a single central source over a national communications network. The thinking goes that the public, as well as students and scholars, will be overwhelmed by the richness of these resources — and need librarians. Therefore, we should no longer build big book warehouses, we should get on the information bandwagon now. In fact, we should have been on it several years ago. This is a composite picture from several recently published articles (Robinson, Malinconico, Smith) and I see a number of very serious issues for our profession in this vision of the future.

First, in a chapter written for my forthcoming edited monograph, Michael Winter has explored the issue of deskillings/deprofessionalization and the reskilling of librarianship in relation to technologies. I do not want to misrepresent Michael’s conclusions, so I will note them up front. He contends that "deskilling" is somewhat misleading if applied across the board.... In librarianship one can find examples of downward movement [of professional skills], but these are often accompanied by an at least partly compensating upward movement; "deskilling" in other words, is often followed by "reskilling" (Winter, forthcoming).

I have looked at Winter’s analysis and come to a more pessimistic conclusion. He notes that, as with other industries or professions, capital-intensive investment in technologies tends to transfer authority away from the collegial and professional control of work. The introduction of "telematics" — contemporary automation combined with telecommunications — shifts librarians’ labor processes toward electronic resources, and,
inevitably brings new managerial orientations, often shifting resources away from traditional areas of librarianship....Along with this comes a new administrative elite in libraries...oriented toward national and international networking trends [and] often openly allied with outside interests. Not surprisingly, contemporary library administrators often lean toward the elite corporate culture that controls telematic technology than to the technology of print [Winter, forthcoming].

If it is based in elite corporate culture, how might management of librarians' professional work look in the future? Think back to my description of the "virtual library" - librarians as information consultants and data surfers. If all librarian work is to be mediated through computers, which is exactly what the "virtual library" holds for us, and those technologies are the vehicle for the lessening of collegial control of work and the introduction of the corporate management model, then I believe librarians will be subject to the same supervision and constraints as other white collar and information workers. For example, the Wall Street Journal ran a story on office networks: "Network management programs now allow operators of most office PC networks to peer into directories of files stored on individual PC's, letting them read, rewrite and delete files from PC hard disks" [Wilke 1992].

Further, Shoshana Zuboff, author of In the Age of the Smart Machine, states quite bluntly in an earlier article that

It is the intent of the intellectual technology at the core of the computer system to substitute algorithms or decision rules for individual judgement....Work accomplished through the medium of video terminals or other intelligent equipment can be recorded on a second-by-second basis. [This information is] available to supervisors and managers, thus limiting their dependence on face-to-face supervision but potentially increasing the amount of surveillance that can occur [Zuboff 1982, 52, 57].

Zuboff notes that jobs as diverse as that of bill collectors, airline pilots, auto-assembly plant workers, telephone company workers, bankers, and cold-type operators have all been deskilled to a greater or lesser degree. She concludes that "...there should be no confusion that firms undertake massive computer-based automation projects with labor force reduction as a primary goal" [61]. In other words, information technologies have brought both deskilling and an abstracted and deprofessionalizing supervision to many other kinds of work.

Remember Michael Winter's analysis that deskilling is only partially mitigated by reskilling. Is this all too farfetched to apply to librarianship? Think back further to the reference to Tom Gaughan's description of work at OCLC. Statistics are kept constantly on the number of calls, average call length, average wait, and the abandon rate. He states that "Several managers expressed concern about [the abandon rate] because it was too high....I wondered if there's a library in the country with a phone system slick enough to measure the abandon rate of telephone reference queries (Gaughan 1991).

I contend that a form of these kinds of management and supervision are already in place at OCLC. In terms of deskilling and labor force reduction, there are right now all kinds of fledgling programs out there designed as "Intelligent Reference Systems" to "...identify and describe appropriate electronic and printed resources to meet user's reference information needs...link users to appropriate...databases [and] provide them with location information about [those resources]" (Bailey and Gunning 1990, 10). This sounds very much like a program designed to do the professional work of an academic reference librarian. Other areas of professional encroachment have been identified as well (Buschman and Carbone 1991). In the long run, I believe these developments in the library field will follow the larger social patterns of deskilling and electronic supervision already found in the blue, pink, and white collar work worlds for some time now.

The Problems: Will We Need Libraries?

What will "virtual libraries" be? There are a number of differing interpretations or glimpses at the underside of the future predicted for our institutions. Like James Govan, I think libraries will become nothing more than retailing shops for pri-
vate and privatized electronic resources. In his [probably] unintentionally ironic title, “Information’s Brave New World,” S. Michael Malinconico states that “There are obviously a growing number of serious competitors prepared to offer a broad variety of library and information services” (Malinconico 1992, 38). I find that statement interesting in several ways, but the most important assumption behind it is that libraries need to change and act even more as a “business competitor” to those other “library and information services.” Through this process, we are giving up on our historical missions of service, collective social memory, and our relationship to print.

The problem is that for libraries to install things like electronic Book Banks (Lande 1991), is essentially putting a library in a library! Offering current electronic resources is a replication of the same phenomena. There is no particular reason for all of these resources to be offered through libraries since libraries are putting themselves on an entrepreneurial/business footing. We will have become just another competitor in the information marketplace, not logically, socially, economically, or morally any better or more desirable than other information providers.

Still, Charles Robinson feels that, in order to “save” libraries, we should give up our “custodial function” since there either won’t or shouldn’t be any more massive collections of printed books (Robinson 1992, 54). In a privatized environment, there is no way the full spectrum of print will become available in a “...single comprehensive collection including all extant current, past and future...publications” as Eldred Smith predicts (Smith 1992, 50). None of the current projects to digitize electronic text come close to this goal, and as I have suggested, the selection and distribution of those texts is the building of an electronic canon (Buschman 1992).

Eugene Provenzo, an early supporter of what he called the “Post-Gutenberg” era, has come to question the shape that digitized culture is taking. He warns that digitized text and photographs make the historical record a much more ephemeral and manipulable thing, rendering them unreliable. After all, an electronic text or photograph can be altered without any record of what the original source said....The control and rewriting of history that [Orwell] warned of was not really feasible [then]...The ability to alter the past has always been potentially possible. [But until now] it has tended...to be enormously time-consuming and relatively easy to detect (Provenzo, forthcoming).

This is no longer the case.

Lastly, there is some question that access to current electronic resources is becoming more privatized and restricted. For instance, restricting access to the NREN is already becoming an issue (see Wilson 1992 and 1992a). And in an obscure conference held in Reston, VA on April 21-22, 1992, privatization of the Internet was being contemplated and planned (Caskey 1992). On a lighter note, Stanford University sought to censor a humor file on their computer network (Kadie 1992). I will only note in passing the well-documented and continuing profit-making off of government information (New York Times 1991). Of course, those electronic resources that do exist are weighted heavily toward business and economics. When DIALOG’s 1990 database offerings were examined, my coauthor and I found that 17 of the 25 categories of subjects – covering the vast majority of databases offered - were of primary interest to those fields (Buschman and Carbone 1991, 27). CD-ROMs, the electronic resource of choice in libraries, also lean heavily in this direction. Of the 2212 CD titles available worldwide, only 13% are related to history or the arts. This is substantial growth from 1988 when roughly 50% of all available CD-ROM titles were scientific, technical, or business specific and only 6 were related to the humanities (Nicholls 1992, 72-3).

Conclusion

I have argued elsewhere that librarians are uncritically accepting the agenda inherent in library information technologies on the premise that, by becoming data surfers, we’re catching the wave of the future and riding it to the long-awaited pay and recognition of status that we feel we deserve (Buschman 1990 and 1990a). I think that there are other aspects to those
technologies – an underside if you like – that compel at least as much examination as their wonderful possibilities. Adapting the eloquence of Maxine Greene, another educational thinker, I would suggest that "Nowhere is it written that American [public institutions] are required...to respond to the demands of the Pentagon or to those obsessed with exploiting markets overseas" (Greene 1989, ix-x). Elsewhere she writes: "In a time when so much time is spent watching...and manipulating, in a time when linear forms work in strange dialectic with the swirling images of video; we need to provide spaces...for giving voice to what remains silent amid the sounds of machines" (Greene 1985, 17).

I return to Henry Giroux's call for critical public spheres where the capacity for learning is not reduced to economic or technical considerations.... The public sphere...refers to those arenas of social life...where dialogue and critique provide for the cultivation of democratic sentiments and habits.... The principles that inform the role of state and federal policy within this context are organized around a public philosophy dedicated to the creation of an educated citizenry, capable of exercising political and ethical leadership in the public sphere (Giroux 1984, 190, 192-3).

Librarians simply must gather the intellectual courage, and political and moral will to question where our administrative, government, business, educational, and technical elite are leading our institutions and our profession. The strength of our democracy resides at least as much in providing spaces for potential alternatives, challenges, and ideas to develop as it does in the speed and manipulability of our data. Our current trajectory will make libraries places that no longer provide the spaces that Giroux and Greene spoke of that our society needs now more than ever.

In accepting the ALA Social Responsibilities Round Table's Gay and Lesbian Task Force 1992 Book Award for fiction, Paul Monette put a very poignant and human face on this issue. He said: "Libraries were, for me, one of the only safe spaces; a place where one could explore being different." I believe these are the kinds of spaces we are giving up.

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