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Technological Change and Professional Identity

What I will present here consists of a number of seemingly disparate trails of thinking that I have been pursuing for the past four years or so. Charting those trails on a single map, relating technological change in the information world to the ongoing history of librarianship, as well as to larger managerial and social issues, is what I hope is accomplished in this paper.

I would like to start by introducing an image of this conference as a whole, and a series of alternative images of my place as the last spot on the program. It is the image of a technological feast. I think it will illustrate the underlying rationale with which I undertook this paper. First picture the program, up to now, as a great smorgasbord of technological pickles, side dishes and main courses, with the audience invited to fill their plates. There they are, the tempting relishes (microcomputers, mmmmmm), hearty pastas (word processors and telecommunication devices), and flashy ice-sculpture salad arrangements (videotex and disc), along with the varieties of bread and butter (micrographics and input/output devices). All are arranged attractively to the eye, and in as convenient a form as possible, to encourage the diners to eat heartily.

After having conjured up this image, where, I asked myself, do I fit in? My first thought was obvious—dessert. At the end of the table, I am the last item to maneuver onto the already overloaded plate—if you go in for desserts. Some, of course, have already left the table and gone off somewhere to sit down and eat. These are either the practical-minded, no-nonsense eaters to whom sociological musing is most definitely a frill, or the virtuous dieters making their way home after too many days out of their libraries. To those still left, out of either politeness or a true love for the pastry that will round out an already rich meal: hold back your compli-

ments to the chef. No, I decided that image would not work; not dessert. People who go in for sociology may often be pretty sour—they have a reputation for enjoying making other people uncomfortable—and a number of them have been found by many to be, for one reason or another, completely indigestible. The dessert image just did not fit. I had to devise something else to get a sense of my function on the program.

My next thought was busboy. Here I am, sweeping up after the smorgasbord, trying to create some order following the disarray of the feast. There is a certain amount of plate-scraping—to deal with those messy issues that did not get fully dealt with (like how to pay for all that technology). Maybe I will have to make some clatter to help ease the last diners out, with some bold pronouncement about the future of the tree with the decline of paper. But I will have to watch out for those sharp knives and forks of criticism, for as an academic and a fairly traditional library practitioner, I have some vulnerabilities: I do not have a degree in electrical engineering, I have never mounted a disc pack, and I have never had to meet a payroll. Still, the busboy image does not really suit me either, for the busboy is silent; he has no direct contact or identification with the diners.

What I have finally settled on as an image is something more anthropomorphic than a dessert, something a bit more dignified than a busboy. What I will be today is a restaurant critic, a literate and dispassionate commentator on the feast served to the library world by the information technologists. As a restaurant critic I have an obligation to be honest about my personal tastes in food. But I also must be sensitive to my readership, to be certain to cover such essential details as ambience and price. Today I will even go beyond that a bit, and discuss nutritive value. To achieve such balance in critical perspective, there is no better Michelin guide to emulate than that provided by sociology—a field that, to me at least, goes further than any other humanistic area of study in bringing understanding to the issues we face as librarians in a technological age.

To help my audience pursue the thread of argument that runs through this paper, I would like, at this time, to provide a brief outline of that argument. A key to understanding librarianship's relationship to technological adoption is to develop a more disinterested model of what librarianship is. The commonly accepted model in the occupation currently is the classic "attribute" model of professionalism. After reviewing the classic professional attribute model, I will present an alternative model of how professions behave. This model is now widely accepted and used by sociologists, and is known as a "process" or "conflict" model. An important element of the process model is the idea of occupational segments, developed in a seminal paper by Rue Bucher and Anselm Strauss,¹ which I will briefly recap. With this process model of professions in mind, I will then

look specifically at librarianship. It is my thesis that technology has always played a critical role in the "process" of librarianship, and that today this role is expanding at the expense of other social values which librarianship pursued in the past. I will offer a number of arguments showing the status benefits to librarianship which advanced technology brings, and explore in some depth the consequences of librarianship's increasing reliance on technical solutions. Through a more critical examination of the social ends to which new technologies are being put, I hope to persuade librarians to take full cognizance of their responsibilities in the information world. I wish to make explicit some of the value choices made by librarians that now seem partially hidden, and through that urge a more general examination of the values implicit in much technological decision-making. Only through such higher-level perspectives on decision-making as they are shared by many librarians, in a manner respectful of a diversity of interests, can we hope to avoid the institutionalization of information systems which run counter to human needs. Having now provided a general outline for my remarks, I will proceed with an examination of two competing models of a profession, during which I hope to demonstrate that one is superior to the other in terms of objectivity and accuracy.

Virtually all of us who have gone through library school and have endured a course on "the library in society" have doubtless heard the time-honored lecture on professionalism. That lecture, usually titled "Is Librarianship a Profession?" (or among the bolder, like Melvil Dewey's own "librarianship is a profession"²), typically reviews a canned definition of professionalism and then proceeds to point out how well librarianship fits the definition. The definition used has been around with only minor variations at least since 1915 when Abraham Flexner argued the case for social workers,³ and the classic statement of it is generally considered the one by Greenwood.⁴ Central to this definition is its logic of assigning professional status to an occupation based on specific traits or attributes of that occupation. Criterion attributes for professional status include such things as the occupation having a scientific or specialized and esoteric knowledge base, an orientation toward service to the public, an extended period of training required for entry, a code of ethical conduct, and a professional association. This model is widely taught not only in library schools, but also in many other programs, such as schools of nursing and journalism, or wherever professional status is an issue.

The attribute model has long been troublesome to sociologists, and has gradually been replaced by models which are more sophisticated. There is one great problem with the attribute model, which is this: since "professional status" is defined solely in terms of attributes, the model has promulgated the popular notion that if an occupation wants "professional status," all the occupation need do is strive to achieve all the attributes it

can.⁵ Thus, undertakers can develop codes of ethics, copywriters can form professional associations, chiropractors can require bachelor's degrees for entry into chiropractic schools, and so on—which is, in effect, the creation of the form, without necessarily any substance, of professionalism. Librarianship, too, of course, in its striving for greater social recognition, has worked to achieve such attributes as are called for in the attribute model of professionalism. The recent effort within ALA to promulgate a meaningful code of ethics is just one example. The attribute model, then, rather than being an objective definition of anything, is a set of ideas used by certain occupations to get what they want—a special type of social recognition called “professional.” Some sociologists have gone so far in rejecting the attribute model as to call the terms *professionalism* and *profession* “folk concepts,” having no relevance to sociological scholarship at all.

What has replaced the attribute model as a sociological tool to better understand those occupations which call themselves professions? No single simple, alternative model has yet been precisely codified, but there is general agreement that the *actions* or *moves* an occupation engages in to achieve or maintain a high social status are more important to study than whether some set level—“professional”—has been achieved or not achieved. Such an agreement avoids the pitfall of having sociologists make some judgment as to whether or not an occupation is a profession, since in reality that judgment has relatively little, if any, meaning. What does have meaning, of course, is the *belief* common within certain occupations that professional status is a desirable goal. Such a belief is a reliable predictor of certain actions designed to achieve the goal of professional status. This refocusing of attention away from the spurious issue of whether an occupation is or is not a profession, and toward an examination of action to achieve the imputed goal, is called a “conflict” or “process” approach to the study of occupations.

An important theoretical building block in developing this more objective approach was provided in a 1961 paper called “Professions in Process” by Rue Bucher and Anselm Strauss, which was published in the *American Journal of Sociology*.⁶ Bucher and Strauss drew attention to the means by which professions sustain a high social status, but more importantly, they pointed out that to conceive of an occupational group as a unified and homogeneous “profession” was to ignore a lot of the significant variation within the group. They developed the concept of professional “segments,” subgroups within the occupation as a whole which have varying, and sometimes conflicting, interests. These segments may be specialties, they may be special roles designed to perform public relations for the occupational group, or interest groups bent on making certain changes in the occupation as a whole. The paper defined professions in a new way: “as loose amalgamations of segments pursuing different objec-

tives in different manners and more or less delicately held together under a common name at a particular period in history."⁷ These segments, the authors argued, behave much like political movements, in which there may be strong leaders, competing ideologies, jockeying for special recognition and influence with the public at large, and other activities that belie the sense of "professional unity" that is assumed whenever we generalize about an occupation as a whole. The idea that certain occupations could be analyzed in terms of the actions of segments was an important contribution to the process model of professionalism. What I shall present here, relating technological change to the professionalization of librarianship, relies heavily on the concepts that Bucher and Strauss developed.

Bucher and Strauss outline a rather extensive typology of how occupational segments can be studied, using examples from medicine that are familiar to all of us; but three research propositions they discuss are particularly important to my purposes here. First, they note the special problems posed by recruitment into occupations, by which they are referring to how professional schools turn out the "right kind" of new professionals. Schools, they note, can be a "critical battleground" upon which differing interests within a profession fight to gain new recruits for one segment or another.⁸ Second, the authors note that segments often are organized around some "core task" and seek recognition of that task by other segments and by the lay world as elemental to the profession as a whole. For the medical field, the most prominent "core task" has historically been the doctor-patient relationship, although, of course, many physicians do not participate in that task to any significant degree in their workday—witness pathologists, medical researchers and administrators, and radiologists, for example.⁹ Third, recognizing that homogeneity in a profession is illusory, yet important for the occupation's relationship with the lay world, Bucher and Strauss call attention to what they refer to as "spurious unity and public relations." In this context, allow me to quote briefly a comment they make about professional associations: "It seems that associations must be regarded in terms of just whose fateful interests within the profession are served. Associations are not everybody's association but represent one segment or a particular alliance of segments. Sociologists may ask of medicine, for example: Who has an interest in thinking of medicine as a whole, and which segments take on the role of spokesmen to the public?"¹⁰ These three research propositions—recruitment battles in professional schools, the definition of "core tasks," and "spurious unity and public relations"—suggest ways of looking at occupational segments as they maneuver among one another for a larger piece of the status pie.

Having sketched out what I believe is a more fruitful way to describe the activities of certain occupational groups, I would like to consider how a process model may be used to examine librarianship. It should be clear

from my synopsis of the process perspective that I am definitely not interested in arguing the question of whether librarianship is a profession or not. I *am* interested in the continued actions taken by librarians, singly and in groups, to maintain or enhance their group status within librarianship.

My central thesis is that new information technologies are serving as powerful tools, not just in what they do in physical terms of moving information around, but as social instruments in the hands of certain occupational segments. Like the white lab coat of the scientist or the stethoscope of the doctor, information technologies have social communicative value quite apart from their manifest functions. The particular end to which new technologies are especially suitable as means is the acquisition of professional attributes.

Let us first look at the value of new technologies for the professionalization of librarianship in the context of the recruitment conflicts suggested by Bucher and Strauss. Library schools have long been under pressure, at least since the Williamson Report of 1923,¹¹ to provide a more scientific base to the content of their instruction. This pressure came from a variety of sources, one of them being the university community's perception that what was being taught in library schools was not sufficiently rigorous to merit graduate school status. Another pressure came from the strong drive for professionalization from many occupational segments, since attainment of professional status requires a scientific and continually growing knowledge base.

The most significant early response to that pressure for more science was the attempt to forge a social science knowledge base for librarianship at the University of Chicago in the 1930s. Douglas Waples's reading interest studies, Dean Wilson's library surveys, and Bernard Berelson's social/political analysis of the public library were among the attempts made to create a social science of librarianship.¹² Counterpressure from the field prevented the social science-based definition of library science from gaining a lasting foothold. Then, following World War II, the development of operations research and kindred methodologies brought the hope that such mathematical techniques could serve to build the knowledge base librarianship needed. The problem which advocates of the operations research movement had was that the length of training required to master that area was substantial; thus, very few mathematically-oriented researchers were ever recruited to build a significant movement. And, like the social science movement before it, operations research could not attain the support of a sufficient number of practitioners in the field because application just seemed so difficult.

But postwar technology was different. Though technology is not "science," twentieth-century technologies related to elemental electronic

or other physical processes are closely wedded in the public mind with science. The library world was in a fortunate position to benefit from that public perception, especially following the publication of Vannevar Bush's "As We May Think"¹³ and the interest of a number of early computer specialists in word processing. Computer research had immediate legitimacy on the university campus. Although the early librarian "information science" advocates of computer application had over a ten-year fight with library schools to bring computers into the curriculum, it is safe to say at this point that they have won. The requests from library school deans to senior university administrators for more terminals, more computer power, more electronic hardware of all sorts, legitimizes the professional status of library schools in the eyes of the academic community as nothing before ever did. Other equipment requests that had been made in the past, such as for media hardware, provided no such benefit because of their unfortunate association with elementary and secondary education.

In addition to this clear legitimation benefit that computer technology provided library education, there is another benefit to library educators faced with curriculum development problems. Teaching about new technologies is an easy way to keep a course "current," much easier than organizing a course around new research findings in our field. Developing a course around new technologies is likely much more satisfying to students because the course is clearly "relevant," to use the overworn word of the sixties. This strategy for curriculum design also wins friends among practitioners for the same reason. Never mind that most of what would be learned in such a course likely will be fairly meaningless in five years as still newer and better gadgets come along; still the students are happy, they earn their course credit, and once they pick up their sheepskins they are no longer the school's problem. Instead of teaching students to think, it is easier just to keep them busy and then leave them to that great new panacea, "continuing education."

To summarize the points made here about the recruitment conflicts evident in library education, we can see that new technologies appear to create new "knowledge"—in actuality, merely new "know-how"—which increases the promise for professional status that librarianship seeks. Ironically, that these technologies are almost always developed *not* by people with MLS degrees makes no difference whatsoever. That these technologies are not "science" either makes no difference, because the blurring in the public mind of technology and science provides a sufficient screen for the library school to continue doing what it has done for many years—provide a good deal of practical technical instruction along with an indoctrination into the belief that librarianship is a profession. All of these factors combine to convey an increasingly pro-innovation bias to students in library schools. The myth being perpetrated is that "newer is better."

Moving on to the Bucher and Strauss notion of “core task” as it applies to segmental conflict within librarianship, it is apparent that the question “What does a librarian do?” has been a thorny one for many years. Much of the difficulty in answering the question stems from the professional/bureaucratic conflict the field is caught up in, as library administrators are, by our definition, librarians, just as catalogers, reference librarians, and book selectors are. I would argue, however, that for the purposes of professionalization of librarianship, the medical paradigm of the doctor-patient relationship looms large in our library schools and our professional literature. Such a paradigm gives special weight to the reference librarian’s claim to perform the core task of the field as a whole—providing information directly to users. Parenthetically, I do not wish to leave the impression here that, because I personally am a reference librarian, I am pleading a special status case for reference work; rather, I am trying to develop a more general point. That point is that the recent technological innovations in reference work, most notably online bibliographic searching, have had a substantial impact on the public image of librarianship as a whole.

The core task for librarianship in the past has a character that allied librarianship closely with human service occupations such as nursing, medicine and social work. The provision of one-to-one help was first put into practice by Dewey and others to compensate for the complexity of new systems originally designed for self-help.¹⁴ The early theorist of reference service, Samuel Swett Green, developed a rationale for reference¹⁵ that had common intellectual roots with many other late nineteenth-century helping institutions. Giving personal assistance in libraries was an idea of great attraction to an occupation which became available as a career to many educated women at that time, when the institutionalization of charity was a major social force in the United States. In this century, the elaboration of the “core task” nature of reference was undertaken by textbook writers such as Margaret Hutchins¹⁶ and the work of others like Robert Taylor, whose “question negotiation” theory¹⁷ brought reference ideology even closer to that most modern of status occupations, Freudian psychological counseling.¹⁸ A statement made by Verner Clapp in 1966 aptly places this intimate helping image of the reference “core task” at the center of librarianship as a whole:

Reference work, as we who have labored in its vineyard have always maintained, is the culmination, the flowering—or, if you will, the reaping and the reward—of library work. For this, from generation to generation, the acquisitions staff has checked dealers’ catalogs, bid at auctions, ransacked the bookshops and bookstalls of the world, engaged in inequitable exchanges, and sought out tons of unreadable official publications. For this the bibliophiles collected, and then parted with, their

collections again. For this the never ceasing labors of the cataloging room slowly wrought streamlined order out of incredible chaos, converting an inapprehensible miscellaneity into a comprehensible universe of knowledge. For this the army of encyclopedists, lexicographers, compilers, bibliographers, and indexers selected and anthologized, analyzed and assembled, footnoted and referenced. Of all these labors this, at last, is the payoff. The time may seem to be any time of day. But it is not just any time of day; it is the very moment of truth. In this instant, out of the secret lore, the powerful wisdom that has been entrusted to him, the reference librarian has pronounced an Open Sesame, and the recesses of the library unfold. From among its thousands of volumes and millions of pages shines forth a fact—the information for which an inquirer is waiting at the reference desk, perhaps patiently, perhaps impatiently, and only rarely conscious of the miracle that is being performed on his behalf and which is taking place before his eyes.¹⁹

It was true, of course, that, even described in such glowing terms, there were grave difficulties with reference service. As several researchers have revealed, the accuracy quotient in reference work is not at all satisfactory.²⁰ Organizational researchers showed that the work performed by librarians in reference departments was often clerical.²¹ Bunge's experiment with nonlibrarians performing reference work provided results that were hardly encouraging to those who felt as Clapp did.²² But then the technological change of online bibliographic searching came along to allay any doubts librarianship might have had about the primacy of reference.

What online searching did, of course, was to put the reference librarian in a special relationship as intermediary between certain users and a technology which had powerful status association value. I say "certain users" because the cost of the service, both in staff time and in direct money terms, made providing it for all unthinkable. The speed with which online searching was accepted in the field was truly amazing, especially in light of the repeated accusations made by the information science community in the sixties that librarianship was so anti-innovation. Even the barricade of charging for use, thought by some to have had the authority of the Ten Commandments to American librarianship, was quickly brought down with hardly a slingshot volley of a fight. And the reason? In my opinion, it was the status value accompanying the technology that accounts in large measure for the rapid acceptance of online searching. Another reason may have been the desire to protect the performance of the "core task" from being practiced by others—nonlibrarians; thus, the still strong support for the intermediary role among those system designers who closely cater to the interests of reference librarians.²³ Such is one example of the use of a technology for social ends other than the practical end for which it was designed.

This analysis of a technological innovation in the area of a "core task" is meant to suggest that other information technologies may not have such

an easy introduction into librarianship unless they can be similarly associated with reference or other broadly recognized core tasks. The transfer of cataloging data through timesharing networks is, of course, widespread by now, but largely due to economics. The professionalization rewards of this innovation are decidedly mixed with losses, too, as the change is not highly visible to the public, and catalog librarian jobs are being phased out.²⁴ Other technologies may not be able to gain a sufficient number of supporters within the occupation to allow the technologies to flourish in libraries, and so they may struggle along, like the audiovisual or microform innovations have, with limited success.

The final era of the Bucher and Strauss conflict model I will discuss is that concept referred to by them as "spurious unity and public relations." Closely linked with the definition of core task, "spurious unity and public relations" in this context refers to the function that technological change serves librarianship in projecting a particular positive and unified public image. We have seen it referred to in our own literature many times as "the new librarian." Computer terminals, videodiscs, lightpens, and dozens of other devices serve to provide the public mind with a set of related images that leaders in librarianship are very anxious for the public to associate with "librarian." Many, many librarians, of course, have no contact at all with new technologies in their daily work, but that fact can be ignored in the rhetoric of professional image-building.

Besides providing a status association for librarianship to supplant the old spinster stereotype, there is another significant gain for the political leadership of librarianship accomplished by the concentration of attention on technological innovations. That gain is the opportunity to speak for librarianship as if it were a single unified group of 130,000 sophisticated specialists, all highly trained, and basically concerned with the solution of technical problems. Librarianship becomes narrowly defined, in terms of "getting information to people," and the real difficulties we have in complicated sociopolitical decision-making tend not to get discussed in public. We pretend that "getting information to people" is all that there is to it, because that is what we think we know how to do pretty well. But what about the larger issues? What information are we talking about? And which people? These are questions on which it is difficult to reach consensus, and thus are questions that are too often avoided by our profession's political leaders. Some would say that we like technical questions because they are solvable, we dislike philosophical questions because they are not. Consensus on means is easy, consensus on ends probably impossible, and so the leadership takes the easy route.

There is an illusion created, when we skip talking about ends and go straight to discussing means, that we all agree on ends, that that issue has been taken care of. All value debate has been closed off—prematurely, I

think. If we are talking about features of a circulation system, for instance, we assume that what we require of any circulation system is generally agreed upon. We have avoided asking whether we need to buy a circulation system more or less than we need more multiple copies, or some other piece of equipment such as a photocopy machine to provide free copies in lieu of loans.²⁵ We also tend to let our own unspoken values, like "newer is better," to remain unspoken, and thus unexamined.

Because it is difficult to develop consensus on ends, and thus to build political power internally to achieve greater benefits from the lay world, concentration of attention on means—technology—is an attractive strategy for those interested in promoting certain interests of librarianship. Complicated issues like intellectual freedom, or what is just and fair distribution of information in our society, make for long debate, and do not ever lead to final closure, to what some would call "progress." It is much easier to pretend we all agree on what we are collectively about, and get on to the next issue. This, of course, is what we get into when we consider technology first.

Using technology as a tool to create spurious unity and to promote a politically expedient, though inaccurate, public image of librarianship effectively crowds out consideration of our most fundamental problems in the information world. Political, organizational and economic problems do not have technical solutions. And what is worse, technological change brings along with it side impacts in political, organizational and economic spheres. We must know about technology, but if that is all we know, then we are in trouble. We will have no sense of perspective on how best to use it or to judge whether it may cause damage when we use it.

One very serious problem that is nontechnical is that social inequities are developing in terms of accessibility to information. Though we hear much applause in the library press that we are becoming an "information society," our information technologies are helping create a society of information "haves" and information "have-nots." A declining literacy rate is just one sign of this problem. Though there is much touting of the social benefit of decentralization possible with microcomputer technology, we are simultaneously seeing greater centralization develop in larger and larger corporations,²⁶ centralization that is wiping out some avenues for information dissemination without providing adequate alternative paths.

To summarize in a nutshell what I have presented here concerning a process perspective on librarianship and its relationship to technology, it has been shown with examples that segments of librarianship use technology for their own social ends. Technology in practice is not value-neutral. Adopting one technology may mean forcing out another one. In the area of the recruitment issues to which Bucher and Strauss called attention, we

have seen that the new technologies in librarianship may not transform the library schools into halls of science to any significant degree. In relation to the core tasks of librarianship, I have argued that technological adoption of online searching sustained a protectionist attitude, and did not at all indicate a breakthrough in which librarians came around to a more enlightened way of thinking. Technological change also provided a vehicle for groups in librarianship interested in projecting a sense of unity to the lay world—what Bucher and Strauss called “spurious unity and public relations.” With all of these points I have been critical of the professionalization movement within librarianship, because I think that movement distracts us from considering more important issues.

I would like to state here that I do believe there is some positive meaning to the term *professional*, if we limit it to the sense that some workers possess special knowledge which they put to use on behalf not of themselves but of the general good as they can best determine it. Acting on behalf of specific others does not necessarily lead to the general good. There are those like Don Swanson²⁷ and Paul Zurkowski who would disagree with me on that, and I suppose they have as much right to their ideological position as I have to mine. I do wish, though, that they would not shroud their view in the rhetoric of science, pretending that theirs is a dispassionate and incontrovertible position. I also wish that some librarians would think a bit more critically when they hear technology vendors equate profit and loss with good and bad.

If we librarians are to act in a professional manner in the sense in which I have just described, I believe it is time we take much more seriously the important responsibility we hold in adopting the technologies now rolling out of Silicon Valley workshops. We need to evaluate them carefully before we buy them. We need to make others aware of potential problems we see before others buy them. We urgently need “environmental impact studies” for new information technologies, so as to protect those good parts of our world information environment—like scholarly journals and neighborhood newspapers—that are on the “endangered species” list. Above all, we need to learn more about economics, and learn fast.

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