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CRL593
Editorial

Improving Quality: An Editor's Advice to Authors

Because librarianship evolves rapidly in these technological and political times, successful librarians must share their best ideas with each other. Publishing articles in refereed journals is an established method for conveying quality information.

In this issue, Ross Atkinson predicts the continuation of the peer review system into the electronic future. In the next issue, Herb White questions whether peer reviewing for journal publications serves its quality control purposes, and Peter Hernon and his colleagues analyze the results of a comparison between papers accepted by C&RL and those rejected through the past decade. The purpose of this editorial is to outline some of the most common reasons that peer referees and the editor have for rejecting papers and to provide guidance for improving the quality of scholarly communications in the profession. Many articles currently rejected could contribute to solving library problems.

C&RL is a double-blind refereed journal. When I receive an article, I remove the name of the author(s) and send it to one member of the editorial board and one other volunteer ACRL referee. These referees study the article, recommend acceptance, rejection, or revision, and return their results to me. If both referees accept the article, I publish it in C&RL. If both reject, I write to the authors explaining the reasons for rejection, and, if appropriate, recommending submission to another journal. The most common reasons for rejecting articles include: not generalizable, "so what," poor writing, inadequate scholarship, weak statistical methodology, wrong choice of journal, and bad luck.

Not generalizable: College & Research Libraries' audience includes the 11,000 members of ACRL and others in the profession and in academe. Many submissions to C&RL and other journals in librarianship are case studies done in a single library often to aid in local decision making. The advantages of such papers for the author are:

- they are easy to find time to write because they relate to work
- they directly contribute to individual job performance
- they principles are easy to understand and apply
- they may be useful to other libraries who face similar problems.

However, this applicability to other institutions must be demonstrated, not assumed. At Midwinter 1993, members of the editorial board discussed how crucial it is to relate the experiences of a single library to those of the ACRL general membership. The author's challenge is to demonstrate how the work done serves as a model for others. Articles should begin with statements of generalized problems and then present the case study. In discussions and conclusions, the author must return to general college and research library applications.

"So What": A related referee question is "so what?" The author must explain why the work being discussed should reach the ACRL audience. Basic research in librarianship expands the boundaries of our knowledge about all areas of the field. Basic research may not have an immediate application to practice, but it should fill some void in the corpus of work about libraries and their users. Applied research, which includes the case studies mentioned...
above, should explain its connection to basic principles and should emphasize its general implications. C&RL's peer reviewers insist that authors explain the relevance of their work.

**Poor writing:** One referee wrote: "The author writes poorly, as evidenced by mixed singular and plural subjects and verbs, misused words, and an incomplete sentence. The whole article just seems to be paragraphs tossed together... I don't think it is intellectual snobbery to be appalled that a professional should submit something written this poorly." Articles must have clear organization, good grammar, and an appropriate style. Circulating a manuscript among professional colleagues is an excellent way to improve its quality and, thus, probability of publication. Members of the academic community in a number of disciplines can provide helpful criticisms. Articles should be so clearly written that laypersons can understand them.

**Inadequate scholarship:** It is shameful to talk to librarians about poor scholarship, but it is a major cause of rejection. All articles, even a case study, need to be sent in the context of work done in the field. Referees are knowledgeable in the areas assigned. When in doubt, they do literature searches that often turn up uncited relevant materials. Authors should use indexes and scholarly tools, do thorough searches, and regularly survey the literature of the field. "Too Many Scholars Ignore the Basic Rules of Documentation," by Janell Rudolph and Deborah Brackstone, a "Point of View" essay in the Chronicle of Higher Education (April 11, 1990), argues that incorrect citations are a national problem. Citations should be carefully checked before submission. The editorial assistant and I incline towards not accepting other articles from authors whose inadequate citations have required a great deal of our time.

**Weak research and statistical methodology:** Sample referee comments include:

- "It is a joke as a research methodological study"
- "The tables are terrible, and there are too many of them."
- "There is no problem statement, hypotheses, or explanation of the proposed importance of the study."

Many library practitioners have inadequate training in research methodology. However, most are located in academic institutions where help with research and statistical methods is readily available. Library resource materials on this subject are plentiful. In order to avoid having to redo an entire study, the researchers should consult these materials and resource persons before the study is begun.

**Wrong choice of journal:** Articles submitted to College & Research Libraries should be interesting to most of the membership. If the article has an even broader appeal, then it should be submitted to American Libraries, Library Journal, or Wilson Library Bulletin. If it has a narrower appeal, then to a more specific journal—either a state or regional journal or a subject-specific publication. College & Research Libraries publishes substantive, research-oriented articles that are usually about twenty pages of double-spaced text and often have accompanying figures. C&RL News publishes shorter, less formal, more practice-oriented reports. These should be sent directly to the News editor, Mary Ellen Davis. The author should compose the article with a specific journal in mind. Most journals publish editorial guidelines; C&RL and C&RL News' guidelines both appear in the January issues. If you have a question about the suitability of your work, you may wish to e-mail, write, or call the editors, whose addresses appear in the guidelines.

**Bad luck:** Two examples of bad luck are to send in a paper on the same subject that the editor has just accepted a long paper on or to submit work in a special area of interest to the referees or the editor. I find that the referees and I are more critical of works in areas we've written about. We know the literature better and our ideas are more concrete than in areas of less expertise. However, often our interest level is high, and we generate lengthy suggestions for revisions and then publish the revised work. Any author who follows the advice given in
the first six points has little to worry about in this final one.

Librarianship, a dynamic, rapidly evolving field in the Information Age, needs to share the ideas of its best minds. Quality journal publication is a proven method for meeting this need. Like other fields discussed in White's article, quantity is not the most pressing requirement—quality is. Authors must:

• think about professional problems that require solutions,
• study them with well-designed methodologies, and
• explain the applicability of the study to the problem in clear prose.

Articles so conceived and constructed can improve the quality of library literature and librarianship itself.

GLORIANA ST. CLAIR

IN FORTHCOMING ISSUES OF COLLEGE & RESEARCH LIBRARIES

Scholarly Publication, Academic Libraries, and the Assumption That These Processes Are Really Under Management Control
Herbert S. White

Cooperative Collection Development at the Research Triangle University Libraries: A Model for the Nation
Patricia Buck Dominguez and Luke Swindler

Publication in College & Research Libraries: Accepted, Rejected, and Published Papers, 1980–1991
Peter Hernon, Allen Smith, and Mary Bailey Croxen

Laura M. Bartolo and Timothy D. Smith
World Encyclopedia of Library and Information Services, Third Edition
Robert Wedgeworth, editor-in-chief

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Networks, Hypertext, and Academic Information Services: Some Longer-Range Implications
Ross Atkinson

Because computer network use is increasing so rapidly, we must begin to consider some of the longer-term issues that relate to scholarly information exchange in a networked environment, and the possible future roles of academic information services in that exchange. The growing capacity of the network, combined with the eventual ability to link any textual units with any others, may well have profound effects on scholarly communication and higher education, especially the relationship between readers and writers. Three examples of key responsibilities that may be assumed by academic information services in the online environment are (a) assistance with institutionally based publication, (b) work with authors on the indexing of their publications, and (c) the design of new, network-based document structures.

The application of computer-mediated communication and resource sharing to the creation and exchange of scholarly information has been anticipated for decades, but only recently have librarians begun to witness the kind of rapid increase in the use and utility of networked information that we have for so long been expecting. The use of the network is now expanding so rapidly that the statistics recording that increase are difficult even to comprehend. In response to the rapidly rising demand for computer networking—not only for scholarly purposes but also in support of government and commercial transactions—Congress has passed the High-Performance Computing Act of 1991, which is intended to "support the establishment of the National Research and Education Network [NREN], portions of which shall, to the extent technically feasible, be capable of transmitting data at one gigabit per second or greater by 1996." Newly introduced legislation, "The Information Infrastructure and Technology Act," would authorize an additional $1.15 billion over five years to provide for the effective use of such a vastly expanded national network. Perhaps the most pressing challenge to those of us responsible for academic information services, therefore, will be to remain somehow conceptually ahead of such developments in order to guide them whenever possible in directions that will ensure the greatest benefits for scholarship and higher education.

We appear to be succeeding in our effort to meet this challenge in the short term—at least to the extent that issues which must be settled before fully effective use of the network for research and

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Not only because such notions are always relative but also because these issues, too, will certainly be upon us much sooner than we expect.) We need to begin to prepare for these developments now; we need to begin to define concepts, to agree upon values, to take positions, if we are to lay the groundwork for decisive action in the future. This preparation will entail, unavoidably, some prediction and speculation about the qualities and uses of the network in its fully developed form. We must be willing, in other words, to undertake a certain amount of conjecture in public about what a network is and what the network will become, if we are to have any chance of influencing its evolution. The consideration of a few of these longer term implications will be the purpose of this paper.

INITIAL DEFINITIONS

Information Services

There are clearly many kinds of information, but let us restrict our definition to those groups of (often natural language) signs created by people for purposes of communicating their ideas.¹¹ The user—scholars, students—locates such sets of signs or information units, therefore, and produces information from them. The primary purpose of information services has always been and will always be to reduce to a minimum the amount of time required by local users to obtain access to that information they need to do their work.¹² All information service activities are intended ultimately to achieve that single objective. As we move increasingly into an online environment, those service activities will change, but that primary objective will remain the same. Results, in terms of access time reduction, should presumably improve substantially in an online environment. However, information overload—a primary retardant to academic information access since at least the advent of the machine press—will probably also become even more pronounced as more information becomes available online. Efforts to control such overload will no doubt drive the renovation of many information service operations.
An essential responsibility of information services must be to assist users in determining what information they need to do their work. Without this assistance, the amount of time the user will require to locate such information can be greatly extended. Information service operations provide this assistance by acting upon information—by selecting, distinguishing, referring to, and otherwise privileging individual information units, in order to enhance the user’s ability (a) to locate those units and (b) to decide which of those units is worth the time to retrieve and absorb. In the paper environment, this service is provided most clearly through traditional library operations such as collection development, cataloging, and reference. All such services, moreover, regardless of the dominant information format, are necessarily intended to add value to individual information units by differentiating those units from each other in such a way that clientele will be able to make decisions as to the sequence in which they access information. All information exchange is necessarily sequential. Meaning is, in fact, at least partially a product of sequence; to change the sequence, therefore, is always to change the meaning. This is true not only at the sentence (syntactical) level but also at the document level, in the sense that the understanding of an information source is necessarily conditioned at least in part by the reader’s (or hearer’s) previous knowledge or experience of other sources. A primary purpose of academic information services, therefore, is to assist the student or scholar not only in locating needed information but also in determining which items of information to read (or hear) in which order.

The Network

John S. Quarterman defines a computer network as “a set of computers communicating by common conventions called protocols over communication media.” A useful and concise definition—albeit one that also displays a problem that we encounter frequently in the literature on networks and computers—i.e., reification—the confusion of human and material relationships. We must assume that it is information which is being communicated, and we have already defined information as consisting of signs. Computers, however, do not exchange signs. They exchange signals, i.e., “units of transmission which can be computed quantitatively irrespective of their possible meaning.” It is these signals that are then later converted into signs, so that users can extract or create information from them. Since communication entails the exchange of signs, it should not be supposed, as Quarterman apparently does, that a computer network consists of “a set of computers communicating.” Networks are material transportation devices. At its most basic level, a network is a machine designed to move very small physical objects (packets in the current technology) from one place (or node) to another. It is important, therefore, that we continue to bear the materiality of the network in mind—that we recognize it for the mechanical apparatus it is.

Although there are many computer networks now in existence, these different networks are in some cases very difficult to differentiate. It is, moreover, the nature and the purpose of networks to be indistinguishable—what we now call “transparent.” For our purposes, therefore, it is most convenient to refer, as we have done so far, simply to the network in the generic sense of all of the networks now accessible. We must also note, however, that the term computer network is often used to refer to several different concepts. One is clearly the network proper, i.e., the links or highways down which the signals are sent—the transportation system described above. By extension (metonymy), however, the term network is also often used to refer to the content of the databases accessible through the network—so the extended network also includes the information available through (i.e., derivable from) the network proper. Finally, there is what we might call the functional network, that includes the rules or grammar—not only technical (e.g., protocols), but also administrative and legal—which
regulate the network's operation. While information services have in the past been concerned primarily with the extended network, it will become increasingly important for academic information services to participate more actively in the direction and operation of the functional network as well.

**Hypertext**

The network proper is, in any event, a formal telecommunications instrument designed to connect computers. In considering the future of scholarly information exchange, we must therefore take into account not only the facility of the network but also the effects of computers on scholarly reading and writing. Certainly one of the best approaches to such an assessment is to focus on the phenomenon of hypertext because it is through the concept (if not yet the reality) of hypertext that we begin to sense the most fundamental and far-reaching effects of the computer on communication in general and scholarly information exchange in particular. Hypertext may be viewed both as a symbol and as the most visible manifestation of the radically new capabilities made available by computers. Hypertext also deserves the special attention of librarians because one of its most obvious and frequently described applications will be for bibliographical citation.

A useful current definition of hypertext is provided in a 1988 article describing a hypertext system at Brown University:

> In essence, a hypertext system allows authors or groups of authors to link information together, create paths through a body of related material, annotate existing texts, and create notes that direct readers to either bibliographic data or the body of the referenced text. Using a computer-based hypertext system, students and researchers can quickly follow trails of footnotes and related materials without losing their original context; thus, they [students and researchers] are not obliged to search through library stacks to look up referenced books and articles. Explicit connections—links—allow readers to travel from one document to another, effectively automating the process of following references in an encyclopedia. In addition, hypertext systems that support multiple users allow researchers, professors, and students to communicate and collaborate with one another within the context of a body of scholarly material.

**Hypermedia** is simply an extension of hypertext that incorporates other media in addition to text. With a hypermedia system, authors can create a linked body of material that includes text, static graphics, animated graphics, video, and sound.

The term hypertext was originally coined by Theodor Nelson in 1965. He then developed the concept further in other publications, most fully in his now classic *Literary Machines*. It was in that work especially that Nelson introduced the definition of hypertext as nonsequential writing. That concept is frequently echoed in other current definitions. As we noted above, however, sequence is a fundamental component of language, and there can obviously be no such thing as writing or reading "without sequence." What Nelson and others mean, of course, is that hypertext allows the reader to move parts of a document out of their "original" sequence, i.e., to embed them in, or to connect them to, contexts other than those in which the author originally placed them.

To change the sequence is, again, to change the meaning—so that hypertext provides the reader with the power and authority to affect the meaning of the text. We must also recognize, however, that the reader has always had that power anyway. The text consists of signs, and the reader has always brought the meaning to the text by relating the text to previous texts he or she has experienced. Indeed, the potential interrelationship or interconnectedness of all texts has become one of the dominant preoccupations of late twentieth-century philosophy and especially literary theory. In 1966, Julia Kristeva first coined the term intertextuality: "[A]ny text is constructed as a mosaic of quotations;
any text is the absorption and transformation of another. The notion of intertextuality replaces that of intersubjectivity, and poetic language is read as at least double.22 This concept, as developed especially by Roland Barthes, has become highly influential, and has been applied to a variety of critical purposes.23 Care must be taken, as Kristeva noted later, however, not to imagine intertextuality as a linear concept, i.e., "in the banal sense of 'study of sources.'"24 In 1976, Laurent Jenny pointed out that the fundamental metaphors of literary criticism were in fact noticeably shifting from aquatic linear images (e.g., "influences," "sources") to metaphors of webs, fabrics, or networks.25 Roland Barthes, in a classic essay on the nature of the text, even noted that the word text itself derives from the Latin texere, which means to weave (cf. "textile").26 The concept of linearity, therefore, has gradually been replaced in the late twentieth century by the realization that understanding is achieved only through a constant rearrangement of a network or matrix of texts.27

Hypertext does not engender intertextuality, therefore, but rather merely heightens its utility and effect. More precisely, hypertext permits the easy creation of new syntagmatic contexts, in the sense that it permits any text or group of texts to be reduced to its constituent elements, so that these elements can be rearranged or reconstituted in new sequences. While such a function has many uses, the one that is most frequently noted, as in Nicole Yankelovich's definition above, is for purposes of increasing the application and extent of bibliographic citations (i.e., surrogate references to other texts). The reader in the fully formed hypertext network should be able to choose to read in two temporal directions—synchronously through the text as provided by the author but also diachronically back through the citations to which scholarly texts refer, and of which any text is necessarily composed—a kind of bibliographical reading. Each of the texts cited by the author can be read in a hypertext environment, including any parts of those cited texts not specifically quoted by the author—so that the reader can enter the cited text, and read on both sides, so to speak, of the quotation. Any citations in the cited text can in turn be followed backward to their original sources, and so forth.28 And these are only the explicit citations. The reader will in all likelihood also have the ability to use implicit citations, i.e., to create new networks of references by looking for similar texts that use the same signifiers (words, sounds) in similar sequences or proximities in other files accessible throughout the network.29 The reader can indeed approach the entire content of the extended network as a single unit (rather like approaching the entire library as a single, multivolume set). Research on the network thus comes to consist fundamentally of defining and redefining parameters, so that the reader does indeed become a writer, creating new texts through new contexts.

Hypertext's main strength, however, is also its greatest potential drawback: its infinite flexibility could create an environment in which the original expression of the author could become obscured or lost altogether:

Hypertext fragments, disperses, or atomizes text in two related ways. First, by removing the linearity of print, it frees the individual passages from one ordering principle—sequence—and threatens to transform the text into chaos. Second, hypertext destroys the notion of a fixed unitary text. Considering the "entire" text in relation to its component parts produces the first form of fragmentation; considering it in relation to its variant readings and versions produces the second.30 This propensity for mutability has already been recognized as a potentially serious impediment to scholarly communication, and one which information services will certainly need to confront.31 Nelson himself stipulated that a document in its original form—i.e., defined as finished by the author—should be subject to no further alterations, which are not made or condoned by the author.32 But at the level of reading, of course, the reader can do whatever he or she wants.
to the original context—that is the nature of hypertext. At the level of reading, there can be no question that the writer will lose substantial authority and autonomy. Hypertext “infringes upon the power of the writer, removing some of it and granting it to the reader.”

The unity and closure of the text as understood by the writer are no longer inviolable. To be sure, the writer, regardless of format, always merely recommends to the reader that the text be considered in a certain form, that it be read in a certain sequence, that it be related to certain parts of certain other texts. The reader is obviously always in the primary control of the reading—but the availability of hypertext and the network, it must be admitted, increases that control dramatically.

**FREEDOM AND AUTHORITY**

This diminution of authorial control is only one manifestation of a far more fundamental quality of hypertext and networking—and more generally of information exchange in the online era: the potential forfeiture of origin. We encounter this quality now probably most clearly in the reduction of the significance of location: where a particular segment of information is located is a far less important attribute of that information in a networked environment—not because location no longer exists (the signals that “carry” information are always material and must therefore always reside somewhere), but rather because those material signals can now be transported at such speeds that the effect of that transportation on access time becomes imperceptible to the user. All locations become relatively equivalent on the network: they lose their difference, and therefore their significance.

We have noted above that it is people (not computers) who communicate by means of networks; although this, too, is an oversimplification—in the sense that no one ever communicates directly with another person, but rather always with a text of some kind produced by another person. While print certainly tends to level or standardize such communication, the elimination of the perceived differences between one text and another, and thus the obfuscation of origins, becomes even more prevalent in a networked environment. All texts are manifested in the same form on the individual’s computer screen. The text with which the reader interacts is something always already written (or copied) by someone on the network. Regardless of whether that someone wrote that text a few minutes or a few seconds before in response to a query by the reader on e-mail, or whether the original writer produced that text years or centuries or millennia ago under totally unknown circumstances—the reader is still engaged in a dialogue not with that person, but rather with the graphic, material signs. The network by virtue of its endemic neutrality encourages the reader to view all texts as current and all authors as contemporaries.

To change the sequence is, again, to change the meaning—so that hypertext provides the reader with the power and authority to affect the meaning of the text.

Jay David Bolter has examined these issues in some detail in his recent book *Writing Space*. He concludes that hierarchy in writing is a convention of the print culture, and that the advent of the fully developed hypertext network will free the reader from that hierarchy. The hypertext network will also liberate the reader from the tyranny of the author, bringing about a welcome “end of authority.” This will lead to a “new dialogue” between reader and writer, “which replaces the monologue [of the author] that is the conventional printed essay or monograph.”

This tyranny of the author has throughout the print era been most evident, according to Bolter, in the literary canon, which will be replaced in the online age by the “rich texture of allusions and references” of the network. Sequence becomes the responsibility of the reader: since works in hypertext “do not have a single linear
order, corresponding to the pages of a book or the columns of the papyrus roll, ... there is no order to violate.38

Bolter clearly misinterprets some of the fundamental textual and epistemological requirements of communication and scholarship. Some structure, some hierarchy, must be preestablished, some works (canon) and terminology (indexes) must be privileged if communication is to take place. The alternative is babel. It is not that the user should be denied flexibility—quite the contrary; but such flexibility must be voluntary. Indeed, flexibility is only possible if there is a structure against which some variation is possible and permitted. The “new dialogue” for which Bolter hankers would itself result in a tyranny—one exercised entirely by the reader. But that is certainly no dialogue. A dialogue rather entails some balanced authority for both parties; the author’s recommendations on sequence and structure must be provided and consciously observed (or rejected), therefore, if true dialogue is to take place.

This diminution of authorial control is only one manifestation of a far more fundamental quality of hypertext and networking—and more generally of information exchange in the online era: the potential forfeiture of origin.

We glimpse perhaps the root of Bolter’s misconceptions in his challenge to the infinity of reference:

Semiotics regards representation as a process without end. . . . The interpretant, the definition of the sign, may in turn be treated as a sign requiring definition. The process continues in theory as long as we like, because each new interpretant allows for a further interpretation. In fact any practical system is limited. In the dictionary each word is defined in terms of other words that are themselves entries to be consulted, but no dictionary is infinite. If we had the patience, we could examine all the words in the network of definitions contained in the dictionary. By starting often enough at different entries, we could ultimately exhaust the dictionary’s writing space.39

What Bolter fails to recognize or accept is that all of the terms in the dictionary refer to each other—and to nothing else. Language is a network of self-references. Because each term is only understandable through its relationship to other terms, the signs of which the language is composed are in a state of continuous and ultimately circular reference. That is why referentiality is theoretically infinite. That is why one can never “exhaust” the dictionary’s “writing space.” That is why it is possible to claim that there is no beginning and no end to the referentiality of language, and that nothing exists outside of the text. And that is, above all, why some structure needs to be imposed upon the text by some acknowledged authority. Some words, some sentences, some documents need to be specially privileged, to influence the order in which texts are encountered and experienced. This need not mean, of course, that there is some kind of natural or endemic value to one text rather than another—as the concept of the canon might indeed imply. The order imposed on the literature is always artificial, in the sense that it reflects relative decisions made by individuals in authority. It is precisely because there are theoretically no natural origins, no beginning and end to language, that we must impose that kind of order—origins, sequence—for purposes of understanding.

We must assume, therefore, that selection in some form will continue to be a primary activity either undertaken or facilitated by information services. Selection in the online era will presumably consist of someone attaching (i.e., linking) something to the text which the reader can use to decide not only whether to retrieve and read that text but also when to retrieve it (i.e., in the reading sequence). Online selection as an information service is, in other words, an act of appending to the text some evaluation of it, and this literally “added value” is the indispensable service that
will make possible networked scholarly communication.

At the same time, however, we must admit that Bolter and others are fully correct in their realization that networking and such computer applications as hypertext "democratize" information, and permit unprecedented flexibility in text production and manipulation. The "history of information technology from writing to hypertext reveals an increasing democratization or dissemination of power." That may be in nuce the conundrum, the core challenge, of information services in the early online era. Control, to be sure, must be provided, selection must take place, order of some kind must be imposed, if access time is to be reduced and overload circumvented for the purposes of scholarship and education—but paradoxically a primary responsibility of academic information services must be to leave the reader at the same time the freedom to ignore such control, and indeed perhaps under some circumstances even to encourage him or her to do so.

FORMAL CONSIDERATIONS
The Literature

Will formal publication survive the online age? It need not necessarily. All scholarly communication could conceivably take place through the kind of informal interchanges we now see on the network discussion lists. The homogeneity or neutrality of the network described above reduces also the difference between formal publication and informal communication—but, in the interests of control and sequence, some kind of distinction does need to be made in the online environment between writings that the author alone decides should be made public, and writings that experts in the field (editors) endorse and recommend to other experts to read. Special databases or segments of general databases will therefore need to contain subject or topical files that include publications, i.e., writings that authors declare finished, and that duly authorized peer review boards declare significant. Anyone working in the field will then normally consult these publications first, before beginning to search the network for other information of relevance. In this way, the core of the subject can be defined, and progress in the discipline can proceed.

Selection in the online era will presumably consist of someone attaching (i.e., linking) something to the text which the reader can use to decide not only whether to retrieve and read that text but also when to retrieve it (i.e., in the reading sequence).

The clear risk of such a procedure, of course, is that it could lead to an extreme centralization of control over formal publication. If the only categories we have available are (informal) discussion and (formal) publication, and if there are only subject files and no individual journals, and if there are only a few "core" subject files for each discipline, then the editors responsible for deciding what deserves the status of a publication in such subject files could exercise virtually dictatorial control over the development of their respective disciplines. This problem is circumvented somewhat in the print environment through the availability of noncore journals. If there is no equivalent of such a multiplicity of journals in the networked environment, then there may be no opportunity to publish new or unpopular ideas (i.e., outside of "normal science"). It is for this reason that some other categories of scholarly communication will need to be established beyond publication and discussion. Some form of quasi- or individual publication needs to evolve, in which the author alone could vouch for the completeness, quality, and consistency of the publication, and which the reader could then consult on that basis after (presumably) first consulting core or refereed publications. There is nothing at all wrong with vanity publishing—either in paper or online—provided that it is clearly identified as such. Hypertext will in any case ensure that any "peripheral" publications of this type that are of
real significance will be linked to future core publications through references.

If the online discussion (as opposed to formal publication—or quasi-publication) is a legitimate part of the network (as it already is), information service operations will need to decide soon whether such discussions should be archived in the same way that we will need to archive and safeguard publications. The archiving of online discussions is a temptation at the present time in the partially developed network, and it is one we need, in my opinion, generally to resist. To feel obliged to retain every human utterance in graphic form makes little sense in the print environment, and none at all in fully networked circumstances. In all probability, we will need to look at the question of storing network discussions in a manner similar to the way we now approach the retention of manuscripts in the paper environment. It is ultimately a preservation question best left in the hands not of librarians but of archivists. Only a small subset of the manuscripts produced are now retained, and similar decisions based on similar criteria will need to be made for networked discussions. As is the case now of manuscripts in the paper environment, most discussions will presumably be preserved by individuals rather than institutions.

The Document

Monographs and Periodicals. The most basic formal distinction in printed scholarly communication, at least from the standpoint of libraries, is that between monographs (i.e., single books on specific subjects) and periodical articles. The scholarly monograph permits a fully developed statement on a well-focused subject, approached usually from a multiplicity of perspectives or examined in a broad context. The monograph is, as its name implies, unitary and separate. The advantage of such closure is that the monograph can define its own terms and create its own internal, self-refering context—a kind of network in print. The reader must invest some time in the monograph, and while its boundaries are predetermined by the author, the reader always has the option of varying the sequence in which he or she reads the composite parts of the monograph, or of reading it only selectively; most scholarly treatises are doubtless seldom read cover to cover by scholars, but are rather read in. There are also well-known drawbacks to the monograph, however—one being that, aside from some knowledge of the publisher, the reader seldom has adequate advance information about either the quality of the monograph’s scholarship or the precise nature of its content. The scholar must first locate—find out about the existence of—the monograph, a task which enumerative bibliography, cataloging, and book reviewing have been able to assist only to a limited extent; and he or she must then invest time reading “into” the monograph to gauge its quality and utility. Information services, with their primary objective being the reduction of access time, have likewise in the paper environment seldom succeeded effectively in reducing the time needed by readers to digest, assess, and make use of monographic information.

Periodicals, on the other hand, overcome to a certain extent some of the monograph’s drawbacks. The value of periodicals for scholarly communication lies not so much in their periodicity, as in the concentration of their content and the predictability of their subject matter. Periodicals reduce the difficulty of location by establishing narrow boundaries for their subjects, so that much of the key knowledge of some disciplines is in effect defined by its inclusion in a relatively manageable set of core periodicals. The articles published in these core periodicals, in other words, define or represent the current substance of the discipline; developments or ideas not expressed or referred to in the core journals are de facto of less importance—in the sense that the scholar will normally approach information published elsewhere only after he or she first absorbs the information in the core journals. A subject that relies primarily on journal literature is not only more current, therefore, but also arguably under better control than a subject...
dependent mainly upon monographs, in the sense that the periodical-based literature has a more self-defined hierarchy of publication. The periodical article also has the significant but seldom stated advantage that its absorption by the reader involves a considerably smaller investment of time. While the monograph tries to provide a (partially) closed intertextual network, the periodical leaves the reader more of the responsibility and authority for placing the information in a wider context.

Concentric Stratification. In a fully networked environment, formal scholarly publication can no longer be characterized by the dichotomy of monographs and periodical articles. That distinction makes no sense, if for no other reason than that the economics of online publication no longer requires periodicity: any article or monograph can be published as soon as it has been accepted and edited. Nevertheless, a fundamental objective of information services must be to ensure that the special advantages or capacities of both the monograph and the periodical article in the paper environment are somehow built into the online scholarly communication process. We need, therefore, a formal method of writing that is appropriate to the network—one that will exploit the special capacities of online publication, but that will at the same time retain the values (and avoid the drawbacks) of periodical articles and monographs. Any such method adopted must promote the reduction of access time and contribute to the counteraction of overload—and it should above all enhance communication, in the sense that it should improve participation by both the writer and the reader.

One such method may be for scholarly publications to be presented not in the traditional linear sequence, but rather as a set of linked or self-citing levels or strata. Let us give such a format the contradictory label of concentric stratification in order to emphasize simultaneously the concepts of separation and coincidence. Such a document structure might consist of a top level that would contain some kind of extended abstract; this level or stratum would then be connected to the next level, and so on. Each succeeding level would include the information contained in the previous level, but would provide in addition greater degrees of substance and detail. Scholarly communications that require an extended context, and would therefore deserve a monograph in the paper environment, would in the online environment merely include more levels than would a communication that would in a print environment have been published as a journal article. The top level should contain for indexing and access purposes all terms in the work considered by the author to be critical. There should be some standardization of levels, such that the reader would be able to decide which level to access first, depending on his or her previous knowledge of the subject and on the extent of the information required. Such a document structure would also restore to the author some of the authority and control that will necessarily be forfeited in a hypertext and networked environment, since it would permit the author through such a hierarchical structure to privilege—to assign different values or significance to—different parts of the text.

If the reader is going to read in three directions, then the writer is, of course, going to have to learn to write in three directions—a very different notion of writing from that done in the linear print environment.

Three-Dimensional Textuality. If formal scholarly publication on the network does indeed shift from a linear form to some kind of hierarchical structure, then reading on the network will be something that is done, so to speak, in three dimensions: first, one can read horizontally or linearly within any level of a given publication; second, one can read vertically or hierarchically through the levels of any particular publication; and, third, one can read referentially back through the constituent citations.
(be these explicit or implicit) into other texts on the network.\textsuperscript{47}

This has, needless to say, some important implications not only for scholarly communication but also for instruction. Students could be given one group of texts or a single text that could conceivably consist of a single key paragraph; from that one text, the student could then construct (reconstruct?) the entire subject by moving linearly, hierarchically, and referentially—rather like growing a complete organism from a single cell. Needless to say, no two students would end up with the same "subject," or rather the same composite text; the responsibility of the instructor would then become to guide the students through the intertextual connections, making certain that the standard or canonical connections are not overlooked but also providing each student with the capacity to build his or her own connections beyond the canonical.

If the reader is going to read in three directions, then the writer is, of course, going to have to learn to write in three directions—a very different notion of writing from that done in the linear print environment. At the very least, the writer will need to create the work hierarchically in linked levels. One assumes that in a paper environment, for example, most authors start with an outline, and then write each section more or less linearly, i.e., seriatim. Writing by using some system like concentric stratification would presumably also begin with some kind of outline, but then the outline of the whole work might be expanded in stages—with each stage functioning eventually as a separate text-stratum.\textsuperscript{48}

Writing will also need to include connections to explicit citations. The author should be prepared, moreover, not simply to cite another publication but possibly also to do something to it (i.e., to some copy of it)—to tag it or annotate it in such a way that the reader is able to infer the author's evaluation or application of the cited work. In this way, the author can guide the reader through the cited work, but the reader will still be able to make alternative sequencing decisions. If the author is referring to statistical data rather than to a narrative text, the software needed for that data and the tagging of particular data elements would also be expected. In any case, interaction with the textual history of the subject should become a much more integral aspect of both writing and reading in a fully networked environment.

\textbf{INFORMATION SERVICES}

Certainly one of the most basic changes for which libraries as information service operations will need to prepare will be the blurring of the distinction between the reader and the writer. Libraries, at least in North America, have developed an aggressive (and admittedly somewhat self-righteous) philosophy based primarily on assistance to—and protection of the rights of—the reader. Libraries have seldom catered to the full needs of the writer (even though most of the readers in academic libraries are usually gathering information in order to write something). In a networked hyper-text environment, the writer must be accepted as a client deserving of a level of service at least equal to that of the reader—if for no other reason than that it will become increasingly difficult to separate the activity of reading from that of writing, since both will consist mainly of some manipulation of text on the network. "In a full-fledged hypertext the distinction [between writing and reading] can disappear altogether."\textsuperscript{49} We must in any event expect the information environment in the online era to be such that, while the library will obviously continue to assist the user in locating information, the main information retrieval service provided by the library may well be indirect—through assistance to those who input or publish information. A central function of information services in the online era, in other words, will be to ensure that information is made available by its originators in such a form and according to such standards that it will be most rapidly accessible and useful to those who need it.
Publishing

It is very unlikely—and is would certainly be very undesirable—for the commercial publishing industry to continue to play the same dominant role in scholarly publication in the online environment that it has in the paper environment: that would be economically unacceptable and technically unnecessary. There will certainly be important and profitable opportunities for commercial publishers in the online environment, but the routine publication of scholarly notification sources should not be one of these. Since the majority of the authors, readers, and editors of scholarly publications are members of academic faculties, it will make very little sense to continue to “contract out” to commercial publishers the responsibility for distributing the written scholarly products of the faculty. The academy, as Richard Dougherty, Ann Okerson, and others have strongly advocated, must assume that responsibility.

It should be the function of academic information services to ensure that national—or preferably international—peer review structures are in place. These editorial boards will then continue to do what they do in the paper environment: they will add value to individual articles by endorsing them for publication. The network of “core” servers for each subject area mentioned above needs to be established as soon as possible, so that such publications can then be easily available to all students and scholars. Access to the network for academic users should be free, in the same way that access to the library is free; the cost of its maintenance, in other words, should continue to be borne—as it is today—by the institutions. An infrastructure for individual or vanity publications must also be in place. Each institution will need to establish policies on archiving—especially for such individual publishing and for network discussion list input. It is also highly advisable that institutions retain copyright control for all or most publications by their faculty. In the interest of scholarly information exchange—and because scholarly authors traditionally and correctly receive rewards for publication indirectly in the form of peer recognition and promotion rather than direct remuneration—all scholarly information published by institutions should be free for any person or institution to copy for any noncommercial purpose.

Indexing

Providing effective access in a networked environment must become increasingly the responsibility of the writer, with the assistance of local information services. The indexing of the text—or whatever we call the additions to the text that will allow the user to locate, understand, and evaluate it—must become in a networked environment an integral part of the writing of the text. Assisting the author with the indexing of his or her writing, so that such indexing (and this may well include specialized software) becomes part of the publication, should become a responsibility that information services undertake at the time the publication is being produced, rather than something libraries or commercial indexers do, as is now the case, subsequent to publication. This professional activity of assisting the writer to produce his or her indexing within the network context, so that readers needing it can find it, will presumably be fundamentally the same activity or service, approached from the opposite direction, requiring the same bibliographical knowledge and skills, as assisting the reader to locate information on the network.

Document Structure

The replacement of linear reading and writing by a hierarchical structure of some kind (e.g., concentric stratification) will be justified only if that new structure is standardized so that information access is improved. The practicability of the whole enterprise will certainly depend upon prearranged, universally accepted conventions. In the kind of hierarchical structure suggested above, for example, there would need to be some set of abstract guidelines applicable to writing on any topic that would...
define the characteristics of information to be written or located at each level—or more exactly, that would standardize the relationship of the strata or levels to each other. Only in this way would the user be able to exploit the conventions of the structure, in order to arrive at the information needed in the shortest possible time. Defining that structure for all formal scholarly writing, obtaining international agreement on its implementation, assisting authors in their writing so that they make effective use of the structure, and assisting readers in locating the information they need in the shortest time by exploiting that structure—all of these functions should become routine responsibilities of information services in an online environment.

CONCLUSIONS

Librarians are admittedly control freaks. We yearn to regulate all information exchange, and we have a morbid fear of losing anything. We traditionally interpose ourselves between the user and the information. And now, just when it appears that technology will finally liberate the user from the tyranny of mediation, the library, in its new guise as information service provider, appears poised to insert itself once again between the information seeker and the information sought. There will be some objection to this role, and some rejection of this service—but if information professionals recognize that the imposition of some order and structure on networked information is an essential prerequisite for effective scholarly communication and higher education in an online environment, then plans should be made, regardless of the opposition, to provide that service and to demonstrate how it adds significant value to the functional network. This effort should be made, moreover, even if—or especially if—it is not in the best administrative interest of libraries to do so. If the kinds of information services discussed above are successfully implemented, then not only will the traditional operational divisions within the library (e.g., selection, cataloging, reference) dissolve and be reconstituted in other forms but also the currently clear administrative divisions between the library, computer center, university press, and campus bookstore will become increasingly obscure—so that the need to effect some kind of amalgamation of all campus information services may eventually become irresistible.

It is very unlikely—and it would certainly be very undesirable—for the commercial publishing industry to continue to play the same dominant role in scholarly publication in the online environment that it has in the paper environment: that would be economically unacceptable and technically unnecessary.

Neither networks nor hypertext will separately bring about a true revolution—but in combination they are indeed very likely to engender a radical transformation in scholarly information exchange. Together they provide not simply a new and improved version of what has been done before in paper form, but rather represent fundamental revisions in the very modality of communication; they may even affect and alter some of our basic assumptions about the nature of information itself. The ability especially to augment a text's content through implicit and explicit citation has the most far-reaching implications, which users of networks and hypertext must learn to appreciate. If there is one lesson we have learned, one conclusion we must draw, from the experience of such critical methods as deconstruction, it is surely this: if we push intertextuality far enough, if we take it upon ourselves to explore a large enough range of the previous uses of the signs of which a text is composed, if we broaden the context enough, then the reference of those signs and the meaning of that text will diminish and dissolve. Meaning is fragile, and the capacity of the network for a theoretically infinite combining and recombining of texts can jeopardize meaning in a fundamental sense. The
hypertext-enhanced network is indeed a machine of enormous power and promise, but like all powerful machines, it will need to be skillfully designed and responsibly operated by those who understand and respect its potential.

REFERENCES AND NOTES

1. According to testimony of Douglas E. Van Houweling in the House Committee on Science, Space, and Technology, Subcommittee on Science, Management of NSFNet, 102d Cong., 2d sess., Mar. 12, 1992, 38 (also currently available by FTP from nis.nsf.net/internet/legislative.actions/hearing, Mar. 12 1992), between July 1988 and March 1992, "traffic on the [NSF] backbone has grown almost 7,000 percent, an average of 11 percent compounded every month, and new applications and uses are constantly emerging."

2. Congressional Record 137:174 (Nov. 22, 1992), S17730. The NSF Backbone is just completing its transition from T1 (1.5 megabits per second) to T3 (45 megabits per second). See the Link Letter 5, no.1 (Mar./Apr. 1992), 1, 8–9 (also currently available by FTP from nic.merit.edu/newsletters/linkletter). A megabit is one million bits; a gigabit is one billion bits. By contrast, the original ARPANET put into operation in 1969 was run over wideband telephone lines that permitted transmissions of 50 kilobits (i.e., 50,000 bits) per second (Dennis G. Perry, Steven H. Blumenthal, and Robert M. Hinden, "The ARPANET and the DARPA Internet," Library HiTech 6:2 [1988], 51).

3. This bill, sponsored by Senator Albert Gore, is currently (Summer 1992) pending in the Senate as S-2937. For the text of the bill, see Congressional Record 138, no.97 (July 1, 1992), S9539–41. A copy of the press release describing the bill is currently available by FTP from nis.nsf.net/internet/legislativeactions/iita.1992/gorebill.1992.txt.


5. We must be especially careful in the academic environment to avoid assuming that most uses of the Internet are for scholarly purposes. See the testimony of Mitchell Kapor in House Committee on Science . . . , Management of NSFNet, 78: [nearly] "60 percent of all registered computing sites in the Internet are commercial organizations. Within two years the number is expected to grow to nearly 90 percent."


8. The interviews undertaken by the McClure team showed a clear aversion by scientists to publishing in online journals: this is because "the reward structure of science is based on formal publication history and . . . electronic publication does not enhance one’s status or image; in fact, it may very well harm them." (McClure, The National Research and Education Network, 103.)


11. A sign, according to Umberto Eco in his *A Theory of Semiotics* (Bloomington, Ind.: Indiana Univ. Pr., 1976), 16, is “everything that, on the grounds of a previously established social convention, can be taken as standing for something else.”


15. A good example is the relationship of the NREN to the Internet and NSFNet. Will the Internet “Evolve into NREN,” (Vinton G. Cerf, “Introducing the Internet” in Parkhurst, *Library Perspectives on NREN*, 20, figure 6); or will “the current NSFNET . . . become the Interim NREN” (Michael M. Roberts, “Positioning the National Research and Education Network,” *EDUCOM Review* 25 [Fall 1990]: 12); or is the NREN already well in place, with NSFNET “currently” serving “as the primary cross-continental backbone for the NREN, which now links over one thousand university and college campuses . . .” (Stephen Gould, “Building the National Research and Education Network,” *CRS Issue Brief* [IB90126] [Washington, D.C.: Library of Congress, “Updated Dec. 18, 1991] 1)? It is perhaps not so much the network itself as the literature describing it that is becoming too complicated to understand.

16. These three views of the network are perhaps roughly equivalent to Robert Kahn’s three infrastructure components: the network, the databases, and the infrastructure intelligence—except that he quite rightly includes protocols as part of the network rather than as part of the infrastructure intelligence—in his “National Information Infrastructure Components,” *Serials Review* 18, nos.1/2 (1992): 85-87.


20. Ted Nelson, *Literary Machines: The Report on, and of, Project Xanadu concerning Word Processing, Electronic Publishing, Hypertext, Thinkertoys, Tomorrow’s Intellectual Revolution, and Certain Other Topics including Knowledge, Education and Freedom*, 3d ed. (Swarthmore, Pa.: the author, 1981), 1/22 and 2/21. This is a difficult work to cite, in that it has been updated and reissued several times. The copy I used is owned by the Harvard University Law Library.

21. For example, Philip Seyer, in his *Understanding Hypertext: Concepts and Applications* (Blue Ridge Summit, Pa.: Windcrest, 1991). 1, describes hypertext as “nonlinear, or nonsequential, text. That is, the text is organized so you can easily jump around from topic to topic. You do not need to read the text in fixed sequence.”


27. Probably the most effective analysis of the relationship between hypertext and post-structuralist literary theory will be found in George P. Landow, *Hypertext: The Convergence of Contemporary Critical Theory and Technology* (Baltimore: Johns Hopkins Univ. Pr., 1992).


32. “Ordinarily a document consists [sic] of its contents (including history and alternatives) and its out-links. These out-links are under control of its owner, whereas its in-links are not.” (Nelson, *Literary Machines*, 2/27.) An “out-link” is presumably a link from the original, owned document to another document, while “in-links” are presumably the links from other (not owned) documents to the owned document. See also the chapter in *Literary Machines* on electronic publishing (2/34-2/45).


35. Ibid, 153.

36. Ibid, 117.

37. Ibid, 153.

38. Ibid, 119.


41. This is a combination of the Acquisition-on-Demand Model and the Discipline-Specific Literature Base Model as defined in Czeslaw Jan Grycz, “Economic Models for Networked Information,” *Serials Review* 18, nos.1/2 (1992): 12-13. See also in the same issue of *Serials Review*, 78-81, the article by Charles W. Bailey, Jr., on “The Coalition for Networked Information’s Acquisition-on-Demand Model: An Exploration and Critique.”

42. See Stevan Harnad’s very reasonable idea of a hierarchy of discussion groups, out of which would emerge a hierarchy of online publications, in his “Scholarly Skywriting and the Prepublication Continuum of Scientific Inquiry,” *Psychological Science* 1, no.6 (Nov 1990): 343-44.

43. I hasten to note that no publication is, of course, ever fully self-contained, since it is connected with other publications specifically through references and quotations, and more broadly by virtue of intertextuality.


45. It is not, again, that information A in a core journal is somehow endemically superior to information B in a noncore journal, but rather only that information A in the core journal will normally be read first, and will therefore normally condition the understanding of information B.

46. It is in fact this hierarchical quality or position which is actually being marketed by commercial science publishers: that is what the highly reputable or core journal provides to the material it publishes. Whether that value added is worth the prices some commercial publishers now charge is, of course, another question.
47. Reading would probably also take place at the same level across different but related publications; although this might also be viewed as a further form of referential reading, since it might be based on “implicit” references or links.

48. It would probably be possible for some kind of “outliner” software to be produced that would assist with this work, although care would obviously need to be taken to leave the evaluative decisions entailed in such outlining fully in the hands of the author. For a discussion of the concept of the outline as it relates to word processing, see Michael Heim, *Electric Language: A Philosophical Study of Word Processing* (New Haven: Yale Univ. Pr., 1987), 139–45; see also his discussion (243–46) of Gabriele Lusser Rico’s concept of “clustering.”


52. This is roughly the copyright policy of The Public-Access Computer Systems Review. Robert L. Oakley (“Copyright Issues,” 25) has noted, however, that this could create some legal difficulties “because of the potential for disagreements over the line between commercial and noncommercial use.”
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The 1986 College Library Standards: Application and Utilization

David B. Walch

There have been several iterations of college library standards and guidelines since the 1920s. The 1986 College Library Standards, written by an Association of College and Research Libraries' committee, were to address developing concerns in academic libraries. These concerns include collections and staff formulae, budget, audiovisual collections and services, networking, and cooperative associations. This article provides a comparison between the 1975 and 1986 editions of the College Library Standards and summarizes the changes made. It also analyzes the results of a survey of 215 academic libraries. The purpose of the survey was to determine the use and effectiveness of the standards. The results show that the standards are widely used, and that there is keen interest in the application and further development of the standards. Specific recommendations for changes are made.

In 1982, an ad hoc committee was appointed by the Association of College and Research Libraries (ACRL) to review the 1975 edition of The College Library Standards. The committee was charged "to recommend revision which would bring them up to date and make them more generally useful." Particular concern was expressed about the currentness of the collection formula (Formula A), staff formula (Formula B), and the budget standard (6 percent of the institution's general budget). Matters relating to nonprint collections and services, as well as networking and cooperative associations which had not been included in the 1975 standards, also needed to be addressed. From 1982 until the publication of the 1986 standards, the ad hoc committee worked to meet its charge to review and revise each standard in light of developing technology, networking, resource sharing, and audiovisual materials.

A COMPARISON OF THE 1975 AND 1986 STANDARDS

Although few substantial changes were made in the 1986 standards, many commonalities remained between the two. The same number of standards were enumerated in the same order, and they remained quantitative in nature. The formula concept for determining adequacy of collection, staff, and size of library was left intact, although some formula ingredients changed. A review of the major changes and differences is highlighted below:

- **Standard 1: Objectives.** No major changes.
- **Standard 2: Collections.** A major difference between the two editions of the standards was in what was to be counted in Formula A as volumes. The 1975 standards included only print and microform volume equivalents as items to be counted. The 1986 standards allowed books and microforms.
as well as videocassettes, films, videodiscs, sound recordings, filmstrips, loops, slide-tape sets, graphic materials (including maps), computer software, and slides. Also, the 1986 standards permitted libraries to count the number of items borrowed through interlibrary loan or through other resource-sharing arrangements.

- **Standard 3: Organization of Materials.** Slight modifications were made in Formula 3. The 1975 standards stated, "The catalog may be developed either by a single library or jointly among several libraries." This was omitted entirely in the 1986 edition. The 1975 standards also stated, "Patrons shall have direct access to library materials on the shelves." Though this portion of the standard was omitted, the 1986 standards did state that materials placed in storage facilities "shall be readily accessible to users." The change was made because some academic libraries were having to cope with off-site storage.

- **Standard 4: Staff.** The 1986 standards were somewhat more explicit in stating as part of Standard 4.4, "The support staff shall be no less than 65% of the total library staff, not including student assistants." On the same issue, the 1975 standards state that "librarians will seldom comprise more than 25-35% of the total Full Time Equivalent (FTE) library staff." The 1986 standards also added an extensive list of "Supplementary Staffing Factors to Be Considered," including hours of service, computer-based services, audiovisual services, and size and configuration of facilities.

- **Standard 5: Service.** A 1975 standard that referred specifically to "the provision of inexpensive means of photocopying" was omitted from the 1986 standards because photocopy service is a universal service currently provided in nearly all academic libraries. The 1986 standards also included a separate standard related to cooperative programs. In the 1975 version, this was incorporated into the interlibrary loan standard.

- **Standard 6: Facilities.** There was a minor modification in Formula C. The 1975 version recommended 25 square feet per study station and one-fourth of the sum of the space needed for readers and books dedicated to office, operational, and equipment activities. The 1986 version recommended 25 to 35 square feet per study station and one-eighth of the sum of the space needed for readers and books dedicated for office, operational, and equipment activities.

- **Standard 7: Administration.** The 1986 standards omitted two standards that were included in the 1975 version. One referred to keeping statistics for purposes of planning and information, and the other dealt with the need to seek out and utilize cooperative programs.

- **Standard 8: Budget.** The major change in the 1986 standards was a separate standard addressing the need for budget augmentation if the library has responsibility for "acquiring, processing, and servicing audiovisual materials and microcomputer resources." In summary, the changes between the 1975 and 1986 standards were slight. They included the opportunity to count all types of audiovisual materials plus items borrowed through interlibrary loan in Formula A; a recognition of off-site storage; allowance for an increase in the square feet per library study stations; a decrease in the amount of space assigned for office/operational activities and equipment; and a recognition of the need to increase the budget if the library is responsible for audiovisual and microcomputer services.

**SURVEY METHODOLOGY**

Because these changes were made, the committee wanted to determine if the 1986 standards were meeting the needs of those whom they were designed to serve, such as institutions defined by the Carnegie Commission on Higher Education as Liberal Arts Colleges I and II and Comprehensive Universities and Colleges I and II. In order to determine this, a survey of institutions from these classi-
fications was made. The survey was prepared and reviewed by members of the Standards Committee of the College Library Section of ACRL. The committee consisted of Lynne Chmelir, Rebecca Dixon, Claudette Hagle, Diana Parker, and David B. Walch.

The survey was sent to twenty-one institutions for pretesting. This process resulted in some minor modifications. The survey was then submitted to the ACRL office for review, and that, too, resulted in minor changes. The final version of the eight-page questionnaire was distributed to 236 level I institutions and 200 level II liberal arts and comprehensive institutions. Two hundred and fifteen questionnaires were returned, making for a response rate of 41.8 percent. In many respects, the survey parallels one that was done by a College Libraries Section Committee in 1979 and that was reported on by Larry Hardesty and Stella Bentley. The committee conducted a survey of 300 institutions on the use and effectiveness of the 1975 standards. The results were reported in the ACRL's Second National Conference of 1987.5

SURVEY RESULTS

The initial part of the survey sought demographic data, such as student enrollment, faculty size, number of librarians and library support staff, and number of majors offered at the bachelor's, master's, and Ph.D. levels. The survey also sought responses regarding the various units reporting to the chief library administrator, including audiovisual services, academic computing, and computing labs. Other data collected related to number of volumes (print, microform, and nonprint), operating expenditures, and annual growth of the book collection. Below is a summary of information gleaned from responses to the survey.

**Ratio of Librarians to Faculty**

Standard 4 and Formula B specifically address standards related to library staff, and are considered later. However, because Formula B is based only on enrollment, collection size, and growth of the collection, it is of interest to know the ratio of librarians to faculty. To the author's knowledge, this ratio has not been available, except for select library groups that collect their own data, such as the Association of Research Libraries (see table 1).

**External Units Reporting to Library Administration**

Over the past several years, more and more library directors have been given administrative responsibility for activities not normally incorporated within the traditional library. Chief among these activities are audiovisual units. A previous study of sixty randomly selected academic institutions showed

---

### TABLE 1

<table>
<thead>
<tr>
<th></th>
<th>FTE Faculty</th>
<th>FTE Librarian</th>
<th>Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carnegie I comprehensive public</td>
<td>19,291</td>
<td>691.9</td>
<td>27.9 : 1</td>
</tr>
<tr>
<td>Carnegie I comprehensive private</td>
<td>3,406</td>
<td>129.8</td>
<td>26.2 : 1</td>
</tr>
<tr>
<td>Carnegie I liberal arts private</td>
<td>2,822.4</td>
<td>153.3</td>
<td>18.4 : 1</td>
</tr>
<tr>
<td>Total Carnegie I</td>
<td>25,519.4</td>
<td>975</td>
<td>26.2 : 1</td>
</tr>
<tr>
<td>Carnegie II comprehensive public</td>
<td>1,258</td>
<td>51.3</td>
<td>24.5 : 1</td>
</tr>
<tr>
<td>Carnegie II comprehensive private</td>
<td>2,027</td>
<td>91.1</td>
<td>22.3 : 1</td>
</tr>
<tr>
<td>Carnegie II liberal arts private</td>
<td>2,630</td>
<td>127.5</td>
<td>20.6 : 1</td>
</tr>
<tr>
<td>Carnegie II liberal arts public</td>
<td>379</td>
<td>18.5</td>
<td>20.5 : 1</td>
</tr>
<tr>
<td>Total Carnegie II</td>
<td>6,294</td>
<td>288.4</td>
<td>21.8 : 1</td>
</tr>
<tr>
<td>Total—all institutions</td>
<td>31,813.4</td>
<td>1,263.4</td>
<td>25.2 : 1</td>
</tr>
</tbody>
</table>
TABLE 2

UNIT REPORTING TO LIBRARY ADMINISTRATORS

<table>
<thead>
<tr>
<th>Carnegie I comprehensive public</th>
<th>Audiovisual</th>
<th>Archives</th>
<th>Ac Comp.</th>
<th>Comp. Labs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carnegie I comprehensive private</td>
<td>10</td>
<td>16</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Carnegie I liberal arts private</td>
<td>13</td>
<td>17</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Carnegie II comprehensive public</td>
<td>8</td>
<td>8</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>Carnegie II comprehensive private</td>
<td>9</td>
<td>12</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Carnegie II liberal arts private</td>
<td>33</td>
<td>31</td>
<td>4</td>
<td>6</td>
</tr>
<tr>
<td>Carnegie II liberal arts public</td>
<td>2</td>
<td>3</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>106</td>
<td>111</td>
<td>9</td>
<td>17</td>
</tr>
<tr>
<td>Percent</td>
<td>49.3</td>
<td>51.6</td>
<td>4</td>
<td>7.9</td>
</tr>
</tbody>
</table>

TABLE 3

KNOWLEDGE AND USE OF THE 1985 STANDARDS

<table>
<thead>
<tr>
<th>Knowledge of Standards</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thoroughly familiar with details</td>
<td>18.9</td>
</tr>
<tr>
<td>Very familiar with general context</td>
<td>39.3</td>
</tr>
<tr>
<td>Familiar in general</td>
<td>34.0</td>
</tr>
<tr>
<td>Aware but not familiar</td>
<td>7.3</td>
</tr>
<tr>
<td>Not familiar at all</td>
<td>0.5</td>
</tr>
</tbody>
</table>

Use of Standards

- To justify improvement to physical plant | 10.2 |
- To justify library budget | 15.9 |
- To justify staff expansion | 12.9 |
- To justify collection upgrade | 12.5 |
- To justify improvement of services in general | 9.4 |
- To prepare accreditation and/or institutional self studies | 18.1 |
- To orient/educate college administration | 15.2 |
- Have not used | 4.9 |
- Other | 0.9 |

that 33 percent of audiovisual directors reported to a library administrator. This survey of 215 institutions showed a somewhat higher percentage (see table 2). The survey also made it clear that there has not been a rush to merge academic computing activities administratively with the library. Also noted is the small percentage of libraries that have and are responsible for computer labs.

Knowledge and Use of the 1986 Standards

The Hardesty/Bentley survey revealed that 61.6 percent of the respondents were either "very" or "thoroughly" familiar with the 1975 standards. The survey of the 1986 standards showed a nearly identical trend, with 58.2 percent being "very" or "thoroughly" familiar. Table 3 also shows that the three major uses of the standards related to accreditation, arguing for budget augmentation, and education of college administrators. This contrasts sharply with the Hardesty/Bentley survey, which indicated that the greatest use of the 1975 standards was to upgrade the collections and to improve services. It should be noted that, in general, more use is made of the standards by the smaller institutions, such as Carnegie Type II, than by the larger schools. The directors of the smaller institutions have more knowledge of the standards than do their counterparts on the larger campuses.

Standard 2: Collections

In an attempt to recognize the increasing growth and utilization of audiovisual material and microforms, the 1986 standards included a count of these types of materials within the collection
TABLE 4A
FORMULA A—COLLECTION

<table>
<thead>
<tr>
<th></th>
<th>Too High</th>
<th>Adequate</th>
<th>Too Low</th>
</tr>
</thead>
<tbody>
<tr>
<td>Survey of 1975 Standards (No Audiovisual or Interlibrary Loan)*</td>
<td>9.9%</td>
<td>16.5%</td>
<td>46.2%</td>
</tr>
<tr>
<td>Survey of 1986 Standards (includes Audiovisual and Interlibrary Loan)</td>
<td>7.7%</td>
<td>10.8%</td>
<td>45.9%</td>
</tr>
</tbody>
</table>

* Percentages in 1975 do not equal 100 percent since that survey also included a percent for “no opinion” (3.8 percent) and “no response” (5.5 percent)

TABLE 4B
1986 FORMULA A—“GRADED” COLLECTION SIZE

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(90–100% of volumes called for in Formula A)</td>
</tr>
<tr>
<td>66.0%—Grade A</td>
<td>(75–89% of volumes called for in Formula A)</td>
</tr>
<tr>
<td>18.2%—Grade B</td>
<td>(60–74% of volumes called for in Formula A)</td>
</tr>
<tr>
<td>9.4%—Grade C</td>
<td>(0–59% of volumes called for in Formula A)</td>
</tr>
<tr>
<td>6.4%—Grade D</td>
<td></td>
</tr>
</tbody>
</table>

Standard 4.3: Staffing Formula

The same staffing formula is used in both versions. The recommendation that the support staff compose “not less than 65 percent of the total library staff” was also similar to the 1975 statement that “librarians will seldom comprise more than 25–35% of the total FTE library staff.” As noted in table 5A, the majority of the respondents to the 1986 and the 1975 standards surveys deemed the standard as adequate. Table 5B suggests that academic libraries find it far more difficult to meet the standard for staffing than the standard for book collections. For instance, only 33 percent meet the Grade A level for staff, while 66 percent achieve that same grade for book collection size. Table 5C also notes that more than 70 percent of the academic libraries do not meet the 65 percent recommended level of support staff (see tables 5A, 5B, and 5C).
TABLE 5A
FORMULA B—STAFF

<table>
<thead>
<tr>
<th></th>
<th>Too High</th>
<th>Adequate</th>
<th>Too Low</th>
</tr>
</thead>
<tbody>
<tr>
<td>Survey of 1975 standards*</td>
<td>5</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>Survey of 1986 standards</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Percentages in 1975 do not equal 100 percent since that survey also included a percent for "no opinion" (0.5 percent) and "no response" (4.4 percent).

TABLE 5B
1986 FORMULA B—"GRADED" STAFF SIZE

<table>
<thead>
<tr>
<th>Grade</th>
<th>Formula B Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>(90–100% of staff called for in Formula B)</td>
</tr>
<tr>
<td>B</td>
<td>(75–84% of staff called for in Formula B)</td>
</tr>
<tr>
<td>C</td>
<td>(60–74% of staff called for in Formula B)</td>
</tr>
<tr>
<td>D</td>
<td>(50–54% of staff called for in Formula B)</td>
</tr>
</tbody>
</table>

TABLE 5C
SIZE OF SUPPORT STAFF

<table>
<thead>
<tr>
<th>Percentage</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>21.1%</td>
<td>Have 65% or more of staff in support staff positions.</td>
</tr>
<tr>
<td>19.7%</td>
<td>Have 60–64% of staff in support staff positions.</td>
</tr>
<tr>
<td>19.2%</td>
<td>Have 55–59% of staff in support staff positions.</td>
</tr>
<tr>
<td>14.8%</td>
<td>Have 50–54% of staff in support staff positions.</td>
</tr>
<tr>
<td>18.2%</td>
<td>Have 0–49% of staff in support staff positions.</td>
</tr>
</tbody>
</table>

Standard 6.1: Space Formula

The major change in Formula C, which is the facilities formula, dealt with the space required for staff. In 1975 the formula recommended that the space required for such administrative purposes as staff offices, work areas, catalogs, files, and equipment equal one-fourth of the sum of the space required for readers and books. The 1986 standards recommend that only one-eighth of the sum of the space required for readers and books be devoted to administrative purposes. Both formulas noted that the space required for audiovisual purposes should be added to the calculations. The 1986 space formula also specified that space required for microforms, bibliographic instruction, and equipment and services associated with library technology also be added to the formula. The major ingredients of the formula, such as the allocation of space for readers and books, remained primarily the same. Table 6A compares the 1975 response to that of 1986. Table 6B indicates the grade achieved by academic libraries as measured against Formula C (see tables 6A and 6B).

Usefulness of the Standards

Although some standards were deemed more useful than others, each of them received high marks for their value as a standard. Standard 2 (collections) was seen as being most useful when considering the high end of the "usefulness" scale. Standard 8 (budget) was considered the next most useful. Both of these standards have specific quantitative ingredients. The survey of the 1975 standards also showed Standard 2 to be the most useful, followed by Standard 7 (administration). Standard 3 (organization) was deemed the least useful in both surveys. Table 7 shows the response to the questions regarding usefulness (see table 7).

Related Concerns

The survey also suggested five additional areas for potential development of standards. These five areas included performance measures, database access, resource sharing, microcomputers, and...
Survey of 1975 standards*  
Survey of 1986 standards

<table>
<thead>
<tr>
<th></th>
<th>Too High</th>
<th>Adequate</th>
<th>Too Low</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>5.5%</td>
<td>7.7%</td>
<td>6.6%</td>
</tr>
<tr>
<td></td>
<td>.5%</td>
<td>7.2%</td>
<td>16.4%</td>
</tr>
</tbody>
</table>

* Percentages in 1975 do not equal 100 percent since that survey also included a percent for “no opinion” (8.8 percent) and “no response” (1.1 percent).

**TABLE 6B**  
1986 FORMULA C—"GRADED" SPACE

<table>
<thead>
<tr>
<th>Grade</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grade A (90-100% of the net assignable area called for by the formula)</td>
<td>49.5%</td>
</tr>
<tr>
<td>Grade B (75-89% of the net assignable area called for by the formula)</td>
<td>19.1%</td>
</tr>
<tr>
<td>Grade C (60-74% of the net assignable area called for by the formula)</td>
<td>21.1%</td>
</tr>
<tr>
<td>Grade D (50-59% of the net assignable area called for by the formula)</td>
<td>10.3%</td>
</tr>
</tbody>
</table>

online catalogs. As noted in table 8, the majority of those responding indicated the development of standards for database access and resource sharing would be most useful (see table 8).

Directors also recommended as many as fifteen other areas, from document delivery to hours, that needed to be considered for inclusion within the standards. The audiovisual services area was mentioned the most. Although the initial charge given to the 1982 ad hoc committee specifically mentioned the need for addressing audiovisual concerns, the perception among some respondents was that more needs to be done. One of the difficulties the committee faced in its consideration was the paucity of audiovisual research needed to provide sufficient rationale that supports the quantitative measures that characterize the standards.

A final question on the survey asked which type of standard—quantitative or qualitative—best meets the needs of the profession. It is interesting to note that the 1979 university library standards reflected a qualitative nature. The foreword to the 1989 standards, however, states, “By far the most important of these [issues discussed by the committee responsible for the 1979 standards], was the question of whether standards should be quantitative or qualitative. In the end we concluded that neither approach was appropriate.” Similar discussions were held by the committee that developed the 1986 standards. The decision in that instance was to continue with a quantitative approach. An overwhelming majority (64.5 percent) of the survey respondents expressed the desire to retain a quantitative approach; 25.6 percent favored a qualitative style; and

**TABLE 7**  
USEFULNESS OF EACH STANDARD

<table>
<thead>
<tr>
<th>Standard</th>
<th>Useful</th>
<th>Modestly Useful</th>
<th>Useless</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>5</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>1 - Objective</td>
<td>29.4</td>
<td>31.6</td>
<td>30.5</td>
</tr>
<tr>
<td>2 - Collection</td>
<td>36.7</td>
<td>35.7</td>
<td>20.1</td>
</tr>
<tr>
<td>3 - Organization</td>
<td>21.4</td>
<td>30.0</td>
<td>39.0</td>
</tr>
<tr>
<td>4 - Staff</td>
<td>34.9</td>
<td>32.8</td>
<td>22.7</td>
</tr>
<tr>
<td>5 - Service</td>
<td>30.2</td>
<td>36.4</td>
<td>24.0</td>
</tr>
<tr>
<td>6 - Facilities</td>
<td>34.0</td>
<td>35.1</td>
<td>20.9</td>
</tr>
<tr>
<td>7 - Administration</td>
<td>28.0</td>
<td>33.3</td>
<td>28.6</td>
</tr>
<tr>
<td>8 - Budget</td>
<td>33.3</td>
<td>37.0</td>
<td>23.8</td>
</tr>
</tbody>
</table>
TABLE 8
PRIORITY FOR FUTURE DEVELOPMENT OF STANDARDS

<table>
<thead>
<tr>
<th>Standard</th>
<th>High</th>
<th>Medium</th>
<th>Low</th>
</tr>
</thead>
<tbody>
<tr>
<td>Performance measures</td>
<td>27.3</td>
<td>32.8</td>
<td>25.2</td>
</tr>
<tr>
<td>Database access</td>
<td>34.7</td>
<td>35.7</td>
<td>23.6</td>
</tr>
<tr>
<td>Resource sharing</td>
<td>34.8</td>
<td>36.3</td>
<td>18.9</td>
</tr>
<tr>
<td>Microcomputer</td>
<td>20.9</td>
<td>31.6</td>
<td>32.2</td>
</tr>
<tr>
<td>Online catalogs</td>
<td>35.5</td>
<td>30.0</td>
<td>25.5</td>
</tr>
</tbody>
</table>

9.9 percent said they would like to see the incorporation of both.

REMAINING ISSUES

The 1986 edition of the College Library Standards is in its seventh year. The survey showed that as many as 95 percent of the respondents found the standards to be "useful" to "very useful." Because of such a high rate of use, it is important that the standards remain current and viable. The results of the survey discussed here, plus the limited number of articles found in the literature relating to the 1986 standards, point to some areas that, at the very least, need tweaking and in some instances require fresh thought and approach. These areas are summarized below.

Rationale for Quantitative Measures

As previously noted, a substantial number of respondents favored the quantitative nature of the standards. However, current research and rationale to support the quantitative criteria are lacking. If such specificity is going to be articulated, then there needs to be current supporting documented research. The quantitative measures that need rationale include:
- Standard 2.2, Formula A (collection size).
- Standard 4.3, Formula B (staff size and composition).
- Standard 6.1, Formula C (library building).
- Standard 8.1, library budget.

One library director, Hans E. Bynagle, succinctly stated his concern with the lack of rationale by noting:

The quantitative components of the Standards tend to be useful for political leverage only as long as no one inquires into them too closely. If anyone asks the basis for any quantitative standard, one is usually at a loss to reply. I am not aware of anything ever published to explain the basis of any of the numerical formulas. I urge your Committee to undertake to "make public" in some fashion the rationale for each such standard. There are, of course, risks in such exposure, but in the long run it will enhance the credibility of the Standards and of those who appeal to them.10

The current Standards Committee will be challenged to develop objective rationale for any quantitative measures they use. David Kaser also noted this weakness and spoke to the need for doing more research in developing the standard. He stated:

Research findings, of course, which can substitute sure and certain knowledge for opinion, belief and faith, should provide the proper foundations for quantitative standards. The advent over the last couple of decades, slow though it may have been, of more sophisticated and powerful research methodologies onto the library scene augurs well for future standards-makers. Optimizing and regression techniques, modeling, input/output analyses, and other research processes utilizing the capabilities of the computer, all promise better and more tenable standards in the years ahead.11

Counting Audiovisual and Microforms

The attempt to give credit to recognize audiovisual materials and microforms as an integral part of the library collection has resulted in making the collections formula less challenging. As noted
previously, by counting these types of materials, two-thirds of the institutions surveyed have Grade A collections. More than 70 percent found the formula to range from adequate to too low. While microforms and audiovisual materials need to be recognized, it would appear that an adjustment in the formula is needed. Furthermore, technological developments that make full-text access available online have the potential for impacting collection size.

**The “Richness” of the Staffing Formula**

The survey showed that as many as 66 percent of academic libraries are understaffed, according to Formula B. How are these libraries coping? Is there a substantial difference in the level of basic services being offered between libraries that are well endowed with staff and those that are not as richly blessed? Soon after the 1986 standards were published, two articles appeared that analyzed the staffing formula with the actual staffing levels in two statewide systems. Phillip M. White found that of the nineteen libraries in the California State University system, only 68 percent had what Formula B called for, only one fell into the Grade A category, and fourteen were graded C or lower. Ronnie W. Faulkner also compared the West Virginia Public Colleges against Formula C. He found that those institutions had 66 percent of the number of librarians called for and 52 percent of the recommended support staff. He concluded that “the formula for staffing seems excessively liberal,” and that “while there seems to be no doubt that the college libraries are understaffed, little is to be gained by arguing that the situation is worse than it is in reality.” The analysis of library staffing in these two statewide systems suggests that Formula B and the two-to-one ratio may require a more thorough review and accompanying rationale.

**Additional Areas for Standards Development**

Respondents to the survey indicated that standards relating to database access and resource sharing would be useful. There appears to be additional interest in incorporating standards that would address audiovisual issues more directly. Although reference to, and consideration of, audiovisual matters was given in Standards 2 (collections), Standards 6 (facilities), and Standards 8 (budget), there still appears to be the need for greater and more precise focus in this area.

**CONCLUSION**

The survey of libraries regarding the 1986 College Library Standards indicated that they are of value and are being used. Their quantitative nature continues to appeal to the vast majority of those who use them. Yet, the survey suggests a need for revision, which is something that goes beyond mere editing. As the College Libraries Standards Committee assumes its task, it should be aware of the challenge others have faced in developing and revising standards. The venerable Robert B. Downs stated in his Report of the Committee on University Library Standards to the Association of Research Libraries in January 1975:

> Several years ago when Stephen McCarthy called me to ask if I would serve as Chairman of the Joint Committee (ARL/ACRL), I thought that it was an excellent idea and I accepted without hesitation. I thought that standards have been a useful tool in college libraries and various other types of libraries, so why not for university libraries? My innocence and naiveté soon came in for several rude shocks.

While Downs did not elaborate on the “rude shocks” encountered, similar sentiment was later echoed by David Kaser, who served on the ACRL ad hoc committee to revise the 1959 Standards. He noted:

> Much of the persistent frustration at the academic library community’s inability to fashion tenable standards for itself can probably be attributed to the fact that it looks so deceptively easy. Like defining “pornography,” the unwary falls easily into the trap of assuming that, given a little time and motivation, any modestly informed person could do it. Many knowledgeable librarians have tried unsuccessfully to make standards, however, and the
very high failure rate among these efforts bespeaks clearly the formidable character of the task. While the difficulties of making the standards effective, timely, and meaningful are clearly articulated by Downs and Kaser, it is a task worthy of the challenge and one that will continue to benefit the profession and the college libraries that they serve.

REFERENCES AND NOTES

2. Ibid.
3. Ibid., 199.
4. Carnegie Comprehensive and Liberal Arts Type I and II institutions are described as follows:
   Comprehensive Universities and Colleges I. These institutions offer baccalaureate programs and, with few exceptions, graduate education through the master’s degree. More than half of their baccalaureate degrees are awarded in two or more occupational or professional disciplines, such as engineering or business administration. All of the institutions in this group enroll at least 2,500 students.
   Comprehensive Universities and Colleges II. These institutions award more than half of their baccalaureate degrees in two or more occupational or professional disciplines, such as engineering or business administration, and many also offer graduate education through the master’s degree. All of the colleges and universities in this group enroll between 1,500 and 2,500 students.
   Liberal Arts College I. These highly selective institutions are primarily undergraduate colleges that award more than half of their baccalaureate degrees in arts and science fields.
   Liberal Arts College II. These institutions are primarily undergraduate colleges that are less selective and award more than half of their degrees in liberal arts fields. This category also includes a group of colleges that award less than half of their degrees in liberal arts but, with fewer than 1,500 students, are too small to be considered comprehensive.
8. Ibid., 195.
10. Correspondence to Jacquelyn McCoy, Chair of the Ad Hoc College Library Standards Committee, from Hans E. Bynagle, Library Director of Whitworth College, Spokane, Wash. May 20, 1985.
Preservation Analysis and the Brittle Book Problem in College Libraries: The Identification of Research-Level Collections and Their Implications

Janet Gertz, Charlotte B. Brown, Jane Beebe, Daria D’Arienzo, Floyd Merritt, and Lynn Robinson

This article examines the brittle book problem in college libraries, priorities for treatment of brittle research materials, and the potential contribution of college libraries to national preservation efforts. Using a methodology based on Ross Atkinson’s article “Selection for Preservation,” the authors conducted condition surveys in three college libraries, identified titles as curriculum support, low-use research, or special collections materials, and assessed their physical condition. The results indicate that these three libraries own significant numbers of low-use research volumes which are brittle and in some cases held by few other libraries nationwide.

Within the last decade, liberal arts college libraries in the United States have begun developing preservation programs for their collections.¹ For years, these libraries have carried out many of the components of a preservation program, such as item conservation treatments, user education, replacement, and rehousing of damaged materials. Until recently, however, most college libraries have not had a librarywide preservation program coordinated by an in-house preservation administrator. Librarians generally do not question the need for all libraries, whether they are public, school, special, or academic, to make easily applied and common-sense preservation practices part of the library’s operations. Proper materials handling, user education, and the training of staff in basic minor repairs produce immediate results and are easily accomplished with relatively little expense. Many librarians, including directors of liberal arts college libraries, do, however, question whether the collections of liberal arts colleges merit the substantial philosophical and financial commitment required for a full preservation program. They question the benefits derived from complex activities,

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such as revising the commercial binding contract to reflect the current Library Binding Institute standards, conducting condition surveys of selected collections, or monitoring and assessing the physical and environmental conditions of library facilities. Unquestionably, lack of funding and difficulty in finding and often training someone to carry out these activities are significant obstacles.

What is sometimes overlooked when questioning the worth of a preservation program is the less immediate monetary benefit and the inherent ethical values that a program promotes. For example, what is the library's obligation in prolonging the useful life of the collections, particularly periodicals, with respect to regional interlibrary loan use, or for participation in a formal or informal cooperative collection development scheme? What are the preservation obligations with respect to maintaining the library's known subject strengths? What are the collection management implications and obligations to the donor when gift collections containing physically endangered materials are acquired? What are the long-term monetary and intellectual benefits, and what is the most cost-effective method of maintaining a physically stable collection?

If the context of this discussion is changed from the campus to the region or nation, then the significance of the college's materials beyond short-term and immediate curriculum support comes into play. Do research-level materials of national import exist in college libraries? If so, are there enough of these materials to coordinate efforts with existing national cooperative preservation programs? Do college libraries have a responsibility for long-term or "permanent" preservation of such low-use, often out-of-scope materials?

These are the preservation concerns addressed in this article. To examine these issues, the authors conducted two preservation surveys at Amherst and Grinnell colleges in 1990 and one at Franklin and Marshall College in 1988. The results of these three studies carry implications for preservation at individual college libraries and for national preservation efforts.

**BACKGROUND TO THE 1990 STUDIES**

In May 1985 the Shadek-Fackenthal Library of Franklin and Marshall College (F&M) in Lancaster, Pennsylvania, implemented a librarywide preservation program modeled after that of Yale University. The program actively promotes coordination of preservation activities within collection management and development functions. By 1987, numerous embrittled nineteenth-century titles in the classics collection were identified as in need of preservation decisions. At about the same time, Ross Atkinson had just published his article, "Selection for Preservation," describing a typology which analyzes titles for intrinsic value, intellectual value, and patterns of use. Charlotte B. Brown and Janet Gertz undertook a study blending Atkinson's typology with the preservation decision-making methodologies already in place at F&M. They tested the new method in 1988 with a survey of the F&M classics and linguistics collections.

Not only did Atkinson's typology prove workable for F&M, but the results of the survey indicated that 36 percent of the titles in the classics collection were of research value (Atkinson's Class 3—see Appendix for definitions); 42 percent of the collection was physically endangered; and 24 percent of the Class 3 titles were reported to be held by five or fewer other libraries. The study had identified a small but coherent group of materials with research value on a national level. The question then arose whether other liberal arts college libraries have subject collections that could produce similar results.

In spring 1989, the Council on Library Resources (CLR) funded a proposal to test the applicability of the F&M methodology in the collections of Amherst and Grinnell colleges. The test would also determine if these two collections would exhibit profiles comparable to F&M's despite differences in their histories and environments. The study's
hypotheses maintained that the F&M methodology would accurately record the physical condition of each title in the Amherst and Grinnell collections and unequivocally assign it to one of the three Atkinson classes, and that significant Class 3 materials would be identified in both collections.

**METHODOLOGY OF THE STUDIES**

The methodology used at F&M, and later replicated by Amherst and Grinnell colleges, consisted of a random survey of volumes from designated subject areas, classification of each title according to Atkinson's typology, analysis of circulation records and physical condition, and identification of holdings of Class 3 materials outside the home library. Consistent evaluation of the books' physical condition was assured by using definitions and criteria established for the Yale preservation survey conducted from 1979 to 1982. (See appendix for the definitions employed here).

Each randomly selected title, including all volumes and duplicate copies, was located in the stacks or retrieved from circulation and then inspected for physical condition. The investigators noted the number of circulations, as well as reserve and interlibrary loan uses since 1979, and then classified the title according to Atkinson's typology. All titles which fell into Class 3 were searched in OCLC, RLIN, and NUC Pre-56 to determine holdings nationwide.

Maintaining consistency between the methodology employed in the F&M study and the subsequent Amherst/Grinnell project was essential to generating comparable data. The investigators from Amherst and Grinnell, therefore, met with Brown and Gertz to learn and practice the F&M methodology and to modify as needed the coded survey worksheets. Summaries of the survey at Grinnell, conducted and reported by Lynn Robinson and Jane Beebe, and of the survey at Amherst, conducted and reported by Daria D'Arienzo and Floyd Merritt, follow. Complete details of the two case studies are available on request from the respective authors.

**FIRST CASE STUDY: SURVEY OF THE CLASSICS COLLECTION AT GRINNELL COLLEGE**

Grinnell College is an undergraduate, four-year, coeducational residential institution in Grinnell, Iowa, whose goal is for students to develop analytical and imaginative thinking in the liberal arts. The school has 33 academic departments and 129 faculty members. The faculty's primary mission is to teach.

The college was founded in 1846 in the city of Davenport, Iowa, and was the first to grant a bachelor of arts degree west of the Mississippi River. In 1859, Iowa College, as it was called then, moved to Grinnell, Iowa, and was renamed Grinnell College. In 1882, a cyclone hit Grinnell, destroying both college buildings. Nevertheless, the structures were rebuilt and the curriculum was expanded.

What is sometimes overlooked when questioning the worth of a preservation program is the less immediate monetary benefit and the inherent ethical values that a program promotes.

The library collection has been housed in at least four separate locations. During the 1982–83 school year, a major renovation and expansion of Burling Library doubled the study and shelf space, provided air conditioning throughout the building, and provided individual lighting systems.

The primary purpose of the collection is to support the curriculum and, secondarily, the basic research needs of the faculty. Burling Library holdings exceed 300,000 volumes and over 2,000 active serial titles. The college has been a selective United States depository since 1874 and is also a full depository for State of Iowa documents. Faculty and librarians share selection responsibility, and the annual acquisitions rate is approximately 9,500 volumes.

The library began a reclassification and retrospective conversion project in
TABLE 1
COLLECTIONS COMPARED AS A WHOLE

<table>
<thead>
<tr>
<th>Percentage</th>
<th>F&amp;M P (%)</th>
<th>F&amp;M PA (%)</th>
<th>Grinnell PA (%)</th>
<th>Amherst QE (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Atkinson class</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Class 3</td>
<td>12</td>
<td>36</td>
<td>44</td>
<td>46</td>
</tr>
<tr>
<td>Class 2</td>
<td>86</td>
<td>62</td>
<td>54</td>
<td>45</td>
</tr>
<tr>
<td>Class 1</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>9</td>
</tr>
<tr>
<td>Publication date</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>pre-1900</td>
<td>22</td>
<td>58</td>
<td>63</td>
<td>48</td>
</tr>
<tr>
<td>pre-1950</td>
<td>88</td>
<td>42</td>
<td>37</td>
<td>52</td>
</tr>
<tr>
<td>1950-</td>
<td>6</td>
<td>33</td>
<td>26</td>
<td>30</td>
</tr>
<tr>
<td>1980-</td>
<td>32</td>
<td>1</td>
<td>9</td>
<td>22</td>
</tr>
<tr>
<td>English language</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Used since 1979</td>
<td>87</td>
<td>66</td>
<td>71</td>
<td>86</td>
</tr>
<tr>
<td>Condition</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unusable</td>
<td>8</td>
<td>42</td>
<td>7</td>
<td>6</td>
</tr>
<tr>
<td>Brittle</td>
<td>7</td>
<td>41</td>
<td>41</td>
<td>27</td>
</tr>
</tbody>
</table>

1978. The entire collection is now re-classed, converted to machine-readable form, barcoded, and available on INNOPAC, Grinnell’s local online catalog. An extensive weeding project involving faculty and librarians was undertaken, using basic bibliographic reference tools.12

Selection of Classics

Given its history and continuing importance, Grinnell’s classics collection was selected for the survey project. Since its founding, Grinnell’s students have pursued a strong traditional curriculum focused on intensive study of literary texts in their original languages.13 Four full-time faculty members teach Greek and Roman literature, history, and art. These individuals are among the most active in the library’s acquisitions program. The library has not been the recipient of any major gifts or donations to the classics section.

Methodology

A file was created using INNOPAC to determine the number of items in the Library of Congress PA classification, and a random sample was generated from this base, using Minitab software. The file was then searched and records printed off according to the random sample. The printouts were attached to survey worksheets and the volumes were inspected. Class 3 items were searched on OCLC for Associated Colleges of the Midwest (ACM), state, and national holdings. When holdings listed in OCLC totalled fewer than ten, NUC Pre-56 and RLIN were also searched.

Survey Results

Selected Grinnell data are presented in the third column of tables 1, 2, and 3.

The Grinnell PAs can be characterized as an older, well-used collection; 63 percent were published before 1951. In the past ten years, 48 percent of the collection has circulated at least one time. Most of the collection, 71 percent, is in English. Almost half of the volumes have become brittle, and more than 82 percent are printed on acidic paper. Altogether, 7 percent of the collection is not usable, because of physical deterioration.

Atkinson’s typology indicates that 54 percent of the collection can be characterized as Class 2, and 2 percent as Class 1. Despite the weeding projects, 44 percent of the collection was designated as Class 3, implying that these materials are still considered of value to the library even though not recently circulated. In total, 85 percent of Class 3 had not been used since 1979, while 74 percent of
TABLE 2
ATKINSON CLASS 2 COLLECTIONS COMPARED

<table>
<thead>
<tr>
<th>Percentage</th>
<th>F&amp;M PA (%)</th>
<th>F&amp;M PA (%)</th>
<th>Grinnell PA (%)</th>
<th>Amherst QE (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Publication date</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>pre-1900</td>
<td>5</td>
<td>36</td>
<td>45</td>
<td>6</td>
</tr>
<tr>
<td>pre-1950</td>
<td>95</td>
<td>64</td>
<td>55</td>
<td>94</td>
</tr>
<tr>
<td>1950-</td>
<td>1</td>
<td>9</td>
<td>8</td>
<td>1</td>
</tr>
<tr>
<td>1980-</td>
<td>35</td>
<td>16</td>
<td>15</td>
<td>47</td>
</tr>
<tr>
<td>English language</td>
<td>91</td>
<td>81</td>
<td>94</td>
<td>99</td>
</tr>
<tr>
<td>Used since 1979</td>
<td>54</td>
<td>57</td>
<td>74</td>
<td>57</td>
</tr>
<tr>
<td>Condition</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unusable</td>
<td>3</td>
<td>21</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>Brittle</td>
<td>1</td>
<td>20</td>
<td>24</td>
<td>4</td>
</tr>
</tbody>
</table>

Table 3 had circulated at least once. Only 25 percent of the Class 3 long-term research materials were English-language, and 85 percent were published between 1850 and 1950. The Class 2 materials were predominantly English-language (94 percent) and relatively new (55 percent published since 1950 and 15 percent since 1980).

The condition of bindings and leaf attachment for the two classes do not correlate with age, as 4 percent of Class 2 and 10 percent of Class 3 items are in bad condition. A greater contrast appears with regard to paper brittleness, where 76 percent of Class 2 items are in good condition as compared to only 38 percent of Class 3. Unfortunately, both classes have a high level of acidic paper, indicating that Class 2 volumes will also become embrittled in time.

CONCLUSIONS

The Atkinson typology is workable; all titles in the Grinnell collection fit easily into the typology. Although Grinnell found a significantly lower percentage of Class 3 titles held by five or fewer libraries nationally than did F&M (5 percent versus 27 percent), this type of analysis remains worthwhile. As financial resources fail to keep pace and as collection development becomes increasingly dependent upon regional re-
source sharing, access to data on the breadth, depth, and condition of the holdings of regional institutions becomes vital. In Iowa, for instance, Grinnell is working together with other institutions to formulate a comprehensive state preservation plan. If each Iowa Private Academic Libraries (IPAL) member would undertake this type of study, a sound preservation plan could be devised.

The CLR project has provided Grinnell College with the rationale and structure for establishing a preservation program within the context of its collection management objectives. The collection development librarian has been designated preservation officer. Also, binding, repair, and replacement decisions are now being made using the Atkinson typology.

SECOND CASE STUDY: SURVEY OF THE GEOLOGY COLLECTION AT AMHERST COLLEGE

Amherst College was founded in 1821 for the “education of indigent young men of piety and talents for the Christian ministry.” Coeducational since 1976, Amherst is now an independent liberal arts institution for approximately 1,600 undergraduates. From its beginning, mathematics and science accompanied religious and classical studies as a preparation nineteenth-century Christian ministers deemed essential to fulfill their responsibilities and “thwart opposition.”

Currently, Amherst has thirty academic departments and 160 faculty who are engaged in two primary activities: the education of undergraduates and research. In 1965, Amherst and four neighboring institutions—Smith College, Hampshire College, Mount Holyoke College, and the University of Massachusetts at Amherst—formed Five Colleges, Inc., a consortium that provides a wide range of academic, social, and cultural opportunities. The Five-College Automated Library System allows users from any of the campuses access to catalog and circulation information from all member libraries. A direct borrowing agreement among the libraries is facilitated by a pickup and delivery system.

The Robert Frost Library, constructed in 1965, is Amherst’s main library facility. There are also six branch libraries—Biology, Geology, Mathematics, Science, Music, and Psychology. Holdings number more than 725,000 volumes, 327,000 microforms, and 74,000 government documents. Amherst adds approximately 17,000 volumes per year to its collection and has 3,961 serial subscriptions. To the fullest extent possible, the library supports the research requirements of its faculty and students, including the purchase of titles which strengthen the research-level collections.

The library began cataloging on OCLC in 1974. In 1988, in cooperation with the other Five College libraries, an online catalog and circulation system was introduced. Approximately 90 percent of Amherst’s catalogued holdings are now reflected in the Five-College database.

Almost half of the volumes have become brittle, and more than 82 percent are printed on acidic paper. Altogether, 7 percent of the collection is not usable, because of physical deterioration.

Amherst’s collection development policy states that the library provides a balanced, well-rounded liberal arts collection by acquiring materials to support the general curriculum, the range and depth required of interdisciplinary studies, and a substantial, if not complete, portion of faculty research. The materials are also to support the research requirements of honors students writing theses and others conducting independent study or special projects.

SELECTION OF GEOLOGY

The study and teaching of geology at Amherst document the historical development of the field during the nineteenth and twentieth centuries, and the history of United States higher education. The school’s Geology Department continues to offer a strong curriculum, but the extent to which these strengths were re-
lected in the library's holdings was unknown. The survey was expected to provide useful data.

Geology materials are housed in the Frost Library and the Geology Department Library. Prior to being moved to those libraries, the materials had been shifted and moved periodically as a result of building construction, retrospective conversion, reclassification, and transfers. It is possible that some of the collection was lost in a 1882 fire, and a 1938 hurricane.

Overall, from 12 to 46 percent of the materials are identified as relatively low-use, research-level items in four subject collections from three well-established colleges whose library collections were begun in the early to mid-nineteenth century. Half or more of these items are brittle, and anywhere from 6 to 74 percent are unusable.

A separate departmental collection seems to have been formed about 1850. In 1950, the more recent, actively used segments of the collection were moved to an unstaffed departmental library in the Pratt Museum and stored in locked glass-fronted bookcases for security purposes. Access is provided to students through the department secretary and faculty using a charge system. A theft-detection system was installed in Frost in 1976; the Geology Department library has never had one. The latest inventory in the Frost Library, done in 1981, indicated that approximately eighty geology titles were missing. As of 1988, ninety volumes were missing from the department library. There is natural and fluorescent lighting, and no climate control system in Pratt.

Most geology material has traditionally been selected by the faculty and purchased from an annual library allocation. Periodical recommendations are reviewed by the library director. Depository selections and gift decisions are made by the reference librarian, who consults with faculty as necessary. The head of acquisitions identifies and fills significant gaps whenever possible. The college archivist and the curator of special collections are responsible for the selection and addition of materials in their respective areas. Weeding has been minimal.

In addition to the 4,389 geology monographs and serial titles sampled, the library holds approximately 350 geology periodical titles and about 75,000 topographical and geological maps received from the United States Geological Survey. Over the years, many volumes from the personal libraries of Amherst's Geology Department faculty have been accessioned into the collection. A few titles considered to be rare or at risk are located in the Special Collections and Archives Department.

**METHODOLOGY**

The Dewey shelflist cards were numbered from 1 to 2,655 and the Library of Congress QE shelflist cards from 2,656 to 4,389 (omitting periodicals in both classifications). A random sample of 354 titles was taken from the 4,389 total. Each shelflist card was reproduced onto a worksheet and each volume was inspected. Items assigned to Class 3 were searched on OCLC for Five-College, state, and national holdings. When the OCLC total was below ten, further searching was done in NUC Pre-56 and RLIN.

**SURVEY RESULTS**

Selected Amherst data are shown in the fourth column of tables 1 to 3. The results indicate that 48 percent of the geology titles surveyed were published before 1950; 30 percent date from before 1900; and 8 percent date from before 1850. Eighty-six percent of the collection is in English and approximately 66 percent of the publications are United States imprints. Ninety-four percent of the publications are generally in usable condition, although the paper is acidic in 69 percent of the surveyed volumes and already brittle in 27 percent.

The per title recorded use is low in comparison to Grinnell and F&M: only 29 percent had been charged out since 1979. Factors that may account for this include the nature of the material (older
science materials are not as likely to circulate as are older titles in the humanities; the relatively small number of users involved; and locked bookcases and incomplete circulation records in the Geology Department Library.

The proportion of the collection meeting the criteria for Class 3 was 46 percent, which is close to the 45 percent that fell into Class 2. Not all of the Class 3 publications are particularly old; half were published after 1900, presumably reflecting to some degree the comparatively rapid pace at which science books become outdated. Amherst's policy of cataloguing the Geological Survey Professional Papers as a series until 1982 may also have affected the results, since all 1,238 of the pre-1982 volumes are represented by a single shelflist card that was not selected for the survey. After 1982, each title was catalogued separately. The fifteen post-1982 samples that turned up in the survey met Atkinson Class 2 criteria.

There was no recorded use since 1979 for 98 percent of Class 3 titles. Of Class 2 titles, however, 57 percent had been used at least once since 1979. The physical condition of the two classes shows a clear contrast—50 percent of the Class 3 titles are already brittle versus 4 percent of those in Class 2. Three times as many Class 3 titles as Class 2 titles proved to be unusable, although the numbers in both cases were low. Note that Class 3 titles are older and contain much of the foreign-language material. These findings, consistent with those of Grinnell and F&M, were expected.

While almost all of the Class 3 titles are held elsewhere, 10 percent of these are held by five or fewer libraries and 19 percent by ten or fewer libraries. Although the 10 percent represents only twelve titles in the sample, it extrapolates to 200 for the catalogued geology collection as a whole.

Of the 354 items sampled, 41 percent were from the Geology Department Library. Seventy-four percent of Amherst's Class 2 titles are housed there, and they constitute 81 percent of that collection. By contrast, 83 percent of the Class 3 titles are located in Frost Library. One immediate result of this survey was the identification and transfer of nineteen titles from the open stack area to Special Collections.

COMPARISON OF THE DATA RESULTS FROM THE THREE SURVEYS

The results of all three studies are compared in tables 1 to 3. Class 2 materials, the curriculum-support portion of the collection, can be characterized as having more recent publication dates, a predominance of English-language texts, and relatively high levels of use. Books circulate most frequently when they are new, and foreign-language materials are used less than English-language materials. The Class 3 titles, in contrast, are characterized by relatively low use, higher rates of foreign languages, and older dates of publication. The latter feature inevitably correlates with increasingly brittle paper.

Taken as a whole, each collection presents a distinctive profile. However, it can generally be said that the two F&M collections contain a lower percentage of Class 3 materials than the Amherst and Grinnell collections, and that the F&M PAs are in significantly worse condition. By far, F&M PAs constitute the highest percentage of books determined to be unusable. While Grinnell's PA collection is of the same age and just as brittle, it has a much lower percentage of unusable books. This may be due, in part, to Grinnell's weeding and repair project, and to the presence of the very brittle Gonzalez Lodge gift collection at F&M.

While Grinnell's PAs are slightly older than the other collections, the F&M Ps are the youngest in terms of publication date; a third of the titles have been acquired since 1980. The Amherst collection has the lowest use level and the F&M Ps use level the highest. 20

If only Class 2 materials are considered, the two PA collections contrast with the P and QE collections in having older publication dates and more brittle paper. The F&M PAs are also in worse overall condition. The age of the PA col-
lections is not surprising since the subject matter encourages continuing use of older materials. The Grinnell Class 2 PAs stand out, with almost 25 percent higher use than the other three collections (see table 2).

When the Class 3 materials are compared, the two classics collections, as may be expected, have much higher foreign language rates. Again the F&M PAs are shown to be significantly older and in poorer condition than the others, although all four Class 3 collections inevitably have high brittleness rates. At the same time, many more F&M PAs are held by five or fewer other libraries (see table 3).

Overall, from 12 to 46 percent of the materials are identified as relatively low-use, research-level items in four subject collections from three well-established colleges whose library collections were begun in the early to mid-nineteenth century. Half or more of these items are brittle, and anywhere from 6 to 74 percent are unusable. Finally, from 5 to 24 percent of the Class 3 materials are reported held by five or fewer other libraries. These percentages translate into several hundred volumes per subject collection which are not only physically at risk, but are also close to unique in U.S. holdings. At the same time, these materials are presumably assigned the lowest priority for preservation in the libraries which own them.

CONCLUSIONS

These studies set out to investigate several questions. Is the model proposed by Atkinson applicable and workable for college and other libraries whose major emphasis is not doctoral-level research? What does its application tell us about the intellectual makeup and physical condition of college libraries? Can this knowledge help each library to develop priorities for meeting its local preservation responsibilities? Do the results of the surveys indicate that college libraries may also have a national contribution to make? What are some possible avenues to approach national participation in preservation activities?

The Atkinson model, intended for use by major academic research libraries, is also applicable and workable for college libraries. F&M, Grinnell, and Amherst successfully applied it to smaller and larger areas of the collection. It provides a rational, reliable, and organized structure for distinguishing curriculum support materials from low-use research materials, and for determining the average physical condition of each group. From this starting point, the library can begin planning and prioritizing for preservation. The same data can also help in evaluation and revision of collection development policies by indicating what percentage of the collection is used and what percentage may be out of scope for the library's primary mission. On the purely practical side, the random sampling takes a relatively small amount of staff time.

Since pockets of Class 3 materials were identified in all three libraries, such materials may be expected in other college libraries as well, at least the older ones or those which have acquired substantial retrospective subject collections through donations or purchase. The level of paper embrittlement in these older materials is predictably high, but in two of the three libraries more of the volumes are still usable than are comparable materials in many large research libraries. Columbia University, for instance, found that 53 percent of its older classics, medieval, and renaissance history collections are unusable by the definition employed for the three surveys discussed here. Of national interest is the fact that some of the college library Class 3 materials appear not to be widely held, even by research libraries. They form a class of near-unique holdings, the preservation of which is not addressed by national efforts aimed primarily at large research libraries.

How does the college library calculate the preservation needs of its Class 3 materials against the requirement to keep the active part of its collections in usable shape? In theory, the first priority for treatment in any collection should be the item which is in greatest immediate danger—the volume which is both in use
and structurally unsound (whether brittle or not). Use magnifies the damage and results in quicker destruction of the volume. By definition, most Class 3 materials are infrequently used at best. Therefore, they are of lower priority in terms of physical risk and collection development. The approach advocated here is the implementation of proper care and handling techniques, and the housing of materials under stable environmental conditions. These methods of preservation can significantly delay further damage.

While this approach would appear to be a low-effort, no-cost solution, the cost of shelf space is high. Especially in a crowded facility, weeding emerges as a tempting alternative to long-term storage of unused, out-of-scope volumes. The results of this study, however, indicate that it may be worthwhile to search the national databases to determine what potential withdrawals are held by a large number of other libraries. This would ensure that one of the nation's last copies of a publication is not being eliminated.

It is not unusual for college libraries to have computer access to virtually all of their holdings. As they enter Class 3 titles into the national databases, college libraries contribute to national preservation efforts by making their holdings known and permitting other libraries to borrow volumes for microfilming in lieu of missing or severely damaged copies. Allowing the item to be borrowed for filming not only preserves the lender's copy (usually the borrower provides the lender with a copy of the film) but it also permits creation of a master negative available to the rest of the nation.

Where a substantial or coherent group of Class 3 materials exists, such as F&M's Gonzalez Lodge Collection, there is the potential for grant funding. One model for cooperative filming is the 1990-92 SOLINET/ASERL Cooperative Preservation Microfilming Project in which a central agency handles the entire operation (bibliographic control, physical preparation, contracting with filming vendors, and film quality control) for libraries of various sizes. Participants then deposit their master negatives centrally. This minimizes the drain on local library staff, who need only deal with selection of the materials to be filmed.

The first step is to establish a local preservation program that can evaluate the collection, establish binding and repair policies that meet national guidelines, and keep the active part of the collection fully usable. This includes systematic, ongoing identification of any volumes damaged in use (at the point of circulation or when reshelving) and recommending appropriate treatment, whether rebinding, repair, replacement, reform-ation, or withdrawal. The local preservation program will also carry on preventive measures such as disaster preparedness, stack maintenance, training of staff and users in proper care and handling, and monitoring and improving the building's environmental conditions.

The second step, once unused Class 3 materials are identified, is to stabilize the materials physically. This may be as simple as cleaning and straightening the shelves, or it may involve rehousing or transferring volumes to closed storage to protect them from further harm. Withdrawal may also be an appropriate action. The third step is to participate "passively" in national preservation efforts by making the library's holdings known and by permitting borrowing for preservation purposes.

Taken as a whole, these three steps target local needs and reflect the library's basic responsibility to minimize damage to the collections, to keep them usable, to stabilize volumes which cannot be rebound or repaired, and to establish priorities which optimize use of preservation funds and staff time. The fourth step goes beyond local concerns and initiates reformatting of the Class 3 materials. This decision not only depends on the library's resources and priorities, it also involves a substantial commitment of time, seeking potential partners, grant writing, and implementation. The results, though, may well be a direct contribution to national, and indeed international, efforts to preserve our written heritage.
1. “Although it is notoriously difficult to adequately define a college library, for the most part these libraries share the following common factors: finite collection size (generally well under one million); small student body (usually about 2,000); principal focus on undergraduate students and instructional programs; secondary focus on research needs of the faculty; small materials budget (again, well under $1 million); library staff of two to fifteen professionals; and the absence of subject bibliographers on the library staff.” Joanne Schneider Hill et al., eds., Collection Development in College Libraries (Chicago: ALA, 1991), Introduction, v.


7. Ibid., tables 4, 3, and 7, 292–94.


9. Funding for the training sessions was included in CLR Grant 843. Copies of the work sheet are available from Gertz and Brown.

10. Grinnell College, Catalog, 1990-91 (Grinnell, Iowa: Grinnell College, 1990), i.

11. In 1859, the books were transported to Grinnell. In 1884, Goodenow Hall was built as the library and astronomical observatory. Carnegie Library was built in 1904 and Burling Library in 1959.

12. Over 25,000 volumes were withdrawn during the reclassification and conversion project. Weeding continues as an ongoing activity which removes several hundred volumes per year.


16. The Amherst Library has been housed as follows: rooms in South College, North College, and Johnson Chapel, 1821–52 (1–10,000 volumes); Morgan Library, 1853–83 (10,000–43,000 volumes); Morgan Library Addition, 1883–1917 (43,000–100,000 volumes); Converse Memorial Library, 1917–38 (100,000–225,000 volumes); Converse Memorial Library Addition, 1938–65 (225,000 volumes–400,000 volumes); Robert Frost Library, 1965–present (400,000–700,000+ volumes); 1990–early planning stages of Frost Library addition.

17. Amherst has held depository status since 1884.

18. Daily weather records for 1990 show that the temperature at the college dipped as low as −4 degrees Fahrenheit on February 26, 1990 and soared as high as 95 degrees Fahrenheit on August 4, 1990.

19. These include Amherst professor and president Edward Hitchcock (1793–1864), the first president of the Association of American Geologists; Charles Upham Shepard...
(1804–1886), a nationally prominent member of the Geology faculty; Benjamin K.
Emerson (1842–1930; AC 1865), best known for his writings on the geology of the
Connecticut Valley and the plateaus of central and southern New England, and the
first at Amherst to clearly separate geology from religion.

20. These studies did not investigate the ratio of student subject majors to subject collection
size, nor differences in teaching styles with greater or lesser emphasis on library use.

21. Based on an item-by-item inventory of 161,000 volumes carried out in 1990 as part of
the Foundations of Western Civilization Preservation Project funded by the National
Endowment for the Humanities.

22. Consider the statement in Peter Sparks’ recent research summary test that “brittle book
paper (1 fold or less) will not fall apart if the volume is left unused on the shelf year
after year.” (Peter G. Sparks, “Some Thoughts on Paper as an Information Storage
3–4. This supports arguments for establishing a use-based approach to preservation
such as those presented in Scott Bennett, “Buying Time: An Alternative for the Preser­

23. This National Endowment for the Humanities–supported project involves twelve
members of the Association of Southeastern Research Libraries (ASERL) in cooperative
filming of 17,000 volumes through the central Southeastern Library Network (SO-
LINET) Preservation Microfilm Service.

APPENDIX

ATKINSON’S TYPOLOGY DEFINITIONS*

Class 1 Preservation

Materials having a high economic value, particularly special collections items, and
level-five collections. Child modifies Atkinson’s criteria by including items with intrin­
sic value.† The criteria for inclusion in this class were imprint date (foreign imprints
pre-1801, United States imprints pre-1860); local publications for each of the participat­
ing institutions, such as for F&M Pennsylvania imprints pre-1900 and all Lancaster
County, Pennsylvania, imprints; notable first editions; editions limited to 500 or fewer;
important association and signed copies; notable physical traits, such as fine bindings;
and particularly high monetary value.

Class 2 Preservation

“Higher use items that are currently in demonstrable demand for curriculum and
research purposes.”‡ Criteria used to identify these materials were relevancy of the
title’s subject content to current or anticipated curriculum and faculty research areas;
assignment to a reserve section for any period during 1979–1988; circulation since 1979;
and inclusion in a reference collection.

Class 3 Preservation

Lower-use research materials. Criteria used to identify these items were long-term
intellectual value, and failure to fit into Class 1 or 2.§

† Child, 355. Intrinsic value, as defined by Child, “encompasses several nonmonetary but
important research values deriving from artifactual characteristics which compel pre­
servation in the original format.”
‡ Atkinson, 346.
§ Intellectual value is defined as the content of the item (such as words and pictures)
created by the author, as distinguished from the form the item takes. A book and its
photocopy are often said to have the same intellectual content, although, clearly, the
photocopy has lost many of the physical attributes of the original book.
PHYSICAL CONDITION DEFINITIONS

**Unusable**

Any one aspect of the volume’s physical condition is nonfunctional. The criteria used were:
- External protection (binding) is broken so that a cover or the spine is detached.
- Text block is broken or sewing/adhesive is broken.
- One or more leaves is detached or significant portions of leaves are missing.
- Mutilation or environmental damage has caused one of the problems above or has caused portions of the test to become illegible.

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Collective Bargaining and Faculty Status: A Twenty-Year Case Study of Wayne State University Librarians

Lothar Spang

Faculty status for librarians has been an increasingly problematic issue in collective bargaining at Wayne State University (WSU) for over twenty years. From the 1970s through the early 1980s, WSU librarians achieved near parity with faculty in compensation, job security, and governance matters. However, incursions on these gains began in 1984, and by 1992 librarians at the university were losing certain salary accomplishments, tenure options, and sabbatical and promotion rights. Documentation of the evolution of these successes and failures reveals the challenges for academic librarians in seeking faculty status through collective bargaining.

In 1972, Wayne State University (WSU), located in Detroit, Michigan, became one of the first research universities in the United States to institute collective bargaining for its faculty and professional staff, including librarians. Over the years, the number of WSU librarians in the American Association of University Professors (AAUP), the bargaining agent, has consistently remained above 70 percent, even though WSU's faculty membership has rarely reached 60 percent. Only a few librarians, mostly for philosophical reasons, are not union members.

In twenty years, nine contracts between representatives of the WSU-AAUP and the university administration have been signed, and collective bargaining has endured as the major means of librarian and faculty resolution of compensation, job security, and governance questions. Despite initial gains, however, faculty status for librarians has become a progressively contentious issue during the bargaining process, especially as economic conditions have worsened.

From 1972 to 1976, contracts established a framework in which WSU librarians realized sizeable gains in tenure, compensation, and participatory management. These gains helped them approach but not reach faculty status. From 1976 to 1984, the contract details of these issues were refined so that librarians reached near parity with faculty. But by 1984 these gains began to erode, resulting by 1992 in librarians' losing salary gains, tenure options, certain sabbatical privileges, and some promotion rights. Tracing the successes and failures of WSU librarians in their quest for faculty status reveals the profound challenges of seeking such status through collective bargaining.

TOWARD UNIONIZATION

In 1968, WSU administrators formulated a universitywide staffing reorganization plan that separated faculty from other professional staff in matters regarding

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compensation and tenure. Tenure was to be restricted to teaching faculty only, and a separate salary schedule was to be instituted for each employee grouping. Previously, tenure had been available to all professional staff, such as librarians. Rather than tenure, the new plan, for job security purposes, offered these groups a continuing service contract based on seniority. The plan was similar to that offered to civil service employees, meaning that a successful apprenticeship ensured a lifetime position. As for salaries, base nine-month faculty salary equated to base eleven-month librarian salary. And, although minimum salaries for librarians exceeded minimum faculty salaries, the average salaries of faculty as a group by 1968 had already far exceeded those of librarians as a group.

Librarians viewed the university's reorganization plan as an immediate threat to their job security and financial status. Ever mindful of professional status, librarians tried for three years to find what would be considered professional means of countering the plan. The library director, although supportive of the librarians' position, ultimately declined to assume a leadership role in solving their dilemma. Librarians contacted officials of the American Library Association (ALA) for advice, but the response was that ALA had not yet formulated a policy on such issues, particularly on collective bargaining.

Then, during Christmas vacation of 1971, seventy-one nontenured faculty and eleven nontenured librarians (four of whom had multiple-year contracts) received notices of contract nonrenewal. No warning had been given. Influential senior faculty saw this move as a threat to the faculty role in university governance and prompted an immediate search for a bargaining agent. Librarians concurred. A runoff election was held wherein voters were allowed to choose between the AAUP, the Detroit Federation of Teachers (the local chapter of the American Federation of Teachers), and no union. The AAUP prevailed, even though at the time the AAUP was more attuned to university teaching issues than to bargaining.

Because the AAUP could provide little constructive support in actual deliberations, the WSU-AAUP leadership decided to seek the help of advisors from the United Auto Workers (UAW). A librarian was selected as a member of the five-person WSU-AAUP faculty bargaining team. And the Librarians Assembly, formed by WSU librarians in 1970 as a collegial forum to deal with governance, prepared to serve as the official library body responsible for negotiation recommendations and contract implementation as it applied to librarians. The setup allowed the fifty-six librarians in the bargaining unit to be well positioned in the beginning to take advantage of the bargaining process. Parity with faculty in compensation, tenure, and governance was an immediate objective.

THE FIRST TWO CONTRACTS: ESTABLISHING THE FRAMEWORK

The 1972-74 contract made a modest start for librarians. Because the UAW advisor counseled against librarian and faculty desire to participate in governance, the salary and benefits issues were the main contract focus. As a group, librarians made a small gain in approaching overall faculty salaries, mainly because of an increased minimum in the salary schedule for librarians. More crucially, the contract addressed the function of the University Council and the role it played in the education process. Guaranteed to librarians was an equal role with faculty, which was a significant first step in librarian efforts to achieve equality in governance matters. The tenure issue was addressed after talks on this topic that, by mutual agreement of faculty and administration negotiators, lasted 120 days after the initial contract was signed. Librarians regained unit tenure rights, and even those new hires who had been given continuing service contracts were converted to the tenure track. But the faculty-status-for-librarians issue as it related to tenure and promotions remained largely undefined because librarians, at the time, could not resolve...
among themselves the issues of work-load and release time. This was a portent of problems to come.

One compensation component had major implications for librarians. A unit selective salary clause mandated that librarians, like faculty, select their own review committee for merit decisions. By using written reviews supplied by supervisors, the initial review committee of seven librarians, selected by vote in the Librarians Assembly, recognized 46 percent of their colleagues for merit awards. This percentage matched exactly the decisions of library administrators the previous year and was accepted unconditionally by librarians. By contrast, faculty in some departments divided their merit awards either across the board or gave very small amounts, leaving some faculty who received as little as ten dollars unhappy. This action would affect the merit award process produced in the next contract.

Because the UAW advisor counseled against librarian and faculty desire to participate in governance, the salary and benefits issues were the main contract focus.

A President’s Equity component of the 1972–74 contract provided monies for the university president to rectify “unfair” decisions of departmental salary committees. The administration soon began to use this extra discretionary fund to develop the “favored department” concept. This concept allowed larger sums of money to be available for merit in selected departments, creating special departmental loyalties to the administration. But librarians realized little extra merit consideration because the new library director, the librarians’ main liaison with the central administration, had not yet developed influence with the university administration.

The 1972–74 contract also required that deans and directors consult salary committees about salaries offered to new staff, including librarians. In later contracts, this provision was not accepted voluntarily by administrators. Health and other related leaves of absence were also codified. For librarians, unlike faculty, this provision meant that vacation days, short-term leaves, and sick leave days were spelled out exactly. Sabbaticals were treated as a separate issue, but importantly the idea that librarians, like faculty, were eligible for sabbaticals was accepted.

The next contract, for 1974–76, added refinements that were pivotal for librarians. The economic settlement helped them as a group to approach, but not equal, overall faculty salary levels. Also, this contract established departmental procedures, similar to those followed by faculty, for librarians’ tenure review and defined their committee memberships and review criteria. The Librarians Assembly, in conjunction with the library director, was to establish tenure criteria.

In addition to across-the-board raises, and as a means of rectifying previous inequities, each librarian received $200. The Women’s Equity Review Fund allowed several female librarians to receive salary equity settlements of as much as $2,000. The equity adjustments were based on comparable-service male librarian salaries. Additionally, the contract stipulated that all promotions in rank would be recognized by $500. Also established was an Early Retirement Review Committee to define guidelines and costs for early retirements for both faculty and academic staff.

In response to the dissension over the merit award process generated by the last contract, the AAUP bargainers, by compromise, got the university to agree to a centralized committee that would award 50 faculty $1,000 and another 172 faculty $500 each in place of departmental salary adjustment. This judgment error had to be corrected in the next contract. It was soon discovered that departments that had representatives on this committee received more awards than did faculty from departments that had no such representation. Librarians, each having received $200 in this contract, were not eligible for this process. But,
henceforth, from 1976, all collegial selective salary increases, including those for librarians, would be decided at the departmental or unit level.

In 1974, the university agreed to withdraw from implementation a recent study done by the Hay Group of Chicago, a move that proved to be crucial for librarians. This consulting group, hired by the university to study all nonfaculty professional classifications and clerical positions, had separated teaching faculty from professional staff for the delineation of job assignments, productivity standards, and compensation. The plan was reminiscent of the university's 1968 staffing plan that had inspired unionization. This study was tabled when all unions insisted that any classification changes should be part of the bargaining process. But, again, the administration had shown that it was unwilling to consider librarians as faculty unequivocally.

As a result of the first two contracts, librarians were still separate from faculty in compensation and tenure considerations. But progress had been made, particularly in governance matters. Especially ominous for future job security, however, was the fact that librarian tenure remained in the library, whereas faculty tenure was university-wide.

THE FOUR CONTRACTS
FROM 1976 THROUGH 1986:
ADDRESSING THE DETAILS
1976–78

Like the two previous contracts, the 1976–78 salary document was intended to help the lower paid classifications, such as librarians as a group, by designating the largest percentage of monies to these lower paid groups. The 1976–78 agreement increased entry level salaries and called for a $500 promotional adjustment and merit award, as well as cost-of-living adjustments; although these provisions were aimed especially at librarians, salaries of librarians and liberal arts faculty still showed a continually widening gap as shown in table 1.

The settlement also established a professional development component that provided special travel funds for academic staff to encourage research and participation in regional and national conferences. Also mandated was the establishment and publication of unit by-laws. Refinement of the shared governance process was continued by the establishment of a budget advisory committee for each unit, including the libraries, that would be closely involved in the university's budget process.

As a result of the first two contracts, librarians were still separate from faculty in compensation and tenure considerations. But progress had been made, particularly in governance matters.

By 1976, administrators, faculty, librarians, and union representatives began to realize the large amounts of time and commitment that participatory management, as mandated under contract, required. Some librarians also began to think that the review guidelines for promotion and tenure, based on faculty standards, did not recognize their performance. This complaint was particularly voiced by technical services librarians. They were librarians who thought they did their job well but, when preparing a curriculum vitae, had little visible evidence that would be recognizable by librarian colleagues and faculty on the second-level review committee that was advisory to the university president.

Many librarians opted not to seek election to committees or to participate in the governance process because of the commitment that each required. The frustration of governance showed in a report of the 1977–78 Libraries Tenure and Promotion Committee, which asked for guidance from the Librarians Assembly:

Now that librarians have had several years [sic] experience in the difficult task of judging their peers, we feel that some guidance from the Librarians Assembly on these matters would help the . . . committee to function more consistently and would clarify
<table>
<thead>
<tr>
<th>Contract Year</th>
<th>Contract Rank</th>
<th>Minimum Per Rank as Stipulated by Contract</th>
<th>Average Salary in Practice</th>
<th>Dollar Difference for Librarians</th>
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<td></td>
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<td>Faculty 9 Months</td>
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Note: Figures compiled from Wayne State University–American Association of University Professors salary tabulations for respective years. Cited with the permission of the WSU-AAUP.
some of their responsibilities as well as librarian expectations.2

Early in the process, librarians had decided to use supervisory evaluations as the only written tool for collegial review for salary, promotion, and tenure matters. This procedure differed from the faculty’s procedure in which collegial evaluation was definitive. It was not clear in 1976–78 who should communicate committee decisions to librarians or if previous committee minutes and notes in the personnel file could be used in evaluations. In response, the Librarians Assembly voted to remove previous committee decisions from the files, and to continue using supervisor evaluations but not to rank them as requested by the administration. The Librarians Assembly also voted to ask that administrators communicate to librarians both administration and committee decisions in order to allow librarians to appeal decisions to the appropriate body.

Librarians, however, were unable to reach agreement among themselves on the weighting of the research, publication, and service component of the review process, as mandated by the contract provisions. For faculty, teaching quality was given little consideration in such review. But librarians could not dismiss everyday job performance in the same manner. Nor could they fit job performance under “research.” This dilemma would result in the rewriting of such criteria in each contract after 1976. The continuing uncertainty created by these rewrites would have far-reaching implications for all future negotiations and contract implementation.

1979–81

Settlement of the 1979–81 contract was not achievable until a united strike was called by a coalition of the WSU-AAUP, the clerical union, and the paraprofessional union. The AAUP settled first, leaving the two other unions out and creating antagonisms that persist to the present. This lack of a united front among unions would have implications for future negotiations with an increasingly hard-line administration.

For librarians as a group, the economic gains were especially significant in the 1979–81 contract. The compensation package called for a modest 3.7 percent across-the-board increase, but provided for a classification adjustment that, for the first time, linked librarian and faculty titles. Additionally, all academic staff received a 2 percent equity adjustment to bring average salaries more in line with those of the teaching faculty. A unique aspect of the settlement for faculty and librarians was the 1.4 percent salary adjustment based on enrollment figures and student credit hours for the fall term of 1980.

This contract was the first in which the local AAUP chapter representatives indicated a willingness to pursue the issue of faculty titles for librarians. During negotiations, the president of the AAUP chapter wrote the following to the Librarians Assembly:

I understand that “titles” may not in themselves mean much to certain individuals but in my mind faculty rank would more clearly acknowledge the professionalism of WSU librarians.3

This affirmation proved to be the closest that librarians would come in twenty years to achieving faculty titles and was one of the last issues given up at the bargaining table in the 1979–81 contract talks. The negotiating team surmised that the faculty would not strike for this issue and neither would many librarians. This perception continues more than a decade later.

1981–83

The next contract, 1981–83, followed the compensation pattern of earlier contracts: the across-the-board portion was the largest part of the package. But because concerted union negotiator efforts improved entry-level pay scales, librarians benefited more than faculty. Unique to the contract was a clause that recognized longevity by providing a 1 percent increase for staff with fifteen years of service. Although the depressed economy in Michigan made the overall compensation package slightly lower than in previous years, the contract did establish a dental
plan. The President/Dean's Selective Salary Adjustment Fund was at .25 percent, but in subsequent contracts this portion of the package would grow dramatically, with ever-widening implications for librarians.

By 1981, librarians began to use contract language to their extreme benefit, particularly the budget advisory committee clause which enabled them to meet with the provost to detail reasons why the libraries should not be part of the universitywide budget reduction of 2 percent. Although this effort was only partially successful, in that some small budget cuts were still made, librarians had now realized a new empowerment.

As in previous contracts, however, the Librarians Assembly kept librarians focused on issues relating primarily to salary and job security. Faculty status, as it related to the ability to choose appropriate areas for study and research and the necessary release time to accomplish these goals, was still an uneasy topic.

1984–86

The 1979–81 and 1981–83 contracts represented the high point of bargaining for librarians. The 1984–86 settlement began the downward spiral that would culminate in the late 1980s with the loss of viable tenure and promotion rights and many compensation accomplishments. The salary disparity between the upper ranks of librarians and faculty continued to increase (see table 1). And by the 1984 negotiations, librarians had become so mired in the issues of criteria for faculty status that they failed to adequately represent their bargaining position to the AAUP negotiating team. The team was comprised of teaching faculty and academic staff who were unable to articulate librarian needs in the negotiating process. The Librarians Assembly proved to be ineffectual, even in an advisory role. Also, a new dean of libraries had been appointed and had not yet demonstrated a position on the issue of faculty status for librarians. Without the active support of union negotiators or library administrators, librarians were especially vulnerable to encroachments on their status.

Also, the contract talks became openly adversarial in 1984 over the issue of merit pay versus across-the-board pay, as well as the related issues of tenure, promotions, faculty rights and privileges. The WSU-AAUP was unable to present a strong counterfront to administration demands. And from this date forward, an intractable management stance that was invoked at each turn of bargaining talks and contract implementation was to have marked consequence for librarians.

In the 1984–86 contract, a detailed layoff and recall procedure in which the university could declare a financial emergency unit by unit was adopted. As a result, the university did begin preparation for the immediate layoff of faculty and academic staff. Shortly thereafter, all layoff notices were rescinded, and because no financial emergency was declared, the layoff process was later interpreted by staff as an administration scare tactic. But because librarians had their tenure limited to the library system, whereas faculty had tenure that was universitywide, this provision was a special threat, even though no librarians were laid off at the time.

The compensation package reflected the new administration attitude: from 1984 forward, merit pay replaced the across-the-board portion as the major compensation element. Indeed, the 1984 salary settlement called for only a 2 percent across-the-board increase. As never before, librarians were judged for merit consideration by criteria which they had not been able to resolve among themselves: publication, professional recognition, and the necessary time and means to meet these requirements.

Additionally, the university agreed to an early retirement plan which would allow senior staff of thirty years service to get five years of bonus retirement pay that would not affect the TIAA-CREF retirement plan. In theory, high-paid senior staff would be replaced by young staff, and salary savings would accrue. In reality, the economics of the times usually required that new staff be offered higher salaries than the monies left in
salary savings from the vacant position minus the early retirement pay. Thus, this provision resulted in the hiring of an increasing number of part-time staff in the libraries. The major effect of this plan was a decrease in the full-time staff and fewer librarians eligible for the bargaining unit. In 1972, there were two part-time librarian positions; by 1992, from nine to eleven part-time librarian positions were regularly filled.

This contract also adversely affected librarians' rights to sabbaticals comparable to faculty's. A new short-term sabbatical procedure was instituted in which librarians were eligible for 80 percent reimbursement whereas faculty were allowed 100 percent. The university's justification was that faculty had unique research needs. AAUP negotiators, all teaching faculty, accepted this reasoning, thus breaking a tradition predating unionization wherein librarians and faculty had the same sabbatical privileges. No longer was the idea of the librarian as scholar, comparable to faculty, tacitly accepted.

The most disturbing aspect of the 1984-86 contract, however, was the university's insistence on a new classification of academic staff, called academic associate. It was a term-contract job category for those employees whose assignments did not warrant the publication/research path necessary for tenure consideration. By agreement, this classification was to be limited to 30 percent of the bargaining unit. In practice, tenure-track positions were no longer offered to librarians being newly hired.

Moreover, the 1984-86 contract criteria for promotion made it all but impossible for librarians to be promoted to the Librarian IV rank. The requirement of substantial publication as well as considerable national or regional recognition, which are teaching faculty criteria for promotion to the highest rank with no consideration of academic librarian skills, has meant that, as of late 1992, no librarian has been promoted to this rank since 1986.

As a result of the 1984-86 contract, the morale among WSU librarians immediately began to wane. After administration denial of tenure in 1985 to one respected librarian who had the requisite publication and professional recognition, a number of librarians opted to renounce the tenure track option in favor of the academic associate rank in which publication and other traditional scholarly pursuits were not required. The unsettled issue of release time and the uncertain standards for publication and professional recognition had proven insurmountable.

By 1987, only five recently hired librarians remained on the tenure track. In early 1991, these five librarians also renounced this option as not worth the effort, given the uncertain criteria and lack of administrator support. Librarians eligible to retire under the early retirement plan did so, rather than work under conditions in which they perceived that traditional scholarship and service were neither encouraged nor recognized. In addition, professional assignments previously held by librarians were increasingly given to nonprofessionals. Included in such reassignment to nonlibrarians were personnel administration, collection development, and grants and development. Also, the increasing numbers of librarians within the library system who were hired on term contracts outside the bargaining unit, such as systems analysts, assistant directors, and other administrators, and whose collegial allegiance was to library administration rather than to librarians, meant that fewer "line" librarians were left to do the day-to-day professional work of librarianship, stressing work schedules, job responsibilities, and goodwill, and significantly reducing even further the number of librarians eligible for bargaining unit representation (see table 2). In effect, many aspects of the professional status

<table>
<thead>
<tr>
<th>Year</th>
<th>Administrators (Unrepresented)</th>
<th>Librarians (Represented)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1972</td>
<td>3</td>
<td>56</td>
</tr>
<tr>
<td>1985</td>
<td>4</td>
<td>46</td>
</tr>
<tr>
<td>1992</td>
<td>14</td>
<td>26</td>
</tr>
</tbody>
</table>
of WSU's librarians had been circumvented.


These three contracts were not settled until strikes were called by the AAUP local. Clerical union contracts were in tandem with the AAUP contracts, and these unions called strikes during the same periods. The concerted force helped to end the AAUP strikes quickly. Although each of these stoppages was short and usually resulted in no loss of pay for employees, the morale of the entire university was adversely affected, especially in the libraries. It was not only the us-versus-them attitude of the staff and administration but also that of the strikers-versus-nonstrikers attitude as well. Even more divisive was that, of the two UAW locals representing library support staff, one union settled, and its members were told by its leaders to cross the picket lines of co-workers whose local had not yet settled.

And by the 1984 negotiations, librarians had become so mired in the issues of criteria for faculty status that they failed to adequately represent their bargaining position to the AAUP negotiating team.

The salary component of each of these contracts reflected the depressed Michigan economy and the accompanying monies, which were somewhat lower than those of earlier contracts. But the salary component also demonstrated the continued hard-line attitude of the university and library administrators. The merit component was larger than the across-the-board portion, which was generally under 3 percent. Most striking was that the President/Dean's Selective Salary pool, which was at 2 percent, was more than double that of the Unit Selective Salary pool. With more than half of the salary increases earmarked for merit, the effect is that more than 50 percent of the librarians have received a salary increase of 3 percent or less since 1986. Merit increases are particularly low for librarians because, unlike with faculty members, the merit process for librarians follows administrative guidelines. The result has been great salary disparities among librarians, where years of service or rank have not been considered in salary adjustment.

Also of increasing concern by 1986 was the fact that the same senior librarians, because of contract guidelines, were required year after year to serve on the Salary Review Committee. These same senior librarians were also on the Tenure and Promotion Committee because, when promotions to Librarian IV all but disappeared in 1986, only Librarian IVs could vote on promotion to the IV rank, according to the contract. Therefore, the same judgments followed candidates year after year, allowing little hope for promotion or merit increases for those denied earlier. As of the end of 1992, the situation had still not been corrected.

A further frustration occurred when the Librarians Assembly was replaced by the library administration with a committee called the Libraries Forum. The Librarians Assembly was a collegial body chaired by an elected librarian that for years had provided advisory leadership in bargaining and implementing contracts. The Libraries Forum was made up of non-librarians, among them the library science department faculty who, along with librarians, now reported to the dean of libraries. The forum, chaired by the dean or his designee, remained responsible for the peer committees required by contract. But out of necessity, the entire area of librarians' union representation was no longer a suitable topic for forum discussion. A formal substitute for the Librarians Assembly function as a collegial meeting place to air librarian contract concerns had not, as of the end of 1992, been forthcoming.

By 1986, librarians were so concerned with promotion and tenure criteria that the WSU-AAUP, in the negotiations process, signed a letter of agreement that requested administrative review of such
criteria. Specifically requested was the identification of an appropriate universitywide committee to be part of the second-level or presidential review process. At issue was whether the body should be a separate committee of librarians, archivists, and some faculty, or should be the same committee that reviewed faculty.

Meanwhile, unable to resolve criteria for either promotion or tenure, the Libraries Forum decided to survey other research libraries. Two WSU librarians, Barbara Heath and James Ruffner, sent questionnaires to most of the 110 research libraries of the Association of College and Research Libraries (ACRL). Of the seventy-two libraries that responded, 44 percent offered tenure to librarians. Of these 44 percent, 80 percent reported that research and publication were factors in their tenure review process but that a strong record of professional services could be substituted.

In their report, Heath and Ruffner proposed that the Libraries Forum adopt a dual track for tenure review: one track for librarians using publication and research as criteria and the other for librarians choosing professional service. As a result, the forum voted that the Tenure and Promotions Committee base its evaluation on: "(a) professional competence in the performance of academic library assignments; (b) scholarly or significant assignments; and (c) service." 

In compliance with the contract, these new guidelines were forwarded to the dean of libraries, who then sent them to the provost along with his recommendations. None of the dean's recommendations were revealed to the librarians.

In a subsequent tenure denial grievance filed by a librarian, the university's position was that the second point, "scholarly or significant assignments," actually meant "scholarly and/or significant professional assignments." That was the teaching faculty criterion for tenure. The librarian lost the grievance. As a tool, therefore, collective bargaining was essentially unable to help librarians replace teaching faculty criteria with the language that would better reflect academic librarian practices.

In 1987, the provost determined that librarians should be judged for tenure and promotion by a faculty-dominated committee. Ten years earlier, librarians would have been elated with such a decision, but the nontenured librarians of 1987 viewed this offer of faculty status with dismay. By then, stresses of the job, the shrinking staff, the lack of time, the lack of support by library administrators, and the ensuing malaise had taken their toll. Many WSU librarians had reached the point where they were unsure whether they even wanted faculty status.

The 1990-92 contract had the most devastating effect ever on librarian efforts to reach parity with teaching faculty in tenure and salary. In the 1990 negotiations, the WSU-AAUP leadership agreed with the university administration to introduce a new nontenure track employment system for all academic staff. Called the Employment Security System (ESS), it was similar to the 1968 staffing plan. Unlike the 1968 version, however, the latest revision made no provisions for job security. Instead, a twelve-month notification period was all that was required for nonrenewal of contracts, and no written cause for nonrenewal had to be given for the first four years of employment. As a result, two librarians were dismissed in 1991.

Most disturbing is that the ESS requires annual renewal, which is a destabilizing provision that gives new librarians little time to develop professional skills, pursue independent research, and study for professional development not directly related to job assignments given by supervisors. Previous contracts were for two or three years. If library administrators do not need to show cause for contract nonrenewal, then newer librarians are unable to participate in criteria, particularly professional responsibilities and self-determination, and academic freedom, which the ACRL cites as imperative if academic librarians are to be considered comparable to faculty.

Tenure is still a possibility for the "star" librarian at WSU. But, in reality, it has become unachievable for rank-and-
TABLE 3
LIBRARIAN TURNOVER RATES FOR SELECTED YEARS

<table>
<thead>
<tr>
<th>Year</th>
<th>Total Number of Librarians *</th>
<th>% of Librarians with Less Than Five Years' Experience</th>
</tr>
</thead>
<tbody>
<tr>
<td>1972 †</td>
<td>61</td>
<td>63</td>
</tr>
<tr>
<td>1976</td>
<td>59</td>
<td>55</td>
</tr>
<tr>
<td>1980</td>
<td>63</td>
<td>41</td>
</tr>
<tr>
<td>1984</td>
<td>40</td>
<td>36</td>
</tr>
<tr>
<td>1988</td>
<td>31</td>
<td>41</td>
</tr>
<tr>
<td>1992</td>
<td>26</td>
<td>42</td>
</tr>
</tbody>
</table>

Source: Figures compiled from WSU-AAUP data. Cited with the permission of the WSU-AAUP.

* Some positions were filled by more than one librarian in the course of a given year.
† New librarians were hired to staff new law, medical, and science libraries

file librarians, who generally are recent graduates of library school. No mentoring, no time, and no job security mean no nurturing of younger librarians as professionals. This ensures a considerable turnover rate of new staff (see table 3).

Denial of tenure and promotion have prompted the most complaints and formal grievances by WSU librarians in the past six years. In only one instance has a second-level review committee reversed the departmental decision on such issues. And in late 1991, the library administration tried to terminate the employment of a tenured librarian, the first such attempt that had ever been made on a librarian at the university.

By 1990, the discrepancy between salaries of faculty and librarians was similar to that of the 1972 level: base nine-month faculty salary equated to base eleven-month librarian salary. This difference is because of contract emphasis on merit awards since 1984; the continuing high turnover rates of librarians, which means that the overall salary pool is always lower for librarians as a group; and the lack of promotion to the higher ranks, which also contributes to the overall salary pool for librarians being lower than that for faculty.

As for promotion monies, the 1990 contract changed the formula for recognizing faculty and academic staff promotions. Previously, all promotions for either faculty or academic staff were recognized by a dollar amount reflecting the new rank. The new contract retained the dollar increases for faculty and called for a straight 5 percent increase, without regard to rank, for academic staff, including librarians.

In summary, as of late 1992, initial librarian gains achieved through collective bargaining remained largely in two areas: professional development and participatory management. Librarians were still eligible for travel funds, tuition reimbursement, sabbaticals, and professional leaves. They were full members of the Academic Senate (formerly University Council) and its related committees, and participated in library governance through the Salary Review, Tenure and Promotion, Budget Advisory, Travel, and Dean’s Review committees. Otherwise, since 1984, librarians have seen tenure options and salaries eroded, and promotions thwarted. Also, they were no longer eligible for the same sabbatical remunerations as faculty, and have suffered a steady loss of numbers eligible for bargaining unit representation.

The Prospects

WSU librarians have arrived at a crossroads. It remains to be seen whether they can develop a homogeneous position on academic status and then, as a small group in a 1,300-member bargaining unit, assert themselves effectively in the bargaining process to achieve this goal. Bargaining unit representation at WSU is currently at twenty-six librarians (ten of whom have tenure), thirty less than the fifty-six who were part of the 1,800-member bargaining unit in 1972. Contracts generally have been ineffective in addressing the unique academic staff situation. For example, the WSU-AAUP acceptance of a nontenured classification, academic associate, and the ESS as a substitute for tenure, have both had a negative impact on librarians’ status as professionals. But to date librarians have not taken action to remove themselves from the collective bargaining process or
the AAUP. Rather, they still see bargaining as their one means of achieving and maintaining professional status and protecting their rights, and that it is up to themselves, as a group, to make the bargaining process work for them at this crucial time.

Meeting informally, because the Libraries Forum is no longer a suitable arena for collegial discussion of contract concerns, WSU libraries have developed a position statement for WSU-AAUP negotiations that includes two immediate goals: corrective changes in the ESS that would require written reasons for contract nonrenewals, thus ensuring due process; and corrective changes in the composition of the Tenure and Promotion Committee that would eliminate the requirement that only Librarian IVs vote on promotions to the Librarian IV rank, thereby better reflecting the current composition of librarians within the bargaining unit. Achievement of these two goals would allow librarians to address two current major concerns over academic status: job security and promotions, both of which, in turn, impact salaries for librarians as a group.

The ultimate correction of tenure and promotions problems is still a viable goal for future negotiations. Successful adoption and implementation of the two-track career ladder would resolve much of the unease felt by WSU librarians over such issues. Because of the weakened Michigan economy, however, reintroduction of this plan in contract negotiations may not be feasible at this time. Adoption of the plan as a future goal of negotiation is a strong possibility, but one whose ultimate success will be dependent upon librarians’ willingness to spend the time, energy, and concerted effort necessary to prevail in the bargaining process and in implementation.

**Perspective**

In the twenty years of collective bargaining at WSU, librarians missed three key opportunities to resolve definitively the issue of faculty status to their own benefit. In 1971, the Michigan Employment Relations Commission ruled that WSU’s faculty and librarians should be in the same bargaining unit because of their “similar interests.” But librarians were unable to agree among themselves on the workload and release time necessary to fulfill publication and professional recognition requirements as set by faculty standards. In 1976, WSU-AAUP negotiators offered to pursue again the issue of full faculty status for librarians, but, as in 1971, librarians could not develop a common position among themselves on publication, scholarly research, and release time. By 1976, technical services librarians maintained strongly that the nature of their responsibilities precluded the opportunities for research and publication offered to public services librarians. In 1980, the possibility of full faculty status for librarians, as separate from academic staff, was reintroduced by both university and AAUP negotiators. But, among librarians, the issues of release time and criteria for promotion and tenure were still unresolved—and have remained so.

In effect, librarians over the years have declined full faculty status while still aspiring to it. Currently, the criteria for evaluating librarians for promotion and merit are based mainly on faculty standards. Whether they want it or not, WSU librarians are considered as faculty for such considerations, but they do not realize the benefits of such status in salaries, sabbaticals, or (for newer librarians) job security. Until the university’s librarians come to terms with the requirements of faculty status, through negotiation among themselves and then with union and university negotiators, they are likely to remain in this paradoxical position. Perhaps the most salient lesson of the WSU experience, therefore, is that for collective bargaining to work successfully for academic librarians on the faculty status issue, librarians first must agree among themselves on each aspect of such status and then present a concerted front in the bargaining and contract implementation process.
REFERENCES AND NOTES


3. Francine Wehmer, president, Wayne State University Chapter, American Association of University Professors, letter to the Wayne State University Librarians Assembly, Feb. 6, 1980.


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Job Satisfaction of Academic Librarians: An Examination of the Relationships between Satisfaction, Faculty Status, and Participation

Bonnie Horenstein

This study examines job satisfaction of academic librarians as it relates to faculty status and participation of librarians in library planning and decision making, university academic affairs, and professional library activities. A questionnaire was distributed to librarians in 300 United States academic libraries at a random sample of universities and colleges in the United States with enrollments exceeding 2,000 students. An SPSS (Statistical Package for the Social Sciences) data analysis of 638 responses focused on job satisfaction of three groups of librarians: librarians with no faculty status or rank; librarians with either faculty status or rank, but not both; and librarians with both faculty status and rank. Academic librarians with both faculty status and rank were more satisfied than librarians in the other two groups. They also perceived themselves as more involved in library planning and decision making, more frequently consulted, better informed about matters affecting the library, and more involved in the university. The best predictors of overall satisfaction were perception of participation, salary, and possession of academic rank.

Academic status for academic librarians is a pervasive topic in library literature and an issue of continuing debate. This study explores job satisfaction of academic librarians and its relationship to faculty status of librarians. Are faculty librarians more satisfied than those who lack faculty positions or those with hybrid status? Do librarians with faculty status participate more in library planning, decision making, university activities, and professional activities beyond the university? Do faculty librarians perceive a greater level of participation than other librarians? Is participation related to satisfaction? These are the pertinent questions addressed here.

This study examines job satisfaction as it relates to faculty status of librarians, and participation of librarians in library planning and decision making, university academic affairs, and professional library activities. Information about job satisfaction in general for academic librarians, including a profile of satisfactory and unsatisfactory aspects of the profession, was also sought. Some of the

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variables emerging from previous research, which will be discussed in the next section, "Literature Review," were tested in the context of librarianship in the 1990s.

The survey was aimed at the rank-and-file professional academic librarian. Deans, associate deans, and directors were excluded. Part-time librarians were also excluded. Since responsibilities, participation, and expectations of librarians in very small institutions can be quite different from those in larger settings, institutions with enrollments of under 2,000 students were excluded.

The population studied was full-time librarians in universities and colleges in the United States with enrollments of 2,000 or more students as listed in Patterson's American Education. Public and private institutions were included.

LITERATURE REVIEW

A review of library literature revealed little information relating job satisfaction to faculty status of librarians. While faculty status of librarians receives abundant attention in the literature of librarianship, there are no empirical studies of its effect on job satisfaction.

Faculty status might be regarded as a key benefit to academic librarians and assumed to positively affect job satisfaction. Yet, the reverse has also been hypothesized. Harold V. Hosel argued that faculty status increases role conflict and role ambiguity, both components of role stress, which might thereby reduce job satisfaction. He suggested the need for further research in this area to test his inferences.1

Although job satisfaction has received some attention in library literature, it has often been related to participative management style. Participative management refers to a style of management that stresses the importance of involving workers in management decision making.2 In a landmark study involving twenty-two academic libraries in the 1970s, Maurice P. Marchant identified participative management style as the strongest predictor of librarians' job satisfaction.3 Marchant's findings were tested and supported by Dale Susan Bengston and Dorothy Shields in a single-institution study of Brigham Young University.4 Management style was again found to be a strong predictor of librarians' job satisfaction. Several other studies have explored job satisfaction of academic librarians related to gender of the librarian.5 In other studies, job satisfaction of library workers (professional and clerical) was related to the unit of the library where they worked, with contradictory findings. While Steven Seokho Chwe found no significant differences between overall satisfaction of reference librarians and catalogers in university libraries and George P. D'Elia found no differences between satisfaction of public and technical services librarians, Beverly P. Lynch and Jo Ann Verdin found that reference librarians were more satisfied.6,7,8

In a recent study, Mohammed H. Mirfakhrai compared job satisfaction of academic librarians in large and small-size university libraries, finding higher levels of overall satisfaction among librarians in small libraries.9 Leigh Estabrook, Chloe Bird, and Frederick L. Gilmore examined the relationship of technological change to job satisfaction of librarians and support staff, finding that sources of job satisfaction—namely, income, social interaction, and discretion over work—have not changed with automation.10 In "A Review of Faculty Status Surveys, 1971-1984," Janet Krompart and Clara DiFelice noted a lack of information about "what librarians experience and think" because surveys are usually directed to library directors and only about 25 percent "queried librarians."11

METHODOLOGY

The survey instrument was a fifty-five-item questionnaire written by the author (see appendix). Several standard instruments for measuring job satisfaction were considered but deemed inappropriate for the purpose of this research. Therefore, an instrument was developed specifically for this study.

The first section of the questionnaire elicited background information, such as faculty status, rank, salary, tenure and
other benefits, gender, and department of respondent. Faculty status and faculty rank were assumed to be either institutionally granted or not. Faculty rank was understood by the author to mean instructor, assistant professor, associate professor, and professor. The second section of the questionnaire gathered information about the participation and perceived participation of the responding librarian in library planning and decision making, university academic structures, and professional library activities. The final section of the questionnaire focused on job satisfaction, including twenty-one aspects as well as "overall satisfaction" to which librarians responded on a scale of 1 to 5. A checkoff format was chosen for the questionnaire in an effort to minimize the time respondents needed to complete it and to maximize the probability that the questionnaires would be returned.

The questionnaires were mailed to the dean or director of a random sample of 300 libraries from the population defined above. Five copies were included in an effort to broaden the number of respondents (without increasing postage) and to provide more than one point of view from the library. In a cover letter from the author, each dean or director was asked to distribute the questionnaires to the first five librarians on his/her alphabetical roster of full-time professional staff. The questionnaire was distributed in April 1991. Two weeks were allowed for returns.

RESPONSE

Six hundred and forty of the 1,500 questionnaires distributed were returned, yielding a return rate of 42.6 percent. The response was much higher than anticipated. An extremely low budget had precluded providing return postage, or even a printed questionnaire. Therefore, the high response rate suggested the topic captured the interest of the sample population. Attached comments, anecdotes, and lengthy personal statements reinforced the author's perception that the questionnaire was positively received and generated high interest among the targeted librarians.

Several of the receiving libraries did not cooperate in the distribution of questionnaires, citing tight budgets, a clutter of questionnaires, and, according to one library, irrelevance to its mission.

DATA ANALYSIS

The responses from 638 questionnaires were coded and included in an SPSS data analysis. Two of the questionnaires out of the 640 received were excluded from analysis because the respondents were administrative or part-time staff.

Three groups of librarians were identified based on responses to question 1 (Do you have faculty status?) and question 2 (Do you have faculty rank?) on the questionnaire. Six hundred and thirty-one respondents had answered both questions 1 and 2. Group 1 included librarians with no faculty status or rank (n = 190); Group 2 included librarians with either faculty status or rank, but not both (n = 112); and Group 3 included librarians with both faculty status and rank (n = 329).

The data analysis was structured to yield the following information:

- Profile of respondents, including education, years of service, salary, and other background data. Number and percent of librarians who report faculty status and rank as defined in Groups 1-3.
- Job satisfaction of respondents (Questions 33-54). Is it different for Groups 1, 2, and 3?
- Profile of aspects of academic librarianship most/least satisfying to librarians.
- Relationship of participation to job satisfaction? Is participation different for Groups 1, 2, and 3?
- Relationship of job satisfaction to respondent's years in the profession, salary, gender, department, tenure status, rank, or other background data.
- Frequency of response for each question.

PROFILE OF RESPONDENTS

What were some of the general characteristics of the responding librarians? Of the responding librarians (n = 636), 67.5 percent indicated they had faculty status; 32.5 percent did not. Faculty rank was held by 54.5 percent and 45.5 percent did
not have rank (n = 637). Both rank and status were held by 52.2 percent. A large proportion of the librarians (38.3 percent) (n = 630) had more than fifteen years of experience in professional positions. Salaries were middle-range with 51.2 percent earning between $25,000 to $35,000 per year (n = 629). Publication as a requirement by their institutions was cited by 28.6 percent of the responding librarians and 29 percent indicated there was no publication required (n = 610).

Table 1 summarizes demographic data for the respondents.

**JOB SATISFACTION OF RESPONDENTS**

The aspects of job satisfaction listed on the questionnaire were derived from studies of job satisfaction and included both intrinsic and extrinsic measures. Intrinsic items are inherent in the activity, such as assigned duties or management style, while extrinsic items are external to the work, such as salary and benefits.

Librarians responded to all of the satisfaction items on a 5-point scale, where 1 is unsatisfactory, 3 is satisfactory, and 5 is highly satisfactory. Overall satisfaction was assessed in two ways. Question 54, “overall satisfaction with your job,” queried the librarians’ overall satisfaction directly. In addition, the sum of responses to items 33 to 53, which related to the various aspects of job satisfaction, was calculated for each respondent as a measure of overall job satisfaction. In cases where an individual omitted an item, the sum was not calculated.

A factor analysis was performed on the satisfaction items. Factor analysis is used in statistics to identify a small number of factors underlying complex phenomena. The satisfaction items all loaded onto a single factor, showing they were in fact measuring the same phenomenon.

Reliability analysis was performed on the sum of questions 33 to 53 to test how reliable the sum served as a measure of overall satisfaction. It was found to be reliable (alpha = .9290) and is considered a better measure of satisfaction than the single question 54, overall satisfaction.

Librarians reported above satisfactory levels of overall job satisfaction. Question 54, “overall satisfaction with your job,” resulted in a mean response of 3.52 (n = 631/SD = .93). Overall satisfaction as measured by the sum of 33 to 53 resulted in a mean of 68.01 (n = 549/SD = 14.55). In this category, a mean value of 63 indicates “satisfactory” and a value of 105 indicates “highly satisfactory.” Thus librarians responded a little more positively to the single question “overall satisfaction” than the sum of their responses to all of the items.

Aspects of librarians’ position that were most satisfactory to the total group in rank order were relationship with library users, relationship with peers, assigned duties, and opportunities for variety. Aspects of their position that librarians in the total group found least satisfactory in rank order were opportunities for promotion or other advancement, other recognition for accomplishments, and salary.

Approximately twenty librarians voiced their feelings about their jobs with attached personal statements or comments. On the positive side, individual librarians spoke favorably about the autonomy and control they enjoyed in their work and in such matters as governance, evaluation, hiring and retention, good relations with colleagues and staff, and involvement in decision-making processes. On the negative side, librarians complained about low salaries, poor raises, lack of private office space, negative budgetary impacts (such as reduced staffing and greater workloads), poorly articulated promotion standards, lack of opportunity for meaningful participation, poor management, and department-head-dominated decision-making structures.

Table 2 summarizes satisfaction of the total group with the various aspects of their jobs.

In order to examine the relationship of faculty status to job satisfaction, analysis of variance was performed to determine the satisfaction of Groups 1, 2, and 3 to each of the satisfaction items (Questions 33 to 54 and the sum of 33 to 53). When significant differences among the groups...
## TABLE 1
### DEMOGRAPHIC DATA OF RESPONDENTS

<table>
<thead>
<tr>
<th></th>
<th>Group 1 n = 190</th>
<th>Group 2 n = 112</th>
<th>Group 3 n = 329</th>
<th>Total n = 631</th>
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<tbody>
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<td>10-month work year or less</td>
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<td>55.5</td>
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<td>14.9</td>
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<td>24.3</td>
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<td>36,000–40,000</td>
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<td>41,000–45,000</td>
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<td>5.4</td>
<td>12.5</td>
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<td>over 45,000</td>
<td>1.6</td>
<td>8.0</td>
<td>9.5</td>
<td>6.8</td>
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<td>Publication requirement for promotion, tenure, or other advancement</td>
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<td></td>
<td></td>
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<tr>
<td>None</td>
<td>54.5</td>
<td>38.0</td>
<td>12.0</td>
<td>29.0</td>
</tr>
<tr>
<td>Publication encouraged</td>
<td>32.6</td>
<td>36.1</td>
<td>38.9</td>
<td>36.6</td>
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<td>7.3</td>
<td>14.8</td>
<td>30.9</td>
<td>21.1</td>
</tr>
<tr>
<td>Substantial record of publication required</td>
<td>.6</td>
<td>3.7</td>
<td>12.7</td>
<td>7.5</td>
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<tr>
<td>Other</td>
<td>5.1</td>
<td>7.4</td>
<td>5.5</td>
<td>5.8</td>
</tr>
<tr>
<td>Academic rank held</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Instructor</td>
<td>.7</td>
<td>11.1</td>
<td>19.3</td>
<td>13.4</td>
</tr>
<tr>
<td>Assistant professor</td>
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<td>11.1</td>
<td>24.5</td>
<td>16.9</td>
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<td>5.1</td>
<td>4.3</td>
<td>3.4</td>
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<td>Other</td>
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<td>5.8</td>
<td>36.7</td>
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<td>Department</td>
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<td></td>
<td></td>
<td></td>
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<td>7.0</td>
<td>6.4</td>
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<td>42.2</td>
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<td>5.2</td>
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<td>Cataloging</td>
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<td>18.8</td>
<td>15.6</td>
<td>15.9</td>
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<td>Serials</td>
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<td>4.9</td>
<td>4.1</td>
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<td>21.4</td>
<td>25.1</td>
<td>23.4</td>
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<td>Gender</td>
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<td>Male</td>
<td>27.8</td>
<td>24.5</td>
<td>29.5</td>
<td>28.1</td>
</tr>
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<td>Female</td>
<td>72.2</td>
<td>75.5</td>
<td>70.2</td>
<td>71.7</td>
</tr>
</tbody>
</table>

(continued)
TABLE 1 (continued)

DEMOGRAPHIC DATA OF RESPONDENTS

<table>
<thead>
<tr>
<th>Education</th>
<th>Group 1 (n = 190)</th>
<th>Group 2 (n = 112)</th>
<th>Group 3 (n = 329)</th>
<th>Total (n = 631)</th>
</tr>
</thead>
<tbody>
<tr>
<td>M.L.S.</td>
<td>70.7</td>
<td>50.9</td>
<td>48.3</td>
<td>55.5</td>
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<tr>
<td>Additional master's</td>
<td>23.4</td>
<td>37.5</td>
<td>41.0</td>
<td>35.1</td>
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<td>Ph.D.</td>
<td>3.7</td>
<td>6.3</td>
<td>3.0</td>
<td>3.8</td>
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<tr>
<td>Other</td>
<td>2.1</td>
<td>5.4</td>
<td>7.6</td>
<td>5.6</td>
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</tbody>
</table>

TABLE 2

ASPECTS OF LIBRARIANSHIP RANKED FROM MOST SATISFACTORY TO LEAST BASED ON RESPONSES OF TOTAL GROUP

<table>
<thead>
<tr>
<th>Satisfaction with...</th>
<th>Mean (Total)</th>
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</thead>
<tbody>
<tr>
<td>Relationship with library users</td>
<td>4</td>
</tr>
<tr>
<td>Relationship with peers</td>
<td>3.88</td>
</tr>
<tr>
<td>Assigned duties</td>
<td>3.74</td>
</tr>
<tr>
<td>Opportunities for variety</td>
<td>3.73</td>
</tr>
<tr>
<td>Opportunities to use your own judgment</td>
<td>3.68</td>
</tr>
<tr>
<td>Opportunities for independence</td>
<td>3.63</td>
</tr>
<tr>
<td>Opportunities to use your abilities, education, training</td>
<td>3.63</td>
</tr>
<tr>
<td>Opportunities for professional participation</td>
<td>3.48</td>
</tr>
<tr>
<td>Opportunities for challenge or creativity</td>
<td>3.44</td>
</tr>
<tr>
<td>Relationship with library administration</td>
<td>3.29</td>
</tr>
<tr>
<td>Working conditions</td>
<td>3.16</td>
</tr>
<tr>
<td>Benefits</td>
<td>3.15</td>
</tr>
<tr>
<td>Workload</td>
<td>2.96</td>
</tr>
<tr>
<td>Opportunities to participate in library planning and decision making</td>
<td>2.90</td>
</tr>
<tr>
<td>Opportunities for university participation</td>
<td>2.89</td>
</tr>
<tr>
<td>Management’s style</td>
<td>2.88</td>
</tr>
<tr>
<td>Relationship with university administration</td>
<td>2.83</td>
</tr>
<tr>
<td>Status of librarians at your institution</td>
<td>2.80</td>
</tr>
<tr>
<td>Salary</td>
<td>2.70</td>
</tr>
<tr>
<td>Other recognition for accomplishments</td>
<td>2.68</td>
</tr>
<tr>
<td>Opportunities for promotion or other advancement</td>
<td>2.66</td>
</tr>
</tbody>
</table>

For cases where significant differences were found, Duncan tests were applied. Duncan’s multiple range test is one of a number of tests used in statistics to compare all possible pairs of group means. The test is used here to compare the groups and find out how they are different from each other.

FACULTY STATUS/RANK AND JOB SATISFACTION

A positive relationship was found between faculty status/rank and job satisfaction. Significant differences in satisfaction were found among the groups of respondents. Librarians with faculty rank and status (Group 3) reported significantly higher levels of overall satisfaction (Question 54) than librarians in Groups 1 or 2. When overall satisfaction was measured by the sum of responses to all of the satisfaction items, librarians in Group 3 also had markedly higher levels of satisfaction than those in Groups 1 or 2.

Librarians in Group 3 were more satisfied with many of the aspects of their jobs than librarians in the hybrid group (rank/no status or status/no rank) or in the group with no rank or status. Significant differences occurred in fourteen of the twenty-three items considered.

Table 3 summarizes the data for satisfaction variables where significant differences were found among the groups. As the significance level approached 0, and the F ratio increased, the more reliable the differences were among the groups noted in the last column. Group differences notation may be interpreted as follows: 3 > 1, 2 indicates Group 3 had higher levels of satisfaction than Groups 1 or 2; 3 > 2 > 1 indicates Group 3 had higher levels of satisfaction than Group 2 and Group 2 had higher levels than Group 1; 3 > 1 2 > 1 indicates both Groups 3 and 2 had higher...
levels than Group 1, but Group 3 did not have higher levels than Group 2.

The most striking differences occurred among the groups in their satisfaction with opportunities for university participation, status of librarians at their institution, salary, benefits, and opportunities for promotion or other advancement. In all cases, Group 3 had significantly higher levels of satisfaction than one or both of the other groups.

No significant differences occurred among the groups in their satisfaction with assigned duties, working conditions, workload, management style, relation with peers, relation with library users, opportunities for independence, or opportunities to use your own judgment.

**TABLE 3**

Satisfaction Related to Faculty Status Variables With Significant Differences Among Groups

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean (Total)</th>
<th>mGRP1</th>
<th>mGRP2</th>
<th>mGRP3</th>
<th>Signif.</th>
<th>F Ratio</th>
<th>Group Difference</th>
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</thead>
<tbody>
<tr>
<td>Relation with library administration (n = 625)</td>
<td>3.28</td>
<td>3.39</td>
<td>3.28</td>
<td>3.52</td>
<td>.0301</td>
<td>3.52</td>
<td>3 &gt; 2</td>
</tr>
<tr>
<td>Relation with university administration (n = 614)</td>
<td>2.83</td>
<td>2.60</td>
<td>2.73</td>
<td>2.99</td>
<td>.0001</td>
<td>9.27</td>
<td>3 &gt; 2, 1</td>
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<tr>
<td>Status of librarians (n = 622)</td>
<td>2.80</td>
<td>2.34</td>
<td>2.63</td>
<td>3.12</td>
<td>.0000</td>
<td>30.33</td>
<td>3 &gt; 2 &gt; 1</td>
</tr>
<tr>
<td>Salary (n = 622)</td>
<td>2.69</td>
<td>2.22</td>
<td>2.58</td>
<td>2.99</td>
<td>.0000</td>
<td>25.46</td>
<td>3 &gt; 2 &gt; 1</td>
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<tr>
<td>Benefits (n = 627)</td>
<td>3.15</td>
<td>2.71</td>
<td>3.18</td>
<td>3.39</td>
<td>.0000</td>
<td>22.47</td>
<td>3 &gt; 1</td>
</tr>
<tr>
<td>Opportunities for promotion (n = 627)</td>
<td>2.66</td>
<td>2.28</td>
<td>2.55</td>
<td>2.91</td>
<td>.0000</td>
<td>20.24</td>
<td>3 &gt; 2 &gt; 1</td>
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<tr>
<td>Other recognition for accomplishments (n = 621)</td>
<td>2.68</td>
<td>2.40</td>
<td>2.63</td>
<td>2.85</td>
<td>.0000</td>
<td>10.95</td>
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<tr>
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<td>2.76</td>
<td>2.77</td>
<td>3.02</td>
<td>.0253</td>
<td>3.70</td>
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<tr>
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<td>2.30</td>
<td>3.04</td>
<td>3.17</td>
<td>.0000</td>
<td>45.73</td>
<td>3 &gt; 1</td>
</tr>
<tr>
<td>Opportunities for professional participation (n = 625)</td>
<td>3.48</td>
<td>3.40</td>
<td>3.33</td>
<td>3.57</td>
<td>.0311</td>
<td>3.49</td>
<td>3 &gt; 1, 2</td>
</tr>
<tr>
<td>Opportunities for challenge or creativity (n = 625)</td>
<td>3.44</td>
<td>3.35</td>
<td>3.18</td>
<td>3.59</td>
<td>.0017</td>
<td>6.42</td>
<td>3 &gt; 1, 2</td>
</tr>
<tr>
<td>Opportunities for variety (n = 629)</td>
<td>3.73</td>
<td>3.73</td>
<td>3.53</td>
<td>3.80</td>
<td>.0560</td>
<td>2.90</td>
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</tr>
<tr>
<td>Overall (Question 54) (n = 624)</td>
<td>3.52</td>
<td>3.42</td>
<td>3.40</td>
<td>3.62</td>
<td>.0252</td>
<td>3.70</td>
<td>3 &gt; 1, 2</td>
</tr>
<tr>
<td>Overall (sum 33 to 53) (n = 592)</td>
<td>68.03</td>
<td>64.04</td>
<td>65.74</td>
<td>71.13</td>
<td>.0000</td>
<td>14.34</td>
<td>3 &gt; 1, 2</td>
</tr>
</tbody>
</table>

PARTICIPATION

To what extent do academic librarians participate in library planning and decision making, university academic affairs, and professional activities beyond their institution? Participation of librarians was assessed in several areas of the questionnaire. The extent of actual participation in teaching, attending meetings of the library or university, and professional membership and activity beyond the university was queried in Questions 16 to 20. The presence of a formal library planning and decision-making structure and the degree to which librarians were meaningfully consulted were addressed in Questions 21 to...
TABLE 4
ACTUAL PARTICIPATION BY GROUP

<table>
<thead>
<tr>
<th>Group Differences</th>
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<tbody>
<tr>
<td>Teaching hours per year</td>
</tr>
<tr>
<td>Library meetings per week</td>
</tr>
<tr>
<td>University meetings per week</td>
</tr>
<tr>
<td>Number of library association memberships</td>
</tr>
<tr>
<td>Number of professional meetings attended per year</td>
</tr>
<tr>
<td>Sum of above (Questions 16-20)</td>
</tr>
<tr>
<td>Model of library planning</td>
</tr>
<tr>
<td>Regular meetings of professional staff</td>
</tr>
<tr>
<td>Presence of library planning group</td>
</tr>
<tr>
<td>Who serves on planning group?</td>
</tr>
<tr>
<td>Are recommendations generally implemented?</td>
</tr>
</tbody>
</table>

25. Librarians' perception of their participation was measured on a 4-point scale in Questions 26 to 31. A single score for perceived participation was calculated for each librarian by adding the responses to Questions 26 to 31 in cases where all questions were answered. This is referred to in this paper as "overall perceived participation."

Questions 26 to 31 were constructed to measure perceived participation. A factor analysis was performed on Questions 26 to 31. The factor analysis revealed that these questions loaded on to two different factors. It was assumed from this analysis that there are two factors involved in perceived participation. Four variables (Questions 26 to 29) were found to correlate highly with each other and all to load onto a single factor. Since these questions were measuring the same factor, a sum was also attained in cases where all four questions were answered.

PARTICIPATION AND FACULTY STATUS

Analysis of variance was performed to determine if there were differences in how the groups responded. When significant differences occurred, Duncan tests were applied.

There were no significant differences in how the groups responded to the questions on teaching hours, amount of library and professional meetings attended, library association membership, or the questions relating to a formal library planning group. The model of library planning and decision making, explicitly whether it provided a low or high degree of participation by librarians, did not differ significantly among the groups.

Librarians with faculty status and rank attended more university meetings than the nonfaculty or hybrid groups. They were also more likely to have regular meetings of the professional staff than were nonfaculty librarians. Responses to Questions 16 to 20 were recoded to low, medium, and high values for the purpose of attaining a sum. The overall time spent in teaching, attending meetings of the library, university, and professional organizations as measured by this sum was higher among faculty librarians than nonfaculty librarians. This may be due to their higher participation in the university, a common requirement for faculty librarians.

Differences between the groups in actual participation are summarized in Table 4.

Although differences occurred among the groups in only two of the categories of actual participation, librarians with faculty status and rank perceive themselves as more participatory than the other groups.

Faculty librarians felt more involved in library planning and decision making, more consulted, more informed by the administration about matters affecting the library, and more involved in the university than other librarians. In overall perceived participation all of the groups were different, with faculty librarians perceiving the greatest level and nonfaculty librarians perceiving the least.

The differences between the groups are summarized in Table 5.

In each case, librarians with faculty status and rank (Group 3) scored significantly higher than Groups 1 and/or 2. No significant differences occurred among the
### TABLE 5
**PERCEIVED PARTICIPATION BY GROUP**

<table>
<thead>
<tr>
<th></th>
<th>Mean* (Total)</th>
<th>mGRP1</th>
<th>mGRP2</th>
<th>mGRP3</th>
<th>Signif.</th>
<th>F Ratio</th>
<th>Group Diff.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Involved in library planning and decision making n = 628</td>
<td>2.68</td>
<td>2.57</td>
<td>2.56</td>
<td>2.77</td>
<td>.0127</td>
<td>4.39</td>
<td>3 &gt; 2, 1</td>
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<tr>
<td>Consulted n = 623</td>
<td>3.10</td>
<td>3.00</td>
<td>2.99</td>
<td>3.19</td>
<td>.0186</td>
<td>4.01</td>
<td>3 &gt; 2, 1</td>
</tr>
<tr>
<td>Informed n = 626</td>
<td>2.92</td>
<td>2.81</td>
<td>2.85</td>
<td>3.00</td>
<td>.0225</td>
<td>3.82</td>
<td>3 &gt; 1</td>
</tr>
<tr>
<td>Control n = 625</td>
<td>3.43</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>No significant difference</td>
</tr>
<tr>
<td>University participation n = 628</td>
<td>2.32</td>
<td>1.67</td>
<td>2.45</td>
<td>2.65</td>
<td>.0000</td>
<td>63.86</td>
<td>3 &gt; 1</td>
</tr>
<tr>
<td>Professional participation n = 626</td>
<td>2.75</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>No significant differences</td>
</tr>
<tr>
<td>Overall perceived participation (sum 26–31) n = 614</td>
<td>17.18</td>
<td>16.12</td>
<td>16.96</td>
<td>17.86</td>
<td>.0000</td>
<td>16.86</td>
<td>3 &gt; 2 &gt; 1</td>
</tr>
<tr>
<td>Sum of 26–29 (Factor 1) n = 618</td>
<td>12.11</td>
<td>11.79</td>
<td>11.78</td>
<td>12.41</td>
<td>.0111</td>
<td>4.54</td>
<td>3 &gt; 2, 1</td>
</tr>
<tr>
<td>Sum of 30–31 (Factor 2) n = 614</td>
<td>5.07</td>
<td>4.33</td>
<td>5.15</td>
<td>5.47</td>
<td>.0000</td>
<td>37.28</td>
<td>3 &gt; 1</td>
</tr>
</tbody>
</table>

* The mean values in this table result from the four-point scale used to measure perceived participation, where 1 = not at all, 2 = little, 3 = moderately, 4 = to a high degree.

...and also in participation in university academic affairs (mean = 2.32).

**RELATIONSHIP OF PARTICIPATION TO SATISFACTION**

Correlations were run between the participation items (Questions 16 to 32) and all of the satisfaction items (Questions 33 to 53 and the sum of 33 to 53). To further quantify perceived participation for individual respondents a sum of scores on Questions 26 to 31 was calculated. Questions 16 to 20, which dealt with actual participation, were coded to low, medium, and high values and summed for each respondent.

Librarians who scored high in actual participation (sum 16 to 20) also scored high in satisfaction. Similarly, librarians with high scores in perceived participation also scored high in satisfaction. In Tables 6 to 7, as the significance levels approach 0, the relationship is said to be strongest.

**RELATIONSHIP OF DEMOGRAPHICS TO JOB SATISFACTION**

The demographic features of the responding librarians were examined as they related to job satisfaction. Higher levels of benefits (eligibility for sabbaticals, tenure, research grants, or academic work year) were associated with higher levels of overall satisfaction. Greater benefits were also associated with greater satisfaction with their status, salary, opportunities for promotion or other advancement, and relationship with the university administration.

Higher salaries and more years as a professional librarian were associated with higher overall satisfaction and higher satisfaction with many of the items on the questionnaire.

Table 7 outlines the demographics of librarians related to overall satisfaction.

Although male librarians had higher levels of overall satisfaction when measured as a sum of all of the items, there was no difference between males and females in how they responded to the single item “overall satisfaction.” Thus there is some support for previous studies that hypothesize greater job satisfaction among male librarians.
TABLE 6
CORRELATIONS OF PARTICIPATION
WITH OVERALL SATISFACTION

<table>
<thead>
<tr>
<th>Sum of Items</th>
<th>Question 54</th>
<th>33-53</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sum 16-20</td>
<td>0.1759*</td>
<td>0.2366*</td>
</tr>
<tr>
<td>Sum 26-29</td>
<td>0.5732*</td>
<td>0.7165*</td>
</tr>
<tr>
<td>Sum 30-31</td>
<td>0.1815*</td>
<td>0.3029*</td>
</tr>
</tbody>
</table>

* Significance < .01

TABLE 7
RELATIONSHIP OF
DEMOGRAPHICS WITH OVERALL
SATISFACTION

<table>
<thead>
<tr>
<th>Sum of Items</th>
<th>Question 54</th>
<th>33-53</th>
</tr>
</thead>
<tbody>
<tr>
<td>Status</td>
<td>0.0589</td>
<td>0.1858*</td>
</tr>
<tr>
<td>Rank</td>
<td>0.1128*</td>
<td>0.2116*</td>
</tr>
<tr>
<td>Sabbaticals</td>
<td>0.0779</td>
<td>0.1962*</td>
</tr>
<tr>
<td>Tenure eligibility</td>
<td>0.1175*</td>
<td>0.1987*</td>
</tr>
<tr>
<td>Research grants</td>
<td>0.0866*</td>
<td>0.1591*</td>
</tr>
<tr>
<td>10-month work year or less</td>
<td>0.1028*</td>
<td>0.1903*</td>
</tr>
<tr>
<td>Tenured</td>
<td>0.1027*</td>
<td>0.0875</td>
</tr>
<tr>
<td>Years as a librarian</td>
<td>0.0833*</td>
<td>0.0969*</td>
</tr>
<tr>
<td>Salary</td>
<td>0.1913*</td>
<td>0.2750*</td>
</tr>
<tr>
<td>Publication requirements</td>
<td>0.0168</td>
<td>0.0089</td>
</tr>
<tr>
<td>Academic rank held</td>
<td>0.0411</td>
<td>0.1036*</td>
</tr>
<tr>
<td>Department</td>
<td>0.0701</td>
<td>0.0449</td>
</tr>
<tr>
<td>Gender</td>
<td>0.0257</td>
<td>0.1030*</td>
</tr>
<tr>
<td>Education</td>
<td>0.0340</td>
<td>0.0382</td>
</tr>
</tbody>
</table>

* Significance < .05
† Significance < .01

The department or unit was not found to be related to job satisfaction.

REGRESSION ANALYSIS

A regression analysis was performed to find out which of the variables best predicts overall satisfaction. The sum of 33 to 53 was chosen for the regression analysis because it is considered the more reliable measure of overall satisfaction.

In a stepwise regression of all of the variables that correlated most highly with overall satisfaction, the extent to which librarians felt they are consulted, involved, informed, and in control of their own activities were the best predictors of overall satisfaction. When combined, these items predicted satisfaction more than any other. Salary was the next best predictor, followed by possession of academic rank.

CONCLUSION

Academic librarians with faculty status and rank are more satisfied than other librarians (nonfaculty or hybrid groups). They have higher levels of overall satisfaction and are more satisfied with many of the aspects of their positions. Academic rank is a determining factor in job satisfaction. Rank is most often held by librarians with faculty status. Only 13.4 percent of librarians reported having rank but not faculty status.

Librarians who feel more involved, consulted, informed, and more in control, are more satisfied. The key predictors of job satisfaction of academic librarians are perception of participation, salary, and possession of academic rank.

Perception of participation appears to be the crucial factor in job satisfaction. The best predictors of satisfaction were the extent to which the librarians perceive that they are involved in library planning and decision making, consulted about factors directly relating to their job responsibilities and work environment, informed about matters affecting the library, and in control of their own activities.

Librarians’ perceptions of participation are not the same as actual measures of their participation. Librarians with faculty status and rank perceive themselves as more involved in library planning and decision making, more frequently consulted, better informed about matters affecting the library, and more involved in the university than nonfaculty or hybrid groups. Yet there are no differences in most categories of actual participation, such as amount of teaching, library and professional meetings attended, library association membership, or types of meeting structures. The only differences are in greater in-
volvement with the university and more regular meetings of the library professional staff.

Presence of a formal library planning group, who served on it, and whether the recommendations were implemented, did not determine satisfaction. The model of library planning and decision making, explicitly whether it provided a low or high degree of participation by the librarians, also did not determine satisfaction. There were no differences among the groups in any of the above categories.

Although salary is less important than perception of participation, it is also a strong predictor of overall satisfaction. Findings on the relationship between income of academic librarians and satisfaction have varied in the past. While Mirfakhrai concludes there is no relationship, Chew found in an earlier study that income was related to satisfaction. Librarians with faculty status and rank are more highly paid and have greater benefits than librarians in other groups.

In general, academic librarians report above satisfactory levels of job satisfaction. Librarians are most satisfied with their relationships with library users and peers and with their assigned duties. They are least satisfied with their opportunities for promotion, other recognition for accomplishments, and their salary. This supports Mirfakhrai's findings that librarians were most satisfied with their relationships with coworkers and least satisfied with promotional opportunities. Mirfakhrai suggests librarians be encouraged to have input in planning and policy to combat the deficiency of promotion opportunities inherent in academic librarianship and the perception of librarianship as a "dead-end job." He also found that experience and length of employment were negatively correlated with satisfaction, and suggested job rotation as a solution to the routine nature of the academic librarian's position. This finding was not upheld in this study, where years as a librarian were positively correlated with overall satisfaction.

In this study, it is obvious that faculty status and rank enhance the librarians' satisfaction with their jobs and perceptions of their participation. Librarians with faculty status and rank have more overall satisfaction than other librarians and are more satisfied with most aspects of their jobs, including salary, opportunities for promotion or other advancement, and other recognition for accomplishments, which are generally weak areas of satisfaction in the profession. Hosel's theory of role-conflict resulting in reduced satisfaction levels for librarians with faculty status was not upheld in this research.

Librarians with faculty status and rank have more overall satisfaction than other librarians and are more satisfied with most aspects of their jobs.

The group with faculty status and rank contained significantly more librarians in advanced stages of their careers. In Group 3, 56 percent of the librarians had more than fifteen years of experience as a professional librarian, compared to 24 percent in Group 1 and 19 percent in Group 2. One interpretation is that librarians at this stage have advanced into the more desirable faculty positions.

Faculty status and rank may offer a solution to the routine nature of the profession. The expansion of one's responsibilities to include university-level involvement lends diversity and interest to the job. The opportunity for involvement in a changing array of academic, curricular, and personnel matters may help sustain the vitality and enthusiasm of librarians over the course of long careers.

There was no relation found between department or service area and satisfaction. Some support was found for previous studies that hypothesize gender differences in satisfaction. In this study, male librarians were significantly higher in the sum of all of the satisfaction items, one of the measures of overall satisfaction.

Support for the Marchant study is ambiguous because the librarian's perception of participation, rather than management's style, was the key predictor of satisfaction. However, there was a corre-
lation between participative management style and satisfaction. Within the context of faculty status, perhaps it is the collegial relationship that fosters a sense of involvement and participation, rather than a recognized management style.

While debate about faculty status for librarians is unlikely to diminish in intensity as universities and colleges are pressured economically, one aspect of the debate which has been overlooked is the satisfaction of the librarians. Although job satisfaction is not linked in literature to increased productivity, there is a variety of important positive effects which have been demonstrated. These include positive effects on mental and physical health, longevity, and attitudes toward life and family.

The findings on job satisfaction reported in this study provide information useful to administrators and librarians in their discussions of faculty status and rank for academic librarians.

REFERENCES AND NOTES

17. Ibid., 129.
18. Ibid., 125, 130.
20. Ibid.
APPENDIX
QUESTIONNAIRE ON JOB SATISFACTION, FACULTY STATUS, AND PROFESSIONAL PARTICIPATION

This questionnaire is directed to full-time academic librarians. Please respond to each question below. Your contribution towards research in the area of job satisfaction of academic librarians is greatly appreciated. Your responses will be confidential. Return within two weeks to:
Professor Bonnie Horenstein
Adelphi University
Garden City, NY 11530

BACKGROUND
1. Do you have faculty status? yes no
2. Do you have faculty rank? yes no
3. Do you work as a librarian full-time? yes no
4. Which of the following benefits are you eligible for?
   - sabbaticals (paid or partly paid leaves) yes no
   - tenure yes no
   - research grants yes no
   - 10-month work year or less yes no
5. If you are eligible for tenure, are all full-time librarians at your institution eligible for tenure? yes no
6. If eligible, do you have tenure? yes no
7. If you have faculty status, do all librarians at your institution have faculty status? yes no
8. Years as a professional librarian (include previous positions):
   - 0–3
   - 4–9
   - 10–15
   - over 15
9. What is your present annual salary?
   - under 25,000
   - 25,000–30,000
   - 30,000–35,000
   - 35,000–40,000
   - 40,000–45,000
   - over 45,000
10. What best describes the publication requirement for promotion, tenure or other advancement of librarians at your institution?
   - no publication required
   - publishing encouraged
   - some publication required
   - substantial record of publication required
   - other (please specify)
11. Your rank or status:
   - Instructor
   - Assistant Professor
   - Associate Professor
   - Professor
   - Other (please specify)
12. Your department or service area:
   - Acquisitions
   - Cataloging
   - Reference
   - Serials
   - Automated Systems
   - Other (please specify)
13. Your gender:
   - male
   - female
14. Your education (check as many as apply):
   - M.L.S.
   - Additional master’s degree
   - Ph.D.
   - Other (please specify)
15. Your job title: ________________________________
**PARTICIPATION**

16. Approximately how many hours do you teach per year (formal group instructional sessions such as bibliographic lectures, library tours, etc.)?
   
<p>| | | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>none</td>
<td>1–5</td>
<td>6–15</td>
<td>16–30</td>
<td>31–45</td>
<td>over 45</td>
</tr>
</tbody>
</table>

17. Approximately how many hours per week do you attend meetings relating to the library?
   
<p>| | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>1–2</td>
<td>3–5</td>
<td>more than 5</td>
<td></td>
</tr>
</tbody>
</table>

18. Approximately how many hours per week do you attend meetings relating to the university?
   
<p>| | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>1–2</td>
<td>3–5</td>
<td>more than 5</td>
<td></td>
</tr>
</tbody>
</table>

19. In how many national, state, and/or local professional library associations are you currently a member?
   
<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>1–3</td>
<td>more than 3</td>
</tr>
</tbody>
</table>

20. On the average how many professional meetings of national, state, and/or local associations do you attend each year?
   
<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>1–3</td>
<td>4–7</td>
<td>over 8</td>
</tr>
</tbody>
</table>

21. Which model of library planning and decision-making best describes your library?
   
<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>little or no participation by librarians</td>
<td>some consultation with librarians</td>
<td>meaningful consultation with librarians</td>
<td>high degree of participation by librarians</td>
</tr>
<tr>
<td>none of the above</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

22. Does your library have regular meetings of the professional staff?
   
<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>yes</td>
<td>no</td>
</tr>
</tbody>
</table>

23. Is there a library planning group, council, or other formal group that deals with academic matters of the library?
   
<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>yes</td>
<td>no</td>
</tr>
</tbody>
</table>

24. If so, who serves on the planning group or council?
   
<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>librarians only</td>
<td>mostly librarians and some administrators</td>
<td>mostly administrators and some librarians</td>
<td>administrators only (such as department heads group)</td>
</tr>
<tr>
<td>other (please specify)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

25. Are recommendations or decisions of the planning group generally implemented?
   
<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>yes</td>
<td>no</td>
<td>not applicable</td>
</tr>
</tbody>
</table>

**TO WHAT EXTENT?**

Please circle one response below.

<table>
<thead>
<tr>
<th></th>
<th>Not at all</th>
<th>Little</th>
<th>Moderately</th>
<th>To a high degree</th>
</tr>
</thead>
<tbody>
<tr>
<td>26. ... do you feel you are involved in library planning and decision-making?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>27. ... do you feel you are consulted about factors directly related to your job responsibilities or work environment?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>28. ... do you feel you are informed by your administration about matters affecting the library?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>
29. ... do you feel you exercise control over your day-to-day professional activities?

<table>
<thead>
<tr>
<th>Not at all</th>
<th>Little</th>
<th>Moderately</th>
<th>To a high degree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

30. ... do you participate in institutional academic affairs (university senate, university committees, other university governance structures)?

<table>
<thead>
<tr>
<th>Not at all</th>
<th>Little</th>
<th>Moderately</th>
<th>To a high degree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

31. ... do you participate in library professional activities beyond your immediate institution?

<table>
<thead>
<tr>
<th>Not at all</th>
<th>Little</th>
<th>Moderately</th>
<th>To a high degree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

32. ... has technology changed your job responsibilities?

<table>
<thead>
<tr>
<th>Not at all</th>
<th>Little</th>
<th>Moderately</th>
<th>To a high degree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

**SATISFACTION**

How satisfied are you with each of the following aspects of your current position? Please circle the most correct response.

<table>
<thead>
<tr>
<th>Unsatisfactory</th>
<th>Satisfactory</th>
<th>Highly Satisfactory</th>
</tr>
</thead>
<tbody>
<tr>
<td>33. Assigned duties</td>
<td>1 2 3 4 5</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>34. Working conditions</td>
<td>1 2 3 4 5</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>35. Workload</td>
<td>1 2 3 4 5</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>36. Management’s style</td>
<td>1 2 3 4 5</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>37. Relationship with peers</td>
<td>1 2 3 4 5</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>38. Relationship with library administration</td>
<td>1 2 3 4 5</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>39. Relationship with university administration</td>
<td>1 2 3 4 5</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>40. Relationship with library users</td>
<td>1 2 3 4 5</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>41. Status of librarians at your institution</td>
<td>1 2 3 4 5</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>42. Salary</td>
<td>1 2 3 4 5</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>43. Benefits (work year, tenure, tuition waiver, sabbaticals, etc.)</td>
<td>1 2 3 4 5</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>44. Opportunities for promotion or other advancement</td>
<td>1 2 3 4 5</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>45. Other recognition for accomplishments</td>
<td>1 2 3 4 5</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>46. Opportunities to participate in library planning and decision-making</td>
<td>1 2 3 4 5</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>47. Opportunities for university participation</td>
<td>1 2 3 4 5</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>48. Opportunities for professional participation</td>
<td>1 2 3 4 5</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>49. Opportunities for challenge or creativity</td>
<td>1 2 3 4 5</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>50. Opportunities for independence</td>
<td>1 2 3 4 5</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>51. Opportunities to use your abilities, education, training</td>
<td>1 2 3 4 5</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>52. Opportunities to use your own judgment</td>
<td>1 2 3 4 5</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>53. Opportunities for variety in your job</td>
<td>1 2 3 4 5</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>54. Overall satisfaction with your job</td>
<td>1 2 3 4 5</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>55. Your comments (attach a sheet as needed) :</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
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College Library Information Packets (CLIP Notes) collect data and sample documents for use by college and small university libraries to establish or refine services and operations. CLIP Notes are prepared by the College Libraries Section.

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Database Searching in College Libraries. CLIP Note #15, compiled and written by Sarah Pederson. $29.95; ACRL member $24.95 124p. 0-8389-7651-4 1993

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Association of College and Research Libraries
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Letters

To the Editor:

We take exception to the section in the Bruce R. Kingma and Philip B. Eppard article—“Journal Price Escalation and the Market for Information: The Librarians' Solution” (C&RL 53 [Nov. 1992]: 523–35)—which refers to our May 1988 Library Journal article. Kingma and Eppard state that we have “attributed journal prices escalation simply to overly greedy publishers seeking to extract ever greater profit from libraries.” Apparently the authors did not carefully read our article.

Although we did say there was a growing belief among librarians that publisher profit was the driving force behind the recent escalation of serial prices, we went on to point out that we recognized there had been a decline in the number of copies printed and that this decline resulted in higher unit costs. We also noted how the information explosion had increased the size and number of journals, and increases in the number of pages published were indeed an important factor. Further, we explained how the selection and review processes, editing, design, and marketing of books and journals cost money. We also went on to say, “As a matter of fact, some of us feel real sympathy for responsible publishers. We know that the reason the number of pages has increased in some journals is to avoid competition. (Publishers fear that if they don’t publish those articles, someone else will.) And we can sympathize with and understand the need to subsidize new publications with the revenues from the older, established, profitable titles, whether or not we agree with these explanations.” So, to say that we attribute price escalation simply to greed is shoddy scholarship which misrepresents our views entirely.

Richard M. Dougherty
Professor
School of Information and Library Studies
University of Michigan
Brenda L. Johnson
Coordinator for Public Services Technology Use
University of Michigan Libraries

To the Editor:

I read with interest Peter Hernon and Cheryl Metoyer-Duran’s article on literature reviews and inaccurate referencing (C&RL 53 [Nov. 1992]: 499–512). However, while scanning the list of references something caught my eye. I noticed that both the volume number and issue date for reference number 22 are incorrect. Given the nature of the article, as well as the nature of the errors, I have concluded that the most likely explanation is that the errors were deliberately inserted for some reason. Perhaps in order to see how many readers would notice them. I do hope this is the case, as it would be quite ironic to find true reference errors in an article about reference errors. Please count me among the readers who did notice.

Robin Babou
Graduate Library Science Student
San Jose State University, Fullerton Campus
To the Editor:

I enjoyed reading Mark Cyzyk’s “Canon Formation, Library Collections, and the Dilemma of Collection Development” (C&RL 54 [Jan. 1993]: 58–65). Just when we thought we had a good handle on how to build our collections we discover, much to our chagrin, that our trusted literary canon has shifted. The slippery definition of exactly what our libraries should contain—the much ballyhooed “well-rounded collection”—now seems to be farther than ever from our grasp. This is especially disturbing after we have spent years developing various fancy ways to measure our performance. We had our lists to check, our citations to study, and our circulation statistics to manipulate. Now it seems we are back to the first square.

When all is said and done, it seems that deciding what should go on our shelves still must be done the old-fashioned way—one book at a time through the mysterious process of selection. Even our approval plans cannot save us from this task. I’m not sure we yet know exactly what prompts us to choose one title and not another. Whim or educated guess, how all those pieces of published knowledge fit together to make our collections, and how they got that way, still defies even our most sophisticated research. Collection development is as much an art—squishy though it may be—as it will ever be a science. Keeping up with a moving canon is all in a day’s work for those who decide what goes on the shelves.

Ed Goedeken
Principal Humanities Bibliographer
Iowa State University

To the Editor:

Bryce and Gillian Allen’s comparison of librarians’ and students’ cognitive abilities, in their article “Cognitive Abilities of Academic Librarians and Their Patrons,” (C&RL 54 [Jan. 1993]: 67–73), can be read to support conclusions different from those presented. The authors attribute librarians’ demonstrated superiority in logical reasoning to innate ability combined with selection in career choice and hiring. It seems to me equally plausible that experience with information seeking has sharpened librarians’ reasoning skills. If one posits that a targeted search produces better results than browsing, and that education is compressed experience, the authors’ findings make a case for more instruction in the logic of information retrieval rather than, as they suggest, more reliance on point-of-use aid with the mechanics of simple systems.

Similarly, students’ apparent preference for simple browse searching may be due less to their greater ability to scan quickly (the authors’ explanation) than to uncertainty about what they are looking for. Browsing and haphazard accumulation can mask the problem without contributing to the development of research skill or improvement of the research product.

Of course our information systems should be designed for students, not librarians, but it is worthwhile to consider not only students as they are, but also the goals of their education.

Thelma Freides
State University of New York at Purchase
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Book Reviews


Margaret Stieg's book constitutes an open invitation to research universities to discontinue programs of library and information science (or studies) (LIS) education. Current trends in higher education, Stieg says, conflict with professional traditions and interests. In the old days—the 1950s, say—education for librarianship meant simply a one-year master's degree program, there was no such thing as information science, doctoral programs were nonexistent or marginal, and the teachers had many years of practical library experience and were not expected to do much, if any, research. Universities have changed since then in the direction of Clark Kerr's multiversity, with very heavy emphasis on research and doctoral education, and heavy (and increasing) reliance on extramural funding. To justify LIS programs in research universities now, one must be able to argue that there is intellectually interesting and practically important research to be done, and that there is support for a strong doctoral program.

That is exactly what Stieg does not do. She does not discuss doctoral level education at all, but concentrates exclusively on master's degree programs, with chapters on faculty, curriculum, students, and administration that proceed largely as if the schools she is talking about offered only master's degree programs. (Other chapters include a historical overview, discussions of the aims of professional education, the professional context, the university setting, and accreditation.) But in a research university, the case for a master's degree program has to show how it is and must be embedded in a larger context essentially involving doctoral education and research. Stieg does not do that, and so cannot seriously address the question of the place of LIS programs or schools in research universities; nor can she answer the questions she poses of what a good LIS school is and what a school's responsibilities are.

Stieg thinks it unfortunate that research is so much emphasized in LIS schools, and concludes that the professions would be better served if educational programs concentrated on teaching and new institutions were designed to produce the research that is needed. She has nothing at all to say about what kinds of research are actually done and what might be done. Her views on research are essentially discredited by her strikingly confused view of information science. She thinks the relationship between librarianship and information science is "probably the most complex intellectual problem" faced by LIS education, with big political and economic consequences—which she does not address, except to suggest that information science and scientists are likely to split off from library education. (She clearly reads LIS as "librarianship and information-science," not as "library-and-information science," which she thinks does not and will not exist.) She argues that information science education differs from library education in that there is no identifiable profession for which IS education prepares one; it is a nonprofession and very likely a non-science too. But she also says that both librarianship and information science are both professions and disciplines. On the one hand, she blithely asserts that "what was information science a generation
ago is now mainstream librarianship.” On the other, she doubts that there is any such thing as information science: what, if anything, it is remains, she says, a matter of debate. She is not the only one to be confused about information science, but confusion on this subject is not an advantage when trying to describe LIS education.

Nothing she says suggests any reason for the multiversity to be interested in LIS programs. The picture she draws (apparently based on published documents, accreditation records, and visits to eight schools) is a depressing one, of small isolated units with undistinguished faculty members. The schools are unselective, admitting nearly all who apply. (She mentions Berkeley and UCLA as exceptions to this rule.) On their campuses, she thinks, they are not respected: they are seen as providing training rather than education, and are viewed as intellectually and professionally inadequate. They are expensive, and bring in little outside support for research. They have been attempting to transform themselves into schools for the information professions generally, but librarianship and information science are diverging socially and intellectually, as information scientists assert their intellectual superiority over traditional librarianship. Stieg does not even try to defend the LIS educational programs she describes in such unflattering terms; nor does she make any substantive recommendations for improvement. She thinks the schools fit awkwardly in the multiversity, and expresses no concern about the possibility that LIS education might go elsewhere. (She mentions alternatives such as undergraduate education and intensive workshops but has no recommendations herself.) She does say that it is hard to understand campus disdain for the “knowledge base” of the field, but only suggests vaguely that this may be because that “knowledge base” is essentially humanistic—a weird view of LIS, but she is thinking only of traditional librarianship, not of information science or of the, for her, nonexistent library-and-information science. Her ignorance of information science is crippling and dangerous; if others were to take her book as a competent account of the current state of research in LIS, it could be the end of LIS education in research universities.

It has to be said that this is a profoundly reactionary book, showing a strong distaste for the kind of research, development, and professional practice in information work that is gradually growing from deep roots in bibliographic and librarianship. It would be deplorable if the fact that the American Library Association published this book were taken to imply corporate endorsement of its reactionary message. Stieg says her book is meant to clarify issues and increase understanding. It does neither. It will make work for deans, having to counteract within the university its regressive and misleading account of the present and possible future of LIS education.—Patrick Wilson, University of California, Berkeley.

Harris, Roma M. Librarianship: The Erosion of a Woman’s Profession. Norwood, N.J.: Ablex, 1992. 186p. alk. paper, $22.50 (ISBN 0-89391-941-1). The year 1992 has been called “the year of the woman,” and, indeed, some significant events justify that label. It was a year of historic firsts, ranging from the election of four women to the United States Senate, the announcement that an African-American woman would be the “poet laureate” at the new President’s inauguration, and a clear indication that the new First “Lady” will have a post that matches her intelligence and accomplishments. Reading Librarianship: The Erosion of a Woman’s Profession against the backdrop of this supposed woman’s year, however, brought a heavy dose of reality, reminding one how far librarians have come and how terribly far we, as individuals and as a profession, have yet to go.

Roma Harris has written a book that will, I expect by design, make some people extremely uneasy. She is unambiguous about her purpose and unapologetic about her theoretical orientation.
This book is far more than simply another examination of the social and professional condition of women who happen to be librarians; it is, instead, a richly textured, intelligently argued, and surprisingly moving analysis of librarianship. Harris has not only made a significant contribution to the literature on librarianship, but more importantly, she has widened the ongoing debate about the nature of female-intensive professions to include a consideration of librarianship.

Harris uses a comparative approach to underscore the value of a gendered analysis of work. In addition to librarianship, she examines two other female-intensive professions, nursing and social work, and draws fascinating parallels among the three. She argues, for example, that each of these occupations suffers from similar status anxiety and that each is unsure of its intrinsic social value and is constantly vigilant about its image. Although none of this is particularly startling (Harris herself points out that a major library journal monitors the representation of librarians in the popular media), she does not limit herself to a tired repetition of anecdotal evidence about negative self-image or low status. Instead, she trains her sights on the reasons for this lamentable situation. Simply stated, the problem is nothing more (and nothing less) than the fact that librarianship is gendered female. Librarianship’s status is based far more on who is perceived to be doing the work than on the nature of the work itself.

Harris begins by explaining and then dismantling two theories that have traditionally been used to justify (or excuse) the diminished status of female-intensive occupations. The first, the “trait” theory of professionalism, presents a set of criteria by which “true” professions may be distinguished from all other occupations, creating an explicitly and unapologetically hierarchical system. It should come as no surprise to anyone that occupations which employ larger numbers of women than men fail to fulfill critical criteria; fail, in other words, to pass a rigid, tradition-bound definitional test for “profession.”

While social scientists defend trait theory as an objective, gender-neutral set of criteria against which to judge the professional standing of an occupation, the “feminization hypothesis,” the second theory Harris analyzes, rests exclusively on identifying gender-specific markers. The feminization hypothesis offers up a brand of occupational biological determinism which holds that “when large numbers of women are employed in an occupation, they leave their stamp on the types of work done and how the occupation is organized.” Harris acknowledges that the feminization hypothesis has some value, at least insofar as it recognizes special characteristics of female-intensive professions. But she points out a critical flaw, one that underlines the merit of the theory as a way to explain a sex-segmented work force: the failure to take into account the pervasive and socially sanctioned devaluation of women’s work. Harris identifies this as the critical determinant in explaining the low status of occupations such as librarianship and nursing.

Harris devotes a significant portion of her study to the strategies librarians, nurses, and social workers, both women and men, have employed in their individual and collective efforts to redefine their occupations as professions. In addition to analyzing attempts to de-feminize the occupation, a necessary prerequisite to attaining full recognition as a profession, she examines the successes and failures of educational and credentialing initiatives, the struggles between workers’ unions and professional associations for the collective soul of practitioners, and the paradoxical role technology plays as both a distinct marker of a profession and as a critical factor in the de-skilling of activities traditionally designated as women’s work. In a passage both poignant and humorous, Harris describes the linguistic contortions that gave rise to the appellation information scientist, a change designed, apparently, to avoid mistaking some people who work in libraries for librarians. Harris makes it abundantly clear that, external forces notwithstanding, the “erosion” prominently mentioned in
the title has its roots within the field of librarianship itself. Status anxiety, the endless debate over labels, the desire to re-gender (or, perhaps more accurately, de-gender) librarianship all contribute to the steady devaluation and wearing away (i.e. erosion) of attributes traditionally associated with women. Harris makes a compelling argument that it is just these female attributes, under siege and eroding, that set librarianship apart, that give it a unique character.

Harris's most significant contribution to the debate over the meaning of professionalism may well be her call to librarians to understand the value of women's work and female-intensive occupations on their own terms; not as some lesser version of "real" work, i.e., the work done by men. According to Harris, this new understanding would entail, among other things, "a (re)commitment to service (based on a female rather than a male model)" and an explicit commitment to "embrace a feminist analysis" of librarianship. While fully supportive of the demand to apply feminist analyses to female-intensive occupations and having no quarrel with Harris's insistence that we break away from masculinist definitions of value, I find in her argument for a return to some sort of female principle a certain essentialist flavor that some may feel is divisive. In light of the overall persuasiveness of Harris's argument, however, this is a relatively minor point. What a pleasure it is to view librarianship through such a clear feminist lens.—Ellen Broidy, University of California, Irvine.


This annual, which complements two others in Meckler's recent Volumes in Library Administration and Practice, is an important and useful enterprise. At first glance, however, the prospect of another series, even on so important a topic as preservation, may dismay librarians with overburdened serials budgets. That a substantial number of contributions to this collection have already appeared elsewhere only heightens skepticism. Seven of the nineteen essays were either published as articles, condensed from reports to the Commission on Preservation and Access (CPA), delivered as papers whose content had already been expanded in a book, or issued as policies by the American Library Association (ALA) or the Society of American Archivists (SAA). They are available from these sources at minimal cost.

That said, the present collection is nonetheless a valuable one. Librarians of all sorts have a great need for information about preservation and access but limited ways of getting it. In their short introduction the editors justify a new annual on the grounds that the enormous preservation challenge facing librarians and archivists in the next decades will be characterized by numerous choices and changes and that the series of volumes will serve to share promising strategies, communicate new ideas, and discuss timely issues.

The first issue brings together useful information about the background, current concerns and future directions of the preservation movement. The quality of the contributions is in general quite high. The focus is broad enough and the information solid and up-to-date enough to enlighten both veterans in and newcomers to the field. Indeed, given the general dearth of adequate education about preservation in library schools, this volume could well function as a basic text, so well does it cover the central issues from history to future technologies, from brittle books to archives.

Most of the contributors to this first collection have long experience and national standing in the field. Their reports fall into six sections, each briefly introduced. Eight essays in two sections review the origins of preservation in the nineteenth century and its development into a coordinated movement in the twentieth. Although the essays in this section overlap quite a bit, together the authors assemble from several organiza-
tional perspectives a satisfying picture of the fruitful collaboration between the Council on Library Resources (CLR), its offspring the Commission on Preservation and Access, whose function as a catalyst Patricia Battin describes, the Association of Research Libraries (ARL), the American Library Association (ALA), and the Research Libraries Group (RLG), on whose cooperative microfilming projects Patricia McClung reports. The National Endowment for the Humanities' Office of Preservation has helped implement their collaborative projects by funding the national brittle book program detailed by George Parr.

In the section "Agendas for Administration," four essays deal with preservation education, the place of preservation in library organization and budget formation, environmental issues, and selection for preservation. Deanna Marcus reviews the CPA's Task Force's work on education and stresses that preservation is an attitude rather than a mere set of skills that will be required for new librarians. Paul Fasana and John Baker present issues to be considered when introducing or expanding preservation activities—noting that "no area of library organization is untouched by preservation"—and give practical suggestions and bibliographic references for preservation planning.

In "Options and Opportunities," four articles discuss innovative techniques: microfilming for archives and manuscripts (Janet Gertz), technical considerations in choosing mass deacidification processes (Peter Sparks), digital imaging (Anne Kenney and Lynne Personius), and the complementarity of preservation and conservation (Karen Motylewski and Mary Elizabeth Ruwell). The report on the Cornell digital imaging project by Kenney and Personius is especially detailed and interesting, for this technology has the potential to redefine preservation formatting and to revolutionize access to materials and the library's role in providing it. Their balanced approach does not gloss over the drawbacks of this infant technology, which itself has a short shelf life and needs periodic refreshing. They stress, as does Sparks for mass deacidification, the importance of library involvement in the development of standards and procedures and the need for caution in using new technologies.

The relative novelty and special nature of preservation concerns for the archival world merit a separate section. It includes R.J. Cox's discussion of the evolution of American archivists' understanding of "preservation" from merely sheltering material from harm to ensuring the longevity of their content. Paul Conway presents the Society of American Archivists' new national strategy for archival preservation.

The final section, "Progress and Unmet Challenges," is an excellent bibliographic overview by Susan Swartzberg and Robert Schnare of preservation programs and issues for the 1990s.

Most of the papers are linked together by one or more of the themes articulated in Barbara Higginbotham's introduction. They stress the importance of building on the past and encouraging public awareness in order to secure funding. They review the many faces of cooperation without glossing over the conflicts of local and national priorities. They lay out the expanding range of choices available and the factors that determine decisions, while maintaining a cautious approach to new technologies, which have preservation problems of their own. The importance of access and its critical link to preservation emerges from a number of the essays, as does the pervasiveness of preservation concerns in every aspect of library operations.

The preservation problem has the potential to overwhelm, especially if archival and other nonprint materials are considered. In its variety of approaches to this vast challenge, the collection of essays here offers a valuable vade mecum: librarians and archivists must be willing to explore and pursue all possible preservation avenues, to undertake manageable pieces and partial solutions, and to compromise.

It remains to be seen whether future volumes in the series can sustain the high quality and interest of this one. For
one thing, eight of the contributions (one-third of the book’s length) concern the history of the preservation movement. Will there be enough significant “advances” to fill a volume annually? The series will fulfill its potential for usefulness only if the editors can get contributions from articulate experts and if they can maintain the fine balance between useful practical information and theoretical considerations.—Susanne F. Roberts, Yale University, New Haven, Connecticut.


Each issue of Electronic Documents reports at length on a single subject, and contains brief articles on other topics. Issues are written by the editor, Peter Hyams, and one or two other authors. They consult the secondary literature (and provide brief bibliographies), but most of the information comes from the vendors’ literature and from interviews with both vendors and users. In one issue the editor describes his procedure: “[W]e offer no pretence to test, let alone to recommend products. Instead, we . . . learn where [product vendors] ‘come from’ and whom they aim to please, [and] hear/see what they offer, especially the key features.” A review is expected to make a recommendation, but otherwise this does not seem a bad procedure to follow.

Despite their similar structure, there was considerable variation among the three issues I examined. Perhaps the most interesting was entitled “Hypertext in Action,” an excellent introduction to hypertext for the layperson, well written and illustrated. It conveyed the excitement many people feel about this topic, but also addressed the amount of thought and effort required to produce a product that offers any real advantages over a well-designed “regular” text. The general presentation was accompanied by references to specific hypertext authoring systems and accounts of hypertext in use. Criteria for choosing hypertext software were followed by descriptions of some currently available products.

A second issue, “Producing CD-ROMs,” placed much more emphasis on technical issues, as might be expected, but was also devoted to text preparation and the issues of emerging standards for tagging text (SGML). The third issue, “Recognizing Characters,” contained less explanatory material than the others. The outlines of the topic had been covered earlier in the year in an issue on “Reading Typefaces (OCR),” and this issue, after describing some additional user experience, concentrated on descriptions of specific higher volume, more complex, and higher priced systems.

Reader surveys have already caused some changes in format and are also used to determine topics to be covered. Recent and coming issues discuss such themes as image capture and handling, workflow, on-demand documents, multimedia, document storage and transport, and publishing and the networks, a topic that has been neglected in most of the publishing trade journals. The newsletters accompanying each issue draw heavily on announcements from vendors, but significant events from government and research are also noted.

The key feature of Electronic Documents is its solid introductions to the issues involved in the production of electronic documents. The reader will not understand information theory or be able to take apart a CD server after reading an issue, but will be able to evaluate production options. The reader will also know reasons not to put data into hypertext or on a CD-ROM, but will not know why a given software program should be avoided.

The primary audience for this journal seems to be managers who will be interviewing vendors and making decisions about production systems. Librarians and end users of electronic documents can learn a great deal from this journal, not only about techniques but also about the economic decisions publishers are making, but the editors are not aiming at them. This
is very clear in a conference description which mentions speakers who "range into very marginal areas like the effects of networking CD-ROMs in academia."

The contributors come from Britain. American and some continental European products are frequently mentioned, but most of the vendors and users interviewed are British or the British representatives of non-British firms. The (admittedly selective) list of hypertext products in one issue omits such major United States companies as DynaText and Eastgate. Since most related publications come from North America, it is interesting to see a different perspective, but unfortunate that the coverage stresses Britain at the expense of its partners in the European Community.

The price, which is not unreasonable for a publication researched and written in-house, will probably keep most libraries from subscribing to Electronic Documents to help meet staff information needs in emerging technologies, but libraries should consider it seriously if they support programs in publishing, information science, or business programs with an interest in document handling. —James Campbell, University of Virginia, Charlottesville.


About a quarter of a century ago in the northeast of Brazil, Paulo Freire developed theories that have had a global ripple effect among educators concerned with the kind of society that results from the process of education. Freire's ideas and his friendship have had a significant influence on Henry Giroux, professor of education at Pennsylvania State University. Giroux has published many monographs, compilations, and journal articles—all stressing the importance of education in the search for freedom and as an essential component in the survival of democracy.

The 1980s saw the emergence of the term politically correct which, as Calvin
Trillin has noted in the New Yorker, is “that rare term which appears at first glance to be positive but is always negative.” In Border Crossings, Giroux describes the use of this term as an example of the “politics of erasure” in which all manner of problems are “no longer addressed in serious terms; instead, it has become commonplace to deflect or mask one’s complicity with these practices by labelling those who argue against them ideological tyrants.” Giroux looks for new models for dialogue which will lead to real solutions to real problems, and he focuses on the critical role of the “cultural worker,” that individual who creates symbolic representations that have a pedagogical dimension and can foster liberation and enhance democracy. He includes lawyers, artists, journalists, but especially teachers. Librarians, nurses, country western singers and waitresses never make it in to his text, but presumably he would approve of their inclusion.

In eight dense, theoretical chapters and two lighter interviews, Giroux skillfully advocates a “discourse of possibility,” reaching for a perspective that ignores or denies rigid boundaries or borders. As one of the leading advocates of critical pedagogy, Giroux struggles to formalize theory that draws inspiration from many ideologies and rejects rigidity: “Any pedagogy that acts in the service of only one outcome generally constitutes a form of terrorism.” The chapter, “Modernism, Postmodernism, and Feminism” is a useful summary of the strengths and contributions of each, and it nicely articulates their evolution. Giroux’s border pedagogy is particularly useful to the extent that it provides an antidote to the “limited-good” mentality that assumes that the only solution is money, and since there isn’t enough to go around, we’ll solve my problem, but yours will have to wait.

The danger that critical pedagogy presents to the library is that its advocates will assume that the content of libraries represents yesterday’s canon (see Mark Cyzyk’s article, “Canon Formation, Library Collections, and the Dilemma of Collection Development,” in the January 1993 C&RL) and needs ruthless reconstruction to flourish, rather than understanding what libraries really represent: the interplay of culture, ethnicity, gender, and language across time and generations. Librarians need to pay attention to the debate and attempt to deepen the dialogue. Although Giroux does not mention the library, it is clearly one place on campus and in our society where the exchange of ideas is open and free. Neither tests nor grades nor time constraints come between the reader and the record. New technology and access to worldwide resources leave any attempt to confine the academic library to monocultural or monolingual content as hopeless as keeping mosquitoes out of the house with fishnet. But what, then, if we set out to collect the world’s diversity? A few university libraries try to. They quickly panic, not from the rush of dangerous ideas and alien truths, but from the implications for space, staff, and budget. The other constraint on the capacity of university libraries to assimilate the world’s diversity is time—faculty time. Big collections can intimidate scholars who cannot possibly know or read everything or search every database. The logical extension of border pedagogy is limitless humility, which is, after all, the ultimate empowerment. Giroux is hoping for dialogue and the exchange of ideas and narratives. As librarians, we need to speak up, meet his challenge, and join the discussion.—Ellen Brow, University of Nevada, Reno.


In the 1992 edition of the Encyclopaedia Britannica over 250 women are listed among the contributors. Although this represents a small percentage of the total contributors, it is nonetheless a reflection of the major impact women have made on modern scholarship. Yet, as Gillian Thomas ably demonstrates in her feminist study of the influential and still revered eleventh edition of the Britan-
nica, the intellectual position of women was very different in the early years of this century. In 1910, the year of publication of the eleventh edition, there were a mere 35 women contributors out of 1,500. In her book, Thomas examines the lives and careers of these women and offers a unique perspective on the social history of the time.

The editorial work at the Britannica itself comes under close scrutiny as Thomas dissects the content and emphases of the eleventh edition. She finds, for example, a consistently heavy reliance on German scholarship, though this is tempered by the emergence of a "distinct American influence" (12 percent of the contributors were American, including at least one woman, the novelist Gertrude Atherton). What Thomas finds most significant about the eleventh edition is that the nature of the women’s contributions had undergone an important change from previous editions. For the first time, women had actively assisted in "compiling and preparing" the scholarly essays, though they were still not recognized as "cultural authorities in their own right." Most of the women academics among the contributors "were young scholars without strongly established reputations or positions of authority." Not one, at the time, was teaching in a university.

Thomas looks beyond the Britannica and considers both the education of women in England (in a chapter entitled "The Symbolic World of Man") and their public role in English society. She touches on the importance of the periodical press in providing a voice for literary women and on travel literature as a vehicle for women writers. She notes that "some of the Britannica women contributors [notably Gertrude Bell, Isabella Bird, and Bertha Philpotts] fall into the familiar late-Victorian category of intrepid lady travelers." Yet, the authority of father figures prevalent in the culture at large underscored the notion that "knowledge was a male preserve...."

If a central figure emerges from this book, it is Janet Hogarth, a lower-level supervisor at the Britannica, who was not...
a contributor but rather was responsible for administering the team that prepared the *Encyclopedia*’s index. Previous historians have suggested that Hogarth might have been the mysterious “X” who wrote the article on “Women” for the eleventh edition, but Thomas deduces that the real author was most likely Hugh Chisholm, the edition’s editor. But it is Hogarth who best represents the possibilities and the limitations for women who worked on the *Britannica*.

Thomas does not muster much enthusiasm for the work of the thirty-five women contributors. She is certainly sympathetic to their “uncomfortable public role of exemplars of women’s intellectual capacities,” but finds the extent of their scholarly contribution limited. Indeed, she notes that “some of the . . . women contributors make their sole appearance in the Eleventh Edition as collaborators on entries either written with husbands or fathers or providing a redaction of their work.” While she applauds women’s efforts to overcome limitations placed on their participation in scientific work, she finds that much of the work of women scientists was “subsumed under the activities of male co-workers” (which is not surprising to anyone who has studied the history of science.) She concludes that the only women contributors who attained full recognition for their work were those who “pioneered some entirely new field of study,” such as Alice Gomme (children’s games) and Victoria, Lady Welby (significs).

The final portion of the book consists of biographical sketches (or “outlines”) of the women contributors. The best-known of these include Gertrude Atherton, Mary Bateson, Gertrude Bell, Isabella Bird (Bishop), Alice Meynell, and Mary Augusta Ward (who was better known as the novelist “Mrs. Humphrey Ward”). Each sketch amounts to just one paragraph on the contributor’s life and career. Most of the listings contain at least one bibliographical reference. While this kind of limited information is useful for the unfamiliar names in the group, it falls far short of the “collective biography” Thomas promises in her introduction. Rather, the overall effect is more like a slice of intellectual history.

Thomas has thoroughly documented this work with over 400 notes and a nine-page bibliography of both primary and secondary sources. A Position to Command Respect deserves a space on the shelf next to standard histories like the *The Great EB: The Story of the Encyclopaedia Britannica* by Herman Kogan (1958) and *The Circle of Knowledge: Encyclopedias Past and Present* by James Wells (1968).—Thomas A. Karel, Franklin & Marshall College, Lancaster, Pennsylvania.
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