Writing in the July 1996 issue of JAL, Thomas W. Shaughnessy noted the emergence of a "new library organization" and the creation of "an entirely new way of operating, a new organizational culture." The purpose of the new organization is "to reduce bureaucracy, empower staff, create a team-based culture, develop a deeper ownership of the library by staff, and become more responsive to the library's customers." He continues:

"... libraries must be organized to deal with the extraordinary changes that are occurring in their environment. It is not simply the complexity of the changes—financial, technological, political, social/demographic, and cultural—but also the accelerated pace of change. While change as a concept is abstract, its effects on library staff and library organizations are very concrete. In many research libraries, staff are suffering from mental and physical exhaustion, burnout, frustration, low morale, and other symptoms of stress. In some instances the library's structure adds to the distress by slowing response time, preventing cross-functional solutions to problems, and frustrating efforts to intervene."  

Others have echoed similar observations. Joe A. Hewitt, in a provocative essay, maintains that "libraries are extraordinary busy environments in which the struggle to provide high-quality services and collections on limited resources works against any activity which is not seen as directly supporting this effort." Furthermore, "the primary contribution the library administration can make towards improving LIS [library and information science] research is to implement practices that work towards the integration of both the products and processes of research into the ongoing operation of libraries."  

Clearly, the conduct of action research results in insights useful for coping with, and anticipating, problems related to change. Research also adds understanding and, it is hoped, better decision making and theory. Research may not focus on the needs of the profession but should not ignore those needs. In other words, the topics and problems for research are quite broad, and it is important that we achieve some balance between basic research and research useful for local planning and decision making. However, with the pace of change so great, it can be difficult to produce research having long-term value—conceptually and practically. Change and managerial needs may outpace the ability of researchers to deliver insights useful to the future, let alone the present. In some instances, by the time that researchers have gathered and presented the data, a new culture with new needs and solutions may have emerged.

On November 1-2, 1996, the first Library Research Seminar was held at Florida State University, Tallahassee. The reports on research lacked balance. They tended to involve library school educators and doctoral students, but did include practitioners in some instances. The research discussed tended not to examine the types of issues discussed by Shaughnessy and other library administrators. Compounding the problem, few library directors and middle managers were present. Thus, an important perspective was under-represented at the conference. Consequently, it is important to repeat some of Hewitt’s recommendations (and to build on others) to ensure that future discussions of research do not focus on the "same old, same old." Even some of the research into the Internet and World Wide Web (WWW) fit into this characterization. This is not to say that the "same old, same old" does not have some value; we need to balance it with analyses and projections of change. Complicating matters, research and scholarship should not be based merely on conjecture. We need to examine, as Shaughnessy recognizes, issues such as occupational stress and burnout. Furthermore, greater attention should focus on services—what ones to offer (and in what form) and the effectiveness and service quality of those initiated and planned.

Hewitt encourages library administrators to:

- Require reference to the literature in library planning documents and committee reports;
- Be hospitable to proposals to conduct research in the library;
- Treat major operational decisions as field experiments;
• Assert commitment to research as part of the library’s mission statement;
• Exercise influence on library organizations conducting research;
• Articulate the research needs and concerns of the practitioner community;
• Support ongoing training in research skills; and
• Provide intellectual leadership in the library.\(^6\)

Reference to the literature must go beyond library literature and recognize that many problems and issues have cross- and inter-disciplinary implications. Thus, relevant literatures might include business, management, computer science, psychology, service quality, and so forth. The availability of so many electronic resources increases the opportunities to draw upon the works of those in other disciplines, professions, and fields.

**RESEARCH OPPORTUNITIES**

It is a common occurrence for researchers who publish articles and monographs to suggest topics for further investigation. As well, a careful reading of the Fall 1996 issue of *Daedalus*, which is devoted to "Books, Bricks, & Bytes," suggests a number of topics benefiting from modeling and scholarship. As Peter R. Young, Executive Director of the National Commission on Libraries and Information Science, reminds us, "How are we to conceptualize and develop roles, training, skills, guidelines, competencies, values, and judgments that address the needs of libraries, schools, governments, communities, industries,... and other citizens of a postmodern information age?"\(^7\) He also notes that "Librarians are troubled when old solutions do not fit new challenges;"\(^8\) indeed, here are some excellent opportunities for the development of basic and applied research projects, and for projects to identify new solutions.

Such projects might examine leadership—the ability to lead in challenging times—and draw on some of the types of books which we have reported among *JAL's* book reviews. William Gosling correctly notes that:

... the dynamic cycle of change right now is so great, that there is nothing that lends stability, you can't know what your users want, because they don't know, all is experimentation with no time yet to know the outcomes. And often when you do think you know today, they are outcomes for yesterday's problems, not today's.\(^9\)

**AGENDA FOR RESEARCH AND PUBLICATION**

Professional societies and other groups have proposed various research and publishing agendas. For this essay, I asked members of the Editorial Board to identify five topical areas that they believed were most significant for inclusion in an agenda for academic libraries; 13 members responded with their lists. The resulting compilation appended to this essay does not limit itself to research. It could be argued that a number of the topics involve discussion documents and points-of-view presentations. Nonetheless, they present worthy issues and perspectives, and additions to the literature.

The topics reflect concerns about consortial arrangements, services, decision making, position of libraries within a larger environment, and so forth. Some move beyond action research and call for modeling, basic and applied research. Some are easily answered and involve common sense, whereas others are more complex. All of the topics have value to academic libraries and show that we need not continue to address the same old topics repeatedly discussed in the literature. Where there is repetition, we can look at the problems in new ways, drawing on methodologies and research designs developed in other disciplines. Clearly, it is time to move beyond the "same old, same old," and for research to become even more responsive to the needs of academic librarians. That research should have relevance to an environment of change and to today's—not yesterday's—problems.\(^10\) —PH

**NOTES AND REFERENCES**

2. Ibid.
3. Ibid., p. 252.
5. However, administrators might insist on the research having greater relevance to their planning and decision-making needs.
8. Ibid., p. 118.
9. E-mail correspondence from William Gosling to Peter Hernon, December 21, 1996.
10. "We take months, years to isolate a cure for a disease or to redesign a new product. Research often took months to gather information to produce a sufficiently large data set to make it valid. How can that be accomplished today, when as soon as the response to the data gathered is given, it is then out of date? Are we in a period when we cannot do real research, because the only outcome can be documenting what we did yesterday?" Ibid.

**COMMENTS FROM THE EDITOR**

As the editor, I often equivocate on the value of "how I did it well" articles—sometimes they seem to be the most helpful ones published; at other times they seem to lack any applicability beyond their local situation. With this caveat in mind, I encourage other librarians to attempt to meet Hewitt's challenges by exemplifying some techniques in use at Penn State University Libraries.

In January, Maureen Sullivan and Kathryn Deiss provided some references to monographs on leadership at a leadership team development session. The Libraries has purchased one title for each group member; reading and discussing it will help us learn about change. Plans and discussions often refer to library, management, computer, and higher education literatures. At the same time, the Libraries has $2,000 a year to fund proposals for non-tenured faculty and additional funds have been identified for additional important assessment activities. The 1997 Strategic Plan has eight goals under the category of assessment. In many of these activities, operational decisions will be made through field experiments. The Plan's Strategic Framework includes a Strategy of "investment by the Libraries in faculty and staff development" and a Result of "advancing the knowledge of librarianship." The two sentence *Mission Statement* declares "The Libraries are active participants in the world-wide community of scholars."

Several faculty, including the Interim Dean, actively work on campus and in national venues to influence the library
research agenda. As the Treasurer of the Library Research Round Table, the Interim Dean often articulates the research needs of the practitioner community in that group, in the planning for the conference mentioned above, and in editorial work on *College & Research Libraries (C&RL)* and now *JAL*. Penn State University's emphasis on continuous quality improvement has made *training* on gathering data bountiful. Chris Avery, a reference librarian, has an assignment to assist individual faculty and the Libraries' organizational assessment initiatives with research design. Peter Heron, among others, often provides additional consultation. Half the members of the *leadership* team are at the faculty rank of Librarian, indicating that they have strong national and international reputations as scholars.

The focus in the 1997-2002 plan on assessment recognizes Penn State Libraries' need to know more in order to make better decisions. Research and data are essential to excellent decision making, and many decisions must be made for libraries and librarians to reach their potential in the electronic age.

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**AGENDAS EXPOUNDED BY BOARD MEMBERS**

**Nicholas C. Burckel**

1. How can libraries balance their traditional collegial and democratic approach to decision making with the need to act quickly and efficiently in light of immediate circumstances? More and more we are having to make decisions against a clock that is ticking faster, and we are having to make decisions based on partial information and sometimes with less than ideal time to discuss. How can we both do the right thing and do it the right way?

2. How do we build consortia across geographic and public/private institutional boundaries that permit libraries to leverage their collective buying power or influence to vendors and resource providers? Many electronic access agreements are based on the number of FTE students, with greater discounts going to larger user groups. How can individual institutions organize to get such benefits and still retain some local autonomy?

3. With faculty tenure for traditional teaching faculty under close scrutiny, should librarians continue to use it as the appropriate model for academic librarians? Do we need more flexible descriptions to permit growth in jobs, supplemented by staff development support, instead of rigid descriptions that do not respond quickly to changing user needs?

4. Increasingly, both the issues and solutions relating to an information-based society are being addressed outside libraries. How do we assure the significant value added from librarians is reflected in the solutions to the university's information needs?

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**Karyle Sue Butcher**

1. Transmission and reaffirmation of those principles which we hold as a profession. With the merger of libraries and computing centers, and with the growth and glitz of being information providers, how can we as a profession reaffirm certain basic tenets such as free and equal access to information, and intellectual freedom, which we believe are core to our being librarians and which separate us from others with similar missions. With a growing potential for information haves and have-nots, we must remember what librarianship is all about (e.g., providing information).

2. Developing models to illustrate how professionals can leverage their knowledge. Such models might show more partnerships between those with the MLS degree and those with other specialties such as multimedia and computing skills. Looking at the implications in an organization with fewer full-time MLS graduates and more information specialists; more support staff at reference points and greater use of students in basic library instruction and computing instruction.

3. Continuing the work of Anne Woodsworth on the Information Family research. As librarians work side by side with other information providers, especially those who are non-rank annual appointments, they must develop salary models which reflect the work each group does and the values each group holds.

4. More information on ways to analyze the needs of our users to insure that whatever we do is based, to a large degree, on client needs. This would go beyond the customer surveys most of us send out. In general, libraries need to be making decisions which are more data driven and customer service driven.

5. Much work needs to be done on issues surrounding accessing information remotely, including site licensing, how to budget for new services, printing costs, and how to deal with parallel services, such as print, film, CD-ROM, and online.

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**Ronald F. Dow**

As librarians it is important to respond, through our research agenda, to the threats and opportunities that are facing the academic institutions of which we are a part. Academe is struggling to find an identity within a new economic, political, and technological order and is seeking to differentiate itself from competitors. In response to the changing order, campus administrators are attempting to bring financial and organization order to our enterprise and are developing new strategies for enhancing institutional revenue. Our research agenda must overlap with institutional needs and result in the library being intrinsically linked to the solutions that will define higher education in the future.

Equally important, the research agenda for librarians should encompass all aspects of library operations in times of organizational and intellectual change. Not only must we participate in solutions that redefine higher education, but we must continue to serve the academic communication system of which we have been an integral agent. As academics look to communicate through deferring mediums, we must be prepared to apply, based upon the outcome of research initiatives, our bias for organization and preservation to the evolving outputs of their social/communication system. To meet this agenda, and to fund other new initiatives, we need to investigate the cost, benefits, and academic rationale of those services we now provide and develop new strategies for reassigning resources. Furthermore, we must develop, through our research, an intellectual and organizational context for our decision making in order to maintain the libraries' position on campus.

1. Librarians can establish a stronger academic framework for reference and research services and can assess the impact of those services on undergraduate instruction. Discussion: What is the academic context of library reference and instructional services? Each academic discipline
Librarians can develop a line of inquiry that directly links student success and retention to student employment in the library, student learning experiences in the library, and student exposure to library facilities. Discussion: Retention is an important topic on campus yet little research has been undertaken to link student retention to library experiences, although the theoretical literature on retention supports such a connection. Observation indicates there exists a positive correlation between student work experience in the library and student performance. A line of inquiry can document these observations and begin to add to the body of literature on success and retention.

Is there a symbolic significance to a library which can be exploited when differentiating institutions of higher learning from non-academic competitors? Can this metaphor work to academe's advantage when marketing in a highly competitive educational marketplace, when distinguishing the campus from corporate competitors, and when attracting students and parents to the campus and the institution's academic programs? How can librarians explore, develop, and manage this image to the advantage of their academic community? Can libraries assume a greater role in developing the intellectual character of campus, as opposed to progressing just the academic and social aspects of campus life?

Financial models now being introduced on campus result in linking programs and services to sources of revenue. This forces cost centers, such as the library, to develop budgets that assign costs through annual allocation to revenue centers. Discussion: This approach to financing library operations opens a number of financial and service issues that would certainly warrant exploration. For example, can and should different service models be developed based upon cost? Can librarians accurately link services and collections to specific sub-institutional goals? Are there effective models for managing libraries that define financial accountability and benefits for revenue center managers in terms that they can understand and support? Are there effective models for achieving additional resources from revenue centers that are different from those models used when campaigning for resources from centralized administrations?

Academic writing is not only about communication but also about the social system of an academic's career. As academic disciplines move toward alternative formats for disseminating writing, how best can libraries support that transition? Research can be undertaken to help librarians understand better the role that writing plays in the social system of academe and to conceptualize better the role of the library in the change process.

Don Frank
1. Issues of leadership need to be explored. There are obvious interdependencies among the concepts and practices of leadership, administration, management, and supervision. But, the characteristics of the effective leader of today and tomorrow in academic libraries need to be seriously considered and discussed.

2. The relative and strategic importance of academic libraries on campuses needs to be explored. Will the academic library of today be relevant tomorrow? How much of the library of today will be relevant tomorrow? What are the assumptions? Politically, are academic libraries important? What leadership is needed? Are academic libraries moving ahead strategically? If not, is it likely that they will not be especially relevant in the future? Do scholars who work in digital, collaborative environments need to go to or consider the academic library to obtain relevant data or information (value-added or not)? This is a strategic issue as it is possible for faculty and students to obtain information without considering the academic library. Is it important for us to be included in the "information loop?" If we are not included, what are the implications in terms of roles, responsibilities, and financial support for the library?

3. The political environment of academic libraries needs to be explored. Libraries need to operate effectively within the political context of academe. What are the major factors? Also, what are the assumptions? This question is also tied to strategic issues. Academic libraries that are politically viable and effective are probably strategically viable and effective.

4. The status of research and publication as an important element of the profession needs to be explored. Some articles have discussed the quality of research and publication on academic libraries. These are important, but they do not compare us with others. How do we as academic librarians compare with the other professions, or with others in academe? We look at our research and the outputs of research critically on occasion, usually comparing the body of research with ourselves. Let us try to look at ourselves as compared with other professionals.

5. Effective partnerships need to be identified and cultivated. Partnerships between academic libraries and other organizational elements of the campus must be strategically effective. Moreover, partnerships with other professional associations or organizations need to be developed and refined. We need to be looking outwardly and strategically.

William Gosling
1. Digital libraries. How should a library go about establishing a digital library or provide access to digital resources? How should it be structured, staffed, and remote resources accessed? How should we get user input and for what? How useful will that input be? What are the problems and opportunities they introduce and how should those be handled? For example, the complexities of delivering multiple electronic formats in a distributed computing environment. Patron support from staff when dynamic electronic formats are burgeoning and staff resources are fixed; what library
4. How will shifting campus demographics affect research materials? What are the costs, how do consortia agreements alter some of those factors?

5. What are the licensing issues and how can they be handled more efficiently?

6. How will printing be handled as more materials will need to be printed on demand? What equipment is needed? Should it be on a cost-recovery basis? How will the library respond when the patron wants the library to pay for a printed copy that the patron can then borrow?

7. Copyright and fair use.

8. How will serial subscriptions be handled in the future? Will they be direct with the publishers or through the vendors? What added value services will the vendors provide? How will licensing be handled in these situations? What role might consortia play in the shared licensing of journal literature which is then served up from a single site?

Larry Hardesty

1. What are the relationships among libraries, computer centers, and media centers as we become more involved with technology? This question involves the examination of mergers, chief information officer (CIO) positions, reporting relationships, etc.

2. In what ways is our profession changing and how do we adapt?

3. What is the role of the academic library (from the view of the students, faculty, and administration), and how do we fulfill that role in times of escalating costs in traditional formats (e.g., periodicals), new cost areas (i.e., computers), and declining resources?

4. How do we evaluate what we do and make changes based on the evaluation?

5. Where are we headed. Do we need librarians and libraries? How do we respond to those who think we do not?

Eddy Hogan

1. The management of intellectual property rights in a digital environment. I maintain that the role of the academic library should not be limited to just promoting the protection of copyright and fair use of digital objects, but should also include the:
   • Digitization, cataloging, organization, and archiving of digital objects; and
   • Management and tracking of fair use, fee-for-use, copyright, and permissions for digital objects.

2. Consortial contracts for access to electronic information resources. I maintain that academic libraries should actively pursue and engage in consortial purchase of access to electronic information resources in order to save money and avoid costs; enhance sharing and reciprocal arrangements among libraries; and leverage additional influence in the development, pricing, and licensing of electronic information resources.

3. Library-based entrepreneurial enterprises. I maintain that academic libraries should actively develop and implement business plans, which will allow them to assess the fair market value of their goods and services to various users and clients; position themselves to compete within the information industry marketplace; and avoid costs, generate income, and participate in partnerships that leverage resources.

4. Information competency in library instruction and across the curriculum. I maintain that academic librarians should actively collaborate with teaching faculty in the development and implementation of new multimedia-based instructional modules that require students to demonstrate information competency skills. The content for these modules should be both library-related and discipline-specific.

5. Review of the successes and failures of team-based management. I maintain that the time has come to assess the overall success rate of team-based management approaches in academic libraries of various sizes.

Cheryl LaGuardia

1. Making every research library a teaching library and methods (explicit and implicit) for doing so.

2. Development of on-going competency assessment in technology and information handling.

3. Partnership with faculty on the production and distribution of research.

4. Lobbying information producers (publishers and vendors) to provide information in the most appropriate format (rather than in the format of the moment or the format of the future) for the use of researchers.

5. Achieving detente between the bookworms and the digit heads: the gulf between them is, in some cases, getting wider rather than converging.

Laurie S. Linsley

1. Distance learning and distance education. Will they last and be effective?

2. Can and should academic librarians organize the Internet?


4. Resource sharing and interlibrary loan. The pool of available serials is rapidly dwindling because libraries are buying full-text electronic databases and canceling subscriptions. Is interlibrary loan headed for a crash?

Charles B. Lowry

1. User interfaces, including the client presentation on Web sites, tend to be poorly designed, lacking intuitive qualities and a clear presentation that leads the casual or novice user through the server’s capabilities. The key reason for this is that user needs are rarely established in specifications, established rules of style are frequently ignored, and user protocols are rarely (if ever) conducted to ensure that the interface does what the designers/developers thought it was supposed to do. There is a pervasive need to establish a
research effort in this area or the Internet will become increasingly difficult to use and frustrating.

2. There seem to be three Internets developing—commercial sites which include the front doors to individual businesses and the sites which are specializing in the sales of goods; the free sites of individuals and organizations which have a "point of view" or purpose which tends to be idiosyncratic, but the immediate goal is to advance this perspective not make money; and the library/information side which has, as its goal, the same basic purposes traditionally forwarded by libraries and the information-oriented businesses which relate to them. There is a need to investigate these and other segments of the Internet to distinguish their characteristics and understand how this medium is evolving.

3. The economics of "archiving" scholarly information are beginning to change as agencies, such as JSOR and OCLC, press the boundaries of use of digital storage as an alternative to traditional print. Among of the inhibitors of progress are:
   - Lack of empirical data to evaluate the efficiency of adding the "access" costs, premiums being charged by publishers, and potential of increased use of searchable backfiles.
   - Lack of empirical data concerning the costs related to information technology investment to provide access—telecommunications, hardware, and an array of software to support access.
   - Lack of general applications of encryption and authentication as well as an understanding of their importance to networked access.
   - Failure on the part of publishers to take a realistic approach to pricing—i.e., to understand that the savings of not supplying print should be passed to libraries.
   - All of these elements and (of course) many more cry out for research as this new environment evolves rapidly.

4. Research into the role of the librarian/information specialist and how end-users will acquire their assistance in the future in the world of networked information.

5. Investigation of the emergence of "collaboration" as the paradigm between the teaching faculty and the "cybarian" and the researcher and the librarian in the networked environment.

Sarah M. Pritchard

As technology and economics drive significant change in our users behavior, parent institutions, and governmental policies, we need to focus our professional research in areas that will yield meaningful models for the value and role of library services to those broader academic and public constituencies.

1. Outcomes. We need to do research to understand the real outcomes of library services, that is to say, the degree to which library services have an impact on academic outcomes themselves. Higher education institutions have not yet been able to define those very well, but they would include things like student performance, job placements, graduate school success, and faculty research productivity. This topic is crucial. Ideally it should be done in collaboration with people from the institutional research field. We could at least look for library descriptive measures that correlate with student/faculty outcomes, even if we cannot measure the library impact directly.

2. New economic models. As library services become seen as decentralized modules, we may be shifting costs from a central overhead system to a user/unit model that could ultimately fragment information resources and leave many users (the less powerful departments, for example) with only the leftovers. Two trends already happening exemplify the research question: the impact of "responsibility-centered budgeting," and of the increased use of direct document delivery where the user pays by the article and the library retains nothing. Academic users/units could simply say, "why fund the library, just give me a chunk of cash and I'll buy what I want."

3. Investment to support academic programs. What does it really cost a campus to support a certain discipline or to implement a new major? How can we assess whether information resources by subject are adequate across a set of institutions? No two libraries divide their acquisitions budgets the same way, and now we should also look at the cost of subject-designated staffing such as bibliographers, and at expenditures made outside the library (e.g., by the information technology department). This information is essential to administrators in the library and campus wide and has been sought after by national higher education groups. The National Academy of Sciences, when it last updated its publication rating graduate programs in specific fields, had hoped to be able to compare library expenditures by subject. We need to find a model into which institutions can map their own expenditures by subject, cutting across interdisciplinary subject categories, types of services, and administrative boundaries.

4. Library effectiveness. The paradox in this line of managerial analysis is that ultimately effectiveness is only definable in the context of local constituencies, yet campus administrators want regional and/or national benchmarks. We use descriptive data from other institutions but we cannot say whether those data define a library as "effective," and local user surveys are highly idiosyncratic. Could we develop, through pilot testing and targeted research, some form of scoring instrument (e.g., based on the ACRL Standards) that would allow us to compare at a meta-level? That is, we would not compare service, or collections, or money, directly; we would compare scores on a standardized instrument designed to assess how well one meets the information resources needs of the campus.

5. Multi-type cooperation. A new resurgence in this is being promoted by state legislatures (e.g., Ohio and Georgia), and it is often the key to getting state funding for resources such as database licenses, telecommunications networks, and even physical facilities. What is the real impact on academic libraries? Does this form of cooperation actually bring benefit to academic libraries' primary constituencies, or is it mostly a "good neighbor" policy where the resources flow out and not in? (This does not refer to consor-tial arrangements where the majority of participants are all academic libraries.)

Carlen Ruschoff

1. There is a need to re-evaluate basic library services provided to the academic community. Are libraries providing
the services that faculty and students want and need? Are budget priorities appropriately allocated to satisfy service requirements?

2. What is the role of the library vis-à-vis the other information service providers on campus (e.g., the academic computing center)?

3. Are expectations of library services changing on campuses? Are they growing, shrinking, or about the same as they were 10 years ago?

4. What is a library collection? (Librarians need to be able to explain this concept to university administrators and budget officers.)

5. Research into the user interface and structure of the database will facilitate access to information resources and library materials. For example, should all bibliographic records (both MARC and non-MARC) reside in a single database, or should materials be housed in different databases? Is there a role for "expert systems" in access as well as cataloging?

Helen H. Spalding

1. What is the impact of growing distance education programs on academic library services? The costs of and access to academic library resources for distance education students need to be identified, analyzed, and compared with the cost and access issues for on-campus students. Higher education administrators are under pressure to maintain or increase enrollment and the accompanying tuition revenues. They view distance education programs as market growth opportunities and increasingly compete for the same students. Many encourage the distant students to make use of local academic and public library resources which the institution in which the students are enrolled does not fund. What are the responsibilities and liabilities of libraries for services to students who are enrolled as distance education students at geographically distant and competing institutions? What are the changes in student enrollment decisions, their use of academic libraries, and the changes in the types of library service being offered to students due to increased dial-in accessibility to library resources from the home/office/computing lab?

2. How are new library service expectations of users driven by new OPAC features? New OPAC features include remote access, additional searching capabilities, access to electronic citation and full-text databases, gateways to the Internet and other information resources. How is access to these new features driving the expectations users have of library services? Are their expectations being met? Are academic libraries developing new and revised services on the basis of users' new expectations? Because of enhanced OPAC features, are users doing better or worse in retrieval, selection, interpretation, and use of library resources than they did in the past?

3. To what extent do faculty and students select and use research material on the basis of whether it is accessible through an electronic database, and/or in full text? Is accessibility through a personal computer at home at any hour of the day now a basic criterion for selection of resources by some students in higher education?

4. What is the impact of the academic assessment movement on the changing role of the academic library? How have academic libraries changed their services, instructional role, and means of accountability as a result of the academic assessment movement?

5. How are campus funding priorities changing because of the impact of the investment in, maintenance of, and replacement of information technology? How do higher education administrators view campus technology funding in relation to library funding?

6. What changes are occurring in the importance of fund raising, fund raising, grants, contracts, and partnerships in academic library resource development? What innovative programs are being developed in these arenas?

7. What is the appropriate role for academic librarians in national information policy making? What leadership should they be providing in addressing higher education policy and issues?

John H. Sulzer

1. We should be benchmarking the future. What is on the minds of the people who are designing the technology that we will use in the next century? What is on the drawing boards now and in the process of development that will be likely to show up on our desks in the next five to 10 years? What are we doing, as librarians and information professionals, to influence information technology research and development?

2. When will the bough break? Doing more with less means stretching our human resources. We seem to attach value to everything but the time and morale of our professionals and staff. Our collections, our equipment, our facilities, and our users' needs, all seem to be our primary concerns and those of the administrators of our parent institutions. It is where we always try to invest and save. Little investment is made in the future of our libraries through increased numbers of librarians and staff. We are accumulating no savings in morale and mental effectiveness in a public service environment that technology is making more intense and stressful rather than less. With more and more resources "at our fingertips," a two-hour shift on a reference desk becomes increasingly more exhausting—especially as the shifts become more frequent and as we "trade time" at different reference service points each week. At the same time, we seem to believe that we can continue to make up for the deficiencies in electronic systems and equipment technology through additional human effort and adaptation. A few more library instruction sessions for our users, a couple more workshops to increase the information and technological literacy of our staff and colleagues, some more orientation and training to explain the idiosyncrasies of the latest database, are what we do and how we expect to keep up. Can we continue in this way and still maintain a humane service attitude? How much instructive reference service time is lost fixing jammed printers and CD-ROM drives? How much positive service attitude is squandered because we so undervalue our time and energy?

3. Although we live in an incredible world of information resources, both electronic and hardcopy, what we have to subsist with now are antique search engines and restrictive methods of evaluating and connecting information resources. We have done a wonderful job in getting our resources, both printed and electronic, in place and orga-
nized in some fashion or another. But that is only half of the access equation. We need to be turning our attention toward improving search and retrieval—two words from a very old vocabulary we use very little nowadays. We need to be looking at ways to develop better interactive components for electronic tools and resources, alternatives for providing reference and research services, and better ways to integrate a diversity of resources in a diversity of formats into an improved unity of information.

4. Will promotion and tenure for academic librarians work in the 21st century? Are criteria designed for teaching and research faculty appropriate for measuring and evaluating professional practitioners? What system or systems of professional evaluation will best ensure a dynamic and productive library faculty, and lead to better career development and professional recognition?

5. How well are we doing at feeding what we learn in practice back into our educational system? Do we need to develop greater synergy between academic libraries and our library schools?