lege and her counterpart at an ARL institution. Despite differences between these institutions, the authors share concerns about negotiating with their environments, facing organizational and technological change, and recruiting and mentoring the next generation of librarians.

While the essays collected here are well written, and the collection as a whole is worth reading, there are several shortcomings. Although individual essayists have supported their arguments with appropriate data, more comparative and longitudinal empirical evidence on African Americans and librarianship might have served to reinforce the key ideas of the volume. Also, because it is organized around environment or type of library, issues and questions surrounding collection development, information technologies, and theoretical questions of intellectual freedom are not as fully developed as they might have been. This shortcoming is particularly significant for academic librarians, given the primacy of these issues for colleges and universities in the remainder of this decade. Finally, more attention should have been given to librarianship in school systems, particularly with the emergence of early intervention as a focal point for an ongoing discussion about quality and outcomes.

Despite these shortcomings, Josey has done a commendable job in bringing the questions of race and profession back to librarianship. Perhaps this volume will inspire a new generation of African American librarians. One also hopes that it will help reinvigorate the public dialogue over race and profession.—*William Welburn, University of Iowa, Iowa City.*

Designing Information: New Roles for Librarians. Ed. Linda C. Smith and Prudence W. Dalrymple. Urbana-Champaign, Ill.: Graduate School of Library and Information Science, 1993. 222p. $25.

This volume contains the proceedings of the 1992 Clinic on Library Applications of Data Processing, held April 5–7, 1992, and sponsored by the Graduate School of Library and Information Science at the University of Illinois at Urbana-Champaign. In her summary of this clinic M. E. L. Jacob writes that its goal was to explore "current state-of-the-art technology," as it relates to librarians' roles as information managers and designers of information systems. The papers presented in the clinic fall into four basic categories: (1) concept statements attempting to define emerging areas of information or knowledge management; (2) descriptions of local solutions to information provision and management in a networked environment; (3) papers on designing information for presentation in online systems, specifically through screen design and the heuristic structuring of information for easy navigation by means of hypertext applications; and (4) papers focusing on some of the policy implications of providing public access to what has become known as the "information superhighway."

This volume seeks to advance the notion that librarians have a significant, perhaps even defining, role to play in structuring and designing new approaches to managing digital, online information. The combination of theoretical models, practical design considerations, and examples taken from the field is also surely meant to act both as a handbook and as encouragement to other library professionals. The breadth of the exposition of problems and solutions, from large academic libraries (as exemplified in the papers by Virginia Tiefel and Timothy Cole et al.) through the public library (Jean Polly) to the school library (David Loertscher), is likewise meant to offer "breakthrough" examples of the modern librarian as information designer and knowledge manager in a variety of settings.

Unfortunately, most of the projects and thinking on which these papers are based took place well before 1992, and in some instances even before 1990, and the technology employed in the most far-reaching of these is a state-of-the-art technology for that period. What has happened since then, however, has been an explosion of information resources, information tools, and information networks, which gives most of the practical

example papers and some of the theoretical observations in this volume only a historical interest. This volume makes clear the astonishing pace of change in the last three years. The key realities of today's and next week's design platform—concepts such as client-server architecture, readily available and relatively inexpensive hardware for the "scholar's workstation," Internet access mechanisms such as Gopher, Gopher+, World Wide Web, and emerging cross-platform information retrieval standards such as Z39.50—all of these form the basis of today's thinking, and all are largely missing from the discussion.

This means that the case studies for end-user system design offered by Cole and Tiefel or the design of a computer-based training system for library staff given by Joe Rader, for example, are of primary interest less as *solutions* to current access and training problems than as exercises in the process of design: how to define the problem parameter set, engage the audience actively in the creation and refinement of information systems appropriate to the problem, evaluate hardware and software options, and create test beds to adjudicate the success of the information solution to the given problem. And indeed the authors are aware of this and note that changes in network architecture, the growth of user expectations, and the influx of materials needing online access will lead them to find new solutions that go beyond the efforts they describe here.

Similarly, the options available for network access for public libraries or communities have expanded dramatically in the years since Polly's work at Liverpool Public Library and since the creation of Free-Net in Cleveland (described by Arlene Sievers). But each offers valuable insights into the process of advancing access in areas where such advances are rather more hard-fought than in academia. Polly's paper also offers a series of appendixes that point users at the beginning of the connectivity path along the way, and these retain their value as pointers to processes, even if some of the factual information is out of date.

In the end, the essays that will retain the greatest interest are those that attempt to place the issues of system design and integration into a larger context. Richard Lucier's cogent vision of a "Knowledge Management Environment" attempts to integrate the primary components of the knowledge-based and knowledge-creating enterprise of the medical library into a single, modularized system. In such a system, online bibliographic databases of the library's collection are augmented by online full-text and image publishing, by cooperative databases created by the institution's scholars, and all are integrated by access tools designed specifically to meet the demands of the institution's scholarship. This is a vision based on a model of scholarly communication that may well be more strongly in evidence in the health sciences, Lucier's field, than in others, but it is, as a model, compelling in its attempt to take the librarian's role as an information manager, access integrator, and service provider seriously. The degree to which such a unitary vision will or can succeed in the more heterogeneous "knowledge environments" to which readers of this volume are accustomed is unknown. Nevertheless, it is, as a concept, worth the attention of any librarian or information professional.

Carolyn Gray's exposition of the Gesher Project, a design effort undertaken by Brandeis librarians and DEC software engineers, is important for its description of what she calls the "participative design" process, and a fundamental grounding in design methodology. The innovative design decision to employ ethnographic researchers as participants in the interviews of the target faculty and research population led to an understanding of the scholarly information process and targets for data management that would have probably remained elusive otherwise. In both cases, the insights that matter come from an understanding, either first-hand or gained through research, of the information that management requires.

In a certain way the volume succeeds probably better than the authors and editors imagined; it is the *design process* that holds our attention as readers, not the specifics of a given project. Perhaps future editors of these proceedings will take a page from the design lessons of this volume, and devise a plan that will permit the electronic publication and dissemination of future proceedings, perhaps a plan that would permit the clinic to be conducted online. Such a system might have the added advantage of making the fruits of the clinic available to the intended audience more quickly, enliven the discussion, broaden the audience, and bridge the gap, even more deeply felt in these times, between the act of creating knowledge and giving it an enduring format.—*Jim Coleman, Research Libraries Group, Inc., Mountain View, California.*

Maack, Mary Niles, and Joanne Passet. *Aspirations and Mentoring in an Academic Environment: Women Faculty in Library and Information Science.* Westport, Conn., Greenwood, 1994. 232p. $49.95 (ISBN 0-313-27836-9).

Greenwood presents this volume as "the first book-length study of women in library education." That it took until 1994, after more than a century of library education, to develop such a book already tells us a great deal about women in library education. The authors, themselves library educators, have examined career development, opportunities and obstacles, and the effects of mentoring.

Beginning in 1989 and running through 1990, the authors first held discussions with women faculty at eight library schools in various regions of the United States, conducted telephone interviews with one hundred women (out of the 236 full-time female faculty in accredited U.S. library schools and programs), and presented preliminary findings at the 1990 annual conference of ALISE (Association for Library and Information Science Education) in Chicago. The comments of five library school deans at that meeting are included in the book.

Maack and Passet have read widely in relevant material from librarianship, education, sociology, and social work, and their bibliography includes both classics in the field (Clifford Geertz, David Riesman, William Chafe, Robert Maynard Hutchins, etc.—all men, you'll note) and current writings about mentoring, and careers in academe. They define a mentor as "someone senior to you in the field who actively works for your advancement. A mentor can also be a role model." In the course of their research they soon found that it made a difference when female faculty got their education and began their academic careers, so they divided their respondents into three cohorts: those who graduated from college before 1955 (35 women), those who graduated between 1956 and 1965 (32 women) and those who graduated in 1966 or later (33 women). We can recognize from the dates some of the events that affected those who lived through each period—the Depression of the Thirties, World War II, the feminist movement.

Carefully and conscientiously, the authors document from their sample the benefits many women faculty have derived from mentoring and being mentored. Starting at home with the influence of mothers and fathers, many women begin to assess their roles in the world around them, and many of the respondents in this study found encouragement and direction in their families. Even negative mentoring—parents who sought to steer their daughters into safe havens of marriage and family—can serve to push determined women toward careers in academe. For many women mentoring does not play a major role in their education until they reach the graduate level. At that point faculty, most often the dissertation adviser, can play a crucial role in the long slogging process toward a degree. He or she can encourage, point out areas of research, coauthor articles or papers, clarify the tortuous roads of academic politics—or, on the contrary, become one of the barriers women in academic positions have to batter down or climb over. Almost all the