

manner. Riggs' treatment of the subject, however, is at once complex and superficial. He is fond of list making and enumerative prose that makes for disjointed reading. One trips over endless lists of things to do or not to do, to consider or to avoid, of questions to ask, of criteria to apply. While this list making could be seen as comprehensiveness of coverage (almost to the point of making the presentation a cookbook approach), this reviewer feels these lifted (and footnoted) lists are an inadequate substitute for original thinking and felicitous prose, that they fractionate the presentation and contribute to an uneven quality throughout. The impression is one of breadth of coverage but of insufficient depth. Riggs' book is not really a cookbook.

The paucity of strategic planning material in library literature is accurately reflected in Riggs' selected bibliography and chapter references. Charles McClure is a librarian who has written on the planning process in libraries. For a shorter treatment of the subject see McClure's article in the November 1978 *C&RL*; his edited collection of papers, *Planning for Library Services: A Guide to Utilizing Planning Methods for Library Management* (New York: Haworth, 1982) is a useful compendium of contemporary planning approaches.

In this generally successful application of a complex business procedure to libraries, Riggs makes certain explicit and implicit assumptions, some of which may attenuate the usefulness of the book to particular libraries. He assumes a library of moderate to large size and one that is hierarchically structured for authority and decision making. He also assumes one characterized by strong, centralized management and control process and by a high level of rationality: to wit, a stereotypical (and idealized) bureaucracy. Indeed, the closer one's library is to General Motors in size, complexity, and structure, the more valuable Riggs' book will be.—Albert F. Maag, *Capital University Library, Columbus, Ohio.*

*Changing Technology and Education for Librarianship and Information Science.*  
Ed. by Basil Stuart-Stubbs. Greenwich,

Conn.: JAI, 1985. 188p. (Foundations in Library and Information Science, V.20). \$23.75, individuals; \$47.50, institutions. LC 84-21330. ISBN 0-89232-515-1.

What takes two-and-a-half years to produce, costs libraries twice as much as individuals to purchase, and is outdated by the time it is marketed? Answer: this book. This latest volume in the Foundations in Library and Information Science series is an edited transcription of a June 1983 invitational conference hosted by the University of British Columbia's School of Librarianship. It is both ironic and symptomatic of the technological challenge facing librarians that the proceedings of such a conference took so long to reach a wider audience and that they came traditionally packaged—in a clothbound photo-offset printed edition complete with justified margins.

This small conference of research librarians, information scientists, and educators met to examine and discuss "the impact of changing technology on the recording and dissemination of knowledge, on research libraries as agents in that process, and on education for librarianship and information science." The volume includes the full text of six major theme papers, eleven formal commentaries, and very brief summaries of informal discussions. The conversational style of the commentaries and the personal style of oral presentations are faithfully recorded. Given the delay in publication one might have expected instead to see a heavily edited and tightly organized monograph that succinctly presented the most important elements of the conference.

John Black opened the conference with an overview of changing technology's relationship to scholarly communication and its implications for research libraries. He illuminates his discussion of technologies by examining three functional areas in which innovation has been extensive and rapid—distribution, computation, and storage. While he could not have precisely anticipated all the new technologies, such as CD-ROM, he charts the direction of that change and highlights the implications for libraries. One obvious, but still sobering, conclusion is that re-

search libraries as they are presently constituted will no longer monopolize access to recorded information as completely as in the past. That realization alone should prompt serious rethinking about the future role of research libraries and the education necessary for professionals who staff them.

Reflecting his earlier training and experience in computing at the University of Wisconsin-Madison, commentator Richard McCoy observes that new organizational structures are being developed to oversee and coordinate Black's changing technologies, but they seldom include librarians. That is apparently still true three years later. The prominence that the *Chronicle of Higher Education* accorded Patricia Battin's appointment as Columbia University's new "computer czar" in addition to her responsibilities as university librarian simply confirms the novelty. As might be expected of the president of a consortium of institutions with a substantial investment in a large centralized database such as RLIN, McCoy singles out optical disk technology, with its implications for offline distribution of great quantities of data, as an especially promising technological development.

The implications of the new technologies on the personnel requirements of research libraries was the second major theme of the conference. Those familiar with Carlton Rochell's recent research will recognize ideas he has developed in other forums—especially the idea that new technologies will require an organizational change within libraries. The need to pull together people from various strata and areas of the library with particular knowledge or skills to work on specific projects for brief periods will force libraries to abandon a traditional hierarchical organizational pattern in favor of a flatter, more decentralized matrix organization. Regarding the preparation of professionals to operate effectively in that new environment, Rochell states explicitly what many practicing librarians say privately, that "libraries cannot afford to leave the education of librarians entirely up to the schools" (p.31). Library schools, he feels, often perpetuate a traditional approach at

the very time when library administrators actively seek talented young professionals with new ideas. He predicts a bright future for librarians who serve as custodians of access to information in an age "where data is marketed, purchased and retained as a commodity . . ." (p.35). He also feels, however, that as libraries train more non-professionals to operate technological systems, those libraries will lose staff to the more lucrative business world.

Richard Dougherty's remarks are less a commentary on Rochell's paper than a point of departure for his own observations. He points to the debate over the nature and use of database as the most recent manifestation of the traditional tension between public services and technical services. For Dougherty, the emerging information age requires multipurpose database supporting cataloging, collection development, and resource sharing and a shift in emphasis from bibliographic control to access. Another tension is the competition between libraries and computer centers for the same share of the university's budget, a competition that must be converted to cooperation and integration.

In a second commentary Margaret Beckman contrasts the Canadian research library experience with that of its southern neighbor. She notes, for instance, that Canadian research libraries generally receive a larger portion of the university budget and allocate a smaller percentage of their staff to professionals, who, in turn, earn comparably higher salaries. A two-year M.L.S. is also becoming the recognized standard.

In the third major theme paper Edward Holley reviewed current developments in library education, including two-year programs, joint degree and sixth year certificate programs, and doctoral programs. He remains convinced of his earlier judgment that fewer, larger, stronger library schools will produce better students, a trend that already appears well under way. Whether one is prepared to go quite as far as Holley, few can gainsay his basic point. Commentator Evelyn Daniel does, however, register her concern over the possible consequences of "a small number of fairly large schools control[ling] entry to this di-

verse profession" (p.82). A second educator, William Cameron, stresses the need for graduates who anticipate and plan for technological change, rather than simply react and adapt to it. Restructuring the curriculum, he suggests, will result in schools producing the kind of graduates who will keep librarianship vital and current.

Library educator Bernard Franckowiak opened the fourth theme session appropriately with a look at the future educational needs of librarians. His lengthy list of computer-based core courses and minimal competencies is impressive, but unrealistic. Graduates with those skills will not likely accept even a generous librarian salary when much more is available in business and industry. In his commentary Thomas Galvin points out the drab realities of present school budgets. Those realities suggest that schools cannot be all things to all people and that differentiation is probably necessary. Edwin Gleaves adds his personal experience with microcomputers to buttress Franckowiak's computer emphasis for learning *about* new technologies and for teaching *with* new technologies.

Another closely related theme session dealt with the faculty and students of library schools. In his paper Michael Buckland argues that library faculty are forced to meet a double standard atypical of other faculty: wide practical experience as well as scholarly rigor and conceptual vision. They are not free to concentrate on traditional academic research that is the basis for status and promotion in the academic community, nor can they afford to concentrate exclusively on the practical and applied aspect of the subject. At the same time faculty face these pressures, the number of graduate students is dropping precipitously. Apparently, too, fewer libraries are requiring the M.L.S. degree for professional positions, a fact that runs contrary to general impressions.

In the concluding theme session Dean Robert Stuart of Simmons College discussed strategies for adapting to change. One obvious way is to recruit potentially better professionals who, as a result of their education, are "flexible, adaptable,

capable of critical judgement and educated to face and discern the patterns of future change" (p.130). While that is undoubtedly true, the same could be said of any school training students for professional and managerial positions. And therein lies the problem—we are competing for the best and the brightest with schools that offer their graduates higher status, better incomes, greater psychic satisfaction, and more security. It is unlikely that the next few years will dramatically alter that picture.

Three concluding presentations summarize the conference from the perspective of an information scientist (Neal Kaske), a research library director (James Govan), and an educator (Charles Davis). Although differences in point of view are apparent, the summaries emphasize agreement rather than differences.

Most of the challenges and problems discussed at the conference are not new; nor are the suggested responses and solutions. The latter, to be sure, were fresher when discussed in 1983, but by the time they appeared in print those ideas had already received considerable public attention. What is significant is that the conference proceedings represent a general consensus among the leadership of the major library schools and research libraries in North America about the prospects for both in the near future. Since these are the very individuals and institutions that can shape that future, their comments deserve attention.—*Nicholas C. Burckel, Washington University Libraries, St. Louis, Missouri.*

**Reynolds, Dennis.** *Library Automation: Issues and Applications.* New York: Bowker, 1985. 615p. \$37.50. LC 84-6272. ISBN 0-8352-1489-3.

The author describes the current state of library automation by tracing historically the progress of library functions such as acquisitions, cataloging, circulation, serials check-in, public catalog, interlibrary loan, and the retrieval search services. The beginnings of automation started with the IBM unit-record equipment found in early circulation systems and advanced to today's sophisticated integrated online cata-