cross-indexes in this volume, a disadvantage in any index.—*J. M. Edelstein, University of California, Los Angeles.*

BOOKS RECEIVED

NOTE: *The titles listed represent books received at the editorial office that may be of interest to academic librarians.*

Abrams, M. E., ed. *Medical Computing: Progress and Problems.* New York: American Elsevier Publishing, 1970. 396p. $13.00. (74-112447). (ISBN 444-19679-X).

Adams, A. John and Burke, Joan Martin. *Civil Rights: A Current Guide to the People, Organizations, and Events.* New York and London: R. R. Bowker, 1970. 194p. $9.95. (70-126010). (ISBN 0-8352-0405-7).

Altmann, Berthold. HDL-TR-1523: *The HDL Automated Information System.* Washington: Harry Diamond Laboratories, 1970. 122p.

American Art Directory, vol. 44. Compiled by the Jaques Cattell Press. New York: R. R. Bowker, 1970. 368p. $25.50. (99-1016). (ISBN 0-8352-0282-8).

Annan, Gertrude L. and Felter, Jacqueline W., eds. *Handbook of Medical Library Practice.* 3d ed. Chicago: Medical Library Association, 1970. 411p. $15.00. (70-103541.

Barnetson, Paul. *Critical Path Planning: Present and Future Techniques.* Princeton: Brandon/Systems Press, 1970. 102p. $7.50.

Bhattacharyya, G. *Cataloguing Research in India.* India: Bangalore Press, 1969. 85p.

Boice, Eugene T., et al. *The Medical Library Center of New York: A Cost Study.* New York: New York Metropolitan Reference and Research Library Agency, 1970. 65p. No charge—available on a very limited basis.

Brandt, Siegmund. *Statistical and Computational Methods in Data Analysis.* New York: American Elsevier Publishing, 1970. 322p. $16.50 (77-113749). (ISBN 0-444-10032-6).

British Books in Print: Author Index. Vol. I. London: Whitaker & Sons, 1970. 1493p. $27.60 for 2-volume set. (ISBN 85021-038-0).

British Books in Print 1970: Title Index. Vol. II. London: Whitaker & Sons, 1970. 1950p. (ISBN 85021-038-0).

Canadian Locations of Journals Indexed in Index Medicus. Prepared by the Health Sciences Resource Centre of the National Science Library. Ottawa: National Research Council, 1970. 173p. $5.00.

Clark, Mary Virginia, comp. *Medical Reference Works, 1679–1966: A Selected Bibliography. Supplement 1.* Chicago: Medical Library Association, 1970. 46p. $3.75. (67-30664).

De Lerma, Dominique-Rene. *Black Music in Our Culture: Curricular Ideas on the Subjects, Materials and Problems.* Kent, Ohio: Kent State University Press, 1970. 263p. $7.50. (70-131429). (ISBN 0-87338-110-6).

Evans, Judith L. *Children in Africa: A Review of Psychological Research.* New York: Teachers College Press, 1970. 115p. $3.95. (71-113095).

Flores, Ivan. *Data Structure and Management.* Englewood Cliffs, N.J.: Prentice-Hall, 1970. 390p. $13.95. (73-125290).

Foxon, David F. *Thoughts on the History and Future of Bibliographical Description.* Los Angeles: U.C.L.A., 1970. 31p.

Furet, Francois, ed. *Livre et société dans la France du XVIII siècle.* II. Paris: Mouton, 1970. 228p. 38 Francs. (67-112747).

Garde, P. K. *The United Nations Family of Libraries.* New York: Asia Publishing House, 1970. 252p. $5.50. (ISBN 0-210-22282-4).

Haight, Anne Lyon. *Banned Books: Informal Notes on Some Books Banned for Various Reasons at Various Times and in Various Places.* 3d ed. New York: R. R. Bowker, 1970. 166p. $7.95. (54-11650). (ISBN 0-8352-0204-6).

Hargrove, Thomas L. and Stirling, Keith H. *California State Library: Processing Center Design and Specifications, Vol. V, Cost Analysis.* Berkeley: Institute of Library Research, 1970. 101p.

Hedrick, Basil C. and Anne K. *Historical Dictionary of Panama.* Metuchen, N.J.: Scarecrow Press, 1970. 105p. (ISBN 0-8108-0347-X).

Jacobson, Myrtle S. *Night and Day: The Interaction Between an Academic Institution and Its Evening College.* Metuchen, N.J.: Scarecrow Press, 1970. 358p. $10.00. (ISBN 0-8108-0324-0).

Johnson, Robert Owen. *An Index to Literature in The New Yorker: Volumes XVI–XXX, 1940–1955.* Metuchen, N.J.: Scarecrow Press, 1970. 477p. $10.00. (ISBN 0-8108-0314-3).

Kipp, Michael F. *Interloan Activity in Central New York: Analysis of a Sample.* Canastota, New York: Central New York Reference & Resources Council, 1970. 21p.

Lange, Charles H. and Riley, Carroll L., eds. *The Southwestern Journals of Adolph F. Bandelier 1883–1884.* Albuquerque: University of New Mexico Press, 1970. 528p. $20.00. (65-17862).

Literary and Library Prizes. 7th ed. Revised and enlarged by Olga S. Weber. New York and London: R. R. Bowker, 1970. 413p. $10.95. (59-11370). (ISBN 0-8352-0399-9).

McDaniel, Herman. *Decision Table Software: A Handbook.* Princeton: Brandon/Systems Press, 1970. 84p. $7.50. (78-101001). (ISBN 87769-024-3).

McDaniel, Herman, ed. *Applications of Decision Tables: A Reader.* Princeton: Brandon/Systems Press, 1970. 226p. $9.95. (71-100998). (ISBN 87769-022-7).

National Union Catalog 1956 through 1967, Vol. 1, Totowa, N.J.: Library Division of Littlefield, Adams & Co., 1970. 606p. $15.75. (76-141020).

Nyren, Dorothy, comp. and ed. *Community Service: Innovations in Outreach at the Brooklyn Public Library.* Public Library Reporter no. 16. Chicago: American Library Association, 1970. 60p. $1.75. (77-137361). (ISBN 0-8389-3117-0).

Peguy, Charles. *The Portico of the Mystery of the Second Virtue.* Translated by Dorothy Brown Aspinwall. Metuchen, N.J.: Scarecrow Press, 1970. 158p. $5.00. (ISBN 0-8108-0317-8).

Perrine, Richard H. *Library Space Survey of Texas Colleges and Universities.* Houston: Coordinating Board Texas College and University System, 1970. 60p.

Peterson, Kenneth G. *The University of California Library at Berkeley 1900–1945.* Berkeley: University of California Press, 1970. 205p. $6.00. (71-629639). (ISBN: 0-520-09211-2).

Prostano, Emanuel T. *School Media Programs Case Studies in Management.* Metuchen, N.J.: Scarecrow Press, 1970. 200p. $5.00. (ISBN 0-8108-0363-1).

Prpic, George J. *A Century of World Communism: A Selective Chronological Outline.* Woodbury, New York: Barron's Educational Series, 1970. 304p. $3.95. (71-75835).

Ranganathan, S. R. *Colon Classification Edition 7 (1971): A Preview.* India: Bangalore Press, 1969. 52p.

Ranganathan, S. R. and Bhattacharyya, G. *Conflict of Authorship: Corporate Body vs Corporate Body.* India: Bangalore Press, 1970. 64p.

Recent Research in Reading: A Bibliography 1966–1969. Foreword by James L. Laffey. New York: CCM Information Corp., 1970. 300p. $14.95. (72-135197). (ISBN 8409-0275-1).

Roslansky, John D., ed. *Creativity: A Discussion at the Nobel Conference.* Amsterdam: North-Holland Publishing, 1970. 90p. $7.50. (74-134641). (ISBN 0-7204-4077-7).

Salem, James M., ed. *The Teacher as Writer: Paul T. Nolan, Example.* Metuchen, N.J.: Scarecrow Press, 1970. 242p. $5.00. (ISBN 0-8108-0318-6).

Slavens, Thomas P., ed. *Reference Interviews and Questions*. Ann Arbor: Campus Publishers, 1970. 47p.

Special Libraries and Information Centres in Canada: A Directory 1970 Revision. Compiled by Beryl L. Anderson. Ottawa: Canadian Library Association, 1970. 168p. $7.50. (ISBN 0-88802-030-9).

Spillner, Paul. *World Guide to Abbreviations Part 1, A–H*. Munchen-Pullach: Verlag Dokumentation, 1970. 527p. $33.-00 per 2-volume set. (ISBN 3-7940-1098-1).

Stanford, Edward B. *Minitex* (Minnesota Interlibrary Teletype Experiment). Minneapolis: University of Minnesota Libraries, 1970. 40p.

Strain, Robert E. *The Relevant Professor: Adventures of an Academic Rebel*. Orange, California: Polaris Publications, 1970. 136p.

Thompson, William B. and Ridge, J. D. *Catalogue of the National Collection of Greek and Latin School Text-Books (1800 onwards)*. Leeds: Institute of Education, 1970. 119p.

Tunstall, Jeremy, ed. *Media Sociology: A Reader*. Urbana: University of Illinois Press, 1970. 574p. $12.50. (77-125598).

Ward, Martha E. and Marquardt, Dorothy A. *Illustrators of Books for Young People*. Metuchen, N.J.: Scarecrow Press, 1970. 166p. $5.00. (ISBN 0-8108-0329-1).

Williams, Ethel L. *Biographical Directory of Negro Ministers*. 2d ed. Metuchen, N.J.: Scarecrow Press, 1970. 605p. (ISBN 0-8108-0328-3).

ABSTRACTS

The following abstracts are based on those prepared by the Clearinghouse for Library and Information Sciences of the Educational Resources Information Center (ERIC/CLIS), American Society for Information Science, 1140 Connecticut Ave., N.W., Suite 804, Washington, D.C. 20036.

Documents with an ED number may be ordered in either microfiche (MF) or hard copy (HC) from ERIC Document Reproduction Service, National Cash Register Company, 4936 Fairmont Avenue, Bethesda, Maryland 20014. Orders must include ED number and specification of format desired. A $0.50 handling charge will be added to all orders. Payment must accompany orders totaling less than $5.00. Orders from states with sales tax laws must include payment of the appropriate tax or include tax exemption certificates.

Documents available from the Clearinghouse for Federal Scientific and Technical Information, Springfield, Virginia 22151 have CFSTI number and price following the citation.

Machine Readable Bibliographic Records: Criteria and Creation. ERIC Clearinghouse on Library and Information Sciences. By Ritvars Bregzis. May 1970, 28p. (ED 039 388, MF—$0.25 HC—$1.50).

The centrality of bibliograhic records in library automation, objectives of the bibliographic record file, and elemental factors involved in bibliographic record creation are discussed. The practical work of creating bibliographic records involves: (1) data base environment; (2) technical aspects; (3) cost; and (4) operational methodology. The application of automated processes to library service functions is dependent on the availability of appropriately structured and functional bibliographic data files. There is a general lack of such files. The known bibliographic record files range widely in their scope of

coverage, size, detail of data coverage, functional orientation, and method and cost of production. As a rule they are not mutually compatible. The machine-readable bibliographic record services offered by the Library of Congress and the British National Bibliography constitute a trend in distribution of machine-readable records of standardized definition and multipurpose functionality to the library world at a consistently increasing rate. Although cooperative creation of large bibliographic record files appears to be a feasible objective for the coming decade, it is not clear to what extent a similar sharing by the small library of the required computing services will become possible for purposes of cooperative utilization of the cooperative bibliographic data files.

The Academic Library Response to New Directions in Undergraduate Education. ERIC Clearinghouse on Library and Information Sciences. By Patricia B. Knapp. April 1970, 23p. (ED 039 390, MF—$0.25 HC—$1.25).

Following a discussion of the major trends in higher education, the response of academic libraries to these developments is considered, with particular attention to developments related to undergraduate libraries, community college libraries, learning resources centers, the independent study movement, the library-college movement, and library programs in experimental colleges. The base line for this selective, evaluative, and interpretive review was provided by a bibliography based on a literature search conducted by the ERIC Clearinghouse for Library and Information Sciences staff at the University of Minnesota. Emphasis is on publications since 1965. A major impression received from reviewing the literature on library services for undergraduate education is that a great deal more is said about what ought to be done than about what is actually being done. A second and related general impression is that the library response to new developments in undergraduate education is disappointing because so little of a truly innovative nature is occurring in undergraduate education itself. **Exceptions to** these generalizations are noted. The text is followed by a list of references.

Library Statistics of Colleges and Universities, Analytic Report, Fall 1968. By Bronson Price. National Center for Educational Statistics, 1970. 85p. (ED 039 888, MF—$0.50 HC available from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402 HE 5.215 15031-68, $1.00).

In 1967–68 the operating expenditures of the 2,370 college and university libraries covered in the survey totaled approximately $510 million. Of that total, $189 million or 37 percent was spent on books and other library materials, and $275 million or 54 percent was spent for salaries and wages. Binding and rebinding accounted for 3 percent of the total; all other operating expenditures, for 6 percent. Aside from microform holdings, some 305 million volumes were held by the libraries at the end of 1967–68. Over 2.5 million periodical titles were being received, while the number of serial titles other than periodicals was slightly more than one million. Of the 43,500 nonhourly personnel, 17,400 or 40 percent represented librarians, 5 percent were professional staff other than librarians, and 55 percent were nonprofessionals. The assistance provided by students and hourly personnel amounted to nearly 32 million hours. The overall library expenditures taken as a percent of total institutional expenditures for educational and general purposes (including organized research) was 3.7 percent.

Research and Development in the Computer and Information Sciences. Volume 1, Information Acquisition, Sensing, and Input: A Selective Literature Review. By Mary Elizabeth Stevens. National Bureau of Standards, March 1970. 169p. (ED 039 891, MF—$0.75 HC available from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402. (C13.44:113 Vol. 1, $1.50).

The series, of which this is the initial report, is intended to give a selective overview of research and development efforts

and requirements in the computer and information sciences. The operations of information acquisition, sensing, and input to information processing systems are considered in generalized terms. Specific topics include but are not limited to: (1) source data automation and remote sensing techniques; (2) communication systems and data transmission links; (3) audio and graphic inputs; (4) preprocessing operations upon input items; (5) character recognition; (6) speech recognition; and (7) various other aspects of automatic pattern recognition. Supplemental notes and a bibliography of over 640 cited references are included.

Research and Development in the Computer and Information Sciences. Volume 2, Processing, Storage, and Output Requirements in the Information Processing Systems: A Selective Literature Review. By Mary Elizabeth Stevens. National Bureau of Standards, May 1970. 129p. (ED 039 892, MF—$0.75 HC available from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402 C13.-44:113 Vol. 2, $1.25).

Areas of concern with respect to processing, storage, and output requirements of a generalized information processing system are considered. Special emphasis is placed on multiple-access systems. Problems of system management and control are discussed, including hierarchies of storage levels. Facsimile, digital, and mass random access storage media and techniques are considered. A variety of output mode requirements are also considered, including direct recording to microforms; on-line display systems; printing, photocomposition, and automatic character generation; and three-dimensional, color, and other special-purpose display systems. Problems of system use and evaluation are also briefly noted. A bibliography of approximately 480 cited references is included, together with supplemental notes and quotations from the literature.

A Comparative Analysis of Interactive Storage and Retrieval Systems with Im- *plications for BCN Design.* By Herbert R. Seiden. System Development Corporation, January 1970. 65p. (ED 039 893, MF—$0.50 HC—$3.35).

The work reported is part of a series of studies aimed at providing information and assistance to the National Library of Medicine (NLM) in planning the Biomedical Communications Network (BCN). The first part reviews the literature on systems relevant to BCN design, documents System Development Corporation's position with respect to certain concepts of bibliographic retrieval as they relate to BCN planning, and provides a basis for better understanding of the comparisons. The second part contains comparisons of various systems based on data available in open sources. Over 150 systems were reviewed. Of these, 26 general purpose and 11 bibliographic systems were selected for comparison, based on criteria described in the study. Implications for system design, for the BCN user, and for network planning are discussed in the third part. Some of the major points are: (1) NLM should stay with the bibliographic retrieval design; (2) a unified network concept should be developed and implemented; (3) there is a need for standards and specifications for inputs, thesauri, and unit records; (4) users should be provided more direct access to the files on an interactive basis; and (5) some files should be maintained centrally while others should be duplicated at several centers.

New Mexico's Library Resources: Present Status and a Plan for the Future. By New Mexico State Library, Santa Fe; New Mexico Library Development Council. Arthur D. Little, Inc., March 1970, 207p. (ED 039 895, MF—$1.00 HC—$10.45).

The findings and conclusions of this study are based on personal interviews with librarians and on information gathered from questionnaires. Responses to the questionnaires are pictured in tables. The report resulting from the study is intended to provide: (1) a summary of existing library strengths and weaknesses; (2) rec-

ommendations for improvement of the total library program; and (3) a source of verification and support for those in New Mexico who will actively seek a statewide solution to a statewide problem. Appendix A, on academic libraries, was prepared by Dr. Roscoe Rouse, Director of the Library, Oklahoma State University. The libraries visited are listed in Appendix B. Recommendations of the study group are centered around: (1) a statewide library service network; and (2) resource and personnel development.

Computational Linguistics: Bibliography 1968. By Bozena Dostert and others. Rand Corporation, January 1970. 57p. (ED 039 901, MF—$0.25 HC—$2.95).

Cited are 573 U.S. and foreign articles, reports, and books particularly relevant to the field of computational linguistics with selective coverage in the fields of computation and programming, and social science uses of computers as language processors. In the area of linguistics, a fairly broad view of structural theory and semantics is taken without being exhaustive. Structural properties of some languages, especially English and Russian, are also selectively covered. The coverage of psycholinguistics and sociolinguistics is also selective.

The Development and Testing of Materials for Computer-Assisted Instruction in the Education of Reference Librarians. By Thomas P. Slavens. The University of Michigan, School of Library Science, April 1970. 182p. (ED 039 902, MF—$0.75 HC—$9.20).

Three problems in the field of library science concerning the education of reference librarians which this project attempted to solve were: (1) unsatisfactory teaching methods; (2) variation of education and skill among students; and (3) lack of self-instructional materials. The development and testing of computer-assisted instructional materials has contributed to the solution of these problems by making available: (1) a type of education in which reference situations are simulated; (2) an instructional period to evaluate dis-

crimination and performance; and (3) easily revised self-instructional materials. The purpose of these materials is to help the library science students at the master's level become acquainted with a wide spectrum of representative reference materials and to learn to use these in meeting the informational needs of the library patrons. To accomplish these objectives, 167 reference work annotations and 850 questions dealing with these tools were compiled and organized into a linear program. Reference interviews in libraries were monitored and recorded for use as simulated case studies. In these situations, the computer acts as the patron and the student as the librarian. The group using the computer scored significantly higher on examinations than did another control group which did not use the computer.

Meeting Information Needs in Ohio; A Report on TWX Experiment and Elements That Will Assist in Designing a Reference and Information Network. By the State Library of Ohio, Columbus, 1970. 24p. (ED 039 909, MF—$0.25 HC—$1.30).

Ohio libraries are committed to development of a reference and information network. Duggan's twelve components are cited as useful in planning. A TWX experiment linking two union catalogs and the State Library is described. In a 172-day period (Feb.–Oct. 1969), 4,502 requests (estimated as 44 percent or less of the current potential volume) entered the system. Of these, 2,318 (52 percent) were found at the first station, 427 (10 percent) at the second station, and the remaining 38 percent were unlocated. 539 titles (12 percent) were located as a result of the connection. Of the 1,719 not located, 413 were new publications outside the interlibrary loan code recognized by the union catalogs, and 996 were not identified in three bibliographic sources with indications that they were incorrect entries or material outside the scope of the catalogs. The report suggests that 87 percent of the "proper" requests could be located in Ohio libraries. The mean number of days-items which were in the system was 2.61, with a

range of 1–13. The paper ends with suggestions for next steps including a demonstration of a statewide functional approach to meeting information needs of a specific target group.

Library Management; Papers Presented at a Workshop Sponsored by the Library Association of Alberta, March 69, Red Deer, Alberta. By Gertrude C. Pomahac, ed. Library Association of Alberta, 1969. 55p. (ED 039 913, MF—$0.25 HC—$2.85).

The first of the Occasional Papers issued by the Library Association of Alberta is a record of the papers delivered at the Association's workshop on library management held in March 1969. The papers, both formal and informal, are presented as they were given. Titles of the papers are: (1) "Management of Small College Libraries," (2) "Management of Public and Regional Libraries," (3) "Education for Library Management," (4) "Librarian-Manager or Professional Manager?," and (5) "Management: A Personal Viewpoint." As part of the continuing education program of the Association, the Workshop was designed to provide administrators and educators with the opportunity to share their experiences with representatives of every kind of managerial responsibility, in every size and type of library. A bibliography of management books published since 1960, biographies of the speakers, and a list of workshop participants follow the paper presentations.