number (including location), subject heading, date of publication.] If a contents note were added to make a sixth-item, 90 percent of users would have found a computer catalogue sufficient for their purposes."

The above statement sums up the major points of the study relevant to a computerized catalog. The complete study, however, contains a great deal more information that will be of interest to catalogers, reference librarians, library administrators, and all librarians concerned about the usefulness of the card catalog.

Dr. Palmer has been absolutely honest in his text about the relevance of his study to computerizing the card catalog. He admits that his study does not answer a number of questions that must be answered before we can make wise decisions to develop reduced-data records for a computer catalog. He strongly recommends that much additional research and a great deal of costing be done before decisions are made. Some of the questions he poses are (1) Would the cost of adding certain information to a computer catalog be offset by increased benefits to the user? (2) Is the most economical place to provide certain types of bibliographical information in card catalogs, book catalogs, bibliographies, or in the materials themselves? (3) Is the value of certain catalog information to a small number of users, such as faculty [faculty reported using a greater number of data elements on catalog cards than other groups of users] so great that the information must be included in future catalogs, regardless of the catalog's type or configuration? (4) Should only a portion of the catalog be computerized?

In short, Dr. Palmer has provided us with a useful compilation of card catalog use studies, a valid catalog user study that is meaningful because the methodology employed was sound, and a discussion of what we will have to do before making decisions regarding computerizing catalogs.

Dr. Palmer does not touch directly on all the facets of the computer catalog question, but his book does bring to mind such questions as (1) How complete must the catalog record be? What data must be included? (2) What is the relationship of the national bibliographic record to the local inhouse bibliographic record? Should these

duplicate each other or can they compliment each other? Should they both be in machine-readable form? (3) Is the catalog a research tool or a location/identification tool? (4) How relevant is the experience of the National Lending Library of Great Britain to us? (The user is required to consult printed bibliographies issued by bodies other than the National Lending Library to identify books before requesting them.) (5) Should we in North America adopt the same philosophy as the British regarding retrospective conversion of catalog records? (The BNB MARC records begin at a given time and will be developed from that time forward. No effort will be made to convert catalog records earlier than the determined date. The user will have to use the printed bibliographies or the card catalog for pre-MARC records.)

I recommend Dr. Palmer's book as a useful and thought-provoking contribution to the existing body of card catalog literature.

—Ralph E. Stierwalt, University of Western Ontario, London, Ontario, Canada.

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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, DC 20036.

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Documents available from the National Technical Information Service, Springfield, VA 22151 have NTIS number and price following the citation.

Toward a National Serials Data Program: Final Report of the National Serials Pilot Project. By Donald W. Johnson. Association of Research Libraries, Washington, D.C., 1972. 93p. (ED 063 009, MF—\$0.65).

The National Serials Pilot Project, Phase II of the National Serials Data Program, is described. Utilizing the MARC format for processing serials, the objectives were: (1) to create a machine-readable file containing live serials in the fields of science and technology; (2) to produce a number of preliminary listings; and (3) to produce one or more written reports covering procedures, problems, and results. Data were input via an administrative terminal system to a 360/40 computer; processing of data was done on a 360/50 computer. Among the conclusions and recommendations are: (1) a national serials data bank in machinereadable form is both technically and economically feasible; (2) such a data bank should have its own machine-readable authority file for corporate names; (3) input and output in upper case only would be more satisfactory from both the systems viewpoint and the cost viewpoint, but probably would not be accepted by the library community; and (4) serious consideration should be given to the question of applicability of existing cataloging rules in the determination of main entry in a machine-readable file.

Certification of Public Librarians in the United States; A Detailed Summary of Legal and Voluntary Certification Plans for Public Librarians Based on Information Supplied by the Various Certificating State Agencies or Other Appropriate Sources, 2nd ed. By Ruth R. Frame and John R. Coyne. American Library Association, Chicago, Illinois Library Administration Division. 1972. 44p. (ED 062 998, MF—\$0.65).

Contained in this report is a detailed summary of legal and voluntary certification plans for public librarians in each of the fifty states. Descriptions of the certification plans for public librarians are based on information supplied by state agencies in September 1971. Each plan is identified by the descriptive terms-mandatory, permissive, or voluntary. Mandatory certification is required by state law. Specific penalties for failure to comply are included in the statutes and codes of some of the states. Permissive certification is sanctioned by state law, but not compulsory. Voluntary certification has no legal basis, and is generally sponsored by a state library association. States which have no certification law or plan are also listed.

Library Orientation; Papers Presented at Annual Conference on Library Orientation (First, Eastern Michigan University, May 7, 1971). Sul H. Lee, ed. Eastern Michigan University Library, Ypsilanti. 1972. 50p. (ED 063 004).

On May 7, 1971, the Eastern Michigan University library was host to the first annual conference on Library Orientation for Academic Libraries. The purpose of the conference was to explore solutions to such problems as: how to motivate students to use the library, how to teach proper methods of research, and how to assist the faculty in the maximum usage of library resources for curriculum planning. The four papers presented at the conference are contained in this volume. "Why academic library instruction?" provides a theoretical basis for library orientation. The topic of whether a separate course in bibliography or course-related library instruction is needed is discussed in "Question: a separate course in bibliography or course-related library instruction?" "Motivating students and faculty" focuses on the problem of how to encourage use of the library. The final paper, "Library orientation is reaching out to people," is a discussion of the library outreach program at Eastern Michigan University by the two orientation librarians.

Factors Relating to the Employment of Student Assistants in Major American College and University Libraries. By William H. Williams. Brigham Young University, Provo, Utah. Graduate Dept. of Library & Information Sciences, April 1969. 31p. (ED 065 141, MF—\$0.65 HC—\$3.29).

This research project represents the results of 264 questionnaires received from United States college and university libraries with a student enrollment of 3,000 or more. The results show that while there is widespread use of students in a variety of positions with varying degrees of responsibility, there is little effort made to organize any form of training program; set standards for employment; or pay a standardized wage. In addition, few records are kept as to the length of service or their work performance. The author hopes that this report of the survey results will stimulate action toward the standardization of accepted selection and training procedures for student library assistants. The questionnaire and sample cover letter are appended.

The Medical Library Consultant—A Proposal for Investigation and Evaluation.

By Vern M. Pings. Kentucky-Ohio-Michigan Regional Medical Library, Detroit, Michigan. April 1972. 27p. (ED 065 153, MF—\$0.65 HC—\$3.29).

It was determined that the further development of the Regional Medical Library Program required a more direct relationship with institutions than could be gained through announcements and direct mailings. Thus, since several libraries had shown some success in upgrading of libraries through the employment of medical library consultants, it was decided that each participating library would identify one member of its staff to perform the role of Intramural Coordinator. This paper attempts to identify the role of a new kind of librarian, the medical library consultant, and to define a reporting mechanism so Kentucky-Ohio-Michigan Medical Library (KOMRML) extramural coordinators can begin to share experiences constructively for program planning and implementation. The change in function of the medical resource libraries to "public" libraries, the role of state library consultants in extending library services, and the possible activities in which a medical library consultant might engage are examined. (Other papers on KOMRML are available as ED 044 147 through 151 and ED 048 889.)

An Operations Research Study of the Pacific Northwest Bibliographic Center: Final Report. By David W. Taylor, et al. Bureau of Libraries and Educational Technology (DHEW/OE), Washington, D.C. June 1972. 103p. (ED 065 127, MF—\$0.65 HC—\$6.58).

This report describes the operations of the Pacific Northwest Bibliographic Center (PNBC) which is located at the University of Washington's library in Seattle. The center's Union Catalog contains bibliographic citations for 1,778,000 different titles held by forty-five libraries in the Pacific Northwest. The Union Catalog is supplemented by microfilm files and several book catalogs, as well as the University of Washington library's card catalog. These resources are estimated to describe and provide locations

to approximately 2.75 million different titles. The filing and searching operations of PNBC are described in detail and costed. Flow-charts are provided. The characteristics of requests received, processed, and those for which locations were not provided are described. PNBC's success rate in providing locations for requests is 83.11 percent. Of the requests forwarded by PNBC to potential lending libraries, 83.69 percent result in materials being delivered to the requesting library. A determination was made of the elapsed times for component elements in the sequence from a library requesting material, through processing within PNBC, to the library receiving the material. Processing time within PNBC was found to be 13.01 percent of the total "turn-around" mean time of 19.75 days, and about 6 percent of the total mode time of 10.5 days.

Bibliographic Automation of Large Library Operations Using a Time-sharing System: Phase II, Part I (July 1970-June 1971). Final Report. By A. H. Epstein and others. Stanford University, Calif. Libraries, February 1972. 287 p. (ED 060 883, MF—\$0.65 HC—\$9.87).

The main objectives of Project BAL-LOTS (Bibliographic Automation of Large Library Operations Using a Time-Sharing System) are to control rising technical processing costs and, at the same time, to provide improved levels of service. This report on BALLOTS Phase II is concerned with the development and implementation of the production library automation system—the system that will support the dayto-day operations of the library. The report is divided into four parts. Chapter 1 gives some background for the report and summarizes the nature of the BALLOTS system, as well as its status at the end of the reporting period, June 1971. Chapter 2 describes development progress in two different areas: the bibliographic services and system design as seen by the user; and the software and hardware design to support these services (including video terminal selection and screen design). Chapter 3 describes the major standards and analytic studies completed during the design. Each of these standards or studies became a part of the design, or had a substantial effect on the user, hardware, or software design described in Chapter 2. Chapter 4 describes the activities currently under way (following the reporting period) and future plans.

The Public's Attitude Toward Public Library Services in Essex County, New Jersey; A Research Study Conducted for the Essex County Library Directors Group Public Relations Committee. Market Dynamics, Inc., Princeton, N.J. June 1969. 129 p. (ED 061 974, MF—\$0.65 HC—\$6.58).

In order to structure an effective cam-

paign aimed at increasing the usage of the public libraries in Essex County, New Jersey, this research project was undertaken to determine the consumer attitudes toward various aspects of public library services. These aspects include: extent of public library usage; awareness of library services offered, library services used, suggestions for improvement of library services, evaluation of library facilities, and profile of the library user. Cost considerations made it necessary to conduct the study mainly by telephone, using controls to minimize the bias resulting from homes without telephone listings. The questions answered by this survey include: (1) Who uses the library?; (2) Whom does the public think the library is set up to serve?; (3) What do users think of library services?; (4) Why don't people use the library?; (5) How does the library function relative to children?; (6) Why do people use the library?; and (7) How can potential library users be reached? The detailed findings are followed by an extensive tabular report. The appendix contains the questionnaire used and instructions given to the interviews.

Centralization Versus Decentralization: A Location Analysis Approach for Librarians. By Robert Shishko and Jeffrey Raffel. Rand Corporation, Santa Monica, Calif. August 1971. 23 p. (ED 060 856, MF—\$0.65 HC—\$3.29).

One of the questions that seems to perplex many university and special librarians is whether to move in the direction of centralizing or decentralizing the library's collections and facilities. Presented is a theoretical approach, employing location theory, to the library centralization-decentralization question. Location theory allows the analyst to examine economies of scale and the cost of overcoming distance simultaneously to determine the optimal location and size of university libraries for a given level of services. Specific applications for the Massachusetts Institute of Technology (M.I.T.) library system are discussed.

A Survey of Automated Activities in the Libraries of Great Britain and the Commonwealth Countries: Volume 2, World Survey Series. Ed. by Frank S. Patrinostro and Nancy P. Sanders. Library Automation Research and Consulting Association, Tempe, Ariz. 1972. 93 p. (ED 060 873, available from LARC Association, Tempe, Ariz. as BBB04709, \$15.00).

Concerned with identifying computer based library projects in Great Britain and the commonwealth countries, this survey is based primarily on the survey questionnaires, but information was also gathered from extensive research of the literature. This published report of the survey findings is divided into four parts: (1) an analysis of the Library Automation Research and Consulting (LARC) Association survey results; (2) indexes to the survey listing; (3) the survey reports; and (4) a detailed review of several automated projects, including a report on a survey of automated activities in British University libraries and a National Libraries automatic data processing (ADP) study. The survey is for the use of those librarians intending to automate and seeking information from those who have implemented similar systems. It should also be useful to funding agencies since it documents the extent of existing automation, and identifies areas where little appears to be going on. Conference planners might find it useful for locating speakers, discussion leaders, etc., outside the well-known and often reported systems.

Using the Library: The Card Catalog. By Charles I. Bradshaw and others. Brigham Young University, Provo, Utah. Instructional Services Division. 1971. 90p. (ED 062 992, MF—\$0.65).

Preliminary research conducted on undergraduate university students showed that those tested averaged only 32 percent correct on their pretest knowledge of the workings of the library card catalog. This card catalog program text has been designed to help the student learn the use of the card catalog and to use it faster and more effectively. The program deals with six aspects of the card catalog: (1) filing rules; (2) call numbers; (3) cross-referencing; (4) author, title, and subject cards; (5) tracings; and (6) the book Subject Headings Used in the Dictionary Catalogs of the Library of Congress. Three main divisions of the material are: (1) pretest, (2) workbook, and (3) posttest. The tests are designed to be self-administered and self-scored. The student should take the pretest and grade it himself; it will show in which of the six areas of the card catalog he needs instructional help. The student then should follow the instruction outlined in each of the critical areas as indicated by the pretest results. The student should spend as much or as little time in instruction as is felt necessary before taking the posttest. Compare pretest and posttest scores for actual learning gain.

Evaluation of On-Line Searching in MEDLARS (AIM-TWX) by Biomedical Practitioners. By Wilfrid F. Lancaster. Illinois University, Urbana, Graduate School of Library Science. February 1972. 21p. (ED 062 989, MF—\$0.65 HC—\$3.29).

The purpose of the investigation was to determine how effectively biomedical practitioners, with a minimum of introduction to the system, can conduct on-line searches to satisfy their own information needs. The searches were conducted on the Abridged Index Medicus data base as implemented on the on-line ELHILL system (AIM-TWX). ELHILL is the ORBIT on-line retrieval system of the System Development Corporation as modified for National Library of Medicine use. AIM-TWX was a particular experiment whereby ELHILL was used to make the data base of Abridged Index Medicus available by teletypewriter exchange. Forty-eight searches were conducted by biomedical practitioners. Trained search analysts then structured and conducted searches on the same subject. Statistics were collected and results compared. It is concluded that many biomedical practitioners could exploit AIM-TWX profitably with the minimum of introduction to the system and without the necessity of using a trained MEDLARS analyst. Limitations of the present ELHILL system and potential improvements are discussed as well as possible longer-term approaches to the problems of on-line retrieval.

Statement of Ownership and Management

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