

## Book Reviews

*Current Awareness and the Chemist, A Study of the Use of CA Condensates by Chemists*, by Elizabeth E. Duncan. Metuchen, N.J.: Scarecrow Press, 1972. 150p. \$5.00.

This book starts with a five-page foreword by Allen Kent entitled "KWIC indexes have come a long way—or have they?" Kent is always interesting but when one detects that his foreword is becoming almost an apologia, one wonders just what is to come. The remainder of the book (apart from the index) appears already to have been presented as Dr. Duncan's Ph.D. thesis at the University of Pittsburgh. The first two chapters are the usual sort of stuff, taking us from Alexandria in the third century to Columbus, Ohio in 1970, with undistinguished reviews of user studies and the history of the Chemical Abstracts Service.

The remaining sixty-four pages of text report and discuss a study of the use of *CA Condensates* by quite a small sample of academic and industrial chemists in the Pittsburgh area. The objective appears to have been to compare profile hits with periodical holdings and interlibrary loan requests at the client's library so that a decision model for the acquisition of periodicals could be developed. On the author's own admission, this objective was not achieved. A certain amount of data is presented but it is difficult to draw many conclusions from it, other than the fact that chemists do not appear to follow up the majority of profile hits that they receive nor do they use the current issues of *Chemical Abstracts* very frequently.

It is difficult to understand why this material was published in book form. It could have been condensed to one or possibly two papers for *J.Chem.Doc.* or perhaps even left for the really diligent seeker to find on the shelves of University Microfilms—but, as the Old Testament scribe bemoaned, "Of making many books there is no end." At the bottom of page 118 a reference is made to the paper by Abbott et al. in *Aslib Proceedings* (Feb.

1968); at the top of page 119 the same paper's date is given as January 1968. Other errors are less obvious, but one really questions whether the provision of a short foreword and an index makes even a good thesis worth publishing in hard covers.

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*Computer-Based Reference Service*, by M. Lorraine Mathies and Peter G. Watson. Chicago: American Library Assn., 1973. 200p. \$9.95.

The archetypal title and model for all works of explication is . . . . . *without Tears*. Lorraine Mathies and Peter Watson have attempted the praiseworthy task of explaining computer-produced indexes to the ordinary reference librarian, but for a number of reasons, some of them probably beyond the control of the authors, the tears will remain.

Perhaps one difficulty is that this book was, in its beginnings at least, the product of a committee. Back in 1968 the Information Retrieval Committee of the Reference Services Division of the ALA wanted to present to "working reference librarians the essentials of the reference potential of computers and the machine-readable data they produce" (p.xxix). The proposal worked its way (not untouched, of course) through several other groups and eventually resulted in a preconference workshop on computer-based reference service being given at the Dallas convention of 1971. The present book is based on the tutor's manual which Mathies and Watson prepared for that workshop but incorporates revisions suggested by the ALA Publishing Services as well as changes initiated by the authors themselves.

With so many people getting into the planning act, it is not surprising that the various parts of the book should end up by working at cross purposes to each other. Unfortunately, the principal conflicts come at just those points where a volume of exposition needs to be most definite and precise: just what is the book trying to do and for whom? At the original workshop, the ERIC data base was chosen as a

"model system" since educational terminology was more likely to be understood than that of the sciences. And because the participants were to learn by doing, they were told a great deal about ERIC so as to be able to "practice" on it.

The trouble is that these objectives do not translate well from workshop to print. The details about ERIC, which may have been necessary as tutors' instructions, seem misplaced in book form. Almost half the present book is devoted to a laborious explanation of how ERIC works and this is a great deal more than most workaday reference librarians will want to know about it. Moreover, it is no longer clear whether Mathies and Watson aim to train "producers" or "consumers." The welter of detail suggests that they expect their readers to learn hereby to construct profiles and to program searches but it is highly doubtful that skills of this kind can or should be imparted on a "teach yourself" basis.

Once Mathies and Watson leave ERIC behind, they seem on surer ground. Part II (Computer Searching: Principles and Strategies) begins with a fairly routine chapter on binary numeration which is perhaps unnecessary since this material is easily available elsewhere. However, the section quickly moves on to an excellent explanation of Boolean logic and weighting, describes their application in the formulation of search strategies, and ends with an admirably succinct and demystifying account of how one evaluates the output (principles of relevance and recall). The reader might well have been better served if the book had indeed begun with this part.

The last section (Part III: Other Machine Readable Data Bases) is also very useful, particularly for the "critical bibliography" (p.153) in which the authors describe and evaluate ten of the major bibliographic data bases. This critical bibliography is apparently a first of its kind, which makes the authors' perceptive and frank comments all the more welcome. Part III also contains chapters on MARC and the 1970 census but, strangely enough, does not include a final résumé and conclusions. It is true that in each

chapter there is a paragraph or so of summary but this is hardly a satisfactory substitute for the overall recapitulation one would expect.

In the final analysis, indeed, one's view of the book will depend on just that—what one expects of it. If "working reference librarians" expect to read this book in order to be no longer "intimidated by these electronic tools" (p.ix), they are apt to be disappointed. The inordinate emphasis on ERIC, the rather dense language, and the fact that the main ideas are never pulled together at the end will all prevent easy enlightenment. However, if our workaday reference librarians are willing to work their way through a fairly difficult manual on computer-based indexing as in effect a substitute for a workshop on the subject, they will find this book a worthwhile investment of their time—and tears.

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*The Circulation System at the University of Missouri-Columbia Library: An Evolutionary Approach.* Sue McCollum and Charles R. Sievert, issue eds. *The Larc Reports*, vol. 5, issue 2, 1972. 101p.

In 1958 the University of Missouri-Columbia Library was one of the first libraries to mechanize circulation by punching a portion of the charge slip with book and borrower and/or loan information. In 1964 an IBM 357 data collection system utilizing a modified 026 keypunch was installed, but not until 1966 was 026 output processed on the library owned and operated IBM 1440 computer. However, budgetary constraints forced a transfer of operations in 1970 to the Data Processing Center, which undertook rewriting of library programs in 1971.

After explanation of hardware changes and an overview of the circulation department organization and Data Processing Center operation, this report deals in depth with the major files of the circulation system—circulation master file and location master file—and the main components of the circulation system—edit, update, overdues, fines, interlibrary loans,

address file, location file, reserve book, listing of files, special requests, and utility programs. Many examples of report layouts are included, particularly those accomplished by utilizing data gathered from main collection and reserve book loans.

Although this off-line batch processing circulation system is limited in that it does not handle any borrower reserve or look-up (tracer) routines, both of which are possible in off-line systems, the University of Missouri-Columbia system has merit as a pioneer system which influenced other university library circulation system designs in the 1960s. Detailed reference given throughout the report to changes in the original library programs not only makes it of value as a case history for any library interested in circulation automation but also indicates the important fact that library programs do change and evolve in response to new demands and technological capabilities.

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*National Science Information Systems, A Guide to Science Information Systems in Bulgaria, Czechoslovakia, Hungary, Poland, Rumania, and Yugoslavia*, by David H. Kraus, Pranas Zunde, and Vladimir Slamecka. (National Science Information Series) Cambridge, Mass.: The M.I.T. Press, 1972. 325p. \$12.50.

As indicated by the title, this volume provides a comparative description and analysis of the various organizational or political structures which have been adopted by six countries of central and eastern Europe in their attempts to develop effective national systems for the dissemination of scientific and technical information. For each country there is a detailed account of the national information system now existing, with a brief outline of its antecedents, a directory of information or documentation centers, a list of serials published by these centers, and a bibliography of recent papers dealing with the development of information systems in that country.

This main section of the book is pre-

ceded by a brief review of the common characteristics of the six national systems and an outline of steps being taken to achieve international cooperation for the exchange of information in specific subjects. Of particular interest is the description of the International Center of Scientific and Technical Information established in Moscow in 1969, and which is now linked to five of these national systems. No attempt is made to describe the techniques being used to store, retrieve, and disseminate information.

The authors point out that the six countries being examined "have experimented intensely with organizational variants of national science information systems." Unfortunately, they do not attempt to indicate which of these organizational structures was most effective in bringing about the desired results. Undoubtedly, this would have been an impossible task and probably not worth the effort, since a successful type of organization in a socialist country would not necessarily be effective in a democracy.

The book will be of interest to political scientists and to those seeking the most effective ways of coordinating the information processing efforts of all types of government bodies. It will be only of academic interest to the information specialist concerned primarily with information processing techniques.

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*Information Retrieval: On-Line*, by F. W. Lancaster and E. G. Fayen. Los Angeles: Melville Publishing Co., 1973. 597p. LC: 73-9697. ISBN: 0-471-51235-4.

Have you been reading the *ASIS Annual Review of Information Science and Technology* year after year and wishing for a compendium of the best information and examples of the latest systems, user manuals, cost data, and other facts so that you would not have to go searching in a library for the interesting reports, journal articles, and books? Well, if you have (and who hasn't), your prayers have been answered if you are interested in on-

line bibliographic retrieval systems. The authors of the handy reference book have collected and reprinted, among other things, the *complete* DIALOG Terminal Users Reference Manual, the SUPARS User Manual, the user instructions for AIM-TWX, OBAR, and the CARUSO Tutorial Program. Each of these systems, and several others (arranged alphabetically from AIM-TWX [MEDLINE] to TOXICON [TOXLINE]), is described and illustrated. Features and functions of on-line systems, such as vocabulary control and indexing, cataloging, instruction of users, equipment, and file design, are all covered in a straightforward manner, simply enough for the uninformed and carefully enough so that a system operator could compare his system's features and functions with the data provided. Richly illustrated with tables, charts, graphs, and figures, up-to-date bibliographies (only serious omission noticed was the AFIPS conference proceedings edited by D. Walker), and subject and author indexes, this volume will stand as another landmark in the state-of-the-art review series which the Wiley-Becker & Hayes Information Science series has come to represent.

Emphasis has been placed on the design, evaluation, and use of on-line retrieval systems rather than the hardware or programming aspects. Several of the chapters have a broader base of interest than on-line systems, covering as they do performance criteria of retrieval systems, evaluating effectiveness, human factors, and cost-performance-benefits factors.

Easy to use and as up to date and balanced a book as any in a rapidly changing field can be, Lancaster and Fayen have given students of information studies and planners and managers of information services a very valuable reference aid.

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National Library of Australia. *Australian MARC Specification*. Canberra: National Library of Australia, 1973. 83p. \$2.50. ISBN: 0-642-99014-X

For those readers who are familiar with

the Library of Congress MARC format, the Australian MARC specification will be, for the most part, self-explanatory. The intent of the document is to describe the basic format structure and to list the various content designators that are used in the format. No effort was made to include any background information or explanation of data elements. Because of this, the reviewer found it necessary to refer to other documents, e.g., *PRECIS: A Rotated Subject Index System*, by Derek Austin and Peter Butcher, in order to complete a comparative analysis of the Australian format with other similar formats.

Perhaps the value of reviewing a descriptive document of this type lies in discovering how the format it describes compares to other existing formats developed for the same purpose.

The International Organization for Standardization published a format for bibliographic information interchange on magnetic tape in 1973, *International Standard ISO 2709*. The Australian format structure is the same throughout as the international standard. The only variance is in character positions 20 and 21 of the leader, which the Australian format left undefined.

A comparison of content designators cannot be made with the international standard because it specifies only the position and length of the identifiers in the structure of the format, but not the actual identifier (except for the three-digit tags 001-999 that identify the data fields). The best comparison of content designators can be made with the LC MARC format, since the Australian format uses many of the same tags, indicators, and subfield codes for the same purposes.

The Australian format has assigned to the same character positions the same fixed-length data elements as the LC format except for position 38, which is the Periodical Code in the Australian format and the Modified Record Code in the LC format. In the fixed-length character positions for Form of Contents, Publisher (Government Publication in LC MARC), and Literary Text (Fiction in LC

MARC), the Australian format assigned different codes than LC.

In general, the Australian format uses the same three-digit tags as LC to identify the primary access fields in their records, e.g., 100, 110, 111 for main entries; 400, 410, 411, 440, 490 for series notes; 600, 610, 611, 650, 651 for subject headings; and 700, 710, 711 for added entries. For the remaining bibliographic fields there are some variations in tagging between the two formats. The Australian MARC has chosen a different method of identifying uniform titles, and has identified five more note fields in the 5XX series of tags than has LC. The Australians have also added some manufactured fields to their record. These fields do not contain actual data from the bibliographic record, but rather are fields consisting of data created by program for control and manipulation purposes, or from lists such as the PRECIS subject index. The Australian format has also included, as part of its record, a series of cross-reference fields identified by 9XX tags. LC has reserved the 9XX block of tags for local use.

The use of indicators differs in most instances between the two formats. Both allow for two indicator positions in each field as specified by the international standard format structure. However, the information conveyed by the indicators differs except where the first indicator con-

which means no intelligence carried in this position. In the Australian format the indicators in the 6XX block of tags have three different patterns. Inconsistency of this kind does not tend to destroy compatibility with other coding systems using the same format structure, as long as sufficient explanation and examples are given from which conversion tables may be developed by the institutions with whom one wants to exchange, or interchange, bibliographic data.

An even greater degree of difference exists between the two formats in the subfield codes used to identify data elements. The Australian MARC has identified some data elements that LC has not, e.g., in personal name main entries, the Australian record identifies first names with subfield code "h," whereas LC does not identify parts of a personal name, only the form of the name, i.e., forename form, single surname, family name, etc. In most of the fields the two formats have defined some of the same data elements, but each uses a different subfield code to represent the element. In the Australian document, under each field heading, the subfield codes are listed alphabetically with a data element following each code. This arrangement causes the data elements to fall out of their normal order of occurrence in the field, i.e., name, numeration, titles, dates, relator, etc. For example:

<i>Subfield Code</i>	Personal name main entry (tag 100)	
	<i>Australian MARC</i>	<i>LC MARC</i>
a	Entry element (name)	Entry element (name)
b	Relator	Numeration
c	Dates	Titles (Honorary)
d	Second or subsequent additions to name	Dates
e	Numeration	Relator
f	Additions to name other than date	Date (of a work)

veys form of name for personal and corporate name headings. Within each block of tags, LC has made an effort to remain consistent in the use of indicators, e.g., in the 6XX block for subject headings, the first indicator specifies form of name where a form of name can be discerned. Where no form of name is discernable such as in a topical subject heading (tag 650), a null indicator or blank is used

The example demonstrates the need for precise definition and documentation of data elements for the purpose of conversion or translation when interchanging data with other institutions.

The Australian format has included the capability of identifying analytical entries by using an additional digit (called the level digit) placed between the tag and the indicators to identify the analyt-

ical entries. A subrecord directory (tag 002) is present in each record containing data for analytical entries.

The Australian document includes appendixes for the Country of Publication Codes, Language Codes, and Geographical Area Codes that were developed by the Library of Congress. Their only devia-

tion from LC MARC usage is in the Country of Publication Codes, where the Australians have added entities and codes for Australian first-level administrative subdivisions.

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