BOOK REVIEWS

Book Catalogs. By Maurice F. Tauber and Hilda Feinberg. Metuchen, N.J.: Scarecrow Press, 1971. 572 p. $15.00

In 1963 Kingery & Tauber published a collection entitled *Book Catalogs.* This is a much larger follow-up, containing twenty papers published between 1964 and 1970 and eight previously unpublished pieces. Not surprisingly, nearly all of them are concerned with computer-produced book catalogs—in academic, special, county, public, and school libraries. Although nearly all of the previously published papers appeared in well-known journals, it is useful to have them collected together; the older ones are now of mainly historical interest, but, taken as a whole, they form a valuable record of trial and error—also of progress.

It would be unfair to single out any of the published articles for special praise or blame. In a rapidly changing field, even the good is soon improved upon. It is the examples, the costings, and above all the mistakes that are so helpful. There is no excuse now for running into problems that have in the past led to the total scrapping of some computer systems: unforeseen filing difficulties, insufficient computer storage, bad economic estimating, and inability to produce an acceptable product. One major problem is still unsolved and indeed has not really been tackled systematically—the pattern of output (main sequence and supplements) that provides maximum usability at minimal cost—a problem surely amenable to OR techniques.

As a reviewer from the United Kingdom, I would like to have seen a little more on relevant events there than is provided by Frederick G. Kilgour's general review: the smaller budgets of British libraries have generally enforced much more careful planning and, although there may be fewer successes, there are also very few failures.

The introduction and the three final pieces, all specially written, are of great value, particularly Hilda Feinberg's "Sample Book Catalogs and Their Characteristics" (some samples are unbelievably horrible). For good measure there is a bibliography, a (computer-produced) index, and the listing of "Book Form Catalogs" reprinted from *LRTS*.

I would hazard a guess that it is with COM that the future lies for many libraries. The next collection of papers, for which I hope we shall not have to wait eight years, must surely be entitled "Book and Microform Catalogs."

Maurice B. Line

An Introduction to PL/1 Programming for Library and Information Science. Library and Information Science Series. By Thomas H. Mott, Jr., Susan Artandi, and Leny Struminger. New York: Academic Press, 1972. 231 p.

The importance of this text rests in the authors' assumptions that the acquisition of programming skills by the library student is an essential component of his education in the fields of library automation and information retrieval. Such skills should enable the student to examine critically the relevance of automated information handling for the library, to experiment with some basic methods of manipulating machine readable textual material, and, "to acquire an understanding of the role of the programmer in the development of . . . information handling techniques."

The selection of a programming language for this text deserves some comment. PL/1 has been recognized as a particularly suitable language for the processing of textual material and data base management applications. Its extensive and powerful repertoire of bit, character, string, array, record, and file manipulation capabilities argue strongly in favor of its adoption for library and other information handling applications. Students should be encouraged by the selection of PL/1 for this text, for it offers the novice great flexibility and ease in constructing and manipulating even the most complex types of information structures.

This title constitutes the first published attempt to tailor an introductory programming text to the needs of the library student. As such, it possesses several characteristics which distinguish it from other basic programming books, including other PL/1 texts. The language features receiving the greatest share of attention in the present title are the set of built-in functions in PL/1 designed to facilitate the manipulation of strings of both binary and character data. Discussion of four of these functions (BOOL, UNSPEC, VERIFY, and TRANSLATE) is usually omitted from general introductory PL/1 textbooks. Although the discussions of the BOOL and UNSPEC functions are reasonably complete, the explanations of VERIFY and TRANSLATE fail to indicate the scope of their applications. For example, the utility of the VERIFY function as an index function for ranges is completely ignored. A more illuminating example of the power of the TRANSLATE function could have explored its usefulness in converting ASCII characters to the corresponding characters of the EBCDIC set. This might have clarified the section entitled "Internal Representation of PL/1 Characters," which contains an equivalence table for the PL/1 character

set in ASCII and EBCDIC without indicating its purpose. Additional use of this example could have been made in the presentation of the MARC material, where the practical value of such a function could be stressed. Another desirable feature of this text for the instructor and the library student is the inclusion of sample problems and exercises which, since they refer exclusively to text processing, library automation, and information retrieval, should be readily understandable. Unfortunately, the present volume omits any mention of the PICTURE attribute and its uses. As a powerful device facilitating the interchange of data between numeric and character variables and the uncomplicated editing of numeric fields prior to output time, its inclusion would have proved valuable to the text handling programmer. However, it should be emphasized that this appears to be the single instance in the text in which a generally acknowledged basic language feature has been entirely excluded.

It seems to me that too much of the text (15-25 percent) is devoted to developing some of the elementary concepts of boolean algebra and constructing a theoretical model of document retrieval based on these concepts. One possible explanation for this emphasis is the fact that the material for the book was drawn from a graduate seminar in programming theory for information handling. Although these chapters are informative and the exposition of ideas is straightforward, they should have been omitted. The space which they occupy could have been used more successfully to explore those PL/1 features essential for information handling but excluded or treated too briefly in the present volume. A list of such topics would include: an expanded discussion of program interrupts and the ON CONDITION, a description of PL/1 record formats emphasizing the variable length record, and a guide to the use of the varying structure method of writing variable length records.

The deficiencies of this text are its overemphasis of information retrieval theory and applications, and its failure to stress those features of PL/1 which would enable the student to appreciate the file-handling capabilities of the language. However, for many instructors the availability of programming examples which should be easily grasped by the library student may strongly outweigh these disadvantages.

Howard S. Harris

Guidelines for Library Automation; A Handbook for Federal and Other Libraries. By Barbara Evans Markuson, Judith Wagner, Sharon Schatz, and Donald Black. Santa Monica, Calif.: System Development Corporation, 1972. 401 p. $12.50

This handbook is the result of a 1970 study on the status of federal library automation projects which was conducted under the auspices of the Federal

Library Committee's Task Force on Automation. The survey was carried out by the System Development Corporation and funded by the U.S. Office of Education. It is one of two reports generated from the study data, the other report being *Automation and the Federal Library Community*.

The study consisted of a questionnaire survey of 2,104 federal libraries of which 964 responded. Of that number, 57 libraries had one or more functions automated and ten had one or more functions in various stages of development or planning. The survey revealed that, among other activities, 27 cataloging systems (presumably "cataloging" means catalog card production), 25 serials systems, and 13 circulation systems were operational.

The handbook purports to help the federal librarian answer the question: "Is it feasible to use automation for my library?" It attempts to do this by presenting step-by-step guidelines "from the initial feasibility survey through systems analysis and design to fully operational status." That material more or less follows a pattern of discussion on automation procedure followed by a checklist of the procedures in chart form. The areas covered include "feasibility guidelines" concerning such points as equipment, personnel, budget, and existing files; and "systems development guidelines" which include planning, analysis, design, implementation, and operation. The discussions include brief reviews of the various aspects of automation development, and statements describing the experiences of federal librarians as reported in the study. In this fashion, the reader is informed of the steps that should be considered with each aspect of automation development and, additionally, he is informed of what his colleagues have previously done about each phase and/or problem. Much of this material is too general and too brief to do more than call the reader's attention to the fact that certain requirements must be met in the successful development of an automation project.

A large portion of the book is taken up with descriptions of automation projects in 59 federal libraries. This overview of the federal sector provides limited descriptive information about each library and reviews the various applications in terms of system descriptions, equipment, programs, future plans, documentation, etc. The reviews are not consistent in that not all of the above points are included in every review. This, however, is the result of the data submitted to the survey by the respondents. Approaches have been provided to this survey material by automated application, form of publication, type of equipment used, and by the special features of each system. Surprisingly, there is no approach by name of library. At least one very important library is not represented, i.e., Livermore, but for some reason, a similar library, Los Alamos, is included.

The final section of the book is a potpourri of information about non-federal automation activities and is the weakest section of the volume. It includes a list of "automated libraries" that was published before and is very incomplete and poorly defined. Additionally, it briefly discusses data bases, commercial ventures, and for no apparent reason suddenly includes

22 pages of information on microforms in libraries. It just as suddenly reverts back to automation and proceeds to provide 23 pages of data on input/output hardware in libraries.

The final section is a selected bibliography that seems almost as aimless as the section before it. The items included "have been selected on the basis of their particular interest and applicability to federal libraries," it is stated. They range over the whole spectrum of library automation, and some items have nothing to do with automation at all. There is no index to the book as a whole and a fair number of errors are present.

In summary, the book includes a limited amount of rather old information most of which is available in other places in far greater detail. It appears that SDC had some rather weak survey data that seemed like it should be used! As a book of "guidelines" it does succeed in providing information in uncluttered and simplified form, but it is a very disappointing publication that leaves much to be desired both in substance and in organization.

Donald P. Hammer

Canadian MARC; A Report of the Activities of the MARC Task Group Resulting in a Recommended Canadian MARC Format for Monographs and a Canadian MARC Format for Serials. Recommended to the National Librarian. By Dr. Guy Sylvestre. Ottawa: The National Library of Canada, 1972.

Canada's approach to the realization of a proposed format for machine-readable cataloging data was influenced by several factors. First and foremost was the fact that Canada is bi-lingual, dictating the requirement for the possible representation of data in both French and English. In addition, the National Library of Canada wanted to continue its interaction with the Library of Congress and also to coordinate the development of a Canadian MARC with international developments.

The formats recommended are for the *communication* of machine-readable cataloging data. The processing of the data by local libraries was not ignored. It was recognized that this could involve (1) expansion of the format to accommodate processing data (e.g., for acquisitions, serial control); and (2) the development of data format independent software for effective data storage and retrieval (e.g., a data management system with logical and physical characteristics of data described independently of specific applications software).

The MARC Task Group was established as a result of the recommendations of the Conference on Cataloguing Standards held at the National Library of Canada in May 1970. The mission of the Task Group was to study the requirements for a format for machine-readable bibliographic records to be used in Canada. The group was not to concern itself with

cataloging standards as such, since these were to be considered by the Task Group on Cataloguing Standards.

The MARC Task Group limited its attention to monographs and serials because this was the greatest need at the time. It was felt that after development of these two basic formats, i.e., monographs and serials, other formats for films, manuscripts, maps, etc., could be more logically developed.

Recognizing that Canada has two official languages and that this creates specific bibliographic needs, the Task Group's first recommendation was that the National Library of Canada assume the responsibility for developing a distinctive Canadian MARC format. Variations from the Library of Congress format are to be kept to a minimum, due to:

- Economic considerations.
- Dedication of Canadian library communication (in common with the Library of Congress) to the full application of the *AACR,* American edition and the "version française."
- Willingness of Canada for continued heavy reliance upon the Library of Congress for answering its bibliographical needs in both the traditional way as well as in machine-readable form.
- Readiness of Canada to accept future bibliographic developments and amendments proposed by the Library of Congress, e.g., new filing rules.

It is further recommended that:

- The development of a separate Canadian MARC be coordinated with international developments such as ISBD (International Standard Bibliographic Description) and ISDS (International Serials Data System).
- The National Library of Canada adopt the PRECIS (Preserved Context Index System) developed for BNB for the purpose of adding subject data to MARC records for Canadian publications in the form of descriptors.
- Any new data elements and varying levels of completeness of data introduced into the format in the future (for other media, specialized collections, or retrospective conversions) do not conflict with the basic specifications recommended for Canadian MARC.

Several studies were made by the Task Group. One addressed the need for MARC formats and the user requirements for such formats, keeping in mind the need for bi-lingual content in the perspective of an international MARC as to data for author, title, collation and notes, geographic names, and subject. Format requirements were based on a comparison of the United States and United Kingdom formats and the examination of Italian and other national MARC formats. An intensive study was made of the proposed Library of Congress format for serials. The implications and requirements for a MARC format to be used in conjunction with information retrieval and indexing systems were also examined. The best formats were then defined and recommended to the National Librarian.

The format recommended for monographs may be summarized as follows:

1. The tags are mainly from the Library of Congress MARC-II, with adoptions from BNB and MONOCLE. Particular attention was paid to avoiding conflict with any of the national formats. The Library of Congress 900 tags were expanded to provide Canadian libraries the option of selecting data in bi-lingual content, i.e., the data for the secondary entry fields could be represented in either the French or English equivalent.

2. The indicators specified in the Library of Congress format have been retained. Some additional ones from BNB and MONOCLE have been added.

3. The subfield codes of the Library of Congress format have been used most often with additional ones from BNB. There is no basic conflict with the Library of Congress MARC. Canadian MARC is more specific and the more precise specifications are hospitable to the Library of Congress format. It was felt that the subfielding for filing values or relationships found in MONOCLE could be met by software.

4. Descriptive and bibliographic content are not altered in any way since they are dealt with by cataloging codes. However, for codified content (e.g., codes for language, geographic area, bibliographic area, intellectual level), use of standard international codes is recommended. Meanwhile, Library of Congress MARC-II codes will be used for some fields, e.g., languages, geographic area.

For serials, it was the intention of the Task Group to maintain compatibility with the Canadian MARC format for monographs. However, it was necessary to study the proposed formats for serials issued by the Library of Congress, MASS—a MARC-based automated serials system proposed in the United Kingdom by the Birmingham Libraries Co-operative Mechanisation Project, and the French MONOCLE.

The proposed Canadian MARC format for serials has been based on the recommendation for the processing of serials issued by the Task Group on Cataloguing Standards. Data elements were isolated to meet special applications such as:

1. The preparation of union lists for serial holdings with minimal bibliographic data (e.g., by broad subject groupings, by form division).

2. The bibliographic description of Canadian serials for a national bibliography.

3. The development of local library in-house systems for acquisition, processing, and control of serials.

4. The preparation of a Canadian serials directory incorporating a minimum of data and with a constant update facility.

This diversity of requirements led the Task Group to state several beliefs. First, the isolation of data elements for local library in-house systems and the compatibility of these data elements to allow for the exchange of computer programs can best be done by allocating a tag structure in a format separate to the main serials communication format. Second, there is a requirement for the relating of entries in the serial and monograph format (e.g., monographs in series which may appear in either format). If an exchange of data between the two formats is necessary, there may be a need to have an additional tag or a more extensive tagging structure for titles and series title entries.

The specific recommendations for serials were that the National Library should:

1. Participate in the UNESCO proposals for an international serials data system in which the isolation of data elements for international exchange will have a direct bearing on the elements in a Canadian MARC serials format.
2. Immediately initiate any action deemed advisable within the international proposals to provide standard serial numbers for Canadian serial publications.
3. Consider the preparation of a Canadian serials directory as a separate project.
4. Initiate a pilot project with other libraries to test the proposed Canadian serials format prior to full implementation.
5. On the basis of the above recommendations, explicitly state which data elements are necessary. (The proposed format for serials recommended has those elements asterisked that the Task Group believed were not necessary. These are all processing control-oriented, e.g., frequency control, publication patterns, indexing, and abstracting coverage.)

The report includes three comparative tables to be used in evaluating the proposed Canadian MARC formats. Table 1 compares, for monographs, the Library of Congress, United Kingdom, French (MONOCLE), and Italian formats against the format proposed for Canada. Table 2 compares the Library of Congress proposed format and the MASS format for serials against the format proposed for Canada. Table 3 compares the Canadian format for monographs against the Canadian format for serials. Copies of the Table 1 were submitted to the United States, the United Kingdom, France, and Italy for review and comments. The resulting revisions were not incorporated in the report since this would have delayed publication. The tagging structure, therefore, may be slightly revised when the Canadian MARC User's Manual is finalized. However, those interested in the compatibility of the Canadian formats with the Library of Congress formats and the implications of the Canadian formats for an international MARC format will find the tables sufficient.

Lillian H. Washington

MONOCLE: Projet de Mise en Ordinateur d'une Notice Catalographique de Livre. Publications de la Bibliotheque Universitaire de Grenoble, 4. [par] Marc Chauveinc. 2.ème éd. Grenoble: Bibliothèque Interuniversitaire, 1972. 197 p. plus 25 Annexes and Errata

A review of the 1st edition of MONOCLE appeared in *JOLA* in March 1971 (v. 4, no. 1, pp. 57-58). Readers are referred to that review and to the article by M. Chauveinc in the September 1971 issue of *JOLA* (v. 4, no. 3) for a description of the structure of MONOCLE. The format has undergone little change in essentials, but many changes in detail have been made. New fields have been added (249: Abridged title of periodical; 270: Printer's imprint; 545: Note showing title of periodical analyzed), subfield codes have been changed or added, new indicators have been created (see below), and the names (and therefore the contents) of some fields have been changed (cf. 241 and 242). The Leader has been enlarged from 19 to 24 bytes to show more exactly the address of the index related to a particular bibliographic record (4 new bytes) and to show the current number of fields in the record (2 new bytes) and the current length of the record (2 new bytes) as well as the initial number of fields and the initial length. The length of the index is no longer given. Thus the Leader makes use of 8 new bytes and has discontinued 2 (only 18 of the original 19 were utilized).

What has remained unchanged is the emphasis on coding for filing arrangement and on the use of tags to identify not only the nature of a field but its different functions and its relationship with other data. There is increased emphasis, however, on the importance of the integration and collaboration of several libraries in automation activities and, therefore, on the need for MONOCLE to be generalized so that it is usable by institutions with other goals, hardware, and processing languages than the University of Grenoble. Mention is made throughout the volume of the variant approach of the Bibliothèque Nationale which uses MONOCLE to prepare the *Bibliographie de la France*.

One change in the second edition is the increased awareness of the complexities involved in dealing with subrecords. The use of the subrecord technique has therefore been limited to works meeting certain requirements. The requirements are so strict that, for all practical purposes, Grenoble does not use subrecords. Instead, it uses secondary entries, or series headings, or contents notes.

An important change has been made in the first indicator position of personal name fields (100, 400, 600, 700, 800, 900) which, in the 1st edition, was similar to MARC. A new indicator structure has been created to facilitate construction of sort keys. A first indicator of '0' is used for forenames of saints, popes, and emperors. A '1' indicates a name that is to be filed exactly as given, whether it is a forename, simple surname, or multiple surname.

A '2' is used for multiple surnames containing a hyphen that is to be replaced by a blank, e.g., Saint-Exupery. A '3' is used when a name contains a blank, apostrophe, or hyphen that is to be deleted, e.g., La Fontaine. A '4' is used for complex names, whether simple or multiple, in which it is necessary to keep some blanks and/or letters and to delete others. For this purpose, MONOCLE makes use of three vertical bars to distinguish text to be printed and used for sorting from text to be printed only from text (supplied) to be used only for sorting. Since the three bars are used only in fields with 1st indicator of '0' or '4', the use of these indicators enables the program to test for them only when these indicators are present instead of in every field.

The 1st indicator of '4' is used for complex arrangements utilizing the three bars in other fields as well: 110, 111, 241, 243, 245, 410, 411, 441, 443, 445 and the equivalent 6xx, 7xx, 8xx, and 9xx fields.

The errors in this volume are minor. MONOCLE still lists field 653 (Proper names incapable of authorship) as an LC subject field, although this field was discontinued almost as soon as it was created so that it doesn't even appear in the 1st edition (1969) of the *MARC Manuals*. In a discussion of the use of terminals to catalog books, it footnotes 'the library' of 'Ohio College' rather than 'the libraries' affiliated with the Ohio College Library Center.

The review of the 1st edition pointed out that one of the values of MONOCLE for American librarians was the light it threw on MARC. That statement still holds true. For purposes of facilitating its use for this purpose, an English language translation might be of value.

Judith Hopkins