four basic colours were used as the sub-sub-divisions were small enough to sort out after the basic cards were prepared. 4” x 6” cards were used, ruled down the centre with the mss. page numbers in the left hand column and an indicator was used to show the approximate position of the word on the page—e.g., t, c, b or n for top, centre, bottom or footnote. Once the page proofs were received it was simply a matter of transposing the mss. page numbers to page-proof page numbers obtained by underlining on the mss. where the pages of the page proofs ended and started, and marking the page-proof page number on the side of the mss.

While I admit that a publisher would probably kick at the high cost of preparing such an index, in our case it had so many advantages that it was well worth all the time and effort. In the first place it gave us an excellent opportunity to double check every item and ensure that the same designation was used throughout the book and that the same spelling was used. Secondly, as soon as the final lot of page proofs were received we were in a position to send the index to the printer, thus speeding up the completion of the printing considerably. This index took up some eight drawers of cards and ended up with 100 pages of double-spaced 8” x 14” paper and 41 printed pages.

In addition to this I also had to check all references and ensure that they were uniform throughout—67 printed pages. R. C. WELLSTOOD.

WORD-BY-WORD VERSUS LETTER-BY-LETTER
(The Indexer, Vol. No. 3, pp. 93-95)

Sir,

I would have thought that this argument was over years ago and I think Mr. Fisk is rather optimistic in his expectation of support (for letter-by-letter methods) from librarians/information officers.

It is true that a case can be made for either method, but may I say that after over 30 years of facing the problem of alphabetic indexing I have in my office only one letter-by-letter index. This is an index to the office’s own daily memoranda book, made by a young assistant for training purposes and arranged letter-by-letter to provide an example of the “easy-to-make-but-hard-to-consult” type of index. We on the staff know its shortcomings and (with luck and judgment) can use it, but I have always considered it almost as valuable as an example of how not to do it and an introduction to the pitfalls of the apparent simplicity of ABC.

E. H. SARGEANT.

BOOK REVIEWS


The organizers of this conference on Machine Indexing are to be congratulated on an interesting and balanced collection of papers. There is a wide range of view-
points and the authors were chosen with some care, judging by the absence of waffle and indigestible hunks of technical detail. From the indexers’ point of view it indicates the difficulties in automating their art, as well as the progress in information retrieval.

The first problem in indexing a book by machine is input; there is no direct method of getting it into a computer. So far it has proved impossible to design an adequate optical device which “sees” a letter and “recognizes” it. Human recognition depends not only on the shape of a single letter, but on its context in a sentence, and will ignore a certain degree of error—as any proof-reader knows to his cost. Optical devices read individual letters and are very susceptible to mixed founts, serifs, the density of the printing ink and other irrelevancies. Some research workers have used computers to simulate human recognition of shapes; others have optically standardized the letter, divided it into areas of black and white, and discriminated on the resulting pattern. The E13B magnetic-ink fount used for cheques is a variant of this technique, but it would be scarcely tolerable for printing.

The alternative is to punch the text into paper tape or cards. L. C. Ray on “Keypunching instructions for total text input” (p. 58) estimates the cost at one per cent. per word. Sometimes paper tape from automatic typesetting can be used (p. 47), but only 2-3 per cent. of publications in the U.S. are prepared in this manner. At present therefore there is no real alternative to punching tape or cards specially for computer input.

Assuming that technical advances make it economic to input a complete book, the computer will have considerable difficulty in understanding it. W. D. Climen-son and others (p. 305) have examined the problems which it has in parsing a sentence. Firstly it must determine the various parts of speech. With an inflected language this can be done by word-endings, but English needs a modified dictionary. Certain words can be more than one part of speech; the programme preserves the alternatives until the sentence-structure eliminates all but one. The ultimate aim is to reduce the book to a series of simpler structures which can be selected for a greater or lesser degree of abstracting by statistical techniques. This is only half way to an index, and the dictionary look-up is slow.

A simpler alternative is to bypass the index and use information retrieval methods on the book directly. The titles of books are stored in “Permuted title word indexing” (p. 77), and by allocating several cards to one title the searching can be done by punched card sorters. Human skill comes in the cross-reference and generic headings. The method has been selected by Bell Telephone Laboratories (p. 112) for indexing their internal reports by computer, with an average of 5-6 entries per report. The index is printed off-line, duplicated and circulated. In general authors’ titles are unsatisfactory because they are often deliberately vague or provocative, but this would improve if authors realized that people could not find their books. It could be extended to chapters; and for some applications an index could be dispensed with.

One major obstacle has not been discussed so far: cost. The only people who can afford electronic systems are the big manufacturers and universities, who use them for research or pilot schemes, and the U.S. Government. For the latter Defence
has priorities which override financial considerations, and the best available may not be fast or accurate enough. Seymour I. Taine, in examining the need for the Index Medicus (p. 144), puts the case for conventional methods cogently:

"But a published index is more than an effective, international information channel; the product it delivers to its users bears further scrutiny. Instead of being in a physical form of magnetic tape or punched paper which cannot be used by humans without artificial aids, the output in this instance is old-fashioned, man-readable text, and this has many virtues to commend it . . . Also, the durability of the index as a reasonably permanent record compares well with other media, including those of EDP . . . The user obtains a real bargain for the $20 that he puts out for information about the 125,000 articles indexed in the Index Medicus, or for the $10 he pays for the 100,000 items in the Bibliography of Agriculture. The low cost of preparing the index is also impressive . . ."

The electronic systems, of which the computer is probably the cheapest, are still uneconomic.

Other low-cost systems are classified by Frederick Jonker in the chapter "Basic principles of information retrieval devices" (pp. 52-75) of his report. This is a concise survey with references and the indexer with unusual problems may well find an answer here. The chapter on microfilm document stores (p. 88) is interesting, but it should be noted that they are not in general use. The rest of the report is of more interest to librarians and information retrieval specialists.

DAVID M. COLLISON.


This book contains an annotated bibliography of 90 items on indexing and bibliography of bibliographies on indexing. The text of the report covers the literature of co-ordinate indexing, theory, vocabulary generation, rôles and links, evaluation of co-ordinate indexing systems, mechanizing of co-ordinate indexing systems, representative facilities in existence, and operating problems.

The recommendations of the Documentation Incorporated research group are:

1. That the information retrieval problem be viewed as a problem of the optimum design of an engineering system and not solely as a problem of basic research into linguistics and meaning.

2. That the annual preparation of a critical review encompassing all applicable areas of information retrieval be undertaken or sponsored by some appropriate agency.

GERALD A. WILLEY.


This booklet contains a report of the President's Science Advisory Committee. The Science Advisory Committee believes that citation indexing, particularly with permuted title indexing, will come to be used widely, and that its use will further
alter both the way in which we think of the technical literature and the way we manage it.

The committee defines the citation index as a list of articles that, subsequent to the appearance of the original article, refer to or cite that article.

Further, the committee recommends that authors of technical papers index their contributions with keywords taken from standard thesauri. Societies and editors are urged to establish such thesauri wherever this is practical. If authors would title their papers in a meaty and informative manner, the indexing problem would be easier.

GERALD A. WILLEY.


This booklet was prepared to suggest a simple and comprehensive set of guides for indexing documents in local public offices. Covered in this booklet are rules for full names, names of individuals with titles, names of governmental units, initials, abbreviations and symbols, hyphenated and compound words, surname with prefix, possessive words containing apostrophes, and numbers. A common rule is stated for indexing purposes with exceptions to common rule, rule for multiple entries, and rule for alphabetizing the entry.

GERALD A. WILLEY.


The first edition of this book was published in 1950, and its popularity has necessitated three subsequent enlarged editions. In reviewing the third (The Indexer, Vol. 2, pp. 72-3), we welcomed it as dealing with that most vital aspect of librarianship, assisting the reader to master the intricacies of the public library.

This edition has been brought up to date, and contains new sections on illustrations, and on indexing—all too brief, of course, but drawing attention to its importance to librarians. Students of librarianship will continue to benefit from this small book covering a vast field, and doing so adequately from their viewpoint. Obviously, specialized subjects are only treated from the public library aspect, and it would need a greatly enlarged volume to attempt to list, for example, the reference tools considered essential in a large scientific library.

Mr. Collison must be congratulated on the past success of this invaluable volume in the New Librarianship Series, which must continue to increase in popularity because it is concise yet comprehensive, attractive in format and price, and is maintained up to date.

J.L.T.


This is not an introduction to public librarianship for students, but represents an authoritative survey of the development of the public library movement in many countries. Stimulating views on buildings, staffing, the various departments, co-operation and many other topics are set forth, and demand careful consideration on
account of their source. The City Librarian of Westminster is well-known throughout the profession for his thought-provoking writings, and his views are expressed following careful consideration and first-hand experience. Many of them are controversial, but progress is stimulated by the discussion of such problems.

Every librarian, junior and senior, should read this fascinating survey of public libraries, which is opportune. So much is in a fluid state—education, legislation, authors' lending rights, etc.—and librarianship might be on the threshold of monumental progressive developments—or the complete opposite. It is refreshing to read this compact volume, bursting with facts and figures, illustrated with fourteen plates, and produced at a remarkably low price.

J.L.T.


Recent years have seen tremendous developments in the dissemination and retrieval of scientific information, and Mr. B. C. Vickery's Classification and indexing in science has done much to clarify the position. This complementary volume from the same publisher will perform a similar service for the social scientist. Chapters are devoted to "Information retrieval and the social sciences", "The data of social science", "The organization of subject indexes", "The social sciences in general classification schemes", "Classification for information retrieval", "Mechanical indexing and retrieval", "The structure of classification schemes", "Notational symbols", and "Indexing the classified catalogue". Under these headings Mr. Foskett effectively evaluates developments to date, addressing himself to social scientists in particular, but providing much information of value to all engaged in the dissemination of information.

This study is well documented, taking into consideration all previous significant work on the subject, evaluating it and presenting it as a digested synopsis of progress. This has been significant, but much remains to be accomplished. Mr. Foskett stresses the need for closer collaboration between specialists and librarians. Each appears wary of the other, but future development depends upon mutual understanding, and progress can thereby be greatly accelerated.

J.L.T.


This lists alphabetically by abbreviations the names of organizations and institutions frequently referred to by their initials or other combinations of letters of the alphabet, and also provides addresses and 'phone numbers. There is also an index of main subject headings, with suitable sub-divisions, but the purpose of this feature is not clear, except that it shows how many abbreviations can be classified under each heading.

International organizations are also included, and indexers will find the list useful in identifying the full titles of bodies for which the well-informed in certain subjects use initials only, and expect everybody to know what they are talking about. Librarians are particularly prone to, and victims of, this affectation.

J.L.T.

This alphabetical list of names of 20,000 fictitious characters from about 2,000 books by some 500 authors is necessarily selective, but might well have been improved by a list of works covered, or at least by an index of the authors included, with reference to the pages naming their characters.

Unfortunately the author died before the book was published, and will not have the opportunity of expanding and improving his work. As it stands it is of limited value, but represents lengthy research on a project that might have proved of vital significance as a reference book if made more fully comprehensive. J.L.T.


Cumulative indexes to periodicals are of great value, but they are expensive to produce, and we have far too few of them. This index to The Bee World, published by the Bee Research Association, covers thirty years, and provides a key to "a veritable treasure chest". The preliminaries are in English, French and German, thus catering for the international body of readers, and symbols and letters are used in the index entries to indicate articles, book reviews, bibliographies, maps, portraits, etc. There are suitable cross-references, but there is also regular double-entry under subject and country. "Hints to users" simplifies reference to the index itself, and there is also a list of "Headings under various general categories", indicating the specific headings under which references will be found. J.L.T.

THE INDEXER AS PROOF CORRECTOR

The page proofs sent to an indexer are usually uncorrected. In reading them through, the indexer may notice misprints, and also mistakes in spelling, grammar, and arithmetic, and inadequacies and inconsistencies in punctuation. He may occasionally see reason to question a matter of fact.

It should not be supposed that it is necessarily someone else's business to put these matters right. Each person who reads a set of proofs attentively is likely to find a few errors missed by other readers. An indexer has to be a particularly attentive reader, and will probably observe not only the more obvious mistakes, but also discrepancies that are not very noticeable to others. For example, in scientific papers with lists of references at the end, the names of authors are sometimes not spelt in the same way in the text of the paper as in the list of references. A statement, date, or name may appear on one page in a form inconsistent with a reference on another page. A reference may be made to something supposed to be found on another page, but actually omitted. The indexer becomes aware of these doubtful points in the course of deciding what index entries to make.

Hence the indexer can often do a service to the author and publisher by noting corrections and suggestions for the attention of the "official" proof corrector. I have even known this proof-correcting function of the indexer to be advanced as one of the reasons for having an index at all. M. D. ANDERSON.