

inherent in the application of roles and links. But it has, on the other hand, been shown that it is perfectly possible to apply this aid in practice without any loss of recall whatsoever and with genuine precision enhancing.

When the theory is so little developed, then any contemporary treatise can only show up the prevailing inconsistencies. Many of them could, in the opinion of the reviewer, be eliminated by demanding not only adequate specificity from an index language (as done in Section E), but, at the same time, also adequate representational predictability of the modes of expression stored. Here we can find a rewarding field of activity for information science research.

There are only a few additions to the book that the reviewer would have welcomed. But perhaps they will appear in a later edition? Thus, among the questions to be raised in the design of any information system and which are listed on page 5 (e.g. on the kind of field, the kind and amount of data and of search requests), the question should also be raised whether or not in the information systems under consideration a great deal of importance is to be attached to high recall. If the answer is positive (e.g. in the patent field, for one's own correspondence, and for internal reports), then this will incur a much higher expenditure that will have to be accepted than if the answer is negative. The question whether besides the thesaurus as the index language vocabulary also an index language grammar is available or can be developed should also be brought up. From this depend, to a large extent, size and construction of the thesaurus. A good index language grammar can, without loss of representational fidelity, make a lot of pre-coordinated terms and the corresponding set of rules superfluous and consequently keep the thesaurus small and overviewable.

It should also be clearly pointed out in the book that, no matter how good a thesaurus may be, it will only achieve full effectiveness if it is applied reliably by the indexer in the sense that the latter must always select the most specific and most appropriate descriptors. This is, to be sure, traditional practice in libraries, but in recent years it has, to a large extent, fallen into oblivion. In most cases, by "controlled vocabulary" a vocabulary is meant which consists of permissible descriptors. That the indexer should always choose those descriptors in the thesaurus which most appropriately represent the contents of a text to be stored is normally not mentioned. This implies a continued, though latent search in the vocabulary. In many vocabularies, however, because of the size and the intensive ramifications of the relational paths in them, such a search is not or no longer possible. For this reason, many of the deficiencies observed in thesauri are not inherent in the thesauri themselves, but are only due to their unreliable application.

As far as the use of the thesaurus is concerned, the indexer should also be reminded that he must pursue the relational paths because only then will he reliably come across changes and additions that he does not yet know or which he no longer remembers when he allocates descriptors from memory.

The "post-controlled thesaurus" appears, in the place in which it is discussed, as an absolutely acceptable alternative when intellectual indexing is considered too

costly. It would have been gratifying if, in the same place and at the same time, the deficiencies in this procedure had been illuminated, in particular the fact that with this method all reliability in searching for general concepts is lost. These are often to be found in the literature in the form of multi-word expressions, i.e. paraphrasing and/or defining mode, and not in the lexical form, the only form in which they can be registered in a thesaurus. The later transference of such a mode of expression into the lexical form as being offered for search by the thesaurus is, however, no longer possible in a post-controlled thesaurus. This would pre-suppose knowledge of the whole context of the original. What is more, when working simply with a post-controlled thesaurus, the ambiguity of the polysemous words registered in this way can, for the same reason, no longer be cleared. Consequently, retrieval using a post-controlled thesaurus will be of a much poorer quality than with a thesaurus applied in the traditional manner.

A last recommendation concerns the device of word distance in natural language. It is referred to as a precision enhancing aid. Here it should be mentioned that it is detrimental to recall. In phrasing his text, an author is free from any rule according to which related concepts must always be named verbally at a specific maximum distance. If such a word distance is called for then the searcher will fail to notice those texts in which the word distance within a sentence is greater (e.g. simply by the insertion of a relative clause) or in which both concepts are separated from each other by a punctuation mark. Furthermore, the relation in which the searcher is interested, may be quite different from that which an author had emphasized.

The book is a good introduction to the construction of a thesaurus. It conveys a good grasp of the problems with which we are confronted in this difficult field. It is also a model example of generous, excellently and clearly ordered, faultless book. The contents are well opened-up in the index. The book can be recommended to students and teachers alike, not the least because of the extensive bibliography which has been added.

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SATIJA, Mohinder Partap: **A Primer on Ranganathan's Book Numbers.** Delhi, IN: Mittal Publ. (B-2/19B, Lawrence Road, 110035) 1987. 87p. with appendices and index, ISBN 81-7099-004-1, Rs 65.

This is a simple and systematic exposition of the theory and practice of book number developed by Ranganathan. As Ranganathan's system is not limited to use in conjunction with his Colon Classification, this book is a worthy addition to the very limited literature on this subject. (The author cites only four books written in this century on the academic aspects of book numbers: Laws, 1902; Barden, 1937; Lehnus, 1980; and Comaromi, 1981). The intended audience are those readers who want to learn about and/or practice the scheme of book numbering as developed by Ranganathan.

The first five chapters deal with the theory and practice of Ranganathan's facet formula for the book number, covering in the following order: language of the book, form of presentation of contents in the book, year of publication, accession part of the year number, volume number, supplement number, copy number, criticism number, and accession part of criticism number. Problems with Ranganathan's system are not ignored but are discussed openly, for instance, the problem of placing together the various editions of a book or translations in various languages or abridgements and adaptations of the same book. The appendices provide tables for the language isolate, foci in form and time isolate.

As book numbers are indispensable for any discrete book arrangement on shelves and for giving unique call numbers to library documents anyone with the responsibility of bringing order out of chaos will find this a useful reference.

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DYKSTRA, Mary: **PRECIS: A Primer**. Revised Reprint. Metuchen, NJ: Scarecrow Press 1987. IX,270p., ISBN 0-8108-2060-9

Further to the review of the *Primer*'s first edition in the previous issue of International Classification, a few remarks on the reprint will suffice. Due to the reduced format (close to a "King Penguin") and the handsome pink covers, the book looks different this time. The smaller format is more appropriate, since the type area covered only about 80% per page in the first edition.

What is more important, however, is the fact that the present edition is called a revised reprint. About two and a half sentences are added to the foreword. Yet the arrangement, headings, and length of chapters, subsections, and exercises are completely identical with the first edition. No revisions of the index were necessary. As Prof.Dykstra explains, "the text remains essentially the same in this edition" (p.III). Random comparisons of the texts did not show any revisions. The reprint has the same exercises, except for a minor change on p.50. The author's revisions did not include a correction of an error in the contents pages: as in the first edition, it is stated that exercises are to be found on p.80 (instead of p.79).

It seems very sensible, then, that the Library of Congress Cataloging-in-Publication Data bluntly describe the book a "reprint".

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CRAVEN, Timothy C.: **String Indexing**. Orlando, Fla.: Academic Press 1986. XI,246p., ISBN 0-12-195460-9

The preparation of alphabetic subject indexes, e.g. for books or bibliographies, is and remains an important topic, albeit one receiving far less attention than the problems involved in the preparation of keyword catalogs. This is due among other things to the fact that, for simplicity's sake, index entries have frequently

remained confined to single words - plus, at best, adjective+noun combinations - subjected to a certain terminology control.

Now, while this may still be an adequate method for preparing subject indexes of books, in the field of indexes for bibliographies it has been found - and this applies equally to keyword catalogs, so that to this extent there is, in the end, no difference between both problems - that one is increasingly confronted with complex document contents creating an inevitable need for precombined index entries, co-extensive with the contents of the given document. This has the effect, however, that one has to work with - co-extensive - multiple entries.

To generate such multiple entries, the wish has meanwhile made itself felt to make use of automated processes. Now here the special challenge presents itself of making only meaningful multiple entries - hence of both excluding certain words from the realm of those used for initiating a search, and of keeping the correct context for the given components of a precombined string intact - or having it generated from an input string. In the book reviewed this task is termed string indexing, an expression covering a broad spectrum of procedures, reaching from such methods as KWIC or KWOC, which have no terminology control or clearly defined syntax in the string at all, to the PRECIS system with its subtly differentiated expression possibilities.

Particular interest has meanwhile been acquired by the problem of having such automatic processes handled with the aid of small computers, as well as by the manifold problems connected with the display of index entries on a screen (e.g. in browsing through inverted lists) in an online retrieval. The book reviewed may be regarded as an important and useful contribution to this subject.

Consisting, on the one hand, of theoretical reflections and, on the other hand, of the description of individual systems, the book is divided into 9 chapters (each concluded by a brief summary), 4 annexes and a detailed bibliography<sup>1)</sup>.

The book's strength, which at the same time, however - from a reader's point of view - constitutes a certain weakness, lies in the fact that theory and practical application are not treated wholly separate from one another; the author always makes use of concrete examples in his discussion of the various theoretical problems. This approach does not always make it simple for the reader - especially where the less well-known string indexing procedures are discussed - to follow the author's train of thought. The presentation does, however, have the advantage that abstract considerations are always illustrated through comparing several procedures among one another, thus giving the reader a good opportunity to get acquainted with the strengths and weaknesses of each procedure.

In the introductory chapter the problem field to be treated is marked out, terminology is introduced and the task, purpose and usefulness of string indexing in the various fields of application are explained. The soundness of the presentation is reflected, among other things, by the use of network diagrams to illustrate the various contextual dependences of the individual components of a string.