

cy creates great problems when the text of many documents is combined to form a large database - there are many ways in which a topic can be expressed in full text and, in some cases, the topic is represented implicitly rather explicitly (O'Connor, 1965), making high recall difficult to achieve" (p.200). Also, he perceives great possibilities for the improvement of natural-language systems (p.218). That such progress possibilities exist likewise for the systems with controlled vocabularies is not taken into consideration. His argumentation is not always free of polemics here.

The book also shows clues to the solution of inconsistencies not yet clarified by contemporary theory. This is the case e.g. where attention is called to the necessity of predictability of the representation of concepts (p.196) and where the problems caused by the multiplicity of the paraphrasing manner of expression for a concept are briefly touched upon (p.200). For example, the table on p.217 with its listing of the great variety of imaginable natural-language manner of expression of a concept proves to be glaringly incomplete. In the view of the reviewer, from all this the hopelessness of any attempt to algorithmically recognize paraphrasing expressions of concepts and to machine-translate them into subject headings should be evident when more than just modest requirements are to be met.

In concordance with contemporary terminology, for Lancaster, too, an indexing language is still practically identical with its *vocabulary* (except the brief remarks on p.171 ff), with the desirable *grammar* largely remaining out of consideration, an omission which constitutes the source of many problems.

As to the *practice* of indexing and abstracting, this is, by the nature of things, discussed at various points in the theoretical part as well, and the abundant material compiled will prove most useful to the reader. Several variants of printed indexes and types of abstracts of varying detailedness are presented in informative examples, together with illustrative remarks on the technique of their elaboration. In particular, one learns several interesting and instructive things about the construction of databases, also in the early and pioneer stages of this art.

Lancaster rightly criticizes the fact that the value of the empirical material collected so far often suffers from its having been elaborated on too small a scale (p.213). The results collected under such circumstances do not permit conclusions for the practice of larger information systems. This is something which all those experimenting with small-scale systems should take to heart, and the lack of probative value of the results from such small-scale experiments is by no means compensated for by the sheer quantity of these experiments in the literature, which they dominate (the book reviewed here included), for they can be rapidly and cheaply conducted (as e.g. the experiment described in Tenopir's dissertation, amazingly termed exemplary on p.212).

Surprisingly, all these observations find only little reflection in the forecasts at the end of the book (p.252ff). Here, among other things, great confidence is expressed that the

need for indexing and abstracting will disappear once the sources are available in machine-readable form and a (non-specified) kind of "filters" will be created (p.259). In the view of the reviewer, this confidence is not justified by the experience reported in the serious literature Lancaster quotes.

Illusory, too, are the expectations placed in the idea of post-controlled vocabulary (p.215), in which practically uncontrolled storage of natural-language text words is permitted and in which the different forms of expression that have occurred for a concept are to be compiled only afterwards so that they can be given attention in formulating the query. The reviewer has experience with such an approach and can only advise against it. For, the disambiguation of natural-language expressions after their storage proves hardly realizable, requiring as it does the renewed perusal of practically every original document. Also, the filling-up of the ellipses and the omission of clearly dispensable material from the index, tasks traditionally performed by the indexer, are dispensed with here. Furthermore, those concepts which occur in the paraphrasing mode of expression would wholly escape translation into subject headings and inclusion in the index.

The theory deficit presently prevailing in information science reminds the reviewer of the epoch of Galileo shortly after the Middle ages. Depending on the experimental conditions chosen, experiments of some sort seemed to prove that the velocity of freely falling bodies *varies with their weight* (in accordance with the opinion then held), while experiments of another nature seemed to *prove the contrary* (Galileo's revolutionary idea). The vacuum state, which could have cleared up all contradictions, had not yet been discovered then. Today's information scientific community is still awaiting a breakthrough to a similarly fundamental insight.

Thus, the chapters on indexing and abstracting theory present a faithful image of the currently still unsatisfactory state of our theory.

For the practitioner, the book, owing to the vast amount of material collected, will prove quite helpful for an expedient organization of his daily routines. For the same reason, the attentive reader already familiar with the field can draw from the book many a stimulation for the reformulation of several theoretical statements.

The book has been very carefully designed and lucidly organized and is free of printing errors. The index is a good guide to the book's contents. The reviewer recommends the book as reading material for the students attending his classes on indexing and abstracting.

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WILLIAMSON, Nancy J., HUDON, Michèle (Eds.): *Classification Research for Knowledge Representation and Organization*. Proceedings of the 5th International Study Conference on Classification Research, Toronto, Canada, June 24-28, 1991. Amsterdam, NL,

etc.: Elsevier 1992. 427p. ISBN 0-444-89343-1 (FID Publ.698)

The first study conference on classification research in this series was held at Dorking, England, in 1957. It was organized by the Classification Research Group of London, and was rather tightly focussed on the developments then being pioneered by that group. Since then, in each decade another conference has been held, but these have followed the general pattern of conferences (despite a notional theme such as is expressed in the present title), and offer a dispersed subject content. We cannot expect them to provide a coherent view of the current state of the art, though the keynote address of Elaine SVENONIUS gallantly attempts this. What we get among the forty papers in these conference proceedings is:

(1) Reports on developments in established schemes or projects, such as the papers on editing the DDC online (BEALL), using it to classify online (VIZINE-GOETZ), managing the development of UDC (GILCHRIST) and restructuring it (WILLIAMSON), automating the LC schedules (MICCO), notation in Colon (HUSAIN), the USMARC format for classification data (GUENTHER), or chain indexing (SVENONIUS).

(2) Examples of the application of known techniques to new special fields, such as a thesaurus for archive records (SCOTT and FONSECA), an African art thesaurus (AMAESHI), thesauri and the social sciences (REESPOTTER), classification and thesauri in China (LEI ZENG). (3) General discussion of perennial problems. Here I will include de GROLIER's review and discussion of the development of new general classifications - a problem that has engaged him for the last fifty years. Similarly, DAHLBERG continues her exploration of the basis of a new universal classification system. MIKSA reviews library classification since the mid-nineteenth century, and discusses alternative purposes that classification may serve. Linda SMITH examines current issues in the compatibility of indexing languages. Pauline COCHRANE reviews the use of thesauri as search tools.

(4) Lastly, we find papers that explore new approaches and techniques. Here, I pick out the use of frames, the knowledge structure developed in artificial intelligence, as a tool in indexing. Susanne HUMPHREY provides an updated account of her work on MedIndEx, the indexing research project at the U.S. National Library of Medicine, on which she has been engaged for a number of years. This uses a knowledge base of medical concepts that are held in a frame system that gives situation-specific assistance to indexers as they interact with it. Frames are also used in the European SIMPR approach to automatic indexing, to hold information about facets and the terms in them (REVIE and SMART). Again, GREEN uses frames to express syntagmatic relations in indexed phrases. These papers are examples of the fruitful interaction between information science and artificial intelligence that is becoming of increasing importance in many areas of information handling.

As the principal rapporteur of the 1st ISCCR, I must confess to a certain disappointment on reviewing this

volume. Despite the interest of a number of the papers, there is no overall feeling of contribution to a developing field of research. There is no evidence that the conference was organized to *study* problems raised by the papers. Is this because classification of itself is no longer problematic? The centre of research interest has moved to knowledge representation in general, which includes the semantic relations that are found in classification systems and thesauri, but much more besides. The most creative development work is going into systems of knowledge-based indexing and retrieval, as reflected in a few papers. Perhaps it is time to say 'hail and farewell' to this venerable series of conferences.

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FELBER, Helmut; BUDIN, Gerhard: **Terminologie in Theorie und Praxis** (Terminology in Theory and Practice). Tübingen: G. Narr 1989. XX,315p. (Forum für Fachsprachenforschung No.9)

Si les publications à propos de différents aspects de la terminologie sont nombreuses, les manuels en cette matière sont au contraire assez rares, surtout s'ils englobent à la fois la théorie et la pratique. Pour écrire un tel ouvrage, il fallait des auteurs confrontés quotidiennement avec ces problèmes terminologiques, comme c'est le cas de Felber et Budin. Leur ouvrage, qui est un partie un remaniement du remarquable Terminology Manual, publié par Felber en 1984 sous les auspices de l'Unesco, se compose de cinq chapitres structurés de façon exemplaire et suivis de deux bibliographies.

Le premier chapitre énumère et explique systématiquement les principaux concepts fondamentaux de la terminologie réunis dans un index extrêmement utile. Le deuxième chapitre étudie l'histoire, l'évolution et l'état actuel de la science de la terminologie; les auteurs profitent de l'occasion pour souligner le rôle du maître vénéré Eugen Wüster. L'exposé des courants actuels dans les études terminologiques et de l'enseignement de la terminologique est très instructif. Une énumération implique toutefois le risque d'être incomplète; ainsi certaines pages ne satisferont pas tous les lecteurs, par ex. celles sur l'enseignement de la terminologie dans certains pays, en particulier dans le nôtre. Le troisième chapitre, le plus important, occupe presque la moitié du volume. Il étudie les principes généraux de la terminologie et insiste sur la relation entre terme et concept et sur la variété des relations logiques entre les différents concepts. Ce chapitre considère en outre les rapports entre la linguistique, la lexicographie (lexicologie et terminographie/terminologie; il mentionne assez brièvement les problèmes de la translittération et de la formation des termes (il est à peine question des termes formés d'éléments grecs et latins). Ce chapitre consacre également des paragraphes importants à la classification des concepts, au fonctionnement de certains instituts de normalisation et aux différentes catégories de dictionnaires. La matière envisagée dans ce troisième chapitre est tellement large qu'il est quasi impossible de la résumer; plus d'un lecteur regrettera