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## Book Reviews

Neelameghan, A. et al.: **Cognitive Paradigms in Knowledge Organisation: Second International ISKO Conference**, Madras, 26-28 August 1992. Bangalore: Sarada Ranganathan Endowment for Library Science 1992. 446p.

To review a volume of papers delivered at a gathering which one did not actually attend is always difficult. So much of the atmosphere and inter-change of ideas that takes place on these occasions is lost when confronted with a volume of papers covering a whole range of topics as varied and diverse as those in the volume presently under consideration. The provision of an outline programme and list of participants would have assisted in alleviating this minor difficulty. This second of what are planned to be a biennial series of ISKO conferences provides a valuable contribution to the study of knowledge organization, stressing the theoretical aspects of rather more depth than the practical application in actual systems and in this way it provides an interesting counterbalance to the parallel series of International Study Conferences on Classification organized by FID/CR.

The thirty eight papers contained in this volume were intended to provide a permanent commemoration of the Birth Centenary celebrations of S.R. Ranganathan. The conference was held in August 1992 in Madras where almost seventy years earlier Ranganathan started his professional career, and the collection, with well over half the contributors coming from India, provides a suitable and fitting adjunct to the celebrations of that centenary.

The preface informs us that seven themes were explored in the proceedings but the volume is in fact divided into eight sections, each devoted to one of the themes identified and the final one drawing together the various strands that precede it. The first, *Knowledge and knowledge organization: the needs and the modes* includes four papers, each of which explores different aspects of conceptualization in the user. Elaine Svenonius' contribution examines the impact of computer technology on knowledge representation, and she draws attention to the impact that the computer has made on the widespread realization of the practical value of knowledge representation, especially concentrating on hypertext systems, cluster analysis and knowledge representations accommodating rule-based reasoning. She concludes by looking at the ways in which these may be pursued as a basis for developing knowledge representation for information retrieval.

Other papers in this opening section are concerned with the development of the reader's cognitive capacities in the searching process (Sukiasyan), cognitive skills of conceptualization (Sekhar and Ekbote) and cognitive paradigms and user needs (Frohmann). A more practical note is introduced in the second section *Knowledge seeking in*

*libraries*, which looks at the actual situation in libraries. It includes a paper by Jean Perreault on using epistemology as a bridge from the past to a new paradigm and one by Dorothy McGarry considering the displays of bibliographic records and the functions and data elements needed. The heading of the third section omits the word paradigm from any of its content, and covers various aspects of *Knowledge seeking in information retrieval* such as citation analysis and factors affecting the analysis of requests and the formulation of query statements. This is followed by *Knowledge seeking in problem solving, decision making and learning situations* with contributions which outline various models for such areas of information work as the design and implementation of decision support systems (Novak and Dubey), social and behavioural research and human-computer interaction.

The philosophical approach to classification rather than its applications in a specifically automated situation occupies the attention of section five which is entitled the *Taxonomic approach to knowledge representation*. Here, systems already well known to the information world, such as those of Wahlin and the systematic approach used for the *Propaedia of the Encyclopaedia Britannica* (Parameswaran) which are not notationally symbolized in the manner of traditional library classifications are examined, together with two papers which move from general considerations affecting the whole of knowledge to those specifically concerned with medical systems, one of which is concerned with the human body and the second with neurological sciences.

The major figure who lurks behind all these presentations is of course the father of Indian librarianship, S.R. Ranganathan and the sixth section *Analytico-synthetic approaches to knowledge organization* moves closer to those areas of information retrieval in which he was such an innovative force. The opening paper is by Neelameghan who examines the Master's generalised model of subject structure and models of formation of subjects. Seetharama looks at the 'Cognitive approach in information consolidation' and subsequent papers look at specific problems such as A. Gangemi et al. on a compositional approach in medicine, G. Negrini utilizing the systematifier to structure the field of Science and Technology Research, and I. Dahlberg explaining the dynamic character of the Information Coding Classification, accompanied by the chart in which she sets out her view of the pattern of knowledge. The two concluding sections are concerned with *Cognitive paradigms and their applications to knowledge organization* and *Cognitive paradigms in knowledge bases*. The first of these introduces a more humanities-based theme, and includes papers on the classification of melodic scales (Krishnamoorthy) and one looking at the Getty database. This discussion of problems relating to the retrieval of information about realia as well as literature about works of art as demonstrated through the Getty collection in the contribution by Busch is an indication of the increased attention that is now being paid to retrieval by the museum world and is likely to generate interest in those quarters.

Gopinath concludes with a paper on 'Creativity and knowledge organization'. The final section gathers up the earlier themes and returns to more general considerations of a more abstract nature. The last contribution by *Satija* fittingly discusses 'Term-concept relation: a case study of Ranganathan's approach'.

The whole adds up to an interesting collection of papers drawn from a very wide range of expertise and nationalities. Twenty three contributions are from India, four from Italy and three each from Germany and United States. It was sad to see no contribution from the United Kingdom, a country which figures largely in the footnotes and this lacuna gives some reflection of the present status of the study of classification in Britain compared with the past. There is always a measure of unevenness in such a compilation and it is impossible to identify all the topics covered in the space of a review. The book has been well edited; there are inevitably a few spelling errors, 'Sweedn', 'Ricercae' and a few mistakes in the papers. The collection would have been enhanced by at least a list of the contributors and their organizations and this could have been compiled from the notes at the foot of the first page of each contribution. As seems to be customary with conference proceedings, the work lacks an index, the provision of which would have enhanced ease of reference.

The conference clearly presented an excellent picture of the state of the art and this volume is a most appropriate addition to the works issued to commemorate the year in which Ranganathan would have been one hundred years of age.

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**SATIJA, M.P., SINGH, Amrik: Bibliography of Colon Classification 1930-1993.** New Delhi: M.D. Publications 1994. XI, 129 p.

M. P. Satija's and Amrik Singh's exhaustive bibliography of Ranganathan's Colon Classification lists 1371 (!) titles ranging from 1930 to 1993. The entries provide full bibliographical details; a few titles, most of them rather evasive or even misleading ("classified women": No. 972), have been annotated. The arrangement is by year, then by author.

The book is intended to be inclusive rather than exclusive: "The CC is almost synonymous with facet analysis. Hence to be on the safer side the peripheral literature on the CC, facet analysis and comparative classification have been included" (p.X). The coverage of the bibliography is remarkable: it includes dissertations, monographs, chapters in manuals, contributions to encyclopedias, articles in periodicals, reports of student research projects (No. 320); even a "review of literature on Colon Classification" (No. 179) is included. General studies of classification are

listed without further references to sections and chapters specifying on the Colon Classification; there are helpful exceptions, however, e. g., No. 854.

In view of the subject it is small wonder that many titles are of Indian origin. There are numerous Indian dissertations; in 1974 alone Indian dissertations on the Colon Classification dealt with ten, for the most part highly specialized applications: steel (No. 954), toxicology (No. 958), virology (No. 959), fish (No. 960), plant nutrition (No. 961), wheat (No. 965), aerodynamics (No. 966), demography (No. 967), solid state physics (No. 971), education, library science (No. 973). Like most chronologically arranged bibliographies, the "Bibliography of Colon Classification" helps to emphasize the history and development of its subject. The authors distinguish three major periods: Most of the literature before 1970 explains the Colon Classification in general, while the post-1970 literature concentrates on its specialized aspects. "Current trend mostly focuses on Ranganathan's influence on information retrieval in general and on classification practices in different countries" (Preface, p. XI). Many titles are of a comparative character: very often the Colon Classification is compared to the Decimal Classification.

Although the user is overwhelmed by the comprehensiveness of the bibliography, by the large amount of titles, there are still some surprising omissions and inconsistencies. Of course, Girja Kumar's study, *Ranganathan, Dewey and C. V. Raman: a study in the arrogance of intellectual power* (New Delhi 1991), should be included, regardless of its attitude towards Ranganathan. And in the reviewer's opinion, all bulletins by the Classification Research Group should be listed, including those dealing with the practical application of faceted special classifications, and not only those with a theoretical orientation. In one case (No. 427: *Classification Research Group. Bulletin No. 6*. Journal of Documentation 17 (1961), p. 156-172), the section "Fundamental categories" is listed (p. 157). Are the sections "Integrative levels" (p. 158-159) and "Fixed v. permutable facet order" (p. 161) less interesting?

Moreover, some German addenda are to be listed here, not for the sake of meticulousness, but for the purpose of further enriching a helpful bibliography and thereby stressing Ranganathan's worldwide influence:

1. Vickery, Brian C.: Facettenklassifikation. Translated by Ernst Lutterbeck. With a preface by Helmut Arntz. München-Pullach & Berlin: Verl. Dokumentation 1969.

2. Roloff, Heinrich: Lehrbuch der Sachkatalogisierung. Pullach bei München: Verl. Dokumentation 1973. ("Die Colon-Klassifikation", p. 102-109; "Die Facetten-Klassifikation", p. 109-113).

3. Dahlberg, Ingetraut: Grundlagen universaler Wissensordnung. Probleme und Möglichkeiten eines universalen Klassifikationssystems des Wissens. (DGD-Schriftenreihe Vol. 3). Pullach bei München: Verl. Dokumentation 1974. ("Colon Classification (CC)", p. 156-167).

4. Roloff, Heinrich: Sachkatalogisierung auf neuen Wegen. Von der Facettenklassifikation zu Deskriptor und Thesaurus. 4th ed. Pullach bei München: Verlag Dokumentation 1974. ("Von der Subordinierung zur Koordinierung: Ranganathan", p. 11-13;