Book Reviews

Girja KUMAR: **S.R.Ranganathan: an Intellectual Biography**. New Delhi: Har-Anand Publ. 1992. 327 p. ISBN 81-24-005-5

It is to Ranganathan that the profession owes the best it has. His contributions to library science, especially to classification, are of the order of creating a new paradigm. On the international level, he received full recognition, as was manifested in the designation of his era as the "Ranganathan Age". We will remain forever in his debt. Yet after his death he has mostly been paid only lip sympathy. Not much has been done to implement and further the legacy he bequeathed to us all. As a result most of it smells stale, not being reinterpreted or updated as it is to suit present-day needs. By holding IFLA 1992 on the centenary of his birth, or a lecture, or a conference here and there we have only paid off an infinitesimally small part of the debt we owe eternally to him. The book under review is a real and lasting tribute to Ranganathan, although it by no means tends to only glorify him.

His life was absolutely dedicated to work and profession. To quote from the book (p.114-5):

Work without reward was his motto... He had no vices. He never took tea or coffee... The question of imbibling alcoholic drinks must be considered far-fetched. Like Melvil Dewey, he did not approve smoking in his presence. Work, work and more work was his lifelong motto. He used to term it as work chastity in his picturesque Indian English. He worked all his working hours, seven days a week and 365 days in a year. He practised his regiment for 20 years. He took no leave. He lived and dressed simply. He went barefoot most of the time (a comfortable habit in hot climate). He was mostly clad in *dhoti* without shirt while at home.

His life was library science and its history in action. Many of his colleagues and admirers toyed with the idea of playing Boswell to him. Lack of archival resources and the controversial nature of the subject deterred them from entering the cobweb. Girja Kumar, who worked with Ranganathan and admired him critically, has courageously undertaken and successfully completed this book, which was released in the year of Ranganathan's birth centenary celebrations in New Delhi.

The book is divided into two parts of almost equal length. Part I, entitled "The Man", is an account of Ranganathan's life, activities and achievements beginning from childhood to his last days even at DRTC Bangalore. This part is at best fragmentary; gaps are visible. It reminds us that much more needs to be unearthed about Ranganathan's life, especially his childhood and youth. Not much has been disclosed concerning the author's resources: His research is based on Ranganathan's fragmentary reminiscences in "A Librarian Looks Back", on his letters to friends and colleagues, and on the author's correspondence with Ranganathan's only son T.R.Yogeshwar. The author has concentrated much more on an evaluation of Ranganathan's work and personality presented in Part 2 entitled "The Intellect". This is a psycho-analytical study of the man and the social environment he worked in. The analysis is incisive, and the interpretations are deep and convincing. The topics covered are Ranganathan's place in world library science history, his value system, the make-up of his mind, the working of his intellect and his holistic approach, and his creativity - the latter he viewed as a mystic experience. Lastly, the author discusses Ranganathan's colonial background or intellect, academics in the Third World in general, as well as his relevance for today and tomorrow. Many may not agree with what he has to say. It may even offend a few. He is indeed opinionated. However, he has taken care not to offend the living bigwigs while some of Ranganathan's associates have been given no place in this study.

Nevertheless, the book is thought-provoking and provides food for thought and reflection. Girja Kumar has earned a reputation as an iconoclast, and through this study he has tried to keep this impression intact. The language as usual is lucid and idiomatic. Girja Kumar has been regularly writing on Ranganathan, so his regular readers may find some repetition of his ideas here. Again, within the book itself, there is repetition of ideas and phrases. Nevertheless the book is absorbing and throws ample light on contemporary India's social ethos and academic milieu. The author's wide reading in sociology, psychology, history, and Marxism and his intimate knowledge of Ranganathan shines throughout the book. Brilliance is its hallmark. It is an outstanding and unmatched contribution to Indian library history and literature. It will help to understand Ranganathan: the man, his place in history, his creativity, and the Indian academic milieu of his times and of today.

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DIETZE, Joachim: **Einführung in die Informationslinguistik.** (Introduction to Information Linguistics). Leipzig 1989. München: K.G.Saur Verlag 1991. 194p.

The contents and potential readership of this book are clearly indicated by its subtitle: Linguistic data processing in information science.

"Linguistic Data Processing" has been for many years already a firmly established term indicating not only the special application field for computerized procedures, i.e. that of human language, but also pointing to a specific methodical principle, namely that of non-numerical computing technology, a branch of Artificial Intelligence. For, while all procedures to be executed by a computer of the 1st to 5th generation can be described in strictly determined fashion, the elements of natural languages do not on any level obey exclusively logical rules. This point of intersection of natural sciences and the humanities has already found the interest of many a researcher. The one now trying his hand at it, however, Joachim DIETZE, is a linguist of repute with several publications on applied

computer linguistics to his credit. It is therefore a most fortunate circumstance that the author is one of the library directors who possess profound knowledge of scientific information theory as well. Thus, all prerequisites are fulfilled for the coming into being of a scientifically reliable work, whose practical usefulness now only depends on the structuring of the subject matter and the clearness of its presentation.

DIETZE deals in a very able manner with the 3 developmental series - those of language, of computer analysis and of information - that must be related to each other on various levels. The linguistic problems of course come first, here briefly summarized as phonetics, morphology, lexics, syntax and semantics; they are linked up step by step with information functions, whereupon the automatic analysis (parsing) methods are considered which must be interpolated between linguistically formulated text and retrieval knowledge on this text. As the investigation continues, the linguistic questions develop quite logically into text theory, the computer questions into production systems and the questions of information activities into representation of knowledge.

The book is intended for linguists desirous of becoming familiar with problems of information science. Linguistic, or rather: philosophical knowledge is therefore required on the part of the reader. However, this knowledge is - summarily - but nevertheless completely - set forth in the book itself, with due reference to the aspect it is to serve. It is clearly oriented to its application to problems of information using the instruments of informatics. The book also derives its importance, however, from the fact that DIETZE succeeded in making his book useful for two categories of well-informed readers: an expert in the fields of information or informatics will profit from it if he or she has sufficient basic linguistic knowledge, and any philologist wishing or needing to occupy him- or herself with automatic language processing will value this book as a most useful aid.

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SOWA, John.F (Ed.): **Principles of semantic networks - Explorations in the representation of knowledge**. San Mateo, California: Morgan Kaufmann Publ. 1991, 582p., ISBN 1-55860-088-4

The book, a collection of 19 chapters by different authors, is intended to bring together the most important results in the theory and applications of semantic networks, hitherto scattered throughout the literature on Artificial Intelligence (AI). The authors - mostly professors of computer science - tried to organize the material as they would like to present it to their students.

The result is highly interesting but hardly readable for novices to computer science and AI. The scope of interest cannot be sharply delineated: As convincingly explained by Lenhard K.SCHUBERT (Chapter 2), "semantic nets are in the eye of the beholder". In other words, it is misleading to talk about semantic networks as an exactly defined *knowledge representation* (KR) scheme distinct from the alternatives based on logic, frames, rules etc. Virtually all state-of-the-art systems can be viewed as *graphs* consisting of *labelled nodes* (concepts, individuals, etc.) and *labelled arcs* (relations, roles etc.). - A comprehensive book on semantic network theory would probably tend to be a general book on all kinds of KR.

The book is divided into three parts: Part I *Issues in knowledge representation* provides the theoretical background, Part II *Formal analyses* discusses mathematical and computer science aspects of research in KR and reasoning, and Part III *Systems for knowledge representations* deals with a number of implemented systems and projects. There is no necessity to read the parts (and chapters) in any particular sequence. The first 43 pages ("Issues in knowledge representation" and "Panel discussion with all participants (of the workshop at Catalina)"), however, can be recommended as a *brief introduction to the basic problems and terminology.*

The applications of AI have shown the necessity to concentrate on the intensional (as opposed to extensional) properties of concepts. To analyze concepts, several representation methods are proposed: *SOWA's conceptual graphs* (based on graph notations of *C.S.Peirce* - Chapter 5: *Toward the expressive power of natural language*), BRACHMAN's *KL-One* language and its derivatives (cf. Chapter 14, *Living with CLASSIC: When and how to use a KL-ONE-like language*), WOODS' *conceptual descriptions* (Chapter_1) and some others. Generally speaking, the notations try to make the semantic structure of the concepts explicit and formally analyzable.

One of the fundamental concepts of knowledge organization in libraries and documentation is *concept hierarchy.* In this book, the terms 'subsumption' (defined in terms of the particular method of concept representation) and 'taxonomy' are used to deal with the problem.

Chapter 1 by W.A. WOODS (*Understanding subsumption and taxonomy*) is typical. All concepts are described in terms of composite conceptual descriptions (p. 50-51) as

$c_1, \ldots c_k$ / $(r_1{:}v_1),\ldots(r_n,v_n)$: $\{p_1,\ldots p_t\}$

where

c_i - primary conceptual descriptions (in a simplified case: a conjunction of properties),

$(r_i{:}v_i)$ - relational modifiers (relation : value pairs) to describe relations to other concepts

p_i - general conditions

This is a very general framework with great expressive power. If all relational modifiers and general conditions were dropped and the list of primary conceptual descriptions were interpreted as a conjunction of properties we would get a taxonomy, the familiar lattice-like traditional monohierarchical scheme based primarily on the is-a relation and its extensional interpretation.

However, the full apparatus of semantic networks can accommodate much more: polyhierarchy (in the sense used in documentation), the differences between the structural (i.e. permanent) vs. assertional (i.e. temporary, situational) links, defaults, quantifications, exceptions