Book Reviews

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National Seminar on Classification in the Digital Environment : Papers contributed to the National Seminar on Classification in the Digital Environment, Bangalore, 9-11 August 2001. Edited by A. Neelameghan and K.N. Prasad. Bangalore : Sarada Ranganathan Endowment for Library Science, 2001. 190 p. ISBN 81-900957-4-9.

Introduction

This is a collection of papers presented at the *National Seminar on Classification in the Digital Environment* held in Bangalore, India, on August 9-11 2001. The collection contains 18 papers dealing with various issues related to knowledge organization and classification theory.

The issue of transferring the knowledge, traditions, and theories of bibliographic classification to the digital environment is an important one, and I was excited to learn that proceedings from this seminar were available. Many of us experience frustration on a daily basis due to poorly constructed Web search mechanisms and Web directories. As a community devoted to making information easily accessible we have something to offer the Web community and a seminar on the topic was indeed much needed.

Summary of papers

Below are brief summaries of the 18 papers presented at the seminar. The order of the summaries follows the order of the papers in the proceedings. The titles of the paper are given in parentheses after the author's name.

AHUJA and WESLEY (*From "Subject" to "Need": A Shift in Approach to Classifying Information on the Internet/Web*) argue that traditional bibliographic classification systems fail in the digital environment. One problem is that bibliographic classification systems have been developed to organize library books on shelves and as such are unidimensional and tied to the paper-based environment. Another problem is that they are "subject" oriented in the sense that they assume a relatively stable universe of knowledge containing basic and fixed compartments of knowledge that can be identified and represented. Ahuja and Wesley suggest that classification in the digital environment should be need-oriented instead of subject-oriented ("One important link that binds knowledge and human being is his societal need. ... Hence, it will be ideal to organise knowledge based upon need instead of subject." (p. 10)).

AHUJA and SATIJA (*Relevance of Ranganathan's Classification Theory in the Age of Digital Libraries*) note that traditional bibliographic classification systems have been applied in the digital environment with only limited success. They find that the "inherent flexibility of electronic manipulation of documents or their surrogates should allow a more organic approach to allocation of new subjects and appropriate linkages between subject hierarchies." (p. 18). Ahija and Satija also suggest that it is necessary to shift from a "subject" focus to a "need" focus when applying classification theory in the digital environment. They find Ranganathan's framework applicable in the digital environment. Although Ranganathan's focus is "subject oriented and hence emphasise the hierarchical and linear relationships" (p. 26), his framework "can be successfully adopted with certain modifications ... in the digital environment." (p. 26).

SHAH and KUMAR (*Model for System Unification of Geographical Schedules (Space Isolates)*) report on a plan to develop a single schedule for geographical subdivision that could be used across all classification systems. The authors argue that this is needed in order to facilitate interoperability in the digital environment.

SAN SEGUNDO MANUEL (*The Representation of Knowledge as a Symbolization of Productive Electronic Information*) distills different approaches and definitions of the term "representation" as it relates to representation of knowledge in the library and information science literature and field.

SHARADA (*Linguistic and Document Classification: Paradigmatic Merger Possibilities*) suggests the development of a universal indexing language. The

foundation for the universal indexing language is Chomsky's Minimalist Program and Ranganathan's analytico-synthetic classification theory; according to the author, based on these approaches, it "should not be a problem" (p. 62) to develop a universal indexing language.

SELVI (*Knowledge Classification of Digital Information Materials with Special Reference to Clustering Technique*) finds that it is essential to classify digital material since the amount of material that is becoming available is growing. Selvi suggests using automated classification to "group together those digital information materials or documents that are "most similar" (p. 65). This can be attained by using cluster analysis methods.

PRADHAN and THULASI (*A Study of the Use of Classification and Indexing Systems by Web Resource Directories*) compare and contrast the classificatory structures of Google, Yahoo, and Looksmart's directories and compare the directories to Dewey Decimal Classification, Library of Congress Classification and Colon Classification's classificatory structures. They find differences between the directories' and the bibliographic classification systems' classificatory structures and principles. These differences stem from the fact that bibliographic classification systems are used to "classify academic resources for the research community" (p. 83) and directories "aim to categorize a wider breath of information groups, entertainment, recreation, govt. information, commercial information" (p. 83).

NEELAMEGHAN (*Hierarchy, Hierarchical Relation and Hierarchical Arrangement*) reviews the concept of hierarchy and the formation of hierarchical structures across a variety of domains.

NEELAMEGHAN and PRADAD (*Digitized Schemes for Subject Classification and Thesauri: Complementary Roles*) demonstrate how thesaural relationships (NT, BT, and RT) can be applied to a classification scheme, the Colon Classification in this case.

NEELEMAGHAN and ASUNDI (*Metadata Framework for Describing Embodied Knowledge and Subject Content*) propose to use the Generalized Facet Structure framework which is based on Ranganathan's General Theory of Knowledge Classification as a framework for describing the content of documents in a metadata element set for the representation of web documents.

CHUDAMANI (*Classified Catalogue as a Tool for Subject Based Information Retrieval in both Traditional and Electronic Library Environment*) explains why the classified catalogue is superior to the alphabetic catalogue and argues that the same is true in the digital environment.

PARAMESWARAN (*Classification and Indexing: Impact of Classification Theory on PRECIS*) reviews the PRECIS system and finds that "it could not escape from the impact of the theory of classification" (p. 131). The author further argues that the purpose of classification and subject indexing is the same and that both approaches depends on syntax. This leads to the conclusion that "there is an absolute syntax as the Indian theory of classification points out" (p. 131).

SATYAPAL and SANJIVINI SATYAPAL (*Classifying Documents According to Postulational Approach: 1. SATSAN – A Computer Based Learning Package*) and SATYAPAL and SANJIVINI SATYAPAL (*Classifying Documents According to Postulational Approach: 2. Semi-Automatic Synthesis of CC Numbers*) present an application to automate classification using a facet classification system, in this case, the Colon Classification system.

GAIKAIWARI (*An Interactive Application for Faceted Classification Systems*) presents an application, called SRR, for managing and using a faceted classification scheme in a digital environment.

IYER (*Use of Instructional Technology to Support Traditional Classroom Learning: A Case Study*) describes a course on "Information and Knowledge Organization" that she teaches at the University at Albany (SUNY). The course is a conceptual course that introduces the student to various aspects of knowledge organization.

GOPINATH (*Universal Classification: How can it be used?*) lists fifteen uses of universal classifications and discusses the entities of a number of disciplines.

GOPINATH (*Knowledge Classification: The Theory of Classification*) briefly reviews the foundations for research in automatic classification, summarizes the history of classification, and places Ranganathan's thought in the history of classification.

Discussion

The proceedings of the *National Seminar on Classification in the Digital Environment* give some insights. However, the depth of analysis and discussion is very uneven across the papers. Some of the papers have substantive research content while others appear to be notes used in the oral presentation. The treatments of the topics are very general in nature. Some papers have a very limited list of references while others have no bibliography. No index has been provided.

The transfer of bibliographic knowledge organization theory to the digital environment is an important topic. However, as the papers at this conference have shown, it is also a difficult task. Of the 18 papers presented at this seminar on classification in the digital environment, only 4-5 papers actually deal directly with this important topic. The remaining papers deal with issues that are more or less relevant to classification in the digital environment without explicitly discussing the relation. The reason could be that the authors take up issues in knowledge organization that still need to be investigated and clarified before their application in the digital environment can be considered.

Nonetheless, one wishes that the knowledge organization community would discuss the application of classification theory in the digital environment in greater detail. It is obvious from the comparisons of the classificatory structures of bibliographic classification systems and Web directories that these are different and that they probably should be different, since they serve different purposes. Interesting questions in the transformation of bibliographic classification theories to the digital environment are: "Given the existing principles in bibliographic knowledge organization, what are the optimum principles for organization of information, irrespectively of context?" and "What are the fundamental theoretical and practical principles for the construction of Web directories?" Unfortunately, the papers presented at this seminar do not attempt to answer or discuss these questions.

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HARAVU, L. J. **Lectures on Knowledge Management: Paradigms, Challenges and Opportunities**. Bangalore, India : Sarada Ranganathan Endowment for Library Science, 2002. 204 p. ISBN 81-900957-5-7 (pb).

This work is a collection of lecture notes following the 22nd Sarada Ranganathan Endowment Lectures which took place in Bangalore, India, from 4-6 December 2000. This compilation has been divided into four sections: historical introduction, compilation of several definitions about knowledge and its management, impacts of knowledge management (KM) on information professionals and, review of information technologies as tools for knowledge management. The aim of this book is to provide "a succinct overview of various aspects of knowledge management, particularly in companies" (p. *v*).

Each chapter focuses on a dominant text in a specific area. Most of the quoted authors are known consultants in KM. Each chapter is similarly handled: a review of a dominant book, some subject matter from a few other consultants and, last but not least, comments on a few broadly cited cases. Each chapter is uneven with regards to the level of detail provided, and ending summaries, which would have been useful, are missing.

The book is structured in two parts containing five chapters each. The first part is theoretical, the second deals with knowledge workers and technologies. Haravu begins the first chapter with a historical overview of information and knowledge management (IKM) essentially based on the review previously made by Drucker (1999). Haravu emphasises the major facts and events of the discipline from the industrial revolution up to the advent of the knowledge economy. On the whole, this book is largely technology-oriented.

The lecturer presents micro-economic factors contributing to the economic perspective of knowledge management, focusing on the existing explicit knowledge. This is Haravu's prevailing perspective. He then offers a compilation of definitions from Allee (1997) and Sveiby (1997), both known for their contribution in the area of knowledge evaluation. As many others, Haravu confirms his assumption regarding the distinction between information and knowledge, and the knowledge categories: explicit and tacit, both actions oriented and supported by rules (p. 43). The SECI model (Nonaka & Takeuchi, 1995), also known as "knowledge conversion spiral" is described briefly, and the theoretically relational dimension between individual and collectivities is explained. Three SECI