



# KNOWLEDGE ORGANIZATION

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Integration of an Analogical Reasoning Model  
in a Model of Case Resolution

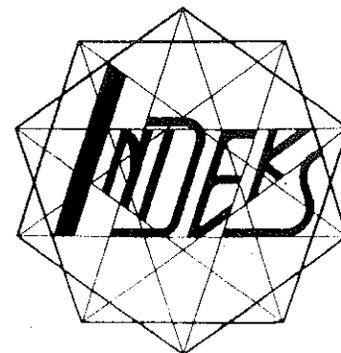
TAMBALACOQUE: For a Formal  
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Onomastics and Terminology, Part II: Core Concepts

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## **Knowledge Organization and Change**

**Proceedings of the Fourth Conference of the  
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**Edited by Rebecca Green**

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The volume contains the 48 papers presented and discussed at the conference. They are preceded by the keynote address of **Roland Hjerppe** entitled: *Gone with the flow, or abide by the side, or watch the Waves? Challenges of Change in Knowledge Organization.*

The papers are concluded by **Francis Miksa's** „The DDC, The Universe of Knowledge, and the Post-Modern Library“, a Lecture presented at the occasion of the 120 years' anniversary of the DDC, just before the beginning of the Conference.

The **papers** are arranged under the following headings: Library of Congress Classification - Knowledge Organization in Cross-Cultural and Cross-Linguistic Settings - The Role of Relationships in Knowledge Organization - Knowledge Organization in the Online Environment - Management of Change in Knowledge Organization Schemes - Thesauri and Metathesauri - Knowledge Organization and Images - Knowledge Organization in the Business and Economic Environment - User Focus in Knowledge Organization - Interdisciplinary Approaches to Knowledge Organization - Interplay of Epistemology and Knowledge Organization - Natural Language Processing - Dewey Decimal Classification. There is a list of **Contributors** as well as an extended **Name and Subject Index**.

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### Araj, H.: **Integration of an analogical reasoning model in a model of case resolution.**

Knowl. Org. 23(1996)No.3, p.130-134, 7 refs.

The resolution of cases in law depends on the generation of metaphors by analogy. It progresses by association, affinity and juxtaposition of two divergent ideas in an integrative approach. To argue a case, a legal expert cannot limit himself to the perception of isolated facts, but instead must find affinities between fields expressing more cohesion in law. In this paper, it is argued that the legal specialist relies on abstract categorization to discover a precedent and thereby create a metaphorical link that serves in the argumentation stage, and also later on in the resolution of the case. On this basis, a model of case reasoning is charted that integrates a model of analogical reasoning. In the same manner, a model of analogical reasoning is designed that combines quality induction and deduction. Furthermore, it is advocated that a rich representation of a law category is required to make a good induction. Similarly, it is specified that quality induction should be constrained by abstract rules in order to preserve legal principles and compute profound similarity between cases to discover the precedent. A better grasp of analogy can help us to improve legal information retrieval as well as legal case-based reasoning. (Author)

### Riggs, F.W.: **Onomastics and Terminology. Pt.II: Core Concepts**

Knowl.Org. 23(1996)No.3, p.157-168, 28 refs.

In both Onomastics and Terminology there are about a half-dozen core concepts which overlap but do not coincide with each other. They include what is called representation, description, cue, tag and notation in Onomastics and, in Terminology, definition, designation, term, symbol and name. A lexicographer writing a synonymy for such words might compare their meanings to show how they resemble or differ from each other, using a Semantic (words-to-meanings) point of view. To compare concepts (not words) in an Onomastic (Ana-Semantic, or concept-to-tag) context, one needs to compare the descriptions (definitions) of each concept to see whether they, indeed, have the same or different essential characteristics. One also needs to compare the notations that situate each concept in a system — even if the definitions of two concepts are almost the same, one might discover that because two concepts are positioned differently in their respective classification schemes, they are conceptualized differently. Finally, the concept tags (terms) used to represent each concept can also be compared semantically, i.e. to see whether their connotations and additional meanings support or hamper the unambiguous recognition of each intended concept. After an introductory display of the two sets of concepts, each of those used in Terminology is compared systematically, using all three sets of comparisons, with the nearest equivalent concepts used in Onomastics. (Author)

### Heinrichs, J.: **Language theory for the computer: Mono-dimensional semantics or multi-dimensional semiotics?**

Knowl.Org. 23(1996)No.3, p.147-156, 10 refs.

Computer linguistics continues to be in need of an integrative language-theory model. Maria Theresia Rolland proposes such a model in her book „Sprachverarbeitung durch Logotechnik“ (1994). Relying upon the language theory of Leo Weisgerber, she pursues a pure „content oriented“ approach, by which she understands an approach in terms of the semantics of words. Starting from the „implications“ of word-contents, she attempts to construct a complete grammar of the German language. The reviewer begins his comments with an immanent critique, calling attention to a number of serious contradictions in Rolland’s concept, among them, her refusal to take syntax into account despite its undeniably real presence. In the second part of his comments, the reviewer then takes up his own semiotic language theory published in 1981, showing that semantics is but one of four semiotic dimensions of language, the other dimensions being the signmatic, the pragmatic and the syntactic. Without taking all four dimensions into account, no theory can offer an adequate integrative language model. Indeed, without all four dimensions, one cannot even develop an adequate grammar of German sentence construction. The fourfold semiotic model discloses as well the universally valid structures of language as the intersubjective expression of human self-awareness. Only on the basis of these universal structures, it is argued, is it possible to identify the specific structures of a native-language, and that on all four levels. This position has important consequences for the problems of computer translation and the comparative study and use of languages. (Author)

### Nissan, E., Shimony, S.E.: **Tambalocoque: for a formal account of the gist of a scholarly argument.**

Knowl.Org. 23(1996)No.3, p.135-146, 84 refs.

Argumentation as reflected in a short communication from the published literature of botany and zoology is discussed. Trying to capture the logic structure of the argument, however imperfectly, is of interest to information science depending on a particular goal: namely, to potentially benefit the task of sketching the relation between bibliographic entries somewhat better than present-day bibliometric or scientometric practice does. This imposes tight limits on the depth of the analysis of the text. Even that way, the project of formalizing the analyzed paper’s argument is ambitious. (Authors)

## Scope

The more scientific data are generated in the impetuous present times, the more ordering energy needs to be expended to control these data in a retrievable fashion. With the abundance of knowledge now available the questions of new solutions to the ordering problem and thus of improved classification systems, methods and procedures have acquired unforeseen significance. For many years now they have been in the focus of interest of information scientists the world over. Until recently, the special literature relevant to classification was published in piecemeal fashion, scattered over the numerous technical journals serving the experts of the various fields, such as

philosophy and science of science  
 science policy and science organization  
 mathematics, statistics, and computer science  
 library and information science  
 archivistics and museology  
 journalism and communication science  
 industrial products and commodity science  
 terminology, lexicography and linguistics

Beginning 1974, KNOWLEDGE ORGANIZATION (formerly INTERNATIONAL CLASSIFICATION) has been serving as a common platform for the discussion of both theoretical background questions and practical application problems in many areas of concern. In each issue experts from many countries comment on questions of an adequate structuring and construction of ordering systems and on the problems of their use in opening the information contents of new literature, of data collections and survey, of tabular works and of other objects of scientific interest. Their contributions have been concerned with

- (1) clarifying the theoretical foundations (general ordering theory, science theoretical bases of classification, data analysis and reduction)
- (2) describing practical operations connected with numerical taxonomy/classification, as well as applications of classification systems and thesauri, manual and machine indexing
- (3) tracing the history of classification knowledge and methodology
- (4) discussing questions of education and training in classification
- (5) concerning themselves with the problems of terminology in general and with respect to special fields.

## Instructions for Authors

*Manuscripts* may be submitted in either English, German or French to the editor-in-chief in two sets (the original and one copy) typed in double space, comprising between 1500 to 3000 words. They should be accompanied by an English indicative abstract of 100-200 words. The contributions are refereed.

*Criteria for acceptance* will be appropriateness to the field of the journal (see Scope and Aims) taking into account the merit of the content and its presentation. Papers are accepted with the understanding that they have not been published, submitted or accepted for publication elsewhere and that, if the work received official sponsorship, it has been duly released for publication. Authors will usually be notified within 6 to 10 weeks. Unless specifically requested, manuscripts or illustrations will not be returned.

*The text of the contributions* should be structured by subheadings; it should contain (a) an introduction, stating the purpose, (b) a description of materials and methods in sufficient detail, (c) information on results or systems developed, and (d) a conclusion on and/or summarization.

*References* should be listed at the end of the paper with the numbers in brackets referring to such numbers in brackets within the text part.

*Additional notes* should be indicated in the text by lifted single numbers behind a word and equally collected with their texts at the end of the paper under the heading *Notes*.

*Journal References* should contain the names and initials of all authors, full titles of the publication, abbreviation of the journal according to the ISO Standard 4, volume number, year of

## Aims

Thus, KNOWLEDGE ORGANIZATION is meant to be a programme for the improvement of classification methods and processes, a forum for discussion for all those interested in the organization of knowledge on a universal or a subject-field scale, using concept analytical and/or concept-synthetic approaches as well as numerical procedures and comprising also the intellectual and automatic compilation and use of classification systems and thesauri in all fields of knowledge, with special attention being given to the problems of terminology.

KNOWLEDGE ORGANIZATION publishes original articles, reports on conferences and similar communications, the Newsletters of the International Society for Knowledge Organization (ISKO News) and the Committee on Classification Research of the International Federation for Information and Documentation (FID/CR News) as well as book reviews, letters to the editor, and an extensive annotated bibliography of recent classification and indexing literature, covering now some 500 items in each issue.

KNOWLEDGE ORGANIZATION should therefore be available at every university and research library of every country, at every information center, at colleges and schools of library and information science, in the hands of everybody interested in the fields mentioned above and thus also at every office for updating information on any topic related to the problems of order in our information-flooded times.

KNOWLEDGE ORGANIZATION was founded in 1973 by an international group of scholars with a consulting board of editors representing the world's regions, the special classification fields, and the subject areas involved. From 1974-1980 IC was published by K. G. Saur Verlag, München. Back issues of 1978-1992 are available from INDEKS Verlag, too. (The 14 volumes of 1978-1992 are offered now at the highly reduced price of DM 200.-).

As of 1989, KNOWLEDGE ORGANIZATION has become the official organ of the INTERNATIONAL SOCIETY FOR KNOWLEDGE ORGANIZATION (ISKO) and is included for every ISKO-member, personal or institutional in the membership fee (DM 60.-/DM 120.-).

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Hunter, E.J.: Classification made simple. Aldershot, GB: Gower 1988. 115p.

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