



# KNOWLEDGE ORGANIZATION

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formerly

INTERNATIONAL JOURNAL  
Devoted to Concept Theory,  
Classification, Indexing,  
and Knowledge Representation

On Some Contributions of the  
Cognitive Sciences and Epistemology  
to a Theory of Classification

Subject Authority Control in a Union  
Catalogue: Perspectives for a National  
Cooperative Project in Portugal

The SUM of Science: The Taxonomy  
and Methodology of Sociophysics

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## KNOWLEDGE ORGANIZATION

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## Contents page

Vol.20(1993)No.3

Garcia Marco, F.J., Esteban Navarro, M.A.: **On some contributions of the cognitive sciences and epistemology to a theory of classification.**

Knowl.Org. 20(1993)No.3, p.126-132, 22 refs.

Intended is first of all a preliminary review of the implications that the new approaches to the theory of classification, mainly from Cognitive Psychology and Epistemology may have for information work and research. As a secondary topic the scientific relations existing among Information Science, Epistemology, and the Cognitive Sciences are discussed. Classification is seen as a central activity in all daily and scientific activities, and, of course, of knowledge organization in information services. There is a mutual implication between classification and conceptualization, as the former moves in a natural way to the latter and the best result elaborated for classification is the concept. Research in concept theory is a need for a Theory of Classification. In this direction it is of outstanding importance to integrate the achievements of 'natural concept formation theory' (NCFT) as an alternative approach to conceptualization different from the traditional one of logicians and problem solving researchers. In conclusion both approaches are seen as being complementary: the NCFT approach being closer to the user and the logical one being more suitable for experts, including 'expert systems'.

(Authors)

Arnopoulos, P.: **A SUM of science: The taxonomy and methodology of sociophysics**

Knowl.Org. 20(1993)No.3, p.139-149, 80 refs.

Attempt to order the main parameters of scientific theory into a coherent taxonomy. To that end, a System Unification Model (SUM) is constructed which serves as a formal frame classifying the salient structures and functions of empirical existence. The terse presentation should give a synopsis of the scope and method of knowledge organization applicable in a global scale.

The methodology used is based on a Triadic Interface Paradigm which combines dialectic and syllogic algorithms to arrive at synthetic conclusions of general application. This holistic perspective situates the static and dynamic contents of matter, energy and information systems in their space-time context. Finally, these dimensions are manipulated by formal operational codes to produce systemic and systematic knowledge.

The Model has been used to demonstrate a new Theory of Sociophysics which integrates the basic principles of social and natural sciences into an all-inclusive conceptual framework. Sociophysics assumes the fundamental isomorphism of nature and culture, thereby projecting heuristic metaphors between them. As a result, it contributes in enhancing, understanding and appreciating the global picture of human reality. (Author)

Lopes, M.I.: **Subject authority control in a union catalogue: perspectives for a national co-operative project in Portugal**

Knowl.Org. 20(1993)No.3, p.133-138, 7 refs.

In 1989, the existence of an online union catalogue, the National Bibliographic Database - PORBASE, raised the urgent need for mechanisms of co-operation in the field of subject authority control. A national co-operative project called CLIP (Compatibilizacao de Linguagens de Indexacao em Portugues) was launched. With CLIP special libraries will assume responsibility for the final content of the authority file with respect to terminology for subject access in different subject areas. Reference is made to the general situation in Portuguese libraries with respect to the availability and application of subject indexing tools, and also to the work being carried out towards standardization and harmonization of procedures in such matters. (Author)

Grinev, S.V.: **Terminological research in the former USSR.**

Knowl.Org. 20(1993)No.3, p.150-159, 10 refs.

Outlines in short the history of terminology in the former USSR from the thirties to the nineties and draws a picture of terminological research activities using statistics of terminology dissertations in chronological order (by five and ten year cumulations) with regard to their correspondence to scientific and technical disciplines/subject areas, languages and fields of terminology science itself with an analysis of the latter's findings. Concludingly seven proposals for the development of a theory of terminology are made stressing the need for the establishment of regional research centers and co-ordination of activities.

(K.O.)

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## 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.

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*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

## 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 (FIID/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 1978-1990 are available from INDEKS Verlag, too. (The 14 volumes of 1978-1991 are offered now at the highly reduced price of DM 400.-).

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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Knowl. Org. 20(1993)No. 1, p. 12-19, 11 refs.

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

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