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# KNOWLEDGE ORGANIZATION

# KO

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Founded under the title *International Classification* in 1974 by Dr. Ingetraut Dahlberg, the founding president of ISKO. Dr. Dahlberg served as the journal's editor from 1974 to 1997, and as its publisher (Indeks Verlag of Frankfurt) from 1981 to 1997.

## Contents pages

Tennis, Joseph T. **Three Creative Tensions in Document Interpretation Theory Set as Evidence of the Need for a Descriptive Informatics.** *Knowledge Organization*, 36(4), 190-199. 28 references.

**ABSTRACT:** Describes three tensions in the theoretical literature of indexing: chief sources of evidence indexing, process of indexing (rubrics and methods), and philosophical position of indexing scholarship. Following this exposition, we argue for a change in perspective in Knowledge Organization research. Using the difference between prescriptive and descriptive linguistics as a metaphor, we advocate for a shift to a more descriptive, rather than the customary prescriptive, approach to the theoretical and empirical study of indexing, and by extension Knowledge Organization.

Ménard, Elaine. **Image Retrieval: A Comparative Study on the Influence of Indexing Vocabularies.** *Knowledge Organization*, 36(4), 200-213. 80 references.

**ABSTRACT:** This paper reports on a research project that compared two different approaches for the indexing of ordinary images representing common objects: traditional indexing with controlled vocabulary and free indexing with uncontrolled vocabulary. We also compared image retrieval within two contexts: a monolingual context where the language of the query is the same as the indexing language and, secondly, a multilingual context where the language of the query is different from the indexing language. As a means of comparison in evaluating the performance of each indexing form, a simulation of the retrieval process involving 30 images was performed with 60 participants. A questionnaire was also submitted to participants in order to gather information with regard to the retrieval process and performance. The results of the retrieval simulation confirm that the retrieval is more effective and more satisfactory for the searcher when the images are indexed with the approach combining the controlled and uncontrolled vocabularies. The results also indicate that the indexing approach with controlled vocabulary is more efficient (queries needed to retrieve an image) than the uncontrolled vocabulary indexing approach. However, no significant differences in terms of temporal efficiency (time required to retrieve an image) was observed. Finally, the comparison of

the two linguistic contexts reveal that the retrieval is more effective and more efficient (queries needed to retrieve an image) in the monolingual context rather than the multilingual context. Furthermore, image searchers are more satisfied when the retrieval is done in a monolingual context rather than a multilingual context.

Van den Heuvel, Charles. **Web 2.0 and the Semantic Web in Research from a Historical Perspective: The Designs of Paul Otlet (1868-1944) for Telecommunication and Machine Readable Documentation to Organize Research and Society.** *Knowledge Organization*, 36(4), 214-226. 29 references.

**ABSTRACT:** Tim Berners-Lee described in *Weaving the Web* his future vision of the World Wide Web in two parts. In the first one, nowadays called Web 2.0, people collaborate and enrich data together in a shared information space. In the second part, exchanges extend to computers, resulting in a “Semantic Web” (Berners-Lee 2000a, 157). Most historical studies of World Wide Web begin with the American roots of the Internet in ARPANET or follow a historiographical line of post war information revolutionaries, from Vannevar Bush to Tim Berners-Lee. This paper follows an alternative line. At the end of the nineteenth and in the first decades of the twentieth century various European scholars, like Patrick Geddes, Paul Otlet, Otto Neurath, and Wilhelm Ostwald explored the organisation, enrichment and dissemination of knowledge on a global level to come to a peaceful, universal society. We focus on Paul Otlet (1868-1944) who developed a knowledge infrastructure to update information mechanically and manually in laboratories of scholars. First the *Understanding Infrastructure* (2007) report, that Paul N. Edwards et al. wrote on behalf of NSF, will be used to position Otlet’s knowledge organization in their sketched development from information systems to information internetworks or webs. Secondly, the relevance of Otlet’s knowledge infrastructure will be assessed for Web 2.0 and Semantic Web applications for research. The hypothesis will be put forward that the instruments and protocols envisioned by Otlet to enhance collaborative knowledge production, can still be relevant for current conceptualizations of “scientific authority” in data sharing and annotation in Web 2.0 applications and the modeling of the Semantic Web.

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Xu, Yang and Bernard, Alain. **Knowledge Organization Through Statistical Computation: A New Approach.** *Knowledge Organization*, 36(4), 227-239. 30 references.

**ABSTRACT:** Knowledge organization (KO) is an interdisciplinary issue which includes some problems in knowledge classification such as how to classify newly emerged knowledge. With the great complexity and ambiguity of knowledge, it is becoming sometimes inefficient to classify knowledge by logical reasoning. This paper attempts to propose a statistical approach to knowledge organization in order to resolve the problems in classifying complex and mass knowledge. By integrating the classification process into a mathematical model, a knowledge classifier, based on the maximum entropy theory, is constructed and the experimental results show that the classification results acquired from the classifier are reliable. The approach proposed in this paper is quite formal and is not dependent on specific contexts, so it could easily be adapted to the use of knowledge classification in other domains within KO.

Keilty, P. **Tabulating Queer: Space, Perversion, and Belonging.** *Knowledge Organization*, 36(4), 240-248. 21 references.

**ABSTRACT:** Considering fields as diverse as the history of science, Internet studies, border studies, and coalition politics, the article gives an historical overview of how the knowledge around queer phenomena has been structured, tabulated, and specialized: the hazards, coercive and pro-

ductive qualities, as well as queer's paradoxical relationship as both resistant to and reliant on categories, classification, and knowledge structures. In the process, the article also considers the development of Western hierarchical knowledge structures in relation to societal power dynamics, proximity, and space.

Bernstein, Jay H. **Nonknowledge: The Bibliographical Organization of Ignorance, Stupidity, Error, and Unreason: Part Two.** *Knowledge Organization*, 36(4), 249-260. 46 references.

**ABSTRACT:** Starting with the Data-Information-Knowledge-Wisdom paradigm in information science, it is possible to derive a model of the opposite of knowledge having hierarchical qualities. A range of counterpoints to concepts in the knowledge hierarchy can be identified and ascribed the overall term "nonknowledge." This model creates a conceptual framework for understanding the connections between topics such as error, ignorance, stupidity, folly, popular misconceptions, and unreason, by locating them as levels or phases of nonknowledge. The concept of nonknowledge links heretofore disconnected discourses on these individual topics by philosophers, psychologists, historians, sociologists, satirists, and others. Subject headings provide access to the categories of nonknowledge, but confusion remains due to the general failure of cataloging and classification to differentiate between works about nonknowledge and examples of nonknowledge.