
KO

KNOWLEDGE ORGANIZATION

Official Quarterly Journal of the International Society for Knowledge Organization

ISSN 0943 – 7444

International Journal devoted to Concept Theory, Classification, Indexing and Knowledge Representation

Contents

Preface to Special Issue

“What is Knowledge Organization”

Guest Editors:

Ia C. McIlwaine and Joan S. Mitchell..... 79

Feature

Interview with Ingetraut Dahlberg

December 2007..... 82

Articles

Birger Hjørland.

What is Knowledge Organization (KO)?..... 86

Joseph T. Tennis.

Epistemology, Theory, and Methodology
in Knowledge Organization:

Toward a Classification, Metatheory,

and Research Framework..... 102

María J. López-Huertas.

Some Current Research Questions

in the Field of Knowledge Organization113

Claudio Gnoli.

Ten Long-Term Research Questions

in Knowledge Organization137

Rebecca Green.

Relationships in Knowledge Organization.....150

Marcia Lei Zeng.

Knowledge Organization Systems (KOS).....160

Contents pages

Hjørland, Birger. **What is Knowledge Organization (KO)?** *Knowledge Organization*, 35(2/3), 86-101. 45 references.

ABSTRACT: Knowledge Organization (KO) is about activities such as document description, indexing and classification performed in libraries, databases, archives etc. These activities are done by librarians, archivists, subject specialists *as well as by computer algorithms*. KO as a field of study is concerned with the nature and quality of such knowledge organizing processes (KOP) as well as the knowledge organizing systems (KOS) used to organize documents, document representations and concepts. There exist different historical and theoretical approaches to and theories about KO, which are related to different views of knowledge, cognition, language, and social organization. Each of these approaches tends to answer the question: "What is knowledge organization?" differently. LIS professionals have often concentrated on applying new technology and standards, and may not have seen their work as involving interpretation and analysis of meaning. That is why library classification has been criticized for a lack of substantive intellectual content. Traditional human-based activities are increasingly challenged by computer-based retrieval techniques. It is appropriate to investigate the relative contributions of different approaches; the current challenges make it imperative to reconsider this understanding. This paper offers an understanding of KO based on an explicit theory of knowledge.

Tennis, Joseph T. **Epistemology, Theory, and Methodology in Knowledge Organization: Toward a Classification, Metatheory, and Research Framework.** *Knowledge Organization*, 35(2/3), 102-112. 55 references.

Abstract: This paper proposes a preliminary classification of knowledge organization research, divided among epistemology, theory, and methodology plus three spheres of research: design, study, and critique. This work is situated in a metatheoretical framework, drawn from sociological thought. Example works are presented along with preliminary classification. The classification is then briefly described as a comparison tool which can be used to demonstrate overlap and divergence in cognate discourses of knowledge organization (such as ontology engineering).

López-Huertas, María J. **Some Current Research Questions in the Field of Knowledge Organization.** *Knowledge Organization*, 35(2/3), 113-136. 151 references.

Abstract: The research dynamics of knowledge organization (KO) show a tendency towards the reformulation of previous questions in the new technology-driven and interdisciplinary context of KO. Current research questions in KO are dominated by a noteworthy interest in quality, related not only to the informational contents recorded in knowledge organization systems (KOS) but also to technical and technological considerations. The integration of knowledge would seem to constitute a quality indicator present in most proposals, and it also responds to the need for KOS with frameworks comprehensible for all user sectors, respecting the diversity of users. The flip side of knowledge integration entails the conjugation of technical, formal and technological aspects, well represented by the word *interoperability*, or the search for a way to simplify and harmonize the great variety of structures and formats that coexist in the Internet. This paper addresses the aforementioned major research concerns expressed in the last decade of KO literature. It is structured into two broad sections: 1) *A demand for quality*, touching on research questions related to multilingualism, cross-culturalism, social groups, minorities and ethics, as well as the integration of structures, forms and formats and the respective proposals by scholars; and 2) *A demand for managing emergent knowledge in KOS*, with a discussion of how to represent and organize work-oriented and organizational knowledge domains, where multidimensional knowledge (multi-, inter- and trans-disciplinarity) is addressed together with the responses put forth by various researchers.

Gnoli, Claudio. **Ten Long-Term Research Questions in Knowledge Organization.** *Knowledge Organization*, 35(2/3), 137-149. 67 references.

Abstract: Research can benefit by periodical consideration of its status in a long-term perspective. In knowledge organization (KO), a number of basic questions remain to be addressed in the 21st century. Ten of them are identified and synthetically discussed: (1) Can KO principles be extended to a broader scope, including hypertexts, multimedia, museum objects, and monuments? (2) Can the two basic approaches, ontological and epistemological, be reconciled? (3) Can any ontological foundation of KO be

identified? (4) Should disciplines continue to be the structural base of KO? (5) How can viewpoint warrant be respected? (6) How can KO be adapted to local collection needs? (7) How can KO deal with changes in knowledge? (8) How can KO systems represent all the dimensions listed above? (9) How can software and formats be improved to better serve these needs? (10) Who should do KO: information professionals, authors or readers?

Green, Rebecca. **Relationships in Knowledge Organization**. *Knowledge Organization*, 35(2/3), 150-159. 37 references.

ABSTRACT: Relationships that interconnect entity classes of import to knowledge organization (knowledge, documents, concepts, beings, information needs, language) include both non-subject bibliographic relationships (document-to-document relationships, responsibility relationships) and conceptual content relationships (subject relationships, relevance relationships). While the MARC format allows the recording of most bibliographic relationships, many of them are not expressed systematically. Conceptual content relationships include, in turn, interconcept and intraconcept relationships. The expression of interconcept relationships is covered by standard thesaural relationships, which typically do not distinguish fully between the underlying lexical relationship types. The full expression of complex intraconcept relationships includes indication of the basic nature of the relationship (including a set of semantic roles), the set of entities that participate in the relationship, and a mapping between participants and semantic roles. Knowledge organization schemes seldom express these relationships fully.

Zeng, Marcia Lei. **Knowledge Organization Systems (KOS)**. *Knowledge Organization*, 35(2/3), 160-182. 39 references.

ABSTRACT: Knowledge organization systems (KOS) can be described based on their structures (from flat to multi-dimensional) and main functions. The latter include eliminating ambiguity, controlling synonyms or equivalents, establishing explicit semantic relationships such as hierarchical and associative relationships, and presenting both relationships and properties of concepts in the knowledge models. Examples of KOS include lists, authority files, gazetteers, synonym rings, taxonomies and classification schemes, thesauri, and ontologies. These systems model

the underlying semantic structure of a domain and provide semantics, navigation, and translation through labels, definitions, typing, relationships, and properties for concepts. The term knowledge organization systems (KOS) is intended to encompass all types of schemes for organizing information and promoting knowledge management, such as classification schemes, gazetteers, lexical databases, taxonomies, thesauri, and ontologies (Hodge 2000). These systems model the underlying semantic structure of a domain and provide semantics, navigation, and translation through labels, definitions, typing, relationships, and properties for concepts (Hill et al. 2002, Koch and Tudhope 2004). Embodied as (Web) services, they facilitate resource discovery and retrieval by acting as semantic road maps, thereby making possible a common orientation for indexers and future users, either human or machine (Koch and Tudhope 2003, 2004).