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## Contents pages

Piñeiro, Carla López and Toledo, Elea Giménez. **Knowledge Classification: A Problem for Scientific Assessment in Spain?** *Knowledge Organization*, 38(5), 367-380. 36 references.

**ABSTRACT:** Agreements and disagreements among some of the most important knowledge classifications involved in Spanish scientific activity assessment are presented here. Knowledge classifications used by two Spanish platforms for journals evaluation, RESH and In-RECS/In-RECJ; the one used by Web of Knowledge; and those used by the three main agencies working on scientific evaluation in Spain, ANECA, ANEP, and CNEAI are compared and analysed in order to check the differences between them. Four disciplines were traced across these knowledge classifications, and none of them tally with others. This state favours failures in the assessment system, especially in those disciplines whose position on classifications seems to be less clear. In this paper, the need for a rapprochement to the subject exposed is expressed. The opening of a debate is offered, with the aim of stimulating the improvement of the whole system, especially in Humanities and Social Sciences fields.

McTavish, Jill R., Neal, Diane Rasmussen and Wathen, C. Nadine. **Is What You See What You Get? Medical Subject Headings and their Organizing Work in the Violence Against Women Research Literature.** *Knowledge Organization*, 38(5), 381-397. 76 references.

**ABSTRACT:** In this paper we argue that the broader definition of classification offered by sociologists and by Geoffrey Bowker and Susan Leigh Star addresses pertinent knowledge organization processes that we can use to investigate the moral, scientific, and aesthetic implications of different kinds of knowledge organization systems. We do so by systematically investigating the organization of the violence against women research literature by medical, allied health, and social sciences bibliographic databases and in particular by the National Library of Medicine's *Medical Subject Headings (MeSH)*. Our findings indicate that underlying these knowledge organization systems are certain discourses on violence against women that may reinforce a gender-neutral understanding of violence.

Anizi, Mouna and Dichy, Joseph. **Improving Information Retrieval in Arabic through a Multi-agent Approach and a Rich Lexical Resource.** *Knowledge Organization*, 38(5), 405-413. 18 references.

**ABSTRACT:** This paper addresses the optimization of information retrieval in Arabic. The results derived from the expanding development of sites in Arabic are often spectacular. Nevertheless, several observations indicate that the responses remain disappointing, particularly upon comparing users' requests and quality of responses. One of the problems encountered by users is the loss of time when navigating between different URLs to find adequate responses. This, in many cases, is due to the absence of forms morphologically related to the research keyword. Such problems can be approached through a morphological analyzer drawing on the DIINAR.1 morpho-lexical resource. A second problem concerns the formulation of the query, which may prove ambiguous, as in everyday language. We then focus on contextual disambiguation based on a rich lexical resource that includes collocations and set expressions. The overall scheme of such a resource will only be hinted at here. Our approach leads to the elaboration of a multi-agent system, motivated by a need to solve problems encountered when using conventional methods of analysis, and to improve the results of queries thanks to a better collaboration between different levels of analysis. We suggest resorting to four agents: morphological, morpho-lexical, contextualization, and an interface agent. These agents 'negotiate' and 'cooperate' throughout the analysis process, starting from the submission of the initial query, and going on until an adequate query is obtained.

Bernaoui, Radia and Hassoun, Mohamed. **Knowledge Awareness and Standards in Agricultural Research in Algeria: Prerequisites for a National Information System of High Added Value.** *Knowledge Organization*, 38(5), 414-424. 17 references.

**ABSTRACT:** This paper gives a review of a survey in 2008 on Algerian scientists specialized in agronomic, veterinary and biological sciences, in order to analyze their information behavior and beliefs to evaluate the importance of shared knowledge standards and values. Algeria strongly suffers from insufficient agricultural production and needs to fit into this logic and to use its search results as source of

innovation and performance in its current strategy of reducing its food expenditures. However, one of its limitations consists in the lack of tools to foster the capitalization and enhancement of its scientific output. The answer is to propose an information model that considers all connections between actors involved in research as well as those in development. The collected data reveal an essential need for the creation of a convenient framework for the evaluation and sharing of knowledge as a collective good. It is aimed at the creation of an information system with high added value (National Observatory of the Agronomic Research), including a uniform thesaurus in the field specific to the agronomy for the national device of research.

Bouramoul, Abdelkrim. **The Semantic Dimension in Information Retrieval, from Document Indexing to Query Reformulation.** *Knowledge Organization*, 38(5), 425-437. 11 references.

**ABSTRACT:** In the context of this research, we present an approach for representing the semantic content of documents and guiding the automatic query reformulation using a domain ontology. The aim is to improve the performance of information retrieval systems. In order to operationalize our proposal, the development of a set of external resources was needed, so we have constructed the 'AnimOnto' domain ontology relating to the animals domain and a document base that covers the same field. They were used to test and validate our proposal. Specifically, we propose in this paper a general architecture based on three complementary processes, this architecture uses the ontology during the semantic indexing stage and in the query reformulation phase. We also describe the 'AnimeSe Finder' tool (*Animal Semantic Finder*). The latter has the advantage of being generic and adaptable to other search types. It is possible to use another ontology with another document base for a new domain, to exploit the general functionalities offered by the 'AnimeSe Finder' tool.

Søilen, Klaus Solberg and Alipour, Philip Baback. **Semantics, Classifications and Evidence in a Model for Global Catastrophic Risks.** *Knowledge Organization*, 38(5), 438-454. 30 references.

**ABSTRACT:** Life on the surface of the Earth is fragile and can be deteriorated by outside influence, from nature, or inside influence, from humans. We present a macro perspective for the nation state as a knowledge discourse system. To detect what might happen, a surveillance model needs to classify emerging risks prior to occurrence. The state intelligence model presented here helps survey potential macro factors. During risk analysis, a set of risk classification criteria was devised for linking inside and outside influence trigger points that can indicate existential catastrophes. The analysis is based on a classification of current risks rather than distant future potential risks. Each is measured according to its respective impact, and whether or not it is highly probable to occur or recur in the surveillance system. The inside influence is found most probable with a probability of  $P \geq 0.4$  compared to outside influence with a probability of  $P \geq 0.28$ . The State Intelligence Surveillance Analysis Model presented here consists of an 8-by-8 risk matrix or, a 16 risk table with a computable 20.92 trillion risk combinations per second. The relationships between inside and outside influences have been studied and grouped into classification schemes, where it is imagined that one may trigger the other, and by chance, acting autonomously for any type of catastrophe. The current study gives more focus and awareness to classifiers and the problem of which surveillance components to detect, thereby improving simulations, being well aware that the exact calculations for catastrophes are impossible.