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**Special Issue: Selected Papers from the International
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Frické, Martin. 2017. "Faceted Classification, Analysis and Search: Some Questions on their Interrelations." *Knowledge Organization* 44(6): 387-396. 76 references.

Abstract: A description is provided of basic faceted classification, which involves combinations of foci across facets, where the foci within a facet are dependent (i.e., exclusive) and the foci across facets are independent (i.e., orthogonal). This is shown to be suitable for organizing the basic goods that Amazon, the online retailer, sells and for progressive filtering as a mode of search. However, on closer inspection, the Amazon case involves a sorted domain. This is problematic for basic faceted classification. Additionally, books from Amazon would typically carry subject classification, which also is difficult for basic faceted classification. It does not support filtering as a mode of search. Subject classification really requires relatively sophisticated linguistic and logical constructors and modifiers, such as adjectives, adverbs, functions, binary relations, and transitive verbs. These can be part of a synthetic subject classification scheme, but they pose a challenge for faceting.

Green, Rebecca. 2017. "Facet Analysis and Semantic Frames." *Knowledge Organization* 44(6): 397-404. 15 references.

Abstract: Various fields, each with its own theories, techniques, and tools, are concerned with identifying and representing the conceptual structure of specific knowledge domains. This paper compares facet analysis, an analytic technique coming out of knowledge organization (especially as undertaken by members of the Classification Research Group (CRG)), with semantic frame analysis, an analytic technique coming out of lexical semantics (especially as undertaken by the developers of FrameNet). The investigation addresses three questions: 1) how do CRG-style facet analysis and semantic frame analysis characterize the conceptual structures that they identify?; 2) how similar are the techniques they use?; and, 3) how similar are the conceptual structures they produce? Facet analysis is concerned with the logical categories underlying the terminology of an entire field, while semantic frame analysis is concerned with the participant-and-prop structure manifest in sentences about a type of situation or event. When their scope of application is similar, as, for example, in the areas of the performing arts or education, the resulting facets and semantic frame elements often bear striking resemblance, without being the same; facets are more often expressed as semantic types, while frame elements are more often expressed as roles.

Lee, Deborah. 2017. "Numbers, Instruments and Hands: The Impact of Faceted Analytical Theory on Classifying Music Ensembles." *Knowledge Organization* 44(6): 405-415. 22 references.

Abstract: This article considers a particularly knotty aspect of classifying notated music: the classification of instrumental ensembles, where the term ensembles is defined as music written for multiple players with only one player per part. Facet analysis is used to examine this area of music classification and as the basis of a model for classifying ensembles. The conceptual analysis is aided by examples drawn from two classification schemes: *British Catalogue of Music Classification (BCMC)* and *Flexible Classification*. First, this exploration reveals that there are conceptually four sub-facets for classifying instrument ensembles, and that the omission of any of these sub-facets causes issues within classification schemes. Next, the different type of relationships between pairs of these sub-facets is delineated, including hierarchical and associative relationships. The classification of ensembles is depicted in a novel way, as a series of inter-connected relationships between sub-facets. Finally, the article ascertains exactly what is being counted, including introducing potential extra sets of sub-facets pertaining to performers and hands. So, facet analysis helps to create a model for classifying instrumental ensembles which provides a novel solution to this historically problematic area of music classification, as well as suggesting a potentially generalizable new way of thinking about complex relationships between sub-facets.

Piros, Attila. 2017. "The Thought Behind the Symbol: About the Automatic Interpretation and Representation of UDC Numbers." *Knowledge Organization* 44(6): 416-424. 31 references.

Abstract: Analytico-synthetic and faceted classifications, such as Universal Decimal Classification (UDC) provide facilities to express pre-coordinated subject statements using syntactic relations. In this case, the relevance, in the process of UDC-based information retrieval, can be determined by extracting the meaning of the classmarks as precisely as is possible. The central question here is how the identification mentioned above can be supported by automatic means and an analysis of the structure of complex classmarks appears to be an obvious requirement. Many bibliographic sources contain complex UDC classmarks which are stored as simple text strings and on which it is very difficult to perform any meaningful information discovery. The paper presents results from a phase of ongoing research focused on developing a new platform-independent, machine-processable data format capable of representing the whole syntactic structure of the composite UDC numbers to support their further automatic processing. An algorithm that can produce the representation of the numbers in such a for-

mat directly from their designations has also been developed and implemented. The research also includes implementing conversion methods to provide outputs that can be employed by other software directly and, as a service, make them available for other software. The paper provides an overview of the solutions developed and implemented since 2015 and outlines future research plans.

Slavic, Aida and Sylvie Davies. 2017. "Facet Analysis in UDC: Questions of Structure, Functionality and Data Formality." *Knowledge Organization* 44(6): 425-435. 31 references.

Abstract: The paper will look into different patterns of facet analysis used in the UDC schedules and how these affect the scheme presentation, the underlying data structure and the management of the classification scheme. From the very beginning, UDC was designed to represent the universe of knowledge as an integral whole allowing for subjects/concepts from all fields of knowledge to be combined, linked and the nature of their relationships made explicit. In Otlet's original design, the emphasis for his new type of classification was on the coordination of classmarks at the point of searching, i.e., post-coordination, which he firmly rooted in an expressive notational

system. While some UDC classes exhibit various patterns of facet analytical theory proper, others, although used in an analytico-synthetic fashion, follow less canonical structural patterns. The authors highlight the lack of connection made throughout the various stages of UDC restructuring between: a) theoretical requirements of an overarching facet analytical theory as a founding principle guiding the construction of schedules; and, b) practical requirements for an analytico-synthetic classification in terms of notational presentation and data structure that enables its use in indexing and retrieval, as well as its management online.

Hjørland, Birger. 2017. "Domain Analysis." *Knowledge Organization* 44(6): 436-464. 151 references.

Abstract: The domain-analytic approach to knowledge organization (KO) (and to the broader field of library and information science, LIS) is outlined. The article reviews the discussions and proposals on the definition of domains, and provides an example of a domain-analytic study in the field of art studies. Varieties of domain analysis as well as criticism and controversies are presented and discussed.