Roger de Miranda Guedes, Maria Aparecida Moura

Semantic warrant, cultural hospitality and knowledge representation in multicultural contexts: experiments with the use of the EuroVoc and UNBIS thesauri

Abstract
Cultural warrant is an aspect of the principle of semantic warrant and recommends that knowledge organization systems (KOS) should be designed from the premises and concerns of a given culture. Although there is no consensus as to a better means of systematizing or apprehending cultural warrant, it is possible to identify certain traits in KOS that signal their readiness to give more sensitive consideration to cultural manifestations in information recognition. In this paper we have analyzed two terms, namely migration and terrorism, contained in two controlled vocabularies that are known to represent the multiculturalism of their user communities, the EuroVoc and the UNBIS thesauri. The study establishes that the conceptual relationships described by the abovementioned terms reveal coverage of user requirements and attention to the socio-cultural outlook of user communities. The perspectives of both cultural assurance and cultural hospitality were recognized as KO concepts that can account for (or justify) the semantic adjustments necessary to meet user needs in a multicultural context.

1. Introduction
Knowledge organization systems (KOS)\(^1\) are interpretations of fields of knowledge materialized in symbolic representations intelligible to human beings and machines. They influence how their users interact with information within the KOS itself and beyond. Considering the instruments that represent knowledge, such a statement evokes the complex relations of meaning and information established in the field of knowledge organization (KO).

Knowledge and language are entwined, since language is the symbolic shaping of knowledge in a communicative manner and because language is the instrument through which knowledge is conveyed. In the present paper, language is the starting point for discussion of theoretical and methodological elements underpinning KOS, situated within technological realities that demand semantic strength capable of providing for multicultural scenarios and contexts. In this way, the principle of semantic warrant comes into play – particularly one aspect of it, namely that of cultural warrant – reflecting upon meanings in documentation language set in information contexts that lead to the coexistence of multiple points of view and interactions with the same object of information or to a specific field of knowledge.

\(^1\) The term knowledge organization systems (KOS) covers all types of schemes, tools and devices that present the organized interpretation of knowledge structures. KOS include classification systems that organize materials at a general level (such as bibliographical classifications), subject headings and thesauri, which allow for more thorough access, and authority control schemes that regulate terminological variation. They also includes less traditional schemes such as semantic networks and ontologies (Hodge 2000; Zeng and Chan 2004).
To illustrate this, we conducted a brief analytical experiment on two well-known controlled vocabularies, namely the EuroVoc and UNBIS thesauri. As KOS, both are oriented towards broad information organization purposes and serve large, diverse user communities with strikingly multicultural natures, presenting challenges to the representation of significant aspects of the concepts relevant to these communities.

2. The Principle of semantic warrant and its perspectives

According to Campbell (2008), the concept of warrant in relation to library science has been a stepping stone towards the understanding and development of systems designed to represent knowledge, providing an intellectual basis for validation and inclusion of semantic entities in these systems. In the author's understanding, warrant articulation in KO is the combination of precepts for the deliberate construction of semantic consensus, using both formal and informal criteria.

The challenge of exploring the principle of warrant began with British librarian E. Wyndham Hulme (1859-1954), who called into question the need for methods and rules in the definition of concepts in a particular field of knowledge. Hulme questioned what could be considered the necessary warrant for determining the set of terms that would reproduce the conceptual domain of fields of knowledge.

One of the best-known definitions of the (semantic) warrant concept in Library and Information Science (LIS) is that of Clare Beghtol, who describes it as

> [...] the authority a classificationist invokes first to justify and subsequently to verify decisions about what classes/concepts to include in the system, in what order classes/concepts should appear in the schedules, what units classes/concepts are divided into, how far subdivision should proceed, how much and where synthesis is available, whether citation orders are static or variable [...] The semantic warrant of a system thus provides the principal authorization for supposing that some class or concept or notational device will be helpful and meaningful to classifiers and ultimately to the users of documents (Beghtol 1986, 110-111).

Warrant, therefore, would be the ontological imperative that assures terminological units incorporated into a KOS carry the adequate meaning for the purpose and utility of such device. From the point of view of KO, the relation between meaning and pragmatics – implicit in the concept of warrant – could be attested by different areas of study such as linguistics, sociology, semiotics and philosophy. What connects these fields is language as the intelligible structure through which reality can be accessed.

To Mai (2011), the idea behind warrant is that semantic justification in the inclusion of terms and classes is based on parameters that are external to the beliefs and knowledge of the professionals that develop, manage and make use of KOS. Professionals that represent and classify information resources use such parameters as reference in the conceptualization of a KOS.

To meet the needs of expressing meaning that is useful to users, developers and maintainers of KOS must make informed choices regarding which perspectives should
be prioritized in these systems. According to Howarth and Jansen (2014), it is possible to identify numerous warrants among the development processes of classifying systems and their relationship with users. Several classic warrants, starting with the literary warrant proposed by Hulme (1911) at the beginning of the last century, have been used to guide the creation of classifications.

In the list of warrants proposed in the field of KO, there is a wide range of warrants for the development of KOS such as literary warrant, user warrant and organizational warrant – recommended by the North-American standard ANSI/NISO Z39.19-2005 (National Information Standards Organization 2005) for the construction and management of controlled vocabularies. Also present are warrants that explore "the possibilities of balance between one another so as to assure a methodological support that achieves a representative conceptual structure as a result […]" (Barité 2011, 4), such as philosophical warrant and educational warrant (Beghtol 1986), structural warrant (Svenonius 2000), cultural warrant (Lee 1976), and phenomenological warrant (Ward 2000). Warrants related to specific and/or contemporary needs can also be seen as a necessity when trying to explain phenomena caused by the digital culture – specifically the phenomenon of occupying virtual platforms and environments.

It is worth noting that Beghtol (1986) recognizes cultural warrant as an umbrella term under which all types of warrant can be understood as detailed case studies of that concept, while Barité (2011, 4) sees other warrants as "derived from or part of literary warrant", while also acknowledging the polyvalence of cultural warrant.

3. **Warrant and cultural hospitality**

In discussing ethical imperatives in the organization and representation of knowledge, Beghtol (1986; 2002) refers to the concept of "cultural warrant", which suggests that any strategy for the organization of knowledge or knowledge representation systems must reflect the assumptions, values and biases of the culture(s) in which it is inserted. The concept of cultural warrant was proposed by Joel Lee (1976) and was inspired by Hulme (1991)'s term "literary warrant". Cultural warrant means that any kind of knowledge organization and/or representation system can only be fully helpful and useful to people of a specific culture if based on assumptions, values and biases of that same culture.

From this standpoint, KOS – being manmade products – are no more than a reflection of societies and their shared values. Cultural warrant is based on the idea that every knowledge organization system represents and imposes a worldview (Beghtol 2002) and is therefore considered a political and cultural artifact (Grolier 1982). These instruments, although not necessarily tangible and, as such, not entirely apparent to the user community making use of them, have a major influence on the individuals of said community.
The corollary to cultural warrant is the concept of hospitality which has been used within the field of knowledge organization to refer to the ability of a classification system to accept new concepts and relations between existing ones. Beghtol (2002; 2005) expands this traditional view of hospitality into the concept of cultural hospitality, in which knowledge organization systems may allow for personal and community choices.

According to Beghtol (2002), the specialized literature considers hospitality the ability of a classification notation to incorporate new concepts and establish semantic and syntactic relations between old and new concepts. Such a definition seems particularly relevant to the treatment of questions about meaning in knowledge organization systems and methodologies pertaining to dynamic environments and multidisciplinary fields.

Cultural hospitality would then be a precept for the creation, development, management, review and use of representation and organization systems concerned with the diversity of meanings in usage contexts that are not limited to well-defined sociodemographic profiles.

Within the concept of cultural hospitality lies an ethical underpinning that creates the conditions for individuals to express themselves and act individually or as a whole while maintaining the possibility of sharing local and individual knowledge, giving way to discussions over particularities and over their own cultures (Boccato and Biscalchin 2014).

Thus, it is evident that the notion of cultural hospitality, despite its potential to substantiate the need for inclusion and expansion of the scope of meanings in fields of knowledge, calls for extensive reflection and careful consideration, starting with the question of what exactly constitutes a hospitable KOS (Guedes 2016).

4. Overview and experimenting on the thesauri

Despite the lack of a practical procedure to quantify the hospitality of a KOS when faced with the contexts it serves, it is possible to draw comparable inferences by analyzing two controlled vocabularies known for representing the multiculturalism of the user communities that make use of them, namely the EuroVoc and the UNBIS thesauri. EuroVoc is a multilingual and multidisciplinary thesaurus for the activities of the European Union, available in twenty-three languages of member countries. The UNBIS thesaurus is a multilingual vocabulary developed by the Dag Hammarskjöld Library (DHL), connected to the United Nations (UN) Department of Public Information, and available in all the official languages of the UN.

Both instruments were designed to answer the information needs of remarkably heterogeneous socio-cultural groups, that being the main reason behind their selection for the experiment. This is a challenge faced by the KOS that must deal with various
criteria that may guide the verification of meaning in its conceptual structures; that is, there is a need to invoke multiple perspectives of semantic warrant that cover levels of meaning increasingly more refined and politically defined.

For a brief empirical analysis of the two instruments of representation, we chose the terms *migration* and *terrorism* in English. The reason behind this choice and the concepts represented by them is due to the active use of both terms in recent years as a consequence of sociopolitical phenomena on a global scale.

We tried to examine the terms *migration* and *terrorism* in both thesauri considering all terms related in some way to them. The aim was to draw comparisons and highlight the presumed attention given by both instruments to questions regarding the manifestation of their audiences’ cultural identity. Figure 1 and Figure 2 illustrate the terms *migration* and *terrorism*, respectively, in both KOS, and their relation to other terms.

![Figure 1: Migration in EuroVoc and UNBIS Thesauri](image1)
![Figure 2: Terrorism in EuroVoc and UNBIS Thesauri](image2)

Source: Adapted from EuroVoc (2018) and UNBIS Thesauri (2018)

We observed that in the case of the term *migration*, the relations that result from branching off into more specific terminology in the EuroVoc thesaurus reveal with respect to the target audience – and to its discourse as crystallized in documents produced within the European Community – a need to particularize notions and concepts arising from facts that have taken place in the tangible social reality of the user community served by the KOS. The same exclusivity in terminological branching does not seem to occur in the UNBIS thesaurus, which shows less specific terms related to *migration*. 
With the historical and social subject-matter of migration flows within the European continent in mind, it is possible to infer that the context of its creation and the audience served by EuroVoc had a higher demand for detailed socio-cultural aspects experienced by that group. This way, the conditions of meaningfulness of said KOS can be contributed to by using cultural warrant as a criterion for representativity. Culture, while seen as a sensitizing element, supports the analytical apprehension of useful meanings for individuals that – while immersed in a game of language – find meaning by relating the term migration with terms such as diaspora and braindrain, for instance.

In the second example, the term terrorism is represented in both thesauri, showing its semantic relation to other specific terms. We observed that in the UNBIS thesaurus there is a greater need to represent concepts that are characteristic of a certain social reality. This does not occur with EuroVoc, which presents less links between terrorism and specific terms directly related to it. In this case, the influence exercised by the purpose of the UNBIS thesaurus operating on the institutional grounds of the UN, despite its position as an international organism, exhibits an extraterritorial nature that results in a range of domains of activity which, in some cases, require more nuances.

Therefore, while these instruments aim to serve the needs of knowledge representation to their user communities, negotiations of meaning are felt with each decision, betraying thoroughness or negligence regarding a concept. The above example from the UNBIS thesaurus shows the clear need to directly correlate the concept of terrorism with the historical fact of the terrorist attacks of September 11, 2001 in the United States (terrorism attacks (11 September 2001)). In this case, the use of the term terrorism and its related terminology acknowledges the manifestation of a cultural hospitality activated to answer the need for meaning elicited by historical, social and cultural contexts.

5. Considerations

The diversity of units of analysis in the organization and representation of knowledge – in relation to elements that impact meaning, such as cultural components – have been recognized as defining characteristics of KOS that aim to be sufficiently hospitable to the experiences of user populations on a global scale. It is all due to the greater opportunity for interaction and access to information promoted by digital technologies, enabling the establishment of information environments in which the multiplicity of watchful eyes demands constant updates and refinements from the systems responsible for organizing and representing knowledge.

This study thus acknowledges the perspective of cultural warrant as a concept that comprehends and justifies changes and variations that other perspectives may present due to demands for information or knowledge production by the user community being served. We also highlighted the analytical concepts of KO that are able to explain (or
justify) the semantic adjustment necessary to answer user needs, such as the subprinciple of cultural hospitality, proposed as a way to accommodate in the KOS meanings that serve a diverse and fragmented audience. Devoting attention to cultural warrant and to cultural hospitality is a way of managing the cultural bias that could compromise the global usefulness of knowledge organization and representation schemes, particularly of KOS that meet the demands of virtual contexts.

References


