Clare Beghtol
Faculty of Information Studies, University of Toronto, Ontario, Canada

Universal Concepts, Cultural Warrant, and Cultural Hospitality

Abstract: The problem of how to provide access to information regardless of linguistic or other domain boundaries or cultural traditions can be approached by examining how cultural universals are implemented in specific cultures at specific times and places. The universal concept of "time" and its implementation in calendars is used as an illustration, and how time is treated in knowledge organization systems is briefly described. A broadened definition for the concept of "hospitality" is proposed for use in evaluating the efficacy of knowledge organization systems. The identification of the complementary concept of "cultural hospitality" provides a theoretical framework to inform decisions about the types of access that can (and/or should) be provided by knowledge organization systems that purport to be globally useful and ethically balanced.

1. Cultural Warrant and Conceptual Universals

The concept of cultural warrant posits that every classification system is based on the assumptions and preoccupations of a certain culture, whether the culture is that of a country, or of some smaller or larger social unit (e.g., ethnic group, academic discipline, arts domain, political party, religion, and/or language) (Beghtol 2001a, 1986). The concept of cultural warrant implies that a knowledge organization system is more likely to be useful and appropriate for those who are members of a culture and that it is less likely to be useful and appropriate for those who belong to some different culture, at whatever level of society that culture or domain may reside. Thus, a knowledge organization system that is appropriate for the elements of one culture may not recognize elements that are highly important for some other culture, and such exclusions pose problems because we need to integrate knowledge across cultural, geographic, and linguistic boundaries. Important tensions thus exist between culturally specific knowledge organization systems and the need to provide systems that are both globally accessible and culturally appropriate. In general, knowledge organization systems for global usage would need to incorporate all the various syntactic and semantic foundations of any and all of the world's cultures, and the creators of knowledge organization systems need to create techniques for poly-cultural information retrieval. Since the foundations of different cultures may be in conflict with each other, we need to develop theories and techniques for incorporating any possible cultural assumptions that might be used for information retrieval.

To gauge the extent of this problem, it is useful to examine relationships between universal semantic and lexical concepts and the specific implementation of those universals in different cultures. Goddard and Wierzbicka (1994) identified eight sets of semantic and lexical universals: Mental predicates; Determiners and qualifiers; Actions and events; Meta-predicates; Time and place; Taxonomy and partonomy; Evaluators and descriptors. Some of these have been examined for their

various roles in bibliographic classification systems (e.g., Breghtol 2001b, 1997). In this paper, the universal concept of time and its instantiation in calendars is used to illustrate the complexities of providing culturally specific information for global information retrieval requirements and to analyze the problems of providing culture specific information resources in globally and ethically acceptable information retrieval systems. Calendars are an appropriate example because they subdivide the abstract domain of "time" for cultural purposes and because detecting bias in abstract domains is more difficult than detecting bias in other domains (Brey, 1999).

2. Calendars

Calendars are non-universal cultural artifacts that represent and help to create the various syntactic (structural) and the semantic (meaning) aspects of a society. Among other things, a calendar structures a person's daily and legal life and the whole culture's yearly, monthly and seasonal cycles. It sets the times for secular festivals, religious occasions, and civic holidays. Calendars are thus a knowledge organization system for various kinds of cultural knowledge. For this reason, the use of a particular calendar is a significant choice for a culture, and calendar reform is regarded as a serious intrusion into established cultural traditions because a new calendar changes a culture. For example, a "calendar war" (Edmonson, 1976, p. 716) can erupt when one culture conquers another, and advocates of the astronomical accuracy of a one calendar over another have been executed for their beliefs (Chu, 1997). Modem movements to reform the calendar have failed for various reasons (e.g., Davies, Trivizas & Wolfe, 1999), and efforts to establish a uniform calendar for the whole world do not seem to have created much interest (e.g., Volk, 1995).

Despite the cultural specificity of different calendars, the globalization of electronic information has revealed that the ability to "translate" one calendar into another is important in a number of fields (e.g., business, banking, computer science, historical research). Dershowitz and Reingold (1997) created computer algorithms for comparing fourteen calendars to each other: Gregorian (civil calendar); ISO (commercial); Julian (old civil); Coptic; Ethiopic; Islamic (Muslim); Persian (modem); Bahá'i; Hebrew (Jewish); Mayan (2); French Revolutionary; Chinese; Hindu (Indian, old, mean); Hindu (Indian, new, true). Some of the difficulties of this enterprise may be appreciated by referring to the Anglo-American Cataloging Rules (AACR2), which describes how to convert the Julian to the Gregorian calendars at different times for different countries for the purposes of bibliographic description (AACR2 1998: 415, fn 17).

3. Time and Calendars in Knowledge Organization Systems

The provision of different calendars has not been a priority for classification and knowledge organization systems, presumably because the cultural warrants of these systems have not required access to different calendars, although chronological arrangement of books on shelves has been attempted at least since the invention of Biscoe Time Numbers for science in 1885 (Lehnus 1980). The only suggestion that users might want different calendars appears to be in the ontology-

based SERUBA system, where "non-Christian equivalents [of points and of extensions in time] can be given to users if the need arises" (Schmitz-Esser 2000, p. 99).

The most complete treatment of time appears in the *Universal Decimal Classification* Table Ig Common Auxiliaries of Time. In Table Ig, "the basis of date indication is the Christian calendar, but non-Christian systems of time reckoning are also allowed for...as well as other time concepts, e.g., seasons and geologic time" (1993, Part 1 p. 66). Table Ig is undergoing revision, but the possibility of converting all dating practices to non-Gregorian calendars is apparently not under consideration (Robinson 2000). Similarly, other knowledge organizations systems such as thesauri, (e.g., *Art and Architecture Thesaurus*), subject heading lists (e.g., *Library of Congress Subject Headings*), and other kinds of metadata systems such as ontologies generally assume the use of the Gregorian calendar and have not given non-Gregorian calendar options.

This kind of examination of the provisions made for one linguistic and cultural universal in knowledge organization systems needs to be repeated for the other linguistic and cultural universals identified by Goddard and Wierzbicka (1994). As an example, however, this study of provisions for calendars shows that current systems are unlikely to be able to accommodate the information needs of users who belong to different cultures in their preferred calendrical mode.

4. The Concept of "Cultural Hospitality"

In order to develop knowledge organization systems for globalized information access and retrieval, we need a theoretical framework for knowledge organization systems that will privilege the needs of different cultures, whether they are national, ethnic, domain or disciplinary cultures. The concept of "hospitality" has long been established as one of the desiderata for the notation of bibliographic classification systems. Hospitality is the ability of a notation to admit new concepts appropriately and to accommodate them in the correct relationships with other concepts. To develop a new theoretical framework for knowledge organization systems, it is helpful to expand the concept of hospitality by 1) including provisions for hospitality beyond notational issues and 2) broadening hospitality to include different cultures as well as new concepts. These extensions of hospitality provide us with a new concept, "cultural hospitality".

Cultural hospitality complements and extends the idea of cultural warrant. It posits that making provisions for specific aspects of different cultures in knowledge organization systems will increase the appropriateness and usefulness of those knowledge organization systems in different settings for the purposes of world-wide information flow. The fundamental tenet of cultural hospitality is that knowledge organization systems should be "permeable" (Olson 1996, p. 9) to different points of view and different cultural attitudes and practices. Practical implementation of this ideal may not be easy. Like all theoretical frameworks, however, the concept of cultural hospitality provides a goal toward which we may proceed, and some possible methods of attempting to reach this goal are discussed elsewhere (Beghtol 2002). Thus, the ideal of cultural hospitality provides a method for assessing the acceptability of provisions made in knowledge organization systems for different cultures, at whatever level of society these cultures may reside.

5. Ethical Knowledge Organization Systems

Identification of the concept of cultural hospitality allows us to begin an investigation into the ethical design of knowledge organization systems for world-wide applicability. Brey (2000) set out a process for developing an ethical basis for computer systems that included three levels:

the disclosure level, at which analysis of systems on some ethical value takes place;

the theoretical level, at which core theories are identified and refined; and

the application level, at which the theories from the second level are applied to disclosures made at the first level and potential implementations are tested and put into practice.

This model of the process of ethical development for computer systems applies equally to knowledge organization systems. Some research has been undertaken on each of these levels, including efforts to disclose embedded values in knowledge organization systems, to internationalize systems, to create poly-lingual systems, and to design and implement applications that can underpin and promote these different efforts. One possible high level ethical system that could be used to unify these activities would be the United Nations Universal Declaration of Human Rights (UDHR, accessible at http://www.unhchr.ch/udhr/lang/eng.htm) combined with Smith's concept of Global Information Justice (GIJ) (Smith 2001). These are appropriate foundations for the ethical assessment of knowledge organization systems because they have been developed on the assumption that differences among cultures should not be threatened by the globalization of information and information technology and that preservation of cultural differences is a high priority (Beghtol 2002).

6. Conclusion

From an examination of the concept of cultural warrant and of how one universal concept plays out in a cultural artifact such as a calendar, we have derived the theoretical principle of cultural hospitality. This concept needs to be debated, assessed and tested further to assess its potential for effective implementation. It appears, however, that we need to make specific universal concepts available for appropriate uses in different cultures and for different information tasks, and that this endeavour can promote the development of ethically-based knowledge organization systems.

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