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Clare Beghtol:
Teacher, Researcher,
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ABSTRACT: The trajectory of the scholarly oeuvre of classification theorist Clare Beghtol is described and evaluated in terms of its significance for the development of modern information systems and the extension of classification theory. Focusing on a distinguished body of research sometimes characterized as "outside the box," Beghtol's explorations of concepts of "aboutness," of faceted classification systems, and of a number of types of warrant, are examined. The article concludes with a consideration of more recent themes of "naïve" classification, ethical approaches to knowledge organization, and the nature of relationships in classificatory structure and meaning.

1.0 Introduction

Clare Beghtol is arguably a leading expert in aspects of knowledge organization that involve classification. Indeed, it can be said that she is the leading classification theorist in North America at present, and ranks with the leading theorists worldwide with particular reference to the United Kingdom. She has taught classification for many years, imparting her knowledge of classification theory to her students while encouraging their critical thinking and intellectual curiosity. Across her academic career, she has been an active member of the American Society for Information Science and Technology's Special Interest Group for Classification Research (ASIST SIG/CR), and has been a participant in, and president of, the International Society for Knowledge Organization (ISKO). Her work appears in respected journals, such as the *Journal of Documentation*, and *Knowledge Organization,* and in the proceedings of the conferences of ASIST and ISKO. On her web-site, and in her own words, she describes her research interests as:

> Classification theory, structural principles of methods of organization, the organization of knowledge, hierarchical and faceted classification systems, relationships in subject access systems, linguistic and cognitive bases for knowledge organization systems.

Further, a perusal of Beghtol's research indicates that "classification theory" is the operative term which encompasses all of her work. Distinctive of her research is the fact that, from the outset, she has always operated "outside the box." She sees classification theory as interdisciplinary and multidisciplinary and, while her work has its roots in the narrower domain of library and information science, she reaches beyond the practical and beyond the narrow confines of this discipline to draw from other disciplines in order to reach an understanding of classification theory as it af-

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fects the world. It would be impossible to do justice to all aspects of her research, but this paper attempts to assess the highlights of her work and its significance for the development of modern information systems and the extension of classification theory.

In North America the term "classification theory" resonates very little interest in the world of library practice in the application of *DDC*, LCC and *UDC*, but it is knowledge that is essential in the updating and restructuring of these systems, and in the creation of thesauri and other systems devoted to knowledge in general as well as in the particular. Moreover, the history and theory of classification is important in the understanding of classification systems by both students and classificationists. Beghtol's work is extremely worthy of an analysis of its content, its impact, and its contribution to the growth and development of modern information systems This paper is an attempt to meet this challenge.

2.0 The beginnings

It is apparent that three early works set the stage for Beghtol's later research. First, there is an early article published in the *Journal of Documentation*, entitled, "Bibliographic Classification Theory and Text Linguistics: Aboutness Analysis, Intertextuality and the Cognitive Act of Classifying Documents" (Beghtol 1986a). This article sets the tone for what is to follow and identifies some of the aspects of classification theory which she intends to pursue. Fundamental to the act of classification is the determination of the "aboutness" of each document classified. Beghtol's article takes an interdisciplinary approach in which she examines the work of T.A. van Dijk, a text linguist, seeking possible links between text linguistics and bibliographic classification theory and looking to find answers on how we determine the "aboutness" of documents. The paper is intended (Beghtol 1986a, 84):

1. to explicate a useful theory of aboutnesss and aboutness analysis from text linguistics,
2. to explore the implications of text linguistics for bibliographic classification theory; and,
3. to explore the elements of the theory of cognitive process needed to understand how people identify the aboutnesss of documents.

The term, "aboutness," is described as it is understood by bibliographic classification theorists and text linguists. The cognitive process is identified with the two approaches of the major classification schemes—the top-down approach, as exemplified by *DDC*, and the bottom-up approach, as exemplified by Ranganathan's *Colon Classification*, and the Classification Research Group's (CRG) approach in the *Bliss Bibliographic Classification* (*BC2*). Consideration of the term "aboutness" is embraced in two kinds of intertextuality; namely, as the relationship between documents classified in the same class using the same classification system, and as the relationship between the classification system as a text and the documents classified by it. In her analysis she refers to the theories of Hulme, the Classification Research Group (CRG), Langridge, and Bliss, among others.

The second source is her PhD thesis, *The Classification of Fiction* (Beghtol 1991) in which she applied the fundamentals of modern classification theory to develop and test a faceted classification system. In the course of her work she investigated literary warrant, and postulated a fictional warrant. The third source is an article entitled "Semantic Validity: Concepts of Warrant in Bibliographic Classification Systems" (Beghtol 1986b) in which she identifies a number of types of warrants. In the process of investigation, the evolution of four of the warrants—literary, scientific/philosophical, educational and cultural—is traced through the development of 20th century classification theory. These three sources lay the groundwork for Beghtol's research over the next eighteen years.

3.0 Moving on

Warrants became a major research area for Beghtol. Cultural warrant appears to be of particular interest. In her article, "Universal Concepts, Cultural Warrant, and Cultural Hospitality" (Beghtol 2002), she deals with the problem of classification systems being culturally oriented and becoming a barrier to access to information because of what is understood. What may be easy access by persons of one culture may not be so for others. There is a need to integrate knowledge across cultural, geographic, and linguistic grounds, and polycultural retrieval is necessary. Further, there is a need to examine relationships across universal semantic and lexical concepts and their implementation in various cultures. Eight sets of universals are identified here, and "time" is used to examine the complexities of providing culture-specific information for global information systems. Beghtol calls for a theoretical framework for knowledge organization systems to accommodate the needs of different cultures. In aid of this she examines the concept of "hospitality" in classification. Cultural hospitality is an important goal.

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Especially important is Beghtol's work on naïve classification (Beghtol 2003; 2004c). Closely related to the interdisciplinarity of classification theory is the notion that there are different kinds of classification for different purposes—formal or "professional" classifications, which we apply to documents and other classifications created by people who have no interest in classification per se. Beghtol refers to these as "naïve" systems created primarily as tools of discovery of new knowledge. The paper looks into the purposes and characteristics of these systems, describes the relationships between the purposes and the context of such systems, the units of analysis used and the theory involved.

An outstanding contribution to classification theory is the work of James Duff Brown. In two articles (Beghtol 2004a; Beghtol 2004b), Beghtol describes and analyzes the contribution made to the development of faceted classification by Brown through his *Subject Classification.* Of particular interest are his views on the order of main classes, on the phenomenon of "concrete" subjects, the need for synthesized notation and the idea of one-place classification.

Every classification system is a theoretical construct imposed on "reality" (Beghtol 2001). Without relationships there can be no classification. The paper, "Relationships in Classificatory Structure and Meaning," describes relationships as functions of both the syntactic and semantic axes of classifications. Both explicit and implicit relations are discussed. Examples from different systems, both bibliographic and non-bibliographic, and cultural warrant are used. In this investigation Beghtol concerns herself with the needs of knowledge structures with respect to the increasing globalization of information exchange. In doing so she raises questions, identifies issues, and suggests area of possible research.

On the assumption that classification operates in every domain, Beghtol has stepped away from her usual venue in two articles on "ethics" as a factor in the organization of knowledge. In "Ethical Decision-Making for Knowledge Representation and Organization Systems for Global Use" (Beghtol 2005), she describes methods for creating, revising, and maintaining knowledge representation and organizing systems. In doing so, she uses a three-level model, and literature from the social and technical sciences. Methods for making decisions are described. In her conclusion, Beghtol indicates that the multidisciplinary approach used is generalizable to other areas, and is seen as being applicable to ethical policies in other areas of discourse. This is another example of borrow-

ing from another discipline. Also here, ethical issues are related to cultural warrant.

A related paper discusses "Professional Values and Ethics in Knowledge Organization and Cataloging" (Beghtol 2008b). It describes the context and content of ethical activities dealing with three professional codes, and how they govern consensual issues in knowledge organization. Basic guidelines are suggested for establishing ethical policies for knowledge organization and cataloguing, and it is shown how they could be implemented using Ethics Toolkit. Two types of ethical issues are identified, namely, ethics related to the working environment of cataloguers, and ethics as related to the accuracy and integrity of catalogue records (e.g., subject headings). Description, classification, and the provision of searchable information as such touches on the incorrect understanding and use of cataloguing tools, including classification schemes and subject headings. As a solution to the problems, the application of six steps in decision-making using the Ethics Toolkit is proposed.

This narrative has touched on those works that seem clearly to characterize Beghtol's research as a whole. There are many more refereed papers, presentations at conferences, contributions to books, and reports on funded research. What follows here is but a sample of these topics: "The Facet Concept as a Universal Principle of Subdivision" (Beghtol 2006); "What is an Event? Domain Analysis of Narrative Documents" (Beghtol 1997); "Mapping Sentences and Classification Schedules as Methods of Displaying Facets" (Beghtol 1998b); and, "Knowledge Domains: Multidisciplinarity and Bibliographic Classification Systems" (Beghtol 1998a).

4.0 Final focus

Finally, an understanding of modern classification theory begins as a knowledge of the historical development of those structures. Beghtol's article (2008a), "From the Universe of Knowledge to the Universe of Concepts: The Structural Revolution in Classification for Information Retrieval," does this extremely well. It begins with recognition of the early classifications which were top-down systems that started with a universe of knowledge, and subdivided that universe downward into subclasses. When the work of S.R. Ranganathan suggested that a better approach would be to start with a universe of concepts and build upward to larger and larger facet classes, changes began to take place. The paper looks at the "spread of facet theory after 1924" through the remainder of the 20th

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century. It addresses the origin of the facet concept and its methodology, and the reception and spread of the concept with emphasis on the work of Ranganathan, Sayers, and the Classification Research Group (CRG). This 2008 article brings together the results of investigation, research, and analysis throughout Beghtol's academic career. It will be followed shortly by an article on classification theory scheduled to appear in the *Encyclopedia of Library and Information Science* (forthcoming).

5.0 What of the future?

In her recent article, "From the Universe of Knowledge to the Universe of Concepts" (2008a, 143), Beghtol has confirmed that, "During much of the twentieth century, the structural axis of classification research appeared to offer the best way forward," and speculates that, in the 21st century, another way forward using the semantic axis might be sought.

Beghtol, herself, still has much to do, and much to offer. Her current research continues on areas of classification theory that were with her from the beginning. The aforementioned article on classification is soon to appear. Also, she has funded research in progress in such important areas as literary warrant, cultural warrant, and the facet concept in bibliographic classification. Congratulations, Clare, on your magnificent contribution to the understanding and development of modern classification theory. Bravo!!

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