Book Review

Interdisciplinary Knowledge Organization. Rick Szostak, Claudio Gnoli, and María López-Huertas. Cham, Switzerland: Springer. 2016. 227 pp. $129.00 (Hardcover) (ISBN 978-3-319-30148-8)

The phenomenon of interdisciplinarity, although inherent to these so-complex and multifaceted times, was already a matter of concern in information science almost half a century ago, when Harold Borko established the conceptual basis for this field, pointing its interdisciplinary nature (Borko, 1968).

This aspect is even more evident in the knowledge organization (KO) field, as was pointed out by Dahlberg (1993) more than two decades ago. Placed among cognitive science, information science, communication science, math and computer science, KO can be characterized by its social and scientific nature, revealing itself as an inter- and transdisciplinary field (Garcia Marco, 1995, 1997; Miranda, 1999) and evidencing an "integration platform of the documentary sciences" (Esteban Navarro, 1995, p. 66).

Considering these aspects, this book arises in a moment of time in which KO is undergoing significant challenges, especially regarding knowledge organization systems (KOS) as mediating tools between knowledge that is produced and the production of new knowledge.

Mostly understood by the scientific community in this area as the main object of study (but not the only one) of KO (Guimarães, Sales, Martínez-Ávila, & Alencar, 2014), KOS are facing significant challenges today: i) the need to provide global approaches without stopping consideration of the local specificities; ii) the search for approaches that are also able to cover the phenomena and not just the traditional disciplines; and iii) a greater interactivity caused by the semantic web and folksonomies.

The book is written by three major researchers in the field of KO, whose scientific careers deal with the topic. Rick Szostak, of the University of Alberta (Canada), has a scientific career path related to the phenomenon of interdisciplinarity; Claudio Gnoli, of the University of Pavia (Italy), has traditionally shown special concerns related to theoretical and epistemological issues of classification; and Maria Jose López-Huertas, of the University of Granada (Spain), has widely discussed how interdisciplinary fields impact the organization of knowledge

today. Thus, such authority could only result in a work of effective scientific value, as it is in the present case.

As highlighted by the authors, the book aims to contribute scientifically to two audiences in particular: researchers in information science (and, more specifically, in knowledge organization), since it addresses current trends, and researchers of interdisciplinarity, because it discusses how this is established—and with which peculiarities—in a specific field.

In this vein, the work starts from the conceptual aspect of interdisciplinarity, including the establishment of the semantic differences between inter-, multi-, and transdisciplinarity. Therefore, it uses the theoretical framework of the history of science and, especially, epistemology, to discuss serendipity, a very relevant and significant topic in today's scientific work that demands we go beyond disciplinary boundaries in order to think in a more inclusive way.

Bringing this matter to information science—an interdisciplinary field by definition, as previously mentioned—it draws on Knapp (2012) to discuss how this feature or phenomenon contributes to the proper recognition and academic prestige of information science today.

Further developing this approach, it gets to the specific issue of interdisciplinarity in knowledge organization, revisiting the discussions that took place at the International Society for Knowledge Organization (ISKO) conference held in Spain in 2007, which gave birth to The Leon Manifesto, calling for attention to the need to rethink KOS in a world permeated by a growing interdisciplinarity. In this context, the authors make it clear that disciplinary approaches to interdisciplinarity have a complementary nature, insofar that both are essential for the configuration of KOS.

Referring specifically to KOS, here understood as the set of tools for knowledge organization comprising classification schemes, subject heading lists, thesauri, keywords, folksonomies, and ontologies, the authors advocate for the coexistence and complementarity of inductive and deductive approaches to ensure an effective representation of knowledge. In this context, they address the instrumental nature of domain analysis as an element to ensure representation that is at the same time comprehensive and particular.

It should be noted, therefore, that domain analysis has been studied, increasingly, in the KO field (Beghtol, 1995; Danuello, 2007; Guimarães & Tognoli, 2015;

Hjørland, 2002, 2004; Hjørland & Albrechtsen, 1995; López Huertas, 2015; Mai, 2009; Smiraglia, 2011, 2012, 2014, 2015; Tennis, 2003; Thellefsen & Thellefsen, 2004), especially so it can go beyond a merely ontological approach to a more epistemological nature that considers the contexts inherent to the different discursive communities and the different cultures. Therefore, bibliometric and terminological approaches (Hjørland, 2002) are especially important to reach a "phenom-based classification" that can be permeated by a "transcultural ethics of mediation" (García Gutiérrez, 2002).

At this turning point, the focus of KOS on the phenomena rather than solely on the disciplines is essential, given the increasing complexity and thematic interconnection that manifests in the area, with new types of relationships that transcend those hitherto known in the area. This approach, by the way, meets a concern that is verifiable in other fields such as medicine, for example, as shown by the educational concept of Problem-Based Learning (PBL).

These aspects make the authors advocate the development of a "comprehensive and multi-dimensional classification" that can address phenomena and their interrelations but also the theories and methodologies that are applied to them.

In order not only to address the issue in a theoretical way but also on an operational basis, the authors discuss in chapters 7 and 8 possible ways to develop KOS that can serve interdisciplinarity. They list the benefits that may arise from the development of a comprehensive phenomenon-based classification, in particular, to facilitate searching databases and to meet the diverse needs of the semantic web in the digital environment, when databases are increasingly widely researched.

Concluding the book, the authors point to possible theoretical criticisms that the idea of developing a comprehensive classification based on phenomena may face, especially regarding a possible conflict between a comprehensive KOS and the respect for diversity, for which the authors point to the issue of different "perspectives." That question still seems quite complex, and will certainly cause academic debate, like the Global KO event, held in Copenhagen in 2015 (Global and Local Knowledge Organization, 2015), that discussed the challenges and perspectives on that "razor's edge" that is to provide global access to information without forgetting local specificities.

This challenge is more evident in the final chapter, where the authors make it clear that this is not a finished work, but rather a work that makes room for new questions, research, and actions, especially in the academic world of KO, for which it assumes that interdisciplinarity is evident in the composition of academic bodies, the look of the phenomena, the developed actions, and the theories and methods employed.

The task is not easy, for sure, but it opens challenging prospects since, as the authors' state: "It is hard (though desirable) to estimate the effect that an advance in knowledge organization can have on the world. But we should not for a moment doubt that it is worth doing: a better future lies ahead if we will only grasp it" (p. 222).

I believe that this work will be of fundamental importance for research, teaching, and professional practice in the field of KO, especially because it proposes a broader look at KOS that, as we had the opportunity to verify in the ISKO literature, occupies a central space in the concerns of the field (Guimarães et al., 2014), which will certainly contribute to them to fulfill their social function.

Considering the expertise of the authors and the depth of their approach, I would like to highlight only a certain inadequacy of the title of the book. As it is presented—*Interdisciplinary Knowledge Organization*—without a specifying subtitle, leads the reader to have expectations about this field as a whole, including its processes, products, and tools when, in fact, the book's focus on field tools (KOS), without mentioning how this interdisciplinary approach can affect, for example, processes such as classification or indexing, especially subject analysis. In this sense, I suggest that the authors can contemplate this aspect in subsequent studies.

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José Augusto Guimarães
Graduate School of Information Science
São Paulo State University – UNESP
Marília, Brazil
E-mail: guima@marilia.unesp.br