Despite such minor omissions and commissions, this lucid book of classification knowledge in pellucid prose and engaging style can easily be described as the best one as of today.

M.P. Satija
Guru Nanak Dev University, India, School of Library and Information Science
satija_mp@yahoo.com

References

Dewey Decimal Classification and Relative Index: Devised by Melvil Dewey. 2011. 23nd ed. Vol 1, ed. Joan Mitchell. Dublin, OH: OCLC.

Hjørland, Birger. 2013. "Facet Analysis: The Logical Approach to Knowledge Organization." *Information Processing and Management* 49: 545-57.

Satija, M.P. 1998. "Classification: Some Fundamentals, Some Myths." *Knowledge Organization* 25: 32-35.

Slavic, Aida. 2008. "Faceted Classification: Management and Use." *Axiomathes* 18(2). doi:10.1007/s10516-007-9030-z

Koraljka Golub. 2015. *Subject Access to Information: An Interdisciplinary Approach*. Santa Barbara, Calif.: Libraries Unlimited. ISBN: 978-1-61969-577-0, $60.00. Also available as an eBook.

One of the hallmarks of a domain is the demonstrable presence of a research front. Usually this is visible through bibliometric analyses that show both the most prolific authors and the most-cited. With any luck, a domain that has intellectual coherence has both, and coherence is demonstrated when the two lists are more or less the same. Another sign of a mature domain is the introduction of textbooks that are created to bring along a new generation of researchers. In this regard, knowledge organization has been rather at a loss for a long time. In 2014 both the domain's founder Ingetraut Dahlberg and I published core texts about the basics of the domain (*Wissenorganisation: Entwicklung, Aufgabe, Anwendung, Zukunft* and *Elements of knowledge organization*). These were artfully reviewed by Kleineberg (2015), who carefully contrasted the different philosophical viewpoints of the two authors. Of course, neither of these books was intended for use as a textbook; rather, each was intended to serve both as a sort of primer for researchers entering the domain from outside, as well as a state-of-the art summary of basic knowledge organization.

The practice of knowledge organization has a long history, reading back centuries or even millennia depending on your sources, but let us agree that education for organizing knowledge roughly parallels education for information as a discipline, which began in schools of library economy or documentation in the late nineteenth century and continue today in schools of information. Here there are several textbooks self-identified as appropriate for education for knowledge organization, although in reality there is only a bit of overlap among their content, which is heavily oriented to library practice. Many rely on Arlene Taylor and Daniel Joudrey's 2008 *Organization of Information* 3rd edition, others on Rowley and Hartley's 2008 *Organizing Knowledge*, and yet others on a more recent text produced in the iSchool movement, Glushko's 2013 *The Discipline of Organizing*. It is difficult to criticize any of these texts—all of them are extensively detailed, and all of them are written to serve a particular pedagogical purpose. But none of them is truly a textbook for knowledge organization.

In 2015 a new text by Koraljka Golub titled *Subject access to information: An interdisciplinary approach* appeared. Golub is a member of the International Society for Knowledge Organization (ISKO), the sponsor of this journal, and she also has been a contributor to the journal (2007; 2011). Most recently, she is the lead author of an extensive literature review of automatic classification (Golub et al. 2016), an important approach to knowledge organization that has had little impact so far in the formal literature from ISKO.

Subject Access to Information has five sections: 1) Organizing Information by Subject; 2) Knowledge Organization Systems; 3) Technological Standards; 4) Automated Tools for Subject Information Organization; and 5) Perspectives for the Future. In "Organizing Information by Subject," Golub gives an overview of what is or can be considered to be a "subject," describes how subject indexing takes place, and introduces the distinction among knowledge organization systems (KOS's), automatic indexing, ontologies, etc. The chapter concludes with a section contributed by David Elsweiler about user information behavior. It is here that the reader begins to see a distinction between knowledge organization and the use of specific bits of knowledge as information. The definition of a KOS in this chapter's glossary is a "system which can be used for various aspects of organizing information" (34).

Chapter two is by Claudio Gnoli, who is a prominent and active member of ISKO. Gnoli shifts away from the "organization of information" phraseology of the first chapter in favor of "knowledge organization systems." The chapter opens with a paean to knowledge organization as "an encompassing notion" (41). Gnoli carefully distinguishes between the terms "knowledge" and "information" and then lays out the details of both the history of the science of knowledge organization and the

evolution of systems for knowledge organization. This chapter itself could be a primer for beginning students of knowledge organization. Subject headings, thesauri, classifications, and ontologies all are described in understandable terms with plentiful examples. In the summary, Gnoli distinguishes the purpose of knowledge organization systems from the generic organization of the more vaguely conceived "information."

The rest of the book is adequate, concise, and accurate. The third chapter is about technological standards and has as its focus: XML and RDF; ISO 2709, which is presented as a class of information exchange standards that includes MARC21 and UNIMARC; SKOS and OWL, which are discussed; and the ISO 25964 standard for thesauri and interoperability with other vocabularies. The fourth chapter has selected topics about automated tools for subject information organization, including bibliometrics by Fredrik Åström, automated classification by Ingo Frommholz and Muhammad Kamran Abbasi, and machine-learning by Dunja Mladenić and Marko Grobelnik. The final chapter is said to include perspectives on the future. In fact, it is a short essay on the relationship between computer science and the science of information.

Each chapter contains a set of review questions that could be used as teaching aids, a glossary of terms, and a bibliography of related literature. It seems questionable whether it might not be more useful if the glossaries and bibliographies were combined and edited both to make them consistent and to allow easier searching. One wonders sometimes whether this is an anthology or a mashup of five different tiny books.

There are unfortunate editorial anomalies, including the confusing mixture of text by the named author and other contributors. The work is attributed to Golub, whose name appears on the title page, but it could as easily be considered to be an edited anthology. There also are other editorial oddities, such as the opening of the summary of the first chapter (31-32):

> As part of making sense of the world, people attempt to organize everything around them. The library and information science and profession hold the longest record of organizing information. The first known library catalog comes from the third century BCE and organizes scrolls by authors and subjects.

Following the astonishing historical sweep of this paragraph and the ungrammatical domain attribution, the text continues with the relatively mundane (32) "searching for information on a certain topic is very common."

In the end the volume is useful, but not critical. It will not serve by itself as a textbook for knowledge organization for the simple reason that it does not have a clear definition of knowledge organization—either the science or its application. While Gnoli's chapter could usefully be separated into the core of a textbook for KO, the rest of the book suffers from a mixed identity crisis of focus placed on organization of the vague "information," rather than on the science of knowledge organization.

Other volumes have appeared that, similarly, cover aspects of KO more or less indirectly. Patrick Lambe's 2007 *Organising knowledge: Taxonomies, knowledge and organisational effectiveness* is perhaps first among equals on this list, although it too begins with an essay about how knowledge cannot be organized but information can (exactly the opposite of the theoretical approach taken by Dahlberg and others in KO). It is an extensive analysis of the uses and usefulness of taxonomies for organizational effectiveness, which is the hallmark of knowledge management, a neighboring cousin of KO. Emilia Currás's 2010 *Ontologies, taxonomies and thesauri in systems science and systematics* is shorter and is situated completely in the realm of computer science. Claudio Gnoli and Carlo Sconomiglio's 2008 *Ontologia e organizzazione della conoscenza* is a concise treatment of ontology and its applicability to systems for knowledge organization. Alas, KO still needs textbooks that are designed to promulgate its own domain.

Richard P. Smiraglia
University of Wisconsin-Milwaukee, School of Information Studies
smiragli@uwm.edu

References

Currás, Emilia. 2010 *Ontologies, Taxonomies and Thesauri in Systems Science and Systematics.* Chandos Information Professional Series. Oxford: Chandos.

Dahlberg, Ingetraut. 2014. *Wissensorganisation: Entwicklung, Aufgabe, Anwendung, Zukunft*; herausgegeben von der Deutschen Sektion der Internationalen Gesellschaft für Wissensorganisation e.V. (ISKO). Textbooks for Knowledge Organization v. 3. Würzburg: Ergon Verlag.

Glushko, Robert, ed. 2013. *The Discipline of Organizing.* Cambridge, MA: The MIT Press.

Gnoli, Claudio and Carlo Sconomiglio. 2008. *Ontologia e organizzazione della conoscenza: introduzione ai fondamenti teorici dell'indicizzazione semantica,* con un'introduzione di Roberto Poli. Lecce: Pensa multimedia.

Golub, Koralijka. 2011. "Automated Subject Classification of Textual Documents in the Context of Web-Based Hierarchical Browsing." *Knowledge Organization* 38: 230-44.

Golub, Koralijka, Thierry Hamon and Anders Ardo. 2007. "Automated Classification of Textual Docu-

ments based on a Controlled Vocabulary in Engineering." *Knowledge Organization* 34: 247-63.

Koraljka Golub, Dagobert Soergel, George Buchanan, Douglas Tudhope, Marianne Lykke and Debra Hiom. 2016. "A Framework for Evaluating Automatic Indexing or Classification in the Context of Retrieval." Advances in information science. *Journal of the Association for Information Science and Technology* 67: 3-16.

Kleineberg, Michael. 2015. Review of *Wissenorganisation: Entwicklung, Aufgabe, Anwendung, Zukunft* by Ingetraut Dahlberg, and *The Elements of Knowledge Organization* by Richard P. Smiraglia. *Knowledge Organization* 42: 190-95.

Lambe, Patrick. 2007. *Organising Knowledge: Taxonomies, Knowledge and Organisational Effectiveness*. Chandos Knowledge Management Series. Oxford: Chandos.

Rowley, Jennifer and Richard Hartley. 2008. *Organizing Knowledge: An Introduction to Managing Access to Information*. 4th ed. Aldershot: Ashgate.

Smiraglia, Richard P. 2014. *The Elements of Knowledge Organization* by Richard Smiraglia. Cham: Springer.

Taylor, Arlene G. and Daniel N. Joudrey. 2008. *The Organization of Information*. 3rd ed. Westport, Conn.: Libraries Unlimited.