resources; diminishing use and hidden collections leads only to stagnation and threat (225).

Less strong was the chapter dealing with resource descriptions, chapter 5 ("Cataloguing, Description and Metadata in Special Collections"), which does not mention the new RDA Toolkit and what effect that will have on rare book cataloging. Also lacking mention is OCLC's CONTENTdm. CONTENTdm is used in creating metadata for digital collections—it is mentioned in passing later in chapter 6—but its predominant use in the community warrants more explanation of its application. The small section on music cataloging might as well not have been included. In addition, this chapter's further reading and useful websites section was inadequate in comparison, say, to the Rare Book School's *Rare Book Cataloging Advance Reading List*.[1]

The first two editions of this book were published in 2011 and 2016, respectively, and were critiqued by contemporary reviewers as being too United Kingdom centric. This third edition seems for the most part to have amended that bias in regard to references to international and American resources, websites, institutions, and tools. To be fair, there is only so much the author can include in the text about other countries' standards and practices without making the book too lengthy and thereby unwieldy. For example, chapter 7 ("Legal and Ethical Issues in Special Collections") is almost exclusively focused on UK and US law and this limited focus seems to be the more practical approach since every country is going to have their own laws and practices in terms of copyright, privacy, and freedom of information.

It is a shame, though, that the book was completed while COVID-19 made physical attendance at many research libraries impossible. The gaps in the chapter bibliographies make this handbook a bit less useful than it could be. It is appreciated that the author admitted as much in the text, stating "I was unable to access some relevant titles due to COVID-19 restrictions. I will share information about them once read via the accompanying website" (23). This is not a fatal flaw, since so much information can be found online nowadays. It is also most likely that there will be room for another edition within five years with the ever-changing world of technology—sections on digitizing, metadata, linked data, etc. will require updating.

To this reviewer, the book will best serve those who are already working in special collections within a specialization, such as a rare book cataloger or reference librarian, who need to broaden their knowledge to other arenas in special collections. The author seems to lean a bit towards thinking that beginners would find it more useful: "The *Handbook* is written for library practitioners who work with Special Collections, *or those aspiring to do so, especially library school students and new professionals*" (xviii). Yet one might suspect that a new librarian would be overwhelmed by the depth of the content overall. For small special collection libraries or collections where there is limited staffing and therefore less experts to consult, however, this book will certainly be a welcome resource.—*Tamara Fultz (tamara.fultz@metmuseum.org), Thomas J. Watson Library, Metropolitan Museum of Art, New York, New York*

Reference

1. "L-30. Rare Book Cataloging—Advance Reading List," Rare Book School, https://rarebookschool.org/courses/library /l30/reading-list/.

Metadata, Third Edition. By Marcia Lei Zeng and Jian Qin. Chicago: ALA Neal-Schuman, 2022. 640 p. $84.99 softcover (ISBN 978-0-8389-4875-0).

The third edition of Zeng and Qin's *Metadata,* first published in 2008 and expanded in a second edition in 2016, offers a fully updated overview of the latest developments in metadata standards, practices, and tools, with special attention paid to the areas of linked data, open science, and digital humanities. In this latest revised edition, the authors provide updated links to web resources, discuss the most current versions of relevant metadata standards, survey newly developed standards and best practices, and introduce new advances in semantic web technologies.

For the most part, the book retains the structure and content sequence of the second edition and consists of ten chapters, grouped into five sections: "Fundamentals of Metadata," "Metadata Vocabulary Building Blocks," "Metadata Services," "Metadata Outlook in Research," and "Metadata Standards." Each chapter concludes with a summary, suggested readings for further exploration and study, as well as exercises designed to reinforce and apply introduced concepts and principles. A brief glossary, a comprehensive list of bibliographic references, and a detailed index can be found at the end of the book. A companion website offers a wealth of additional resources, including chapter layouts, suggested readings and exercises from all three editions, appendixes for metadata schemas, application profiles, registries, and content standards, as well as a tutorial on metadata basics aimed at educators, students, and practitioners.

The first three chapters of part 1 introduce key concepts and principles of metadata. They discuss components and specifications of metadata standards such as the Dublin Core Metadata Element Set, the Visual Resources Association

Core Categories (VRA Core), and the Categories for the Description of Works of Art (CDWA), as well as the fundamentals of metadata descriptions, including data conversion and storage. Part 2 surveys metadata models and ontology schemas, such as the IFLA Library Reference Model (LRM), BIBFRAME, and the DBpedia Ontology. It also introduces the concept and purpose of controlled vocabularies and provides a survey of encoding syntaxes.

Chapter 6 of part 3 discusses tools, systems, and policies that provide the necessary infrastructure for metadata service operations. In this edition the authors present a revised section on metadata as linked data, to account for the latest developments of linked data technologies and the emerging challenges of metadata services. Chapter 7 discusses quality issues faced by metadata repositories, and chapter 8 focuses on methods that have been used to achieve interoperability when building digital collections and services. A summative overview of metadata research and developments of the past twenty-five or so years is provided in part 4. Some of the research areas discussed include metadata architecture and interoperability, modeling, and systematic biases in metadata descriptions, workflows, and practices.

Part 5 expands on chapter 2 and introduces an additional selection of metadata standards pertaining to different subject domains and communities, purposely excluding content standards such as Resource Description and Access (RDA) and Describing Archives: A Content Standard (DACS). It includes standards for general purposes, cultural objects and visual resources, research data, archives, rights management, multimedia objects, preservation and provenance, and metadata describing agents. Several of these sections were updated to reflect latest developments and encoding revisions.

Zeng and Qin—both professors of information science with extensive research expertise and teaching experience in metadata, data modeling, and linked data—have published a welcome and systematic update of an already valuable text. At once a detailed handbook, a well-structured textbook, and a valuable resource guide, the third edition of *Metadata* introduces key concepts and practices in an accessible and logical manner and offers a plethora of didactically useful illustrations and reference resources. The authors give a comprehensive overview of the field of metadata, covering a broad range of complex topics and challenges relevant to libraries, archives, and museums. Their discussions of metadata tools and practices are firmly situated within the broader context of linked data and provide an excellent introduction to the latest developments of semantic web technologies.

This expanded third edition is a substantive book and will be useful reading for information professionals and students who wish to gain a comprehensive overview of the field. It will also be relevant to metadata specialists who require a handy reference handbook and seek to stay current with metadata trends and practices. The companion website will be of particular interest to instructors who teach classes on metadata and information organization as it contains a wealth of additional instructional resources and teaching tools.—*Danijela Matković (danijela.matkovic@yale.edu), Yale University, New Haven, Connecticut*