

programs—to those who are aware of information organization standards and the principles underlying efforts to control and provide access to cultural resources and archival holdings—and to those who are learning about standards, principles, and practices for the first time. Perhaps most important, these books are of enormous value in the cultural resource or archival repository that has functioned mainly under the guidance of in-house, homegrown practices and localized schemas, but now wants to contribute to the growing networked world of cultural resources and archival access. These excellent books are indispensable for any institution that wants to make its resources Web-accessible in a way that will support collection control and access and will facilitate interoperable exchange of information.

Introduction to Vocabularies opens with a “A View from the Top” by David Green, executive director of the National Initiative for Networked Cultural Heritage. This “special message for administrators of cultural heritage collections,” (1) will certainly get cultural heritage custodians who are currently functioning in isolation thinking about the value of shared vocabularies in the networked environment. *Vocabularies*, intended for practitioners, students, administrators, educators, and researchers working with cultural resources, covers the what, why, and how of standards for documenting cultural heritage information, with emphasis on standard vocabularies for description. Chapter 5 is a detailed introduction to the Getty vocabularies: *The Art & Architecture Thesaurus*, the *Union List of Artists Names*, and the *Getty Thesaurus for Geographic Names*. Chapter 6 focuses on more advanced vocabulary-related matters, such as search assistants, database and catalog issues, browsers, and the multilingual aspect of vocabularies. This book concludes with a resource section that

provides a list of acronyms and abbreviations essential to the field, a list of readings, and an excellent compendium that lists tools, guides, manuals, organizations, projects, and training opportunities for individuals who want to expand their knowledge in this area.

The layout of the *Introduction to Archival Organization and Description* is similar to that of *Vocabularies*. In the introduction, Suzanne Warren notes the growth of the archival profession and the development of principles and standards that facilitate control of and access to archival materials. The book is divided into four parts: “Archival Principles, Archival Practices”; “Archival Analysis, Archival Description”; “Putting it All Together: How the Archivist Works”; and “What’s Ahead in Description and Access.” Warren notes that the book “serves as an orientation to fundamental archival principles for the beginning and novice archivist, and demonstrates how the work of an archivist flows from them” (vii). Archival descriptive activities are grounded in two fundamental principles, *provenance* and *original order*. The authors discuss the importance of these concepts and how they guide archival description. Archival thinking has expanded beyond these boundaries to include discussions on *fonds* and *functional provenance* that might be included in a new edition of this book. The book ends with the informative “Tutorial: An Over-the-Shoulder View of an Archivist at Work,” followed by a great little glossary, a list of acronyms that are important to the field, a bibliography for further reading covering tools and technical resources, and a list of Web resources providing useful examples and links to organizations, training, and educational opportunities.

Both of these books are worthwhile; in fact, one hopes that second editions of both will be forthcoming. Though the format of these little volumes is appealing, a larger font would

be appreciated.—Jane Greenberg (jane@ils.unc.edu), School of Information and Library Science, University of North Carolina at Chapel Hill

Sorting Things Out: Classification and Its Consequences. By Geoffrey C. Bowker and Susan Leigh Star. Cambridge, Mass.: MIT Pr., 1999. 377p. \$29.95. (ISBN 0-262-02461-6) LC99-26894.

Sorting Things Out: Classification and Its Consequences is well characterized by its subtitle. Bowker and Star examine both the social, political, and economic forces that shape classifications and the social, political, and economic consequences of classification. The book consists of an introduction to classification as a part of social infrastructure; a thorough examination of the creation and operation of the International Classification of Diseases (ICD); two cases of the effect of classification on individuals’ lives (tuberculosis patients and South African Apartheid race classifications); a description of the use of the Nursing Intervention Classification (NIC) to make visible what professionals do; and a concluding theoretical discussion of changing the practice of classification. In this review I will consider the book’s significance in a broad sense and how the authors’ observations on non-library classifications and their critical and theoretical approach relate to library and information studies (LIS).

The most important contribution of *Sorting Things Out* is its authors’ explanation of the significance of classifications as part of the infrastructure of peoples’ lives. Bowker and Star are explicit about their moral and ethical agenda. They use what I would call a “worst-case study” methodology, a cross between “worst-case scenario” and “case study,” using the most obviously problematic cases to highlight problems that are then visible in more subtle forms in everyday cases. Thus,

their discussion of what happened to tuberculosis patients caught in a bureaucratic infrastructure and of individuals caught in the race classifications of Apartheid South Africa helps us see how classifications can construct peoples' lives. From there we can use our own imaginations to link these consequences to our own experience—classification used by insurance companies, educational institutions, and marketers, for example. Each of these classifications pigeonholes individuals on the basis of a few salient, but nevertheless limited, criteria. Bowker and Star offer intellectual tools for assessing both the advantages of enforcing classification, such as using the ICD to gather information on the spread of disease, and the dangers of pigeonholing, such as the definition of an identifiable, and therefore treatable and insurable, disease.

With this overall approach, how does *Sorting Things Out* relate to library and information science? We will have to do the work of making connections between our classifications and those described by Bowker and Star, but the results are well worth it. For example, the ICD is the instrument for tracking international disease data for the World Health Organization. It is similar to the standards we use for bibliographic control internationally. IFLA's Universal Bibliographic Control program delegates cataloging to national bibliographic agencies who subscribe to the International Standard Bibliographic Description and the Paris Principles. In addition to these internationally developed and endorsed standards, we also have *de facto* international standards such as the Dewey Decimal Classification. Reading the three chapters about the ICD in light of these cataloging and classification standards

can offer us a new way to look at our work in a global context. In addition, LIS readers can link many of Bowker and Star's observations to the principles of classification that our field has developed over more than a century of research and practice. Our understanding of specificity (they use the term "granularity"); exhaustivity; interindexer consistency; and relevance, precision, and recall can enhance and be enhanced in reading *Sorting Things Out*. For example, Bowker and Star note the cultural differences in coding diseases using the ICD. Knowledge of the problems of and possible ameliorative measures for interindexer consistency would be useful to those gathering data on diseases, but the insights into the cultural nature of inconsistent coding is a relevant contribution to LIS literature.

Bowker and Star approach the study of classification by "reading" in the style of a Foucauldian discourse analysis. This is a critical technique worth emulating because it makes visible what is otherwise taken as innate or natural. However, this particular reading could fruitfully go further. At the beginning, the authors state that "to classify is human" (1). Traces throughout the text echo this statement. It strikes me as an inappropriately sweeping presumption in general, but especially so in a work whose authors seem to be questioning fundamentals. It suggests to me that this book is not quite as radical as it appears. The authors do what they set out to do—to reveal the infrastructures that are built from classifications and to reveal their consequences—but they do not question the nature of classification as such. Bowker and Star provide many potentially useful theoretical techniques for self-critical reflection on our creation and use of

classifications, but that is as far as they go. An interesting example is the suggested use of classification to raise the visibility of what professional nurses do. The NIC was designed to make nurses' work visible in hospital information systems, with the idea that it would lead to the recognition of nurses as a profession. This lack of recognition is also familiar to librarians, teachers, social workers, home economists, and other predominantly female professions; and the authors allude to gender issues occasionally. But in discussing the NIC they do not pursue the question of whether the structure of a classification might have negative as well as positive ramifications with gender as a determining factor. If, indeed, gender is active in this situation, then itemizing nurses' tasks in the context of a classificatory structure may lead to deprofessionalization, making nursing appear more like non-professional, primarily female, clerical work. Bowker and Star discuss the difficulty of classifying activities such as emotional support, but do not take the next step of questioning whether or not a traditional classification is a suitable means for the desired end. In some ways they are implying that classification is simply a tool that can be used for good or ill. They do not question the structure of this infrastructure itself and its appropriateness for different groups and cultures. In the end however, *Sorting Things Out* should be considered in terms of its intent and result. Bowker and Star have created an impressive demonstration that classification is power in an often hidden form and therefore demands our critical attention—Hope A. Olson (hope.olson@ualberta.ca), School of Library & Information Studies, University of Alberta, Edmonton, Alberta, Canada