manifestation-based) cataloging that often leads to dozens of records in OCLC for the same expression of the same work, especially in the humanities. And Lubetzky's sound advice about corporate authorship, taken in AACR1, was rescinded in AACR2, leading to many more works of corporate authors being identified by title alone.

For all these reasons, this is a book that should be read by all librarians, information scientists, system designers, experts in informatics, knowledge engineers, and anyone else who ever creates or uses metadata, helps others use and interpret metadata, or designs systems for searching and displaying metadata. As Lubetzky says, "Those who are still longing for a code of rules which could be applied by a beginning cataloger without the exercise of judgment are looking backwards to a time which has gone by" (149).—*Martha M. Yee (myee@ucla.edu), University of California at Los Angeles, Film and Television Archive.*

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Subject Analysis in Online Catalogs.
By Hope A. Olson and John J. Boll. 2d ed. Englewood, Colo., Libraries Unlimited, 2001. 333p. (ISBN 1-56308-800-2) LC 2001-029828.

This book is an expanded and updated edition of a 1991 book by Rao Aluri, Alasdair Kemp, and John Boll. In his review of the first edition, Wellisch (1991) predicted the need for a new edition within a few years.

Indeed the new edition reveals just how much growth there has been in the relevant literature in the past ten years. Much of this work is focused on maximizing the value of established subject access tools in the environment of online catalogs. In this regard, it demonstrates a body of innovative thought following the pioneering work of Cochrane (1985, 1986).

The format—part encyclopedia, part commentary, and in general a guide for the perplexed—is like a medieval compendium. The topic could be quite narrow, but instead the authors have viewed it as the complex intersection of two larger topics. The fundamental principles and basic structures of both subject analysis and online catalogs are presented with concision and agility. Topics are interrelated and linked by internal references within the text. Both the core literature of each topic and the most recent research are cited extensively. The coverage of gray press research reports, many available on the Internet, is impressive.

The analysis is original and serves to relate the discrete concepts to the overall theme. The authors also identify current problems and prospects for future developments and research. Both the challenges to and the opportunities for improving online subject access are described in detail. The role of authority control and the online use of classification are the two main issues.

Bringing together various types of databases through the catalog presents a new need for vocabulary control across multiple files as well as within the catalog. Enhancements such as adding tables of contents to bibliographic records reflect a demand for higher levels of exhaustiveness and specificity in searching the catalog. The authors caution that "it is not clear that the ramifications of doing so have been carefully weighed to ensure that more positive (higher recall) than negative (lower precision) results are produced"

(320–21). The impact of vocabulary control freed from linear file structures is presented in the context of combining sophisticated retrieval techniques.

The revival of interest in classification is viewed with enthusiasm. Again the authors warn that "even in an electronic environment order and linearity, and at least some of the traditional principles of classification, cannot be ignored"(186). These principles provide a counterbalance to the scattering effect of expanded indexing of controlled and uncontrolled search terms. The potential for online classification in support of hierarchical and lateral browsing is immense. The widespread, if clumsy, use of classification by Internet search engines is witness to this potential. The development of more flexible and transparent system-user interfaces suggested by Boll and Olson will be a critical step forward.

The literature of bibliographic control seems to draw readers largely among technical services librarians. This book has as much or more to offer to public service librarians and library system designers. It is a gold mine of bibliographic instruction strategies. Library automation vendors could gain a competitive edge by studying some of its chapters. In at least one MLS program, this book will be used as the text for a subject analysis course. Although not intended per se to prepare catalogers, it provides an excellent basis for a course of value to information professionals in all fields.—*J. Bradford Young (jbyoung@pobox.upenn.edu), University of Pennsylvania Libraries, Philadelphia.*

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The Invisible Web: Uncovering Information Sources Search Engines Can't See. By Chris Sherman and Gary Price. Medford, N.J.: Information Today, 2001. 439p. $29.95 (ISBN 1-55938-510-3) LC 2001-028818.

The popularity of Internet search engines belies their weaknesses as tools for information discovery; using one is like panning for gold, combing through a scoopful of wet sand for a few valuable nuggets. While the unmanageable size and bewildering variety of search results are obvious to—and taken in stride by—most search-engine users, the fact that the large preponderance of Web-based content is beyond the reach of the Internet search services is much less apparent and unsuspected by many. This is the phenomenon of the invisible Web, which experienced searchers and webmasters Chris Sherman and Gary Price seek not only to make us more aware of, but also to equip us to use effectively. In a nutshell, this book sets out to do three things: (1) define the invisible Web; (2) show the would-be searcher how to access the information it contains; (3) present a "starter's kit" collection of representative invisible Web resources.

For the most part, Sherman and Price handle the first two tasks very well indeed. Chapters 1 through 8 are a model of pedagogical technique. The authors start by providing basic concepts and necessary background, continue by defining the invisible Web in relation to the Web and the Internet in general, show how a searcher can tell whether a site is likely to be "visible" or "invisible," list the types of information likely to be found on the invisible Web, and use case studies to show how the invisible Web can be successfully exploited by novice as well as experienced searchers. Organization is clear and logical, categorical analysis is used to good advantage, strategic repetition reinforces key concepts, and well-placed sidebars clarify important terms and puncture myths as they surface. The style is relaxed and informal while maintaining a high level of focus.

However, this relaxed approach is not without a few problems. One is that the authors' definition of "invisible Web" is not as clear and consistent as it could have been. The definition encapsulated in the book's subtitle is lucid enough and is admirably fleshed out in the discussion of the various types of invisibility. Resources likely to be invisible to search engines include databases, sites that require registration, and the deeper pages of an unusually large site. The authors muddy the waters, however, when in some places they refer to "opaque" pages that are indexable by search engines, but not indexed, as part of the invisible Web but elsewhere exclude them from that category. Definition of terms sometimes sacrifices clarity and rigor in favor of casual readability, most egregiously in the glossary definition of "precision," which lacks a key final phrase from the definition used in the body of the text. Even with such minor defects, however, the first third of the book provides an effective and engaging guide to Web searching in general as well as the relationship between invisible Web resources—especially databases—and the Web as a whole.

The remaining two-thirds of the text consists of a classified, annotated directory of about 1000 selected invisible Web resources. It comprises 18 subject or genre categories and 127 subcategories and appears to be a thin and very eclectic sampling of the types of "invisible" resources being discussed. Annotations—either composed or cut and pasted from a self-description—are provided for most resources; the rest are attached to annotated entries as "related resources." Wherever possible, URLs are provided for both a site's search form and home page.

This directory is also on the Web at www.invisible-web.net, but it is disappointing to find, some five months after the book's August 2001 printing date, that despite the authors' stated intention to expand and update their directory, this has not happened so far. The online content does not go beyond that of the book, and there are more than a few broken links. Even so, this directory is well enough organized and offers a sufficient variety of quality sites to give any novice searcher valuable learning experience with the invisible Web. While it seems questionable to devote so much print to a reference feature that is sure to become dated quickly, and which is both available and much more usable online, the directory does advance the purposes of the book by serving as an artist's rendering of what the invisible Web has to offer. The "Web guide" section of the book, it should also be noted, contains descriptions of several directories and specialized search tools the authors have found handy for locating invisible Web resources; this is one of the book's more useful features.

Part how-to manual, part compilation of sites, part background briefing paper, *The Invisible Web* is both more and less than what it appears to be. Its stated objective is to provide a "map" of the vast reservoirs of Web-based content inaccessible to the major search engines. While this metaphor may have energized the authors'