

historical development of standards and cooperation at the national and international levels. As may be expected from a historical account, these articles focus largely on the details of how practical factors affect the development and implementation of cataloging standards and systems. The third chapter in this section ties historical description into current discussion regarding the principles underlying cataloging and its rules.

The second section consists of eleven articles relating to specific countries or regions. Many of these articles strongly resemble the first two chapters of the book in style and content, focusing largely on the historical development of cataloging standards and cooperative cataloging arrangements in different regions and countries. Naturally there is a great deal of attention given to issues relating to entry and attribution in the development of cataloging systems. The majority of these chapters describe their respective country's or region's cataloging history as it relates to western practices. This is largely a result of the dominance of western standards in the world community, but is also a function of the intended audience of this book. In this context, this section illuminates many of the challenges that multicultural materials pose, both within the framework of established cataloging systems, and in the creation of new systems.

The third and final section of this book covers the widest variety of topics and is the most difficult to generalize. Roughly half of the articles address the special cataloging and classification needs of specific material types, including archival materials, government information, maps, rare books, and serials. The majority of the remaining articles discuss the cataloging and classification issues relating to specific topics, including native Alaskan languages, Pacific and Asian language materials, music, law and monastic materials. The two articles

in this section that do not fit into these general categories are "Posthumously Plagiarizing Oliva Sabuco" and "The History of 'The Work' in the Modern Catalog."

The first of these is somewhat of an anomaly in the context of the book as a whole. It is a presentation of evidence as to the authorship of a sixteenth century text with the objective of changing the current attribution in the Biblioteca Nacional of Madrid and the U.S. National Library of Medicine. Although interesting as an example of the importance of attribution and cataloging work in general, it is not at all related to the history of cataloging or classification.

The second exception in this section, "The History of 'The Work' in the Modern Catalog," is definitely relevant to the topic of the book as a whole. Its difference is in its description of a theoretical aspect of cataloging (otherwise rarely discussed in this book) and its comparatively modern scope. It provides a solid and interesting introduction to the issues and theories that led to the creation of the Functional Requirements for Bibliographic Records (FRBR).

By design this book is not a cohesive history of cataloging and classification, but rather a collection of detailed discussions of specific topics relating to the development of bibliographic control. This characteristic makes it a valuable resource for library schools and a good selection for professionals involved in research relating to cataloging and classification. One caveat is that these essays are generally not on an introductory level. For example, many of the concepts and terms used are not defined or described in the works, as, presumably, the reader is expected to be familiar with them already. Because of this, the majority of the articles are probably more relevant for readers already fairly familiar with cataloging and its history, or for use as an addition to more introductory level readings.

Overall this book provides an interesting view of the multiplicity of challenges that catalogers and information professionals have faced, and continue to face, as they tackle the incredible variety of cultures, languages and materials present throughout the world.—*Arwen Hutt (ahutt@utk.edu), University of Tennessee, Knoxville.*

A History of Online Information Services, 1963–1976. By Charles P. Bourne and Trudi Bellardo Hahn. Cambridge, Mass.: MIT Pr., 2003. 493p. cloth \$45 (ISBN 0-262-02538-8)

The present-day librarian can be excused for rarely, if ever, thinking about the early days of online searching. Many are too busy keeping a wary eye on emerging technologies, vendor pricing schemes, and explosive online growth. But before the Internet boom of the late 1990s there occurred the remarkably similar events of thirty years earlier, the emergence of online bibliographic search systems of the 1960s and early 1970s.

Bourne and Hahn have spent twenty years researching the topic and the results are impressive. The book is organized around five roles: hardware and software developments, early service characteristics, formal evaluations, funding, and the online pioneers themselves. The stated goal is to assemble a cohesive chronology of the design, development, and evaluation of the first online systems. While the authors admit that many pieces of the story will never be known, they have succeeded in assembling an exhaustive retelling of a time when computers were new enough, and mysterious enough, to literally paralyze a new user with fear.

While a debilitating fear may be considered extreme, Bourne and Hahn give enough background details to perhaps justify the response. For example, the early 1960s computers required to run the SAGE system weighed in at 250 tons, occupied an

acre of floor space, featured almost 60,000 vacuum tubes, and used up to three million watts of electricity. In 1967, during the installation of a single remote terminal at the Ames Research Center Technical Library, workmen had to remove part of an exterior wall and use a crane to hoist the machine to its new second floor office. Software of the time also required accommodation. The online system MEDLARS, a precursor to MEDLINE, suffered from lag times of fifteen to forty seconds between entered commands. But for all that, early online experiments were surprisingly sophisticated. Systems using Boolean operators, left and right truncation, cited reference searching, wild cards, and more were all available by the late 1960s.

Demand for services caught many pioneering services by surprise. Like the Internet, the impending success of online searching was not apparent to even the most discerning. One professor, speaking at a conference on the small potential of growth for online services, asked, "After all, how many bibliographies can the world absorb?" (371). But by the mid-1970s, enthusiasm for the service was occasionally intense. Bourne and Hahn tell a story of one trainer's experience while conducting a class in Corvallis, Oregon: "About 25 [participants] jammed into a training room designed for ten people. The earliest to arrive grabbed one of the few terminals and would not let go. With the noise, heat, and congestion, an exasperated and sweaty [trainer] could not make himself heard or understood." Online services at the time were not designed to handle large numbers of simultaneous users. Because of their popularity, the service's lag times were severe during peak operating hours. To compensate, MEDLINE began raising fees to curb demand. User groups reacted angrily, predicting that the number of searches would decrease, which did occur and was precisely the point.

Then, as today, systems with superior usability tended to succeed. DIALOG emerged as a leader because of its intuitive system of commands. That may seem odd to the contemporary Internet surfer until Bourne and Hahn show you that one competing system, MOLDS, featured thirty-four commands, many of them appearing very similar: "find, extract, define, chain, fetch, and select" (73). If the modern librarian is suspicious that some online services may be harboring anti-user tendencies, there are precedents for that type of behavior. For example, the English online system RIOT featured an automatic cut off that stopped users' searches if they were selecting too few items to be printed from the displayed result sets. "The point of this feature was to economize on computer search time. [They] did not want searchers to use expensive computer resources to browse for serendipitous discover of references" (109). Despite all of this, enthusiasm for online services was high, even though with services like MEDLARS users could expect a turnaround time of several weeks for the final search results to be returned.

Librarians played a key role in the emergent online industry. In order to understand the new medium, online services conducted many studies using interviews, questionnaires, focus groups, and so on. Even LEXIS, the online service with the stated goal of "crack[ing] the librarian barrier" (302) by enabling attorneys to do the searching themselves, found that the majority of users were librarians. This is because searches were expensive and, without the precision brought to bear by experienced information professionals, inefficient. For example, connecting to MEDLINE at one point cost an institution \$45 an hour. Despite this, librarians were loyal allies who trained searchers and used and promoted the online services themselves, even while fearful of the potential for job loss due to the new technology.

There is nothing in the literature today with the breadth and depth of Bourne and Hahn's history of early online services. The value of the work stems from the devotion the authors have for the subject and their evident empathy for the spirit of the times. Occasionally, however, some punches are pulled unnecessarily. For example, a list of harsh ground rules for searchers using DIALOG is attributed to a government agency who is "mercifully [kept] anonymous" (401). Such omissions are a disservice to scholars, but are luckily not a common occurrence. What is common is a thorough retelling of who did what and why during this exciting time. Readers of this book will certainly come across stories which resonate with direct correlations to the recurring difficulties faced by information professionals today. One significant insight is that librarians, who may perceive themselves as at the mercy of changing technology, benefit substantially from the exponential growth in available information that online services bring.—*Steve McCann (steve_mccann@ncsu.edu), North Carolina State University, Raleigh.*

Organising Knowledge in a Global Society: Principles and Practice in Libraries and Information Centres. By Ross Harvey and Philip Hider. Wagga Wagga: Centre for Information Studies, Charles Sturt University, 2004. (Topics in Australasian Library and Information Studies, no. 23) 375p. cloth Aus\$71.50 (ISBN 1-876938-66-8).

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