ence books, Web sites of various kinds, and discussions with various categories of people. For each, people were asked which they had used to seek health information, in which they'd come across such information, how useful they'd found information from each category, and how reliable they considered each source. Similar details were elicited about demographic, economic, and education factors. All the questions are given in an appendix, in English and in Icelandic.

Since the study investigated "everyday life information behaviour," sources and methods of information seeking were all-encompassing: Internet, print and broadcast media, professional consultations, and conversation with kin, neighbors, friends, and colleagues. Again, from an academic librarian's perspective, the value lies in the attempt not merely to investigate how users interact with us and/ or our resources, but whence and how information is sought or encountered anywhere in society. Since the reviewer is an anthropologist as well as a librarian, I approve of letting what research subjects do, or, at least, report, structure the findings. Since Pálsdóttir didn't directly interview her respondents, much less observe them in their lives and information seeking, the study can't be called ethnographic. It is, however, closer to ethnographic than too much library research, which takes us and our arena as the focus of user behavior and expectations. The questionnaire was pretested with small samples and was modified on the basis of respondent questions and suggestions.

Because the book is a dissertation, the author avoids problems of ambiguity or imprecision—every concept, every method, every interpretation is explicitly grounded in prior scholars' analyses and definitions. This makes for slow progress for the reader, but one does understand what's being discussed and how successive researchers have refined those meanings. The nature of the study also means that the reader should know more than many will about the fairly refined statistical techniques that Pálsdóttir uses to analyze her data, most especially within "clusters."

The nature of the book is such that no one except another dissertation writer could imagine sitting and reading it through. I would doubt that many readers of this review will rush to buy a copy, and the percentage of selectors who'll add it to their collections will likely be low. The thoroughness of the literature review means, however, that librarians can benefit from awareness of the substantial body of research for which "information science" is a real term and not merely a euphemism for "librarianship." People are trying to sift out meaningful distinctions between what information people think they want, what they think they can do to get it, and-not least-what, if anything, they do with it once they obtain it. If, as librarians, we want not merely to measure "outcomes" of our work, outcomes we ourselves define, but instead want to understand how what we do articulates real needs of real users, studies like Pálsdóttir's will be necessary. They won't be fun to read, and won't translate into bullet points easily, but they could provide a deeper and more substantial understanding of our profession and what we do. - Gregory A. Finnegan, Harvard University

Sonn, William J. Paradigms Lost: The Life and Deaths of the Printed Word. Lanham, Md.: Scarecrow, 2006. 393p. alk. paper, \$35 (ISBN: 0810852624). LC 2005-23073.

Upon seeing a steam-driven printing press for the first time, a Leipzig printer commented that: "This machine will make many impressions, but nothing beautiful." This clash between printing purists and print-cheapening innovators and the liberation/dissemination of information to the masses came in several cycles, from before Gutenberg to the Internet, and is the subject of this amazingly detailed book by William Sonn. Sonn is an independent historian and professional

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writer and has worked as a consultant for publishing companies.

The book is divided into four parts, each describing an era in printing. Part I, "The Birth of Type: From Hand to Lever," begins with the genesis of written communication-cave painting-and then brings the reader up through Gutenberg's struggles to the Reformation. Obviously Sonn outlines only the main developments along the way, but a researcher will find that the footnotes provide an excellent starting point for a study of print's history. Gutenberg's family background is described, as well as the difficulties he had with his invention. Technical struggles were not enough; he had to work constantly to secure funding for his work, keep it a secret from competitors, while constantly moving because of political unrest in the region. Unfortunately, due to the lack of information about Gutenberg, Sonn must often speculate about how the work actually proceeded.

The author makes the point in Part I, repeated throughout the book, that the greater availability of the printed word caused revolutions in thinking and daily life. After Gutenberg, people began to think more for themselves instead of relying on others' interpretations. The church reacted by banning "objectionable" books, meaning books that were not in Latin. Some local religious leaders forbade reproducing religious works by machine at all. Secular leaders also became involved in censorship; to preserve profits and gain control of

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the printed word, Henry VIII granted the first patents, controlling who could own a printing press. In doing so, he gained the upper hand over the clergy, pioneering the separation of church and state. The new technology helped ignite the Reformation, when a widely distributed printed book of Erasmus' ideas inspired Martin Luther to doubt church teachings. After having his famous questions printed in Nuremberg, Luther posted them on a church door in Wittenberg, and the list was reproduced and sent all over Europe.

Part II, "The Type Age: From Lever to Machine," would be useful to those studying the history of labor relations, as Sonn documents the start of problems that were to hamper the printing industry until the 20th century. In America, it wasn't much of an issue at first; more urgent was the problem of finding experienced printers. In Europe, however, where the availability of abundant, cheap reading material had given birth to the Enlightenment, entrenched class boundaries meant that printing was controlled by an "oligarchy of masters" who exploited workers terribly and protected themselves by stifling innovation. Sonn, in fact, goes as far as to say that the class system that exported labor unrest to the New World was created by the European printing industry.

In the early 1700s, for the first time, the book market began to resemble what we see today, as authors began to sell their works to booksellers instead of to printers. Copyright legislation debuted in 1709 in England. While it protected authors, it also guaranteed a steady flow of taxes to the monarchy.

Most striking about Part III, "The End of Type: From Machine to Math," is the ongoing relevance of the work of Vannevar Bush, the "scientific cyclone" of the post- Second World War era. After the war, he helped to develop a phototypesetter, a machine that eliminated metal type altogether, and used only photography paper and light to create print. One of the innovations made possible by the new machine was a precursor to today's online databases—in 1962, a company called Photon found a way to hook its photo unit onto a mainframe and uploaded the National Library of Medicine's *Index Medicus*. Phototypesetting sounded the death knell for the unionized press operators.

In the last section, "Life After Type," Sonn discusses the development of the computer and its impact on the printed word. In explaining how computer networks are modeled on the human brain, he makes a complex topic fascinating and easy to understand. He observes that computers have brought us full circle; religious leaders point out today, just as in Martin Luther's time, that modern methods of communication are ruining society. Also, computers and desktop printers have freed us to produce our own work like the cave painters, with no need to send it to a print shop. Just as in the invention of the printing press, though, the real revolution that computers have wrought is in our thinking-Sonn observes that "once again, our place in the cosmos shifted when the way we retrieved and used information changed."

In outlining the history of printing, Sonn touches on a great variety of subjects, humanizing previously one-dimensional historical figures and events. While individual stories are interesting and the tone refreshingly lighthearted and at times hilarious, the sheer amount of detail is often overwhelming. The result is a book that can be a little tedious if read as a narrative, but it would be extremely useful as a research tool. Sonn provides extensive footnotes and a detailed and accurate index and bibliography.—*Henrietta Thornton-Verma, DeVry Institute of Technology*

Last One Out Turn Off the Lights: Is This the Future of American and Canadian Libraries? Eds. Susan E. Cleyle and Louise M. McGillis. Lanham, Md.: Scarecrow, 2005. 227p. alk. paper, \$45 (ISBN 081085192X). LC 2004-20419.

Despite the rather pessimistic tone of its title, the contributors to this collection of essays are, for the most part, true believers

in the mission of libraries and the work of librarians. What they do insist upon is the need for libraries to transform (or perhaps continue to transform) themselves as the world and our users change. Two Canadian librarians edit the collection: Susan Cleyle is associate university librarian at Memorial University of Newfoundland; Louise M. McGillis serves at Sir Wilfred Grenfell College, also in Newfoundland. But aside from the preface on the future of Libraries and Archives of Canada by former national librarian Roch Carrier, the questions and concerns raised by the book's Canadian and U.S. contributors seem to differ very little. The real point here is not that Canadian librarians offer a different point of view, but that we Americans need to listen and learn from our professional counterparts elsewhere in North America and the world. The pointed title of this volume is a gentle reminder that we Americans, who regard ourselves as world leaders in everything (even librarianship!), perhaps need to walk along with others more and lead a little less.

The introductory essay to the volume is entitled "Change the Lightbulb or Flip the Switch-Our Choice!" Cleyle and McGillis muse about why, when librarians claim to be so confident of our future, we keep writing about and agonizing over our place in the information age. They note that the "come to us" ethic of service will no longer work; instead, we need a "get the service to you" model. Each essay in the book offers a different perspective on how to get services to users-all those nonusers and lapsed users who have fled to the Internet, and even our fellow professionals and paraprofessionals. Some are more practical, "how-to" articles; others are thoughtful pieces on the roles of libraries and how we as librarians can move forward and yet also "preserve what is good."

The collection is divided into five parts, each focused on a different theme or concern. The first part, "The Tug of War between Libraries and the Web: Who Will End Up in the Dirt?," is the most practical, offering suggestions on how