duct of qualitative inquiry. In their detailed discussion of direct observation, a frequently used information-gathering technique, the authors offer tips that researchers can use to place themselves in the context of the setting, conduct themselves once in that setting, and record what occurs during observation. With regard to the last, the authors address concerns of reliability and validity in a naturalistic setting. They account for different types of reliability and validity, suggesting ways to ensure both and noting that these concerns may manifest themselves differently in qualitative and quantitative inquiry.

The interview is a principal information-gathering technique in qualitative research. The authors include detailed discussion of various ways individual and group interviews may be designed and conducted. Of special interest is their coverage of how to record interview data and how to ensure full and accurate accounts of the results of interviews. They include advice to the interviewer on how to prepare; what sorts of probes to interject, and when; how to ensure clear understanding of questions asked; and how to elicit responses. Moreover, the authors discuss both the advantages and the shortcomings of this means of information gathering. Not only do they illustrate the strengths of the method; they also point out pitfalls and ways to avoid them.

Perhaps the most helpful element of this book is the inclusion of what the authors call "research scenarios." These concrete examples of project design and the conduct of studies, mostly taken from the authors' own research experiences, describe the steps undertaken in carrying out projects and point out problems and pitfalls. The scenarios place this discussion very clearly in applied settings illustrating the rigor of the methods employed, the importance of planning, and the value of the methods in answering particular questions. These scenarios are interspersed throughout each chapter. Because this book is intended to be a practical guide, its success should be judged according to the practicality of its content. The research scenar-

ios help to make the work a tool that can be used successfully, especially by a less-experienced researcher.

The authors state at the outset that this book is not an academic exercise. Still, there is the need for reference to additional sources that cover in greater detail some of the specific elements of qualitative methods. The authors weave these references into each section of the book by presenting specific examples of the methods and their application, and also by including at the end of each chapter a brief presentation of additional sources and their utility. This is important because no single text can supply everything the aspiring researcher will need to know. The items referred to are very well chosen and complement the discussion of each chapter admirably.

Readers seeking answers to some of the thorny questions that arise in libraries will find this book an excellent guide to qualitative methods of inquiry. There is nothing insular about this work by British authors, published in London by the Library Association; it has applicability to library environments everywhere. Consulting the book can assuredly save a researcher's time and prevent pitfalls in the conduct of any formal research.—*John M. Budd (libsjmb@showme.missouri.edu), School of Information Science and Learning Technologies, University of Missouri–Columbia.*

ASIS '97 Proceedings of the 60th ASIS Annual Meeting: Digital Collections: Implications for Users, Funders, Developers and Maintainers. Vol. 34 (1997). Editors Candy Schwartz and Mark Rorvig. Medford, N.J.: Information Today, Inc. 409p. (ISBN 1-57387-048-X).

Professional conferences enable the members of an association to share results of current research and keep in touch with developments in the profession. Published proceedings document the events at these conferences and make them available to those unable to attend, as well as to future researchers. Because of their documentary nature, conference proceedings are often difficult to consider in

their entirety; like the conferences they document, proceedings can contain a wide range of papers on diverse topics. The proceedings of the 1997 American Society for Information Science (ASIS) annual conference, which took place November 1–6, 1997, in Washington D.C., follow this pattern to some extent. However, ASIS conferences use a thematic approach, which serves as a focus for the presentations. The theme of the 1997 conference was "Digital Collections: Implications for Users, Funders, Developers and Maintainers."

The concept of "digital collections" is drawn broadly here; the perspectives range from case studies of specific digital libraries to theoretical analyses of the effects that digital collections have on the modes and models of library service. The proceedings are divided into "Contributed Papers" (80% of the volume) and "Abstracts of SIG Sessions" (20%). The "Contributed Papers" section provides full texts of 31 papers, arranged into 11 groupings that represent the conference sessions in which they were presented, while the SIG section offers abstracts for over 70 additional presentations. Because of the breadth of material included in the volume, I will highlight, in the order they are presented in the volume, those papers that seem likely to be most useful and informative for today's technical services librarians.

In the first section, "Theory," Karla L. Hahn and Natalie A. Schoch outline the use of diffusion theory to explain developments in electronic publishing. They suggest that the introduction of electronic publishing "should be seen, not as representing a single innovation, but rather an innovation cluster" (p. 5), and that this complexity has complicated research into user acceptance of electronic publishing. This research has promise for helping administrators and future researchers analyze the effects and acceptance of new technologies in the field, although the paper included here is too brief to provide readers much more than a hint of what is involved. Christine L. Borgman's paper titled "Now That We Have Digital Collections, Why Do We Need Libraries?"

closes this section with an excellent exploration of the broad implications of digital collections for library professionals and for the library profession at large. She examines the concept of a library and uses this examination to highlight the assumptions in her title question. Borgman leaves the question unanswered, largely because the answer depends so closely on how we define the library field and its institutions. In her discussion, however, Borgman raises numerous issues important for librarians to consider.

In the second section, "Semiotic Approaches," Jens-Erik Mai uses semiotics to reexamine traditional views of the subject analysis process. Mai assigns the different parts of subject analysis to categories delineated by noted semiotician Charles S. Peirce. This examination offers readers a very different perspective on the subject analysis process and insights relevant to current research in online subject retrieval.

As part of the section titled "Web User Assessment," William Moen and others describe the method they used to assess parts of the U.S. Government Information Locator Service, an attempt by the federal government to make government documents available electronically. The authors outline a framework for ensuring reliable and thorough evaluation of these resources. This is a well-written background piece for the broader research agenda in which Moen has participated.

The fourth section, "Information Retrieval Interaction," includes four papers on relevance change in relation to the specifics of the retrieval situation. Hong Xie identifies seven retrieval intentions, which she terms "interaction intentions," linking these intentions to specific types of actions. This research could have substantial applications in online system design. Amanda Spinks uses a meta-analysis to discover that partially relevant items could be associated with changes in users' understanding of their information problem. David Robins continues this theme, examining in greater detail the frequency and the role of shifts in end-user focus during the retrieval process. Colleen Cool considers the information retrieval expe-

rience as a social interaction and examines it from the perspective of situation assessment. Taken together, the papers in this section raise many questions about the nature of the information retrieval enterprise, giving us a broader perspective on some of the real-world factors involved.

In the "Academic Users/Special Bibliographies" section, Peiling Wang uses a meta-analysis of user relevance criteria to create a complex document selection model with possible relevance to next-generation catalog designs. Wang's observations remind us that both the presentation of data in bibliographic systems and the functions of those systems are areas for further study.

"Theory of Structured Approaches" begins with a substantial work by Martin Doerr on methods he has used to manage heterogeneous thesaurus information. Doerr presents a way to model a large body of thesaurus information and manage terminology among different linguistic systems, a task that assumes greater significance in a digital environment where information originates from many different sources. Tefko Saracevic outlines a stratified model of information retrieval interaction. The research in this paper is closely related to the papers on situated action in the "Information Retrieval Interaction" section.

In the final section, "Metadata," Kwong Bor Ng, Soyeon Park, and Kathleen Bernett examine the differences between library science and computer science perspectives on metadata. Nancy M. Ide and C.M. Sperberg-McQueen discuss problems that arise between the need for standardized markup and the need to accommodate a wide variety of document forms. Heting Chu studies the degree to which hyperlinks in Web pages represent the intellectual content of the collections to which they are linked. Each of these papers raises legitimate areas of concern regarding metadata and their use in broad-based digital collections.

This volume presents a broad array of important research. Without a doubt, digital collections have been an area of great concern to library and information science practitioners over the last decade.

As computer and network technologies have matured, an increasing number of library professionals have looked for ways to use these technologies to further library services in an environment of dwindling resources. The theme of this conference is both pertinent and timely. However, a number of the papers included have little in common with the concept of digital collections. While their inclusion in the proceedings reflects the diversity of research in our field, it also emphasizes the difficulty in using a thematic approach as an organizing principle for the conference.

It is somewhat disappointing that many of the sessions are represented by only a single abstract. It was explained in the preface that the papers presented in full were refereed; the assumption is that the other presentations were not. The purpose of the abstracts is unclear; presumably, they are included to inform readers of potentially interesting studies that are taking place, so that they might contact researchers directly for further information. An argument could be made that if the research is important enough to be mentioned in the proceedings, it is important enough for the full paper to be included. Certainly, gathering, refereeing, and editing an additional 70 papers would substantially increase both the burden of compiling the proceedings and its physical size. However, the solution offered here is not satisfying and does not seem designed for readers' needs.

The arrangement of the volume is also problematic in that the 11 sections in the "Contributed Papers" follow the order of their presentation at the conference, while the abstracts portion is arranged alphabetically by session title. This contrast underscores the fact that many of the papers bear little relation to the digital collections theme. The proceedings would have a better overall cohesion if the papers had been organized in relation to the conference theme, though these organizational issues are not substantial in view of the quality of the research presented at the conference.

This volume, with its numerous descriptions of methods of making digital

collections available and useful to end users, will interest many librarians. The authors of many of the papers explore the management of these materials in an ongoing endeavor, making them of interest to collection management librarians. Administrators will find guidance for program development in their organizations. Systems designers will find descriptions of many different methods of designing and evaluating their systems. In short, this volume will be extremely useful to many. The flaws in overall presentation of the material are minor, while the very diversity that makes this volume difficult to summarize adds to its ultimate value.—*David H. Thomas (dhthomas@ titan.liunet. edu), Long Island University, Brookville, N.Y.*