

Reviews

PETER J. WOSH, EDITOR

Information Handling in Offices and Archives. Edited by Angelika Menne-Haritz. New York: K. G. Saur, 1993. 197 pp. Cloth. ISBN 3-598-11146-0. Distributed by the Society of American Archivists.

Angelika Menne-Haritz has edited the papers presented at an October 1991 symposium on the impact of information technologies on information handling in offices and archives. Held near Marburg, Germany, this international gathering brought together experts from various fields to discuss the impact of modern information technology on archival and records management methods and principles. Many papers in the book address the management and preservation of electronic records within the automated office environment, a significant change from archivists' traditional focus on preserving data files within an archival institution. *Information Handling* also reveals the maturation of archival thought and an emerging consensus among archivists and records managers about approaches to electronic records issues. The common themes that run through the book include the need to build alliances with other information disciplines, the importance of technology standards, the need to address core organizational information management issues along with archival concerns, the need for new techniques that conform with the realities of the automated office environment, and the relevance of such basic archival principles as provenance.

The volume includes contributions from Charles M. Dollar, David Bearman, Richard M. Kesner, and John McDonald, recognized

electronic records experts whose writings will be familiar to North Americans. It also features papers by Richard E. Barry, formerly of the World Bank, some noted European archivists, and three social scientists. Although the book is organized formally into four topical areas, most papers range widely beyond their assigned boundaries.

The first topical section, an information technology overview, includes contributions by Barry and Dollar. Barry's paper is a condensed version of a workshop. He argues that organizations increasingly rely on information technologies and electronic media but have yet to deal with the policy, organizational, and management issues raised by a mixed media environment. Barry provides sound advice and interesting insights on the ways in which archivists and records managers can help their organizations address these issues. Dollar offers a greatly condensed version of his recently published *Archival Theory and Information Technologies: The Impact of Information Technologies on Archival Principles and Methods* (University of Macerata, 1992). His paper reviews information technology trends and discusses their impact on archival theory and practice. Dollar's article provides an introduction to archival electronic records issues but does not substitute for his monograph, which is an excellent overview of the topic.

The second topical overview considers the changing nature of work. It features contributions from three social scientists, who discuss electronic information use in organizations and the impact of information technology on organizational proce-

dures, structure, and work culture. These articles represent the growing social science literature on the impact of information technology on organizations, and they should interest archivists.

Richard Kesner and Peter Bohl address the book's third major topic, defined as the changing nature of documentation. Kesner demonstrates how information technologies are transforming the ways in which organizations conduct business, organize themselves, and document their activities. As the microcomputer revolution has matured, line managers have increasingly replaced technologists as the chief information resource administrators. Information service providers now concern themselves with actively delivering an information utility to end users. Kesner believes that archivists should align themselves with this information utility, master new skills, and serve as advocates for organizational change. Peter Bohl describes recent changes in the Baden-Wurtemberg state government's information technology infrastructure that resulted from automation in the mid-1980s. Despite valiant attempts, the state archives has not been able to deal completely with these changes. Bohl believes that this situation will improve only after guidelines are developed that recognize the archives' role in preserving archival electronic records and providing for their protection and management. Bohl's article demonstrates how far many archival institutions must travel before Kesner's vision is realized.

John McDonald and Michael Cook contributed papers on the fourth topic, the limits and future developments of traditional instruments and principles. McDonald describes the Information Management and Office Systems Advancement (IMOSA) Project. IMOSA is a joint undertaking of the National Archives of Canada, several other Canadian government departments, and a private software firm. These institutions are seeking to develop a prototype software ap-

plication that provides tools both to manage records in automated office systems and to allow organizations to capture, access, and preserve their archival records and corporate memory. Based on tests of the prototype, McDonald believes these tools will not ensure that archival considerations are implemented in the automated office, and he posits that existing approaches to managing records may not be adequate in the future. Cook's paper is a rather superficial treatment of automating records management. He sees information technology supporting records management through the creation of integrated databases containing records management information and through the use of E-mail to circulate this information throughout an organization.

The last topic, which explores implications for archives, was addressed by Claes Granstrom, Bruno Delmas, and David Bearman. All three authors see the relevance of basic archival principles to the automated office environment. Granstrom, a Swedish archivist, describes the situation in a nation where archival principles are fixed by law and a new archival ordinance has given the Swedish National Archives the authority to regulate the management and preservation of government electronic records. Delmas, a French archivist, argues that the archival principles of diplomacy and "archival administration," defined here as "the preservation of records to document the rights, interests, and institutional memory," apply to electronic records. These principles must, in Delmas's view, be modified to conform with the realities of modern information technology and require more systematic and precise application.

David Bearman expands on Delmas's theme, arguing that the management of electronic records for operational or archival purposes requires an understanding of their provenance. Provenance, in Bearman's view, is central to the concept of records as evidence of activities and pertains equally to records in all formats.

Electronic records systems can capture provenance more fully than paper systems but they are less likely to retain this contextual information. As a result, electronic records often lack evidential value. Bearman applies this concept to various types of automated systems. He argues that archivists must make sure that contextual information is captured when systems are designed and preserved over time. Bearman's article is one of the more interesting and important papers included in the volume.

As is the case with many conferences, the discussion at the sessions probably proved at least as valuable as the formal papers. Menne-Haritz provides an introductory essay that attempts to capture the significant discussion points as well as summarize the papers. *Information Handling* is not without its faults. Some papers written by non-English speakers are translated poorly. The quality of the published papers varies greatly. Some are highly polished products, while others appear to be written renderings of less well-developed presentations. The volume also focuses heavily on governmental structures and lacks a diversity of institutional perspectives.

Despite these problems, the book provides a good overview of archival and records management issues in the electronic records area and contains a cross-section of the views of some of the profession's most prominent experts. The book does not, however, reflect the diversity of archival and records management activities in the electronic environment. The archival world has changed rapidly in the last decade. Institutions as diverse as a small state government in New England, a city in Texas, a Catholic archdiocese, and a university in the Midwest are grappling creatively with electronic records issues on a very practical level. Archivists and records managers interested in electronic records should read *Information Handling in Offices and Ar-*

chives. They also need to seek out the growing body of practical experiences reflected in the work of many of their colleagues.

ALAN S. KOWLOWITZ
New York State
Archives and Records Administration

Preservation of Library and Archival Material: A Manual. Edited by Sherelyn Ogden. Andover, Mass.: Northeast Document Conservation Center, 1992. Looseleaf. \$20. Unpaginated. ISBN 0-9634685-0-2. ∞.

This manual, produced and developed with support from the Institute of Museum Services, continues the Northeast Document Conservation Center's (NEDCC) commitment to teaching and providing preservation information for the professional archival community. Sherelyn Ogden, who compiled and edited the material, serves as the director of book conservation at the NEDCC. Various NEDCC staff members have written the technical leaflets that appear in the volume, and the manual reflects their contributions. Karen Motylowski's leaflet on monitoring temperature and relative humidity deserves special mention for its clarity and practicality.

Six major areas of preservation are covered in this handsome and handy looseleaf binder: planning and prioritizing, the environment, emergency management, storage and handling, reformatting, and conservation procedures. Each major type of record medium (e.g., books, paper records, film) is addressed in each section. Thus, for example, a photograph curator must read each section to gather all relevant information concerning photograph care and handling. The looseleaf design allows for future updates or new technical leaflets, and an archivist might even interfile his or her own site-specific information along with the general guidelines.

Occasionally, facts are cited but not supported by additional information. This often raises questions in the reader's mind. For example, a notation in the environment section suggests that photocopiers contribute to indoor air pollution. Is this really a significant problem that archivists need to address? Does the photocopier's potential harm outweigh its convenience? Fortunately, each section contains additional suggested readings, in addition to the lengthier introductory bibliography contained in the first chapter.

The most appropriate audience for this manual probably consists of students who have completed their basic preservation classes and are moving into their first professional positions in smaller repositories. It should serve as a good classroom manual covering the major issues in collections preservation. The reading lists function as able guides for future development, and the checklists help the archivist conduct basic planning with minimal angst. But even seasoned professionals will discover some new ideas and sources in the manual.

Current trends and developments are treated in a sketchy manner. Digitization is only touched on in a tantalizingly brief reference, and it is grouped with older reformatting technologies. Other sources must be consulted for information concerning mass deacidification. Lists of suppliers, products, and recommended reading strengthen the manual. All are chosen carefully, and the annotations and evaluations are often useful. The book's design and ease of use could be improved by a larger type size for the table of contents. Although the format seemingly precludes it, an index would be helpful if manageable. As currently constituted, the manual is not meant for fast use in an emergency. The NEDCC, it should be noted, invites suggestions for new leaflets or general comments concerning the manual.

M. C. JOHNSEN
Carnegie-Mellon University

Before the Computer: IBM, NCR, Burroughs, and Remington Rand and the Industry They Created, 1865–1956. By James M. Cortada. Princeton: Princeton University Press, 1993. Illustrations, index. xx, 344 pp. Cloth. \$55. ISBN 0-691-04807-X. ∞

Archivists who have had the pleasure of processing office records with series that move in an unbroken manner through time invariably come to appreciate the change that technology has wrought on twentieth-century documentation. Certainly, events of the past fifteen to twenty years illustrate the influence of computers on the types of modern records. Equally significant is the effect that more mechanical office technology has had on documentation over the past century. Most readers, whether in academic, corporate, or governmental institutions, have witnessed the change as they have moved from typewriters to word processors. Many readers will also recall their first use of self-correcting electric typewriters, which freed them from older "modern" devices such as erasable bond paper and manual carriage returns. The typewriter, along with the calculator, the cash register, and the tabulator, defined a new industry that author James Cortada claims formed the basis of the modern data processing industry. This industry proved more significant to American business than most historians have acknowledged. For archivists, the significance of this history lies in the office machine industry's importance in shaping modern documentation, even prior to the traditional technological benchmark associated with the development of the computer during the Second World War.

Before the Computer traces the origins of the mechanical devices that defined early office automation, but it does not focus on the details of that technology. Rather, Cortada explores the formation of individual companies and their adherence

to a "three-pronged investment in manufacturing, marketing, and management." The companies that dominate his analysis are International Business Machines (IBM), which arose from Hollerith's invention of the punched-card tabulator; National Cash Register (NCR), which capitalized on James Ritty's invention of the cash register; Burroughs, which grew from William S. Burroughs's accounting machine; and Remington Rand, which started with patents on the typewriter and eventually moved into the tabulator business when it acquired the Powers Accounting Machine Company. Cortada traces the origins of technological change in the late nineteenth century and discusses how each type of machine created applications that propelled the industry forward. The book then examines each company and illustrates how it successfully defended or lost its market position through sales efforts, customer education, product development, pricing, and distribution. Cortada argues that the experience of these companies in office machines placed them in a better position to market the electronic computer, with IBM's experience with tabulators proving especially relevant. Such expertise proved the reason that office machine companies, rather than electronics firms, found themselves converging on the electronic computer industry.

Cortada, currently an IBM employee, is a prolific writer on the history of data processing. He has produced a three-volume historical dictionary, a bibliography, and a guide to the archives of data processing. This book is exhaustively researched. It relies primarily on published sources, although archival records were employed wherever possible. The author emphasizes U.S. industry primarily because U.S. firms dominated the world market in accounting machines, calculators, tabulators, and, to a lesser degree, typewriters. Cortada does, however, include much information about

overseas markets and manufacturers as well. Tables of market economic data abound, almost to a fault. This style of presentation, and the detail of data, make the reading wearisome at points. Better copyediting might have disposed with such phrases as "mutual customer sets."

Still, *Before the Computer* is an important work that moves beyond the history of individual companies and technologies to discuss an industry that shaped commerce, the economy, and recordkeeping. Archivists not interested in the industry will find other relevant information in the book. Cortada describes early applications of punched-card equipment, starting with Hollerith's automation of the 1890 census, and the subsequent use of tab equipment by such railroads as the New York Central and such retail stores as Marshall Fields. He depicts the tremendous sales techniques used by office machine companies to entice businesses to adopt new technologies, and he outlines the manner in which offices grew dependent on the technology. The real profit in tabulating equipment, it should be noted, owed not so much to the sales of equipment as to the sales of punched-card stock.

The description of marketing and management in the office machine industry will also aid archivists who are interested in documenting business. Cortada charts the changing image of the salesperson, which evolved from a disreputable vocation into a profession. John Patterson, the NCR executive who established dress codes, sales seminars, exclusive territories, and quota targets, pioneered this change. IBM adopted these practices soon thereafter, and the rest of the industry followed. Competition among the office machine firms was keen, and this fact enhanced the role of product development, customer education, and pricing. Most companies quickly adopted methods to communicate customer needs directly to headquarters. Feedback became

an important part of product enhancement, a feature readily adopted by the electronic computer industry. Cortada draws a number of parallels between office machines and computer companies, giving credence to the notion that office machine companies were in the best position to market and distribute electronic computers. Many of the strategies employed by the office machine companies were adopted by other industries as well.

Archivists interested in corporate structure and communication should still begin with the work of Alfred Chandler and JoAnne Yates. Cortada, however, offers some important insights for those readers interested in the precursors to computer technology and industry.

BRUCE H. BRUEMMER

Charles Babbage Institute

University of Minnesota, Minneapolis

Recognizing Leadership and Partnership: A Report on the Condition of Historical Records in the States and Efforts to Ensure Their Preservation and Use, with a Focus on State Historical Records Advisory Boards and State Archives and Records Management Programs. Prepared by Victoria Irons Walch for the Council of State Historical Records Coordinators with support from the National Historical Publications and Records Commission. Iowa City: The Printing House, 1993. Appendixes. 365 pp. Spiral bound. Two volumes. ©.

These volumes constitute the second biennial report of the Council of State Historical Records Coordinators. Gordon O. Hendrickson, the council's chair, notes in the foreword that their publication is part of "an ongoing effort to review and summarize the status of historical records programs in the states and territories and to promote the establishment of national priorities to address records concerns."

Over thirty years have now elapsed since the publication of Ernst Posner's classic *American State Archives*. This report is the first attempt since Posner to present a consistent nationwide overview of the status of archival and records management programs in the states. In some respects, it is analytically weaker than Posner's work. It is richer in factual detail, however, and it provides a veritable cornucopia of information concerning conditions and programs in all fifty states, two territories, the Commonwealth of Puerto Rico, and the District of Columbia.

Victoria Irons Walch prepared the compendium, with assistance from the state coordinators and staff members of the National Historical Publications and Records Commission (NHPRC). She successfully assembled, analyzed, and presented in accessible form a vast array of information. Her effort is especially remarkable because it was completed in less than four months. She has organized the information into fifteen sections, with the first eight assessing current conditions in the following categories: state government records, local government records, historical records repositories, statewide functions and services, state historical records advisory board (SHRAB) priorities and activities, state-administered grant programs, facilities, and legislative and regulatory initiatives. The remaining seven sections consider specific issues: budget problems and funding initiatives, access, training and education, preservation and conservation, cooperation and communication, new technologies, and electronic records.

Each section includes both an analysis of secondary information drawn from various sources and brief factual summaries of situations and recent developments in each state. The depth and extent of analysis varies considerably from section to section. Walch's compilation concerning state government records stimulates the richest dis-

cussion by far, probably owing to the greater availability of both current and historical data. Maps and tables are used effectively to illustrate a wide range of topics. Visual representations prove especially helpful in elucidating the existence and level of development of state archival programs, comparing states with a joint archives and records management program, documenting states in which the archival agency has undertaken a formal planning process, unearthing the existence of statewide preservation plans, reviewing the status of local government records programs, and identifying the parent agencies for both archives and records management programs.

Two appendixes also concisely present a wealth of data. The first appendix, which includes statistics concerning statewide archives and records management programs, includes four fascinating tables. The first table compares total governmental expenditures in each state with allocations for state archives and records programs. Percentages of state budgets spent on archives range from a high of .051 in Delaware to a low of .003 in Massachusetts and West Virginia. A second table compares total state government full-time equivalent (FTE) employees with FTEs in archives and records programs. Delaware again has the highest percentage of FTEs (1.63), with Idaho and West Virginia tied for the lowest (.13). The third table compares holdings in state archives in 1986 with similar data compiled during 1991 and 1992. The final table constructs "intensity of care" indexes for state archival holdings, which is arrived at essentially by dividing the volume of archival holdings by the number of archival employees. South Carolina (653) scored the best rating in this category, while Colorado (20,286) appeared the worst.

A second useful appendix contains comprehensive statistics concerning NHPRC grants to the states. Volume two of the re-

port supplements the first volume by profiling archives and records programs in each state. Essentially, it duplicates the information in volume one, presenting the material in a nonanalytical manner that allows relatively easy state-by-state, rather than topical, analysis.

A few cautionary notes are in order. The severe time constraints under which this report was prepared both precluded deeper analysis that might have benefitted the profession and probably prevented the compiler from validating some of the data. Some of the statistics are obvious estimates. It must also be assumed that there was a degree of inconsistency in the manner in which individual states have reported. Further, the office of public records of the District of Columbia is located within the office of the secretary of the District, an agency comparable to the office of secretary of state, and not in a department of administration, as two of the tables indicate. Finally, most authorities agree that the first state archives was established in Alabama in 1901. Yet, curiously, we learn here that state archives supposedly were founded in California in 1850, in Massachusetts in 1896, in Texas in 1876, and in Vermont in 1778!

But these minor quibbles are overwhelmed by the value of this report. Just as Posner's *American State Archives* may be viewed as the baseline against which the information contained in this work may be compared, *Recognizing Leadership and Partnership* will be useful as a baseline for measuring future progress. Opportunities to further analyze the factual information presented in this report should tempt both graduate students in archival education programs and mature professionals alike. This work merits careful perusal by all archivists who care about the challenges that face our profession.

JAMES B. RHOADS
Western Washington University

Keeping Archives. Edited by Judith Ellis. Port Melbourne, Victoria, Australia: D. W. Thorpe, in association with the Australian Society of Archivists, Inc., 1993. Second edition. Illustrations, index. 512 pp. Paper. ISBN 1-875589-15-5. Distributed by the Society of American Archivists.

Many archivists, particularly those of us who work in small or corporate archives, need to be jacks and jills of all trades. We need to know a little bit about all aspects of archives. Given the nature of our institutional demands and the typical staffing and monetary limitations, essential information is usually required immediately. We rarely have the luxury of conducting extensive research into the secondary literature. Need a quick refresher? The second edition of *Keeping Archives* is an excellent reference. Updated to reflect the changing needs and technology of the archives profession over the last six years, it surprisingly manages to improve on the first edition. Since all archives are different, *Keeping Archives* does more than merely offer solutions for one particular type of archives. It provides a way of looking at archival issues and problems so that readers can design the program that will most benefit both their records and the people who use them.

Much of the book remains unchanged from the first edition, but several modifications have been made to reflect recent professional developments. Three new chapters have been added: Preservation, Legal Responsibilities and Issues, and Managing Records in Special Formats (such as photographs, ephemera, and electronic records). Three chapters have been rewritten: Introducing Archives and Archival Programs, Managing the Acquisition Process, and Appraisal and Disposal. The conservation chapter has been deleted; its contents have been subsumed in the new preservation chapter.

By replacing the conservation chapter with one on preservation, Ellis has im-

proved on the first edition significantly. The emphasis is now on caring for records at the repository level rather than on treating problems at the item level. Intended as a very practical orientation to preservation concepts, this chapter includes discussions concerning preservation program implementation, repository and records surveys, basic repair procedures, and disaster planning. The focus is on paper records. The preservation of other media is discussed in the new chapter on special formats. My only admittedly minor criticism of this chapter involves the elimination of several useful tables that enhanced the first edition, most notably the "Ideal Environment According to Types of Media" and the "Repair Rules of Roger Ellis." American archivists, please note: the metric system is used exclusively throughout this book. If you are metric-phobic, consult your dictionary to obtain the U.S. equivalents.

Despite the fact that *Keeping Archives* was published in Australia, the discussion concerning legal responsibilities and issues is surprisingly useful for American archivists. The author, after briefly outlining the Australian legal system, steers clear of specific laws. Instead, she concentrates on such universal archival issues as subpoenas, discovery orders, access, and copyright, all of which have legal ramifications. Since both the United States and Australia base their legal systems on common law, the overall approach to legal issues is similar, even though the laws themselves differ. An especially useful component of this chapter is the section on accountability and the document trail, which emphasizes the importance of both the nature of information and the organizational system in which it is embedded. This section, when considered alongside the discussion concerning ethics and risk, provides a fresh perspective on records. The author stresses that an archives consists of information that constantly is being created and changed by the parent organization; it cannot be consid-

ered merely as the final stop in the life cycle of a piece of paper.

Archivists will appreciate the chapter on managing records in special formats, both as a concise overview and for the range of records it addresses. Ellis considers photographs, film and videotape, sound recordings, maps and architectural drawings, ephemera, objects, art works, published materials, and electronic records. A special section on each format describes the format and discusses special issues connected with its appraisal, arrangement and description, preservation, access, and legal problems. The chapter concludes with a brief discussion on the complications that some of these formats, particularly electronic records, will cause for future corporations and research libraries. I only wish this discussion could have been longer.

The three rewritten chapters echo a theme found in all of the new chapters: archives constitute more than merely individual pieces of paper. They provide information, the meaning and value of which "derive from the social and organizational context in which they were created and used, and from their links with other records. Used or interpreted out of context, their significance is lost or compromised. . . . Archivists manage archives . . . in ways which preserve their meaning and value as well as ensuring their long-term physical survival." The new and much improved first chapter on introducing archives and archival programs underscores this point while also discussing such standards of archival theory as provenance and respect des fonds.

Acquisition and appraisal, considered together in the first edition, have been expanded and separated into two chapters. Both topics appear more accessible as a result. The acquisition chapter is an excellent overview, with handy lists of information that can be referenced when developing policies, producing strategies, and managing the entire process. The chapter on appraisal has been modified only in part, but

the focus has been changed to highlight appraisal theory. It still contains practical information concerning records surveys and retention schedules, but Ellis definitely emphasizes the need to understand records in the context in which they were created rather than considering them as isolated, physical entities. Appraisal begins long before records arrive at the archives; in some cases, even before the records are created. Information and organizational function, rather than the physical items themselves, are the objects of evaluation. The author fleshes out her discussion by considering such problems as the always troublesome subject, correspondence, and case files. She also presents variations on traditional appraisal techniques and offers a very interesting overview of questions that have arisen as a result of the reappraisal of appraisal methodology. This chapter will be especially valuable for archivists whose collections contain large amounts of twentieth-century institutional records.

The remaining chapters basically remain faithful to the first edition and cover such topics as getting organized, accessioning, arrangement and description, finding aids, access and reference services, user education and public relations, and creating and compiling documentation programs. These treatments, along with the micrographics section of the computers and document imaging chapter, basically provide very sound topical introductions and survive well without significant alteration. My only quibble concerns the fact that two chapters—Access and Reference Services, and User Education and Public Relations—take their examples almost exclusively from larger archival repositories. Smaller institutions and corporate archives can also provide innovative reference services and educational offerings, but their efforts will differ considerably from programs initiated by a large historical society or research library.

The only chapter I did not find useful involved computers and document imag-

ing. This chapter's section concerning micrographics does constitute one of the best short introductions I have ever read, but its treatment of computers contains major problems. The author misses an opportunity to provide basic information about the role and requirements of computer hardware and software and to outline the numerous uses and complications that computers can bring to an archives, particularly a small repository. Rather, she focuses almost exclusively on how an archives might make use of a database. Even this discussion did not provide the lists of practical questions and necessary background information that is so prevalent throughout the rest of the book. This chapter fails to address the pitfalls of working with computers, does not provide a checklist for potential hardware and software purchasers, and offers no tips on designing projects in ways that might complement the needs

and skill of existing staff. If Ellis had elected to rework this chapter in the manner of the acquisition and appraisal section, she would have made a much more practical contribution.

Keeping Archives is an excellent reference book on managing an archives. It recognizes that different archives have different needs and that there are many ways to design a good archival program. It appreciates the fact that archives constitutes a profession that requires people to think and plan rather than to follow a set of circumscribed rules. I highly recommend this second edition because of the changes it has introduced and because it continues to provide the background information needed in order to design an archival program that will greatly benefit any institution.

JUDITH JOHNSON

Lincoln Center for the Performing Arts