Perspective

Interviewing Techniques for Remote Reference: Electronic Versus Traditional Environments

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Abstract: An increasing number of archives are supporting electronic mail reference services. To optimize the usefulness of this rapid and convenient means of communication, archivists must consider the nature of the reference transaction in general and adapt it to this new remote or "virtual" environment. As with face-to-face reference encounters, archivists must set the tone of remote reference exchanges; clarify the clients' questions and information needs; deliver the required information; and follow up exchanges, making sure that clients have everything they need and that they feel comfortable asking for more information as the need arises. The author offers suggestions as to how these steps can be implemented via electronic mail and discusses management concerns.

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"VIRTUAL LIBRARIES," "virtual reference," and now, "virtual archives." The library and archival literatures, as well as the popular press, are filled with terms such as *virtual, cyberspace, networking,* and the *information superhighway* these days.[1] It is too bad that the word being bantered about is not *virtuous*[2] rather than *virtual*; hopefully, however, the emerging technologies can be used in such a fashion that "virtual" will indeed be "virtuous," and archivists will be "virtuosos" in the electronic environment. If this is to happen, it is time for archivists to take note and understand the nature of virtual, or remote, or perhaps best phrased, "extended" information services.[3] Already, Congress has debated the Electronic Library Act.[4] The terms *national information infrastructure*[5]

and *National Research and Education Network* (*NREN*) are commonplace among policymakers and library systems personnel,[6] and the Coalition for Networked Information (CNI) is working hard to make effective virtual libraries a reality.[7]

Just as an indication of how the phenomenon of a virtual library has gripped the imaginations and pocketbooks of the academic world, a new college in the California State University System is being

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[1]Consider, for example, the following headlines and titles, retrieved from the NEXIS Current News data base on 14 May 1996: "The Cleavers Enter Cyberspace," "Music on the Net: Online Service Will Feed Music Directly," "Cyberspace Meets Wall Street," "The Virtual Library Looms," "Cyberconf 3: Texas Conference on Cyberspace Implications," and "Becoming a Virtual Librarian." Journals, including *Library Journal* and *Wilson Library Bulletin*, run columns on the virtual library on a regular basis, and many print monthly columns on the Internet or networking.

[2]See Connie Van Fleet and Danny P. Wallace, "Virtual Virtue," *RQ* 32 (Spring 1993): 305–09.

[3]Walt Crawford and Michael Gorman discuss the importance and potential negative impact of terms such as *virtual library* and *electronic library* in *Future Libraries: Dreams, Madness, and Reality* (Chicago: American Library Association, 1995). They recommend the term *extended libraries* as being more descriptive of present reality, wherein libraries offer remote services and may have remote data bases but they still have a physical reality.

[4]See for example, "Electronic Library Act of 1993 Introduced," *Database* 16 (June 1993): 9–10; Michael Rogers, "Senator Kerrey Introduces Electronic Library Act," *Library Journal* 118 (1 May 1993): 24.

[5]The journal *Computers in Libraries* devoted a cover story to this topic in late 1993: Maurice Mitchell, "The National Information Infrastructure: Implications for Libraries," *Computers in Libraries* 13 (December 1993): 53–57. See also Jane B. Griffith and Marcia S. Smith, "Information Policy: The Information Superhighway and the National Information Infrastructure," *Journal of Academic Librarianship* 20 (May 1994): 93–95; "NII Taskforce Issues Preliminary Report: In-

tellectual Property and the National Information Infrastructure . . . ," *Bulletin of the American Society for Information Science* 20 (August–September 1994): 2–4; John A. Shuler, "Great Expectations, Grand Challenges, Limited Opportunities: National Information Infrastructure," *Small Computers in Libraries* 13 (October 1993): 46–52; Craig A. Summerhill, "The Emerging National Information Infrastructure and Reference Services," *Reference Librarian* 43 (1994): 131–44; and Peter R. Young and Jane A. Williams, "Libraries and the National Information Infrastructure," *Bowker Annual Library and Book Trade Almanac,* 1994 38th ed. (New Providence, N.J.: Bowker, 1994): 33–49.

[6]Publications concerning the NREN include Jeris F. Cassel and Sherry K. Little, "The National Research and Education Network: The Early Evolution of NREN,"*Reference Services Review* 22 no. 2 (1994): 63–78; Charles R. McClure et al., *The National Research and Education Network (NREN): Research and Policy Perspective* (Norwood, N.J.: Ablex, 1991); Charles R. McClure, John Carlo Bertot, and Douglas L. Zweizig, *Public Libraries and the Internet: Study Results, Policy Issues, and Recommendations* (Washington, D.C.: U.S. National Commission on Libraries and Information Science, 1994); and Carol A. Parkhurst, *Library Perspectives on NREN* (Chicago: Library and Information Technology Association, 1990).

[7]See, for example, Noreen S. Alldredge, "Networked Information Technologies: CNI Report," *College and Research Libraries News* 5 (June 1994): 337; John Blegen, "Virtual Libraries, Real Cooperation: A View of the Coalition for Networked Information," *Illinois Libraries* 75 (May 1993): 247–50; GraceAnne A. DeCandido, "Networked Information Makes a Pretty Picture: Images on the Internet?" *Wilson Library Bulletin* 68 (June 1994): 15; Charles J. Henry and Paul E. Peters, "The Transformation Potential of Networked Information," *College and Research Libraries News* 54 (October 1993): 512–13; and Joan Lippincott, "Change and the Reference Organization: The Coalition for Networked Information," *Journal of Library Administration* 19 nos. 3–4 (1993): 247–56.

planned with no library building.[8] The planners say that an actual building is not necessary, as the college will have a virtual library. Clearly the chancellor and his staff do not realize that the enormous amount of material that is available in electronic data bases is but the smallest fraction of the existing print sources and that students cannot simply download to computers in their homes, offices, or dorm rooms all the monographs and serials they would need in the course of their education. Indeed, many data bases that libraries access today provide only pointer information rather than actual source materials. While California State's vision of a virtual library may come to pass, the day of the totally virtual library or archives is still well in the future.[9] Although some type of library will in all likelihood be built on this California campus in the future, this is nevertheless a good illustration of the lure and attraction of virtual information sources and services, and this California school is not alone.[10] It all seems so easy....so deceptively easy. Conversely, many information professionals and clients now faced with using electronic resources and networks see the landscape in overly complex and revolutionary terms.

Despite their obvious and frequently necessary attachment to print documents, archivists have a lot to gain from entering electronic environments, and many are very anxious to do so. As evidence of this, the Society of American Archivists (SAA) has offered the workshop, "The Internet for Archivists: An Introduction," multiple times and the Archives and Archivists Listserv now has close to three thousand subscribers (2,809 as of 14 May 1996). Moreover, many institutions are now mounting entire finding aids on Internet gopher servers[11] and are providing collection documents and images via the World Wide Web (WWW).[12] Such tools are facilitating international access to fragile and important collections as never before possible. This benefits both clients and collections.

Many individuals might question why remote reference service is necessary, especially for those repositories with traditional, paper-based resources. Change, even when it is all for the good, is generally quite a demanding process. Depending on the situation, learning new skills, new attitudes, and new behaviors is usually required—processes most people find uncomfortable, time consuming, and maybe even frightening. Along with these human factors, entry into the electronic arena is not an inexpensive proposition when figured in terms of staff time and hardware

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[8]Louis Freedberg, "Cal State's Next Campus," *San Francisco Chronicle* 15 July 1993, Final Edition, A1. See also Matthew Soyster, " 'Virtual Reading'—A Concept Almost Too Scary for Words," *Houston Chronicle*, 28 November 1993, 2 Star Edition, Outlook, 4.

[9]The Library of Congress is currently proposing a national digital library, but there are many challenges to this type of system, including funding, the availability of trained staff, and copyright issues. Moreover, the Library of Congress is not proposing a replacement for its facility in Washington, D.C., but rather an electronic extension to it. See Peter H. Lewis, "Library of Congress Offers to Feed the Data Highway," *New York Times*, 12 September 1994, Late Edition—Final, B11; and Linda Mark, "LC Takes Lead in National Digital Library," *Wilson Library Bulletin* 69 (December 1994): 13.

[10]Beverly T. Watkins, "Many Campuses Start Building Tomorrow's Electronic Library," *Chronicle of Higher Education* 39 no. 2 (2 September 1992): A19–21.

[11]As of 14 May 1996, the listing of archives-related gopher servers maintained by the Special Collections Department at Johns Hopkins University included forty-six locations.

[12]For example, the University of Maine's Archives Imaging Project includes finding aids and original source materials, linked to collection-level MARC records in the university OPAC, that focus on folklore, folklife, and local history in the Maine and Canadian Maritime Provinces. The University of Nebraska at Lincoln's American West Historical Project focuses on publications, diaries, and images of the American West. The University of Michigan's Historical Center for the Health Sciences—Michigan Digital Historical Initiative—includes descriptive text, source documents, images, and other material focusing on the history of the health sciences.

expenses. Why, then, the rush toward remote reference services?

Undoubtedly, the very best reason to consider provision of remote reference services and electronic delivery of materials is the client. Because archival and manuscript collections are unique, there has always been a tremendous problem for scholars to be where their research materials were physically located. Indeed, particular specialties in university departments and research collections have often developed hand-in-hand so that the scholars would have a large body of materials to use locally. Once established, these collections have been magnets for attracting new faculty in these areas to campus. Of course, such collections have never contained all relevant materials, and these universities have never employed all the individuals interested in these materials. Even more troublesome, materials in most areas of potential research have never been drawn together in a few large collections, nor could they be in many cases. This is particularly true for topics in recent social and cultural history, such as women's roles at various times and the situation of the working class. Thus, today's scholars, like yesterday's, still face the problems of locating distributed research materials and traveling to these resources. While modern transportation is more efficient than in the past, few travel budgets are overly generous, and no scholar can afford to waste time.

It is not hard to envision entire archival and manuscript collections being available electronically one day so that researchers will never have to leave their own campuses to use all the materials they need. Right now that day is still well in the future, and, except in cases where researchers need to view only a small number of items, most scholars will continue to travel to major collections. But even small steps toward providing networked access to our collections can mean great savings and increased productivity for researchers. Providing networked access to descriptions of repositories and collections has the potential to make locating relevant materials much easier and faster. As the number of materials and repositories grows, such access should also make researchers better informed consumers before they set out on the road. Not only should researchers find it easier to decide where they will spend their limited travel dollars, but they may also be better prepared to use the materials when they get there. These decisions will work best when archivists assess with the client the relative value of the repository's holdings for the client's research. Finally, electronic access to collections, especially important ones, will provide more casual users, such as students and the general public, the opportunity to view significant documents virtually—something they would never have traveled great distances to do. Such materials could become an important part of high school and college history, civics, and humanities courses.

Collections will also benefit from the electronic age. Mounting images of collections, especially those that are particularly fragile, significant, or heavily used, will not only cut down on travel time and expense, it will also serve to preserve the materials that no longer will be handled so much. If materials are in particularly bad condition, digitized images may be the best hope of extending their research life. Not only will images be preserved, but scholars will be able to have remote access to them from their computers, which is not the case with microfilm. Preservation of digital materials themselves, of course, demands extensive study before archivists know what will turn out to be a satisfactory long-term preservation media.

Interestingly, as researchers become more used to electronic materials, develop better electronic search skills, and uniformly have better network connections, the convenience these systems offer will lead many people to want to use only materials that are available electronically. Libraries already see

this with students who will wait for hours to use a CD-ROM index when they could have immediate access to a paper version of the same tool and use it easily. Faculty, for all their virtuous scholarly behaviors, frequently follow suit. For example, many library clients, including faculty, use only the on-line catalog, even when a large portion of the collection is represented only in the older card catalog, which must be searched manually. We also know that faculty will generally search indexes that are available in their offices through the on-line catalog before they venture out to a library, even one located just down the hall. Thus, the decisions archivists and librarians make regarding which materials to digitize may well equate with which materials will be used in the future. Even if researchers do continue to travel to repositories and libraries to use major collections, finding such collections may increasingly depend on electronic access points.

Providing electronic or remote access to materials is only one facet of providing good remote service. As is the case in traditional repository settings, skillful reference interviewing and good communication with clients are important parts of any remote information service. This article discusses virtual reference service as it is emerging in archives today, setting these developments against the backdrop of a traditional archival reference environment. Conduct of the remote reference interview, the truly human element in the reference process now possible via e-mail, is its major focus. The basic elements of the remote reference interview and information delivery process—setting the tone, clarifying the question, delivering the information, and assessing service—are discussed in detail. The essay ends with an examination of managerial challenges and opportunities posed by electronic reference service.

It should be noted that many small archives with one or two staff members will probably not be able to mount extensive collections via a gopher or WWW server, and they may not have much in-house technical expertise. Many of the following comments therefore relate more directly to larger institutions that will have the ability to train and designate someone to be the electronic archivist. Even small repositories that cannot send electronic documents to clients, however, can provide good informational services through electronic mail (e-mail) without a great deal of technical skills on the part of staff.

Not So New . . .

So, just what is virtual or remote reference, and how can archivists best serve their clients in this environment? First, *virtual* in this sense does not mean that the resources, services, archivists, or clients are not real. While the word *virtual* is hot in the computer world, for both libraries and archives, *remote* or *extended* might be more descriptive words to apply to this type of information service. There will indeed be real archivists, real materials, and real clients in this world, but they will not all be in the same place at the same time. It is often easy to forget that real people are "out there" at the other end of the electronic link, especially amid all the demand for expertise with new software and technologies. It is therefore important to remember that all remote communication, including remote or virtual reference services, are a form of human communication. This loss of the human dimension can also occur from the user's perspective, leading to unrealistic requests and perhaps a less formal communication style than has existed between archivists and clients in the past. People may not be as polite as they would in a postal letter or on the telephone. They may expect more rapid answers via electronic mail and may be less willing to wait patiently for days or weeks for replies to their inquiries. Archivists must be careful to put the human element back into this

type of transaction and to set realistic and satisfying levels of service.

In traditional archival settings, materials, whether they have existed in paper, magnetic tape, or electronic formats, have all resided in the repository. Clients have relied on collection guides and directories, footnotes and bibliographies in texts, the *National Union Catalog of Manuscript Collections (NUCMC)*,[13] and word of mouth to find appropriate repositories and collections. When promising materials had been identified, the researcher would frequently contact the repository via mail or telephone to ascertain the relevance of the resources. Once the researcher was fairly sure the materials were "the good stuff," either the researcher had to travel to them or the institution had to send some form of copy, be it a roll of microfilm, an audiotape, or photocopies, to the user. Thus, either travel on the part of the researcher or extensive copying and shipping by the archivist was required. When visiting the repository, the researcher could engage the archivist in a lengthy discussion as to the nature of the research and the appropriateness of any part of the target collection or other collateral materials.

In a networked, electronic environment both the access tools to materials and the collections themselves may be available to anyone who can connect to the repository through a network such as the Internet. Clients from anywhere in the world can view repository guides, bibliographic records describing collections, entire inventories, and even images and sounds of collection materials from their office or home computers. Researchers can "talk" with archivists via electronic mail without waiting for letters to arrive or for a particular individual to be available to answer a question by phone.

With this model, researchers will probably need to visit only the collections richest in resources to see these materials in the context of the repository's entire holdings; in some cases, even these visits will not be necessary. From the institution's perspective, digitization permits remote access to multiple users without multiple copies being made.

Although networked access is new, archivists and librarians have been practicing various forms of remote reference for years. First and foremost has been the postal request. Researchers have long introduced themselves to archivists via a letter that explained their project, information needs, and research schedule. Indeed, many curators have demanded or at least expected such a letter before the researcher actually appeared in the archives. Archivists have attended to these postal inquiries with great care, mailing back information about holdings and institutional policies, finding requested facts, and sending copies of actual documents. In more complex situations, archivists have written back with questions to clarify the request and a somewhat stilted and very slow reference interview has taken place via the postal system. More recently, researchers may have sent their inquiries via fax and the replies may have been in kind.[14] Telephone refer-

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[13]Library of Congress, Manuscript Division, *National Union Catalog of Manuscript Collections* (Washington, D.C.: Library of Congress, 1959–).

[14]The National Archives and Records Administration (NARA) currently operates an extensive "fax on demand" service that automatically "answers" general reference questions by faxing back to a client a menu of various types of information that may be faxed upon request. This allows for rapid, round-the-clock response to general information inquiries and frequently asked questions and saves NARA staff resources. Libraries are also using facsimile technology in reference situations: Diana Fitzwater and Bernard Fradkin, "Ten Varied Libraries Find CD-ROM + Fax = Shared Reference Resource," *American Libraries* 19 (May 1988): 385. The greatest use in libraries, however, has been for document delivery. See, for example, American Library Association, RASD, "Guidelines and Procedures for Telefacsimile and Electronic Delivery of Interlibrary Loan Requests and Materials," *RQ* 34 (Fall 1994): 32–33; Valerie M. Bennett and Eileen M. Palmer, "Electronic Document Delivery Using Internet," *Bulletin of the Medical Li-*

ence has also been a large component of archival services.[15] Finally, archivists have long had to deal with third-party requests. In this situation, a person visits the archives, but he or she is not the one who will actually use the information. A common example of this reference encounter is seen when professors send graduate assistants to the archives to collect data. In all of these scenarios, the real user of the information is not present to talk face to face with the archivist or to engage in a direct reference interview.

Archivists have conducted remote reference in one other fashion. Although not frequently viewed as reference exchanges, printed archival guides, directories, and finding aids have served as archivist surrogates for many years. In this situation,

researchers bring their questions to the reference tool that was created in anticipation of clients' questions. When viewed in this manner, it is easy to see how important indexing and collection descriptions can be. They not only point to and carry the necessary information, they also may assist clients in understanding the documentary universe and how their information needs fit into it.

Electronic remote reference adds new avenues by which researchers can reach the archivist and archival information. The first method is electronic mail, or e-mail.[16] If the client and the archives both have Internet connections, the client can send an inquiry electronically and the archivist can respond in the same fashion, sending specific information and even entire electronic files. The second method of remote reference is for archivists to mount electronic information in servers that the public or a restricted portion of the public can access via the Internet. Elements mounted in such virtual archives range from MARC AMC records in on-line

brary Association 82 (April 1994): 163–67; Michael Brandreth and Clare MacKeigan, "Electronic Document Delivery—Towards the Virtual Library," *Interlending and Document Supply* 22 no. 1 (1994): 15–19; Mary E. Jackson, "Document Delivery Over the Internet," *Online* 17 (March 1993): 14–15; and Lorre B. Smith, "Facsimile Transmissions: Progress in Resource Sharing," *RQ* 33 (Winter 1993): 254–64.

[15]The library literature contains several articles on telephone reference services, including Frank R. Allen and Rita H. Smith, "A Survey of Telephone Inquiries: Case Study and Operational Impact in an Academic Library Reference Department," *RQ* 32 (Spring 1993): 382–91; Diane M. Brown, "Telephone Reference Questions: A Characterization by Subject, Answer Format, and Level of Complexity," *RQ* 24 (Spring 1985): 290–303; Cheryl McBride, "New Jersey Nightline—A Success Story," *New Jersey Libraries* 25 (Summer 1992): 18–20; Beth M. Paskoff, "Accuracy of Telephone Reference Service in Health Sciences Libraries," *Bulletin of the Medical Library Association* 79 (April 1991): 182–88; Rosemarie Riechel, "The Telephone Patron and the Reference Interview: The Public Library Experience," *Reference Librarian* 16 (Winter 1986): 81–88; Edward A. Riedinger, "Telephone Information Service," *College and Research Libraries News* 48 (September 1989): 672–74; and Daniel R. Smith, "Telephone Reference Training: Some Suggestions and Observations," *Southeastern Librarian* 43 (Spring–Summer 1993): 7–9. Two complete books devoted to telephone reference service are Rosemarie Riechel, *Improving Telephone Information and Reference Service in Public Libraries* (Hamden, Conn.: Library Professional Publications, 1987), and Rochelle Yates, *A Librarian's Guide to Telephone Reference Service* (Hamden, Conn.: Library Professional Publications, 1986).

[16]Libraries are using e-mail reference, and literature in this area that can be informative for archivists includes Miriam Bonham, "Library Services Through Electronic Mail," *College and Research Library News* 48 (October 1987): 537–38; Ann Bristow, "Academic Reference Service Over Electronic Mail," *College and Research Libraries News* 54 (November 1993): 631–32; John T. Butler, "A Current Awareness Service Using Microcomputer Databases and Electronic Mail," *College and Research Libraries* 54 (March 1993): 115–23; Amy Chang, "Developing an Electronic Information Service in an Academic Library," *College and Research Library News* 52 (April 1991): 236–39; Ellen H. Howard and Terry A. Janowski, "Reference Services via Electronic Mail," *Bulletin of the Medical Library Association* 74 (January 1986): 41–44; Julie M. Still and Frank M. Campbell, "Librarian in a Box: The Use of Electronic Mail for Reference," *Reference Services Review* 21 no. 1 (1993): 15–18; Becki Whitaker, "Electronic Mail in the Library: A Perspective," *Library Trends* 37 (Winter 1989): 357–65; and others. The Association of College and Research Libraries has even written a Spec Kit, an instructional/model use manual, on this subject called *The Use of Electronic Mail in Research Libraries. Spec Kit No. 149* (Washington, D.C.: ACRL, November–December 1988).

catalogs, to text, sounds, photographs, and videos available at nodes in the World Wide Web. This latter approach brings, at least in part, the repository to the researcher, including information found in published guides, finding aids, and even images of entire collections. Here the archivist anticipates clients' needs but does not actually interact with clients at the time of the information exchange. When clients want to browse collections and have the time to do so, or when they know precisely what they want, publicly mounted finding aids and parts of collections prove to be extremely powerful resources. One day not so far in the future, researchers, from the comfort of their offices, should be able to move electronically though various hierarchies of finding aids and actually have better access to resources than a visit to a paper-based archives has provided in the past. This networked environment, however, which separates the client from the archivist, contains reference pitfalls. The danger lies in the fact that it bypasses the traditional human interaction of a reference interview that can serve to clarify questions as well as identify appropriate materials for the researcher.

The remainder of this article focuses on maintaining the essential human element in the virtual archives. It discusses issues associated with e-mail reference and the techniques used to conduct electronic reference interviews through this medium. It should be noted at this point that e-mail communication is but one element in the successful networked environment. E-mail shares a synergistic relationship with other modes of information exchange and delivery such as gopher and WWW sites.

Remote Reference Interaction

Although it is often taken for granted, there is frequently nothing simple about the reference interview, whether this takes place in a library or in an archives. James Wyer, in an early reference textbook of

1930, wrote that the reference "cross examination" was tantamount to "library mindreading" and that it was the librarian's job "to know how to give people what they do not know they want!"[17] We could easily substitute "archivist" in this sentence. In a classic 1968 article on question negotiation and information seeking, Robert Taylor described the reference interview in much the same way, as "one of the most complex acts of human communication," for in this act "one person tries to describe for another person not something he knows, but rather something he does not know."[18]

Librarians and scholars have been studying the reference process and creating models to describe it for over a century. Still, it is a very elusive process that frequently does not lead to a satisfactory outcome. With the advent of electronic data base searching services, interviewing techniques improved somewhat and the amount of research focusing on the reference exchange increased.[19] This increase in attention to the interview for computer-assisted services was essentially out of necessity, as a good deal of money could be riding on an on-line search. While money is not usually involved in archival reference service, there are similarities between

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[17]James I. Wyer, *Reference Work* (Chicago: American Library Association, 1930), 101.

[18]Robert S. Taylor, "Question Negotiation and Information Seeking in Libraries," *College and Research Libraries* 29 (May 1968): 180.

[19]See, for example, Ethel Auster, "User Satisfaction with the Online Negotiation Interview: Contemporary Concern in Tradition Perspective," *RQ* 23 (Fall 1983): 47–57; Janet M. Dommer and M. Dawn McCaghy, "Techniques for Conducting Effective Search Interviews with Thesis and Dissertation Candidates," *Online* 6 (March 1982): 44–47; Stuart J. Kolner, "Improving the MEDLARS Search Interview: A Checklist Approach," *Bulletin of the Medical Library Association* 69 (January 1981): 26–33; Barbara E. Quint, "Inside a Searcher's Mind: The Seven Stages of an Online Search," *Online* 15 (May 1991): 13–18 and (July 1991): 28–35; and Arleen N. Somerville, "The Pre-Search Reference Interview—A Step by Step Guide," *Database* 5 (February 1982): 32–38.

the on-line reference situation and that which occurs in archival settings. In both cases, the interview is mandatory. The client cannot access the data bases (non–end-user searching situations) or the archival collections without first talking to an on-line searcher or an archivist. In both cases, the information professional not only physically provides the requested information but also helps to clarify the request and assists with intellectual access. These factors make both of these reference transactions more complex and more critical than other transactions that take place at a library reference desk most of the time. The impossibility of extensive subject indexing for most archival collections frequently complicates the archival reference transaction even further. The importance and difficulty of the archival reference interview is clear from the recent literature in this area.[20] Other articles relating to archival reference have focused on research challenges and educational needs.[21]

In comparison to face-to-face interviews, remote reference adds other complicating factors. First, the archivist may well be dealing with clients who have never seen the inside of an archives and really have no idea of the types of materials they contain. Second, communication will be much slower, even with very fast e-mail response time. Third, in the remote reference situation, the participants do not benefit from visual clues and may hesitate to ask more questions.

Many librarians and archivists would argue that there is nothing like a face-to-face encounter with a client in terms of finding out what information the person needs and how the institution can help that person. The human, person-to-person exchange is always information rich, even when the client (or the information professional) is not very forthcoming. The interviewer has access not only to the client's verbal clues, but to many visual clues that are present. Undoubtedly the best aspect of the reference interview in terms of actual communication is the fact that both parties can ask questions when the response from the other person has not been particularly clear or meaningful. This can go on for many iterations until the participants reach some satisfactory level of mutual understanding. At various points along the way, interviewer and requester can each reiterate what they think they have been hearing to make sure each understands what the other person is saying. This can also help the other person to realize that he or she has left something out and has not been communicating very clearly.

Of all the remote means of providing reference service, electronic mail presently provides the greatest opportunities for good communication between client and archivist. Visual clues that are present in most face-to-face encounters are missing, but e-mail may in some ways prove to be a superior medium for the provision of the reference interaction. Perhaps most important, it allows archivists to pause and think before dashing off to find materials. It is always difficult, in both library and archives reference encounters, to override the desire to find material for clients at a moment's notice, even if this means not thinking about all the possible resources available. E-mail communications make such reflection possible, allowing archivists to explore resources in a more relaxed and

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[20]Mary Jo Pugh, *Providing Reference Services for Archives and Manuscripts* (Chicago: Society of American Archivists, 1992), 41–50; and Barbara C. Orbach, ''The View from the Researcher's Desk: Historians' Perceptions of Research and Repositories,'' *American Archivist* 54 (Winter 1991): 28–43. In the latter, Orbach discusses the need for the archivist to understand the historical research process from the scholar's point of view. This is requisite to asking the right questions during the reference interview.

[21]Richard J. Cox, ''Researching Archival Reference as an Information Function: Observation on Needs and Opportunities,'' *RQ* 31 (Spring 1992): 387–97; Janice E. Ruth, ''Educating the Reference Archivist,'' *American Archivist* 51 (Summer 1988): 266–77.

thoughtful manner. Not only is this less stressful than is the case with person-to-person or telephone situations, it should also lead to better information and a more even work flow. Most electronic mail systems can also automatically store address and message histories, and each patron can have an individual virtual "folder" in the repository without the need for printing any of this correspondence. E-mail correspondence can also be very beneficial to clients. With instantaneous multiple mailings, it can be cheaper and quicker than other remote reference techniques, with no stamps to lick and, best of all, no telephone tag!

The largest drawback for the immediate future is that many potential clients will not be able to research repositories via electronic means, but this number is decreasing every day and should not stop archivists from using this information delivery method. Even today, many researchers have more ready access to the Internet than they do to more established tools, including *NUCMC*, the Research Libraries Information Network (RLIN),[22] the Online Computer Library Center (OCLC),[23] and Chadwyck-Healey's *National Inventory of Documentary Sources.*[24] If archivists assiduously apply good reference and interviewing techniques, electronic mail should be as successful as interchanges in person and should help clients use a wide range of resources, both in the repository and at remote locations.

Setting the tone. The first element in any reference interview situation is setting the tone for the encounter. In person, the reference archivist accomplishes this by having an accessible reference station, by employing clear signs that direct clients to the reference desk, and by establishing eye contact with clients and smiling as they approach. All of these visual clues are missing for electronic clients. Moreover, they may not even know how to access the repository electronically. If electronic reference is to work, archivists must both educate potential electronic clients about how to access their repositories and make people feel welcome as they do this. Advertising e-mail addresses on appropriate listservs, listing them in published directories, and including them on all correspondence are all good steps in this process. Archivists from different institutions may also form a network of addresses and assist clients in contacting other appropriate repositories.

A message that has been received should be followed by a friendly, immediate response, telling the client that the inquiry has been received and that someone will be in contact with them very shortly. Such prompt responses can help clients feel that their requests are important. This can be done automatically, much the same as telephone systems tell callers that all operators are presently busy. This message could also include basic information about the repository.

The next step is to ensure that someone promptly gets in touch with the requester. The great advantage of e-mail is that it can provide almost real-time conversations in a written format. If clients do not hear from the archivist for days, they might as well have used the postal service to mail their letters. When an inquiry is received, the archivist may want to send a registration form for the client to fill out and return electronically, asking much the same information as if the client were visiting the repository. This would make any subsequent on-site registration process much easier, provide in electronic form information that could automat-

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[22]RLIN is the Research Libraries Group's national bibliographic utility.

[23]OCLC maintains an on-line union catalog of over thirty-two million bibliographic records, including archival entries.

[24]The *National Inventory of Documentary Sources in the United States* is a set of microfilm reproductions of finding aids for manuscript and archival collections held in repositories around the United States. It is available from Chadwyck-Healey, Inc., 1101 King Street, Alexandria, Va. 22314.

ically be entered into a data base, and accumulate good use statistics on the electronic reference service. Such statistics would be a great help to collection developers and the repository's administration. The data would show what areas were of greatest interest to electronic clients and who were the primary e-mail reference users. The electronic registration form could also include policy statements from the archives, informing clients not only about the types of services that are available electronically but also about what to expect when they arrive at the repository and what rules and procedures the institution has in place. As part of this form, clients should be reminded that their requests will be kept confidential and that only the repository's staff will have access to these messages. Such a confidentiality pledge may help clients to be more candid and forthcoming in their information requests, which will expedite the entire process.

Clarifying the question. Once the archivist has read and digested the e-mail message, it is time either to send out the requested information if the question is very simple and unambiguous and can be answered in this fashion, or to ask the correspondent to clarify or detail the request. Although library and archival clients frequently have very straightforward requests, this is not always the case, especially with interesting or seemingly intractable questions. One of the greatest challenges of these more complex scenarios is discovering exactly what the client wants and understanding the process from the client's perspective.[25] In many cases, the reference professional, as part of the information search system, will help the client clarify his or her need. Brenda Dervin and Patricia Dewdney note that "one of the most important tasks of a librarian who acts as an

intermediary between the inquirer and the system is query negotiation—determining what the inquirer really wants to know."[26] We can easily apply this observation to reference archivists.[27] William Katz adds that few clients actually ask for the information they need; rather, they ask more specific questions or make their inquiries more complex than is necessary.[28] The great advantage to e-mail in this instance is that the archivist can reread and think about the inquiry before replying or asking the next question. The disadvantage is that this process can take much longer than an interaction with a client who visits the repository.

As in a face-to-face interview, an electronic interview may entail several rounds of open-ended and neutral questions from the archivist before the information need is clearly articulated. As part of this process, the archivist might refer the client to electronic finding aids if the repository has mounted these on a gopher server or a hypermedia node. If such tools are available, clients can peruse them from the comfort of their desks and personal computers and then develop more insightful questions. Having finding aids mounted on a gopher or World Wide Web server can greatly enhance the quality of a reference transaction. Users may just look at these tools or they may download them to their own machines and print them out. All of this will save the archives printing, handling, and postage costs.

Reference personnel have long argued over whether the reference interview is an art or a science that can be studied and learned. The truth, as is almost always the

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[25]Carol C. Kuhlthau, "Inside the Search Process: Information Seeking from the User's Perspective," *Journal of the American Society for Information Science* 42 (October 1991): 361–71.

[26]Brenda Dervin and Patricia Dewdney, "Neutral Questioning: A New Approach to the Reference Interview," *RQ* 25 (Summer 1986): 506.

[27]Linda J. Long, "Question Negotiation in the Archival Setting: The Use of Interpersonal Communication Techniques in the Reference Interview," *American Archivist* 52 (Winter 1989): 40–51.

[28]William A. Katz, *Introduction to Reference Work*, 6th ed. (New York: McGraw-Hill, 1992) 2: 50.

case, is probably somewhere in the middle. Using a theatrical metaphor, Elaine Jennerich and Edward Jennerich observe that "reference work in general is a creative art and that the reference interview in particular is a performing art."[29] At the same time, various techniques can definitely facilitate communication between the reference staff and clients, and many of them can be applied to the remote reference transaction. First and foremost, the archivist needs to be a good listener, or in this case, a good reader. When the inquiry arrives, the archivist must read it carefully and do his or her best to understand it without jumping to conclusions or moving directly to sources that may not be what the client really needs. The archivist needs to read the initial message, evaluate it, and develop fruitful questions from it.

In an interview situation, archivists can use three basic types of questions: open, closed, and neutral.[30] Open questions are phrased in such a way that the client must answer in his or her own words; a simple yes or no will not suffice. For example, "Tell me more about your research project: In which occupational groups are you most interested?" Reference staff frequently use such questions at the beginning of an interview to get the person talking, especially if the initial inquiry has been in the form of a closed question. Closed questions are usually specific and receive yes or no answers. For example, "Do you want to look at journals from tobacco merchants?" These questions are usually best employed at the end of the interview when

the archivist is fairly sure what the client wants. Finally, there are "neutral" questions, a term coined by Dervin and Dewdney.[31] Neutral questions are a type of open question, but they have more structure and allow the librarian or archivist to direct the flow of conversation by saying, for example, "How do you plan to use the information from these journals?" or "What type of information do you expect to find?" If the archivist finds the client is looking for financial data rather than narrative, it may be appropriate to send that client to account books rather than to journals. Through a skillful blend of these three types of questions, archivists should be able to determine user needs and direct the client to the most appropriate sources.

Throughout the reference interchange, the archivist should summarize what he or she believes the client is saying and keep presenting this to the client. At times this may seem like parroting back what the client has said, but it is essential in keeping the lines of communication open and making sure information is not misunderstood. This process can help clients to see where they have omitted information or where they have presented the wrong idea. In general, it helps in the sense-making process.[32]

Delivering the information. At this point, clients may want to look at actual archival files. If clients are planning to travel to the repository, this preliminary work will save them a great deal of on-site time, and they will arrive with better questions, having developed a sense of the collections before leaving their offices. They should be ready to delve right into the records them-

[29]Elaine Z. Jennerich and Edward J. Jennerich, *The Reference Interview as a Creative Art* (Littleton, Colo.: Libraries Unlimited, 1987), xii.

[30]For more on various types of questions in the reference process, see Bryce L. Allen, "Text Structures and the User-Intermediary Interaction (Open and Closed Questions in the Reference Interview)," *RQ* 27 (Summer 1988): 535–41, and "Questions and Answers: Finding Out About Information Needs," *Canadian Library Journal* 46 (June 1989): 191–93.

[31]Dervin and Dewdney, "Neutral Questioning."

[32]Brenda Dervin, "Useful Theory for Librarianship: Communication Not Information," *Drexel Library Quarterly* 13 (July 1977): 16–32. See also Laura J. Isenstein, "Get Your Reference Staff on the STAR Track," *Library Journal* (15 April 1992): 34–37.

selves. Alternatively, a repository may be able to mount some records on its public server. This can be problematic, especially with copyright. If possible, however, the electronic access can save a good deal of wear and tear on the documents themselves, especially on heavily used records. Because of the expense of scanning technology, it is most feasible to mount records that are already in electronic format, but each repository will have to decide which records would be most useful in electronic form. New scanning and hypermedia technologies also make possible high-quality electronic versions of images and sound recordings. These images can be mounted on a World Wide Web server, and clients can download them from any Internet access point in the world. If files cannot be converted to an electronic format, clients may have enough information at this point to ask to have certain records photocopied and sent to them if they cannot visit the repository.

Assessing the success of your service. Once the archivist and archives have supplied the client with requested information or documents—in person, through the mail, or electronically—it is time for the archivist to ensure that the client's information needs have been satisfied. The reference transaction all too often ends after the client has received some information but has not had his or her total information needs met. Frequently, clients feel that they have ''bothered'' the reference archivist enough and that they should not ask for more time or attention. In other situations, clients leave the archives only to discover later that they could look for more information but that it would be too costly to reinitiate the searching process. The reference archivist should always ask clients if their information needs have been fully met and should assure them that their questions are important to the institution. This is particularly important with electronic reference, as a friendly smile cannot reassure the client across the Internet. Clients

should always be made to feel welcome to come back to the archives, even if only electronically, and they should also understand that they will probably have further questions as their research process progresses.

Management Concerns

As with all service operations, electronic reference poses its own management concerns. Today's primary concern, which may become secondary in the future, is that someone needs to be responsible for keeping the required hardware and software running. This person may be a specific archives employee or, in the case of university settings, a systems librarian who works with the archives. In either case, someone in the archives should have enough technical expertise to route mail properly, create signature and other similar files, and diagnose problems. At least one employee should be very familiar with the Internet, including the workings of e-mail, gophers, and the World Wide Web; with new software developments; and with the process of scanning documents. A reference archivist should also be able to assist clients by giving instructions, over the telephone or through the mail, for hooking into the archives electronically. If no one presently has these skills it would be a good investment for the archives to send an employee to a training program. These skills will also help the staff to work better with systems librarians or computer experts on campus. After all, there is nothing like an educated consumer, and the reliability of service depends upon keeping the system up and running.

A second concern for management is establishing and maintaining positive attitudes among the staff regarding electronic reference. For many archivists, the remote relationship will not be as satisfying as face-to-face interaction with users. If electronic services are to flourish and produce

the desired results, electronic clients cannot be made to feel like second-class users, nor can they be given second-class service. Supervisors will need to monitor this service and evaluate staff efforts, just as they would any type of service. To do this, management may establish a policy to set up a file for each client sending queries that contains all of that client's requests and the archives' replies. The file should document who responded to the request, what the particular message was, and how timely the response was. If more than one employee supports this service, better rapport may be established if there is some way to route incoming messages to the staff member who previously worked with the user.

Having a file for each client, and perhaps for each question the client asks if these are unrelated, serves several purposes:

1. Files provide a permanent set of user information, such as name, position, address, telephone number, and e-mail address. This is very important if the archivist wishes to contact the client in the future.
2. Saving queries allows the reference archivist to go back and revisit the question during the initial reference transaction and throughout the client's research.
3. Having such a file allows the archivist to contact the user with any information found subsequent to the primary reference transaction. This purpose would be facilitated by subject indexing for each file and query.
4. These files can facilitate evaluation of the staff's work, both by themselves and supervisors. Such analysis should lead to better performance in the future.
5. From the resulting data base use statistics can be generated, which should be helpful for both reference and collection development.

Another area of concern for management is setting policies for handling e-mail ref-

erence inquiries. Along with training the staff in using these new technologies and communications capabilities, repository directors or public service managers need to establish policies that ensure the fair, equitable, and legal use of e-mail reference service. Guidelines have to be set regarding how long inquiries are to be retained and in what format (electronic or print) they are to be stored. Inquiries that are mailed to archivists' personal addresses should be routed to the institutional reference point. The ease with which electronic files may be copied and sent to clients demands strict review of copying policies that reference archivists can refer to when responding to clients. While it may be unrealistic to expect every archival institution to develop a full range of policies and procedures regarding e-mail reference, major institutions and, perhaps, the Society of American Archivists should develop model guidelines that other institutions could adapt and adopt. Such guidelines should focus on ethical as well as technical issues.

Finally, remote reference may simply mean more reference inquiries. This is bound to be the case as more and more individuals start to use the Internet. University archives that have MARC AMC records in their library catalogs may receive e-mail inquires even when they do not sponsor such an e-mail reference service. Researchers may find interesting materials listed in the catalog and may go through the university electronic staff directory to find addresses for the archives staff members even when the archives does not have a reference e-mail address.

Archives, along with libraries, are going to have to develop strategies to deal with the likely increase in usage and the new demands posed by a networked environment. We do not yet know what the impact of e-mail reference will be on the archival organization, but many questions come to mind. Will networked access require additional personnel to handle increased re-

quests? If archival clients are anything like today's library clients, a broader range of access options will mean more customers, both in-house and remote. While this is always good for annual statistics, increased usage can really place stress on small staffs. Many archivists, especially in university settings, complain that researchers, including faculty and students, do not use their resources as they might. It is unlikely, however, that these same archives, which already have staff shortages and extensive processing backlogs, could deal with greatly increased numbers of users. Archives have always had a measured flow of customers as people had to travel to their unique holdings. The information superhighway removes these distances and cost barriers for the client. More access, however, may mean more and different pressures on repository staffs in general, and on reference personnel in particular.

As a means of balancing service priorities, there may have to be policies outlining how long archivists can spend on electronic reference requests and how this work should be balanced against time spent with clients in the repository. This is a thorny problem. It is difficult not to give a great deal of attention to clients in the building, but as virtual services grow, the repository becomes an ''archives without walls.'' In this new, expansive arena, external electronic clients should be viewed in much the same way as archivists have traditionally viewed those who visit the repository. Remote service should not be second-class service.

Another problem area focuses on staff training and preparation. Must new employees possess strong networking and computer skills before they come to the repository, or can all the requisite material be learned on the job? If a good deal of technical skill is required from the outset, can traditional history departments prepare students adequately for archival positions, or must new employees have at least some

coursework from schools of information and library science, or even computer science? If on-the-job education is sufficient, how much time must a staff member, either new or experienced, be given each week to devote to this type of training? Indeed, what will the typical archivist's job description look like five years from now and, how will archivists spend a typical day?

Moving out from the archives, what will be the relationship with systems staff and offices of academic computing in business and on campus? It seems that the archives can no longer exist as an isolated information storehouse for its larger institutional host. What will these links mean? Increased flow of materials to the archives? Better visibility within the organization? More interaction with funding sources could significantly improve the position and efficacy of many archives and manuscript repositories, but it could also stretch staffs to their limits.

Along with management issues, several information storage and retrieval challenges must be met. Only a small portion of all archival and manuscript collections are now represented in national bibliographic utilities such as OCLC and RLIN. Until this number is significantly increased, researchers cannot reliably find materials from these sources. Moreover, studies have shown that the indexing provided in these MARC AMC record systems leaves much to be desired and frequently results in poor retrieval. While many repositories now mount entire finding aids via gophers or the World Wide Web, locating such tools is a mystery to most clients, and there are few if any explicit links to and from the MARC AMC records contained in OCLC and RLIN. Such retrieval problems, which promise to linger for several years, serve to highlight the need for archivists in the retrieval process. Although some researchers may use bibliographic data bases in their offices, many will come to the ar-

chives requesting assistance. Increasingly, archivists will turn to these systems to help users locate materials; this, of course, requires archivists themselves to be expert users of the systems. Being linked to the entire bibliographic world can be quite exciting, but it also imposes a burden on the archivist: that of being an excellent information retriever. Unfortunately, few archivists are highly skilled in the use of these systems today.

Numerous other questions remain. For example, how is this technology going to be transferred to smaller institutions, or is this necessary? What will it mean if only larger institutions provide electronic access to their collections? Who will use the materials in nonnetworked repositories? In networked ones? Not only may there be an increase in clients with remote services, but as they become more technologically adept, clients may increase their expectations of a repository's capabilities. If asked to make more and more records available electronically, institutions may well find that they need to divert more funding and support to this area to satisfy clients' demands.

Apart from specific reference technique issues, archives face a number of related challenges with remote reference services. Today, many archives that are mounting electronic versions of finding aids on the Internet are simply entering the full text of these documents as it exists in the print versions. If these tools are to be successful in the remote electronic environment, archivists must review the contents and structure of materials in light of external clients and how they will use them. Well-written finding aids, along with text, images, and sound recordings from collections, will not only be useful research tools, they will also promote the repository and its collections. Mounting these resources on the Internet will also serve to reach beyond the traditional archival users to new audiences. It is important that archivists present these materials in the best possible

way and that they provide a good deal of context for the text and images sent out electronically. This total package will also involve new indexing techniques that will be able to link related materials and that will produce acceptable retrieval results.

With more materials available over the Internet, archivists may take on new roles in the larger information arena. Because of the expense of mounting some of these projects, archivists will also have to collaborate with other archival institutions, as well as with other types of information agencies, to obtain funding and provide wide-ranging cultural services. All of this will involve a good deal of effort and cooperation and a common vision of information access and preservation. These are but a sample of the issues that will surface during the next few years as more and more archives join the networked world.

Conclusion

Recent comments on the Archives and Archivists listserv[33] indicate that many repositories that offer electronic mail reference tend to treat it just the same as postal service reference. This is unfortunate, as so much more is possible, particularly in terms of interviewing. The electronic mail interview can be seen as a combination of face-to-face and traditional mail reference modes. The important thing for archivists to remember is not to take e-mail inquiries at face value simply because they are written or arrive via the computer. They must be dealt with, just as the archivist would deal with any verbal request. Questions, however, must be clarified and clients queried as to the success of the reference process and product. When these steps are followed, remote reference service should be as satisfying as that which takes place

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[33]The address for this listserv is Archives@miamiu.-muohio.edu.

at the reference desk. As with any new technology, there is a great temptation to treat e-mail the same as its older, printed cousin, postal mail. This is why the first automobiles were made to look like horse-drawn carriages and why on-line catalogs mimic traditional card catalogs. As technologies mature, however, people generally exploit more of their inherent capabilities. We can expect the next generation of on-line catalogs to abandon the printed-card look in favor of more informative and user-oriented displays and capabilities, such as Boolean searching. Indeed, this is already happening. Archivists who are now using electronic mail to serve their clients need to see beyond the traditional print paradigms and to exploit the interactive features of this technology. Moreover, they need to see electronic mail as one part of a much larger electronic reference and information delivery system.