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2

Determining the Question: In-person, Telephone, and Virtual Reference Interviews

The reference interview is more an art than a science, an ever-changing practice that requires responsiveness to context rather than just the application of a pre-determined set of skills. While librarians should learn the elements of a good reference interview, they must also recognize that these steps must be adapted to match each situation. Each reference interview will be different since each user and each question is different. The overall structure has three phases: "establishing contact with the user, finding out the user's need, and confirming that the answer provided is actually what was needed" (Ross, Nilsen, and Dewdney, 2002: 5). Within this framework, librarians must learn to improvise like expert jazz musicians.

For librarians, answering the user's question correctly is the most important part of the reference interaction, yet studies and experience show that users react to the manner in which the reference interview is conducted, paying special attention to both verbal and nonverbal cues. They are more likely to return to a librarian who has handled their request respectfully whether or not their information need has been completely fulfilled. Librarians must learn the elements of a good reference interview. Each reference interview will be different since each user and each question is different. So they will have to adapt the elements of the interview to the specific situation. Conduct is as important as content.

Why Conduct the Reference Interview?

Sometimes it seems like the questions asked by users are very straightforward, prompting librarians to wonder why the reference interview is necessary at all. Upon looking into the matter, however, the librarian often discovers that the real question was not the first one asked. Users tend to believe they can ask a short question and get enough information to proceed on their own. In such circumstances, the ambiguity of their initial inquiry often leads to confusion. A user might, for example, ask for books about stars when, in fact, he wanted to

know the constellations one can see south of the equator or maybe he is seeking information about the home addresses of movie stars. On another occasion a user might ask for books on baking when he wanted to find out about the chemistry involved in the rising of yeast rather than recipes for bread. In philosophy, errors prompted by the multiple meanings of words are known as "category mistakes," the grouping of dissimilar concepts under a single shared label. Errors of this kind may not have profound consequences in the library world, but they do waste the time of users and staff alike. **A#1** By asking additional clarifying questions the librarian can avoid such problems, focusing on the meaningful content of the user's request.

What We Know about the Reference Interview

Many studies have been done about the reference interaction. Robert S. Taylor in his article "Question Negotiation and Information Seeking in Libraries" explored the reference interaction from the point of view of question negotiation. Taylor discussed "five filters through which a question passes and from which the librarian selects significant data to aid him in his research" (Taylor, 1968: 183). Elaine Z. Jennerich and Edward V. Jennerich approached the reference interview as a "creative art" and a "performing art" (Jennerich and Jennerich, 1987). Mary Jo Lynch studied the reference interview in public libraries and asked how reference librarians know when to interview a user, through what channels a librarian gathers information without asking questions, and what the characteristics are of an effective question sequence (Lynch, 1978).

Brenda Dervin and Patricia Dewdney's article, "Neutral Questioning: A New Approach to the Reference Interview," proposed the neutral questioning model—a user-oriented approach to answering reference questions (Dervin and Dewdney, 1986). Patricia Dewdney and Catherine Sheldrick Ross continued the research in this area by looking at the reference interview from the user's point of view (Dewdney and Ross, 1994). They asked Masters of Library and Information Science students to visit libraries and ask questions of interest to them and to report on the results. Only 59.7 percent said that they would return to the same librarian (Dewdney and Ross, 1994: 222).

Marie Radford in her 1998 article in *Library Trends* turned her attention to nonverbal communications. **A#2** She identified five factors indicated by users that were critical in their decision as to whom to approach. They were initiation, availability, proximity, familiarity, and gender. Mary Jane Swope and Jeffrey Katzer studied the question of why people don't ask for assistance and found that dissatisfaction with their previous assistance, the belief that their query was too simple and the disinclination to bother the librarian affected their decision not to ask for assistance (Swope and Katzer, 1972).

Intercultural communication has been studied by Terry Ann Mood (1982) and R. Errol Lam (1988). Mood stated that foreign students learn best by hands-on experience. Lam emphasized more effective intercultural communication through the reference interview. Most recently, research has turned to the area of virtual reference and what are the differences and similarities with face-to-face

reference with the work of Straw (2000), Kern (2003), Radford (2008), and Nilsen (2005).

Conducting the Reference Interview

The reference interview is composed of several parts, each of which is discussed in turn over the following pages:

- Establishing rapport with the user
- Negotiating the question
- Developing a strategy for a successful search and communicating it to the user
- Locating the information and evaluating it
- Ensuring that the question is fully answered—the follow-up
- Closing the interview

Establishing Rapport with the User

When users arrive at the library or contact a librarian remotely (whether by phone, e-mail, chat, or instant messaging), they expect to find someone willing to assist them. To make the initial approach easier, librarians must find ways to signal, verbally and/or nonverbally, that they are approachable. **A#2** In Edward Kazlauskas's "An Exploratory Study: A Kinesic Analysis of Academic Library Public Service Points," he found that raising the eyebrow and lowering it when someone approaches, maintaining eye contact, nodding and smiling all help make the initial encounter more positive and comfortable (Kazlauskas, 1976). He also identified behaviors that make the librarian less approachable: lack of immediate acknowledgment of user, failing to change body stance as user comes closer, covering the eyes with the hand, reading, tapping one's finger, and twitching of the mouth (Kazlauskas, 1976).

Marie A. Radford "observed reference interactions for thirty-seven hours, interviewing 155 users who approached thirty-four librarian volunteers." Her purpose was to discover behaviors that influenced which librarian the user approached. She identified five factors indicated by users that positively shaped user decisions:

1. *Initiation.* The librarian begins the interaction by using one of the following nonverbal signals: eye contact, body orientation, movement toward the user, or verbal enforcement.
2. *Availability.* The librarian indicates availability by turning around, moving toward the patron, using eye contact, or otherwise signaling attention to the user nonverbally.
3. *Proximity.* Users decide who to approach based on their physical distance from the librarian.
4. *Familiarity.* The user had previously met or been helped by a particular librarian.
5. *Gender.* Users found it more comfortable to approach a female librarian. (Radford, 1998: 708-710)

The Jacoby and O'Brien study of undergraduate students documented the importance of reference staff being friendly and approachable. This makes it more comfortable for the users to request the help they need. It also impacts on the students' confidence to search for information on their own (Jacoby and O'Brien, 2005).

A#2 The librarian can also look approachable by roving through the reference area and helping users who may need assistance. Many users may not be comfortable initiating a conversation with a librarian when they need help, so roving gives users a less formal opportunity to get assistance. As they roam, librarians can simply ask users if they are finding what they need. They can approach users whom they have already assisted or perhaps users who have not approached the reference desk.

When serving users who telephone, send their requests by e-mail, or ask a question through a chat service, the librarian can make the process easier by greeting the user in a friendly, upbeat manner (i.e., "Hello. How can I help you?") and by responding to the information provided by the user. For example, the user may reveal that the reason he or she is using virtual reference is due to an illness or the inability to leave home. The librarian should respond to this comment by remarking on the situation in a friendly but neutral way—for example, by saying, "Hope you feel better soon."

A#2 Whatever the circumstances, the user must feel that the librarian is interested in his or her question. The librarian can accomplish this by facing the user and maintaining eye contact with him or her. The librarian signals his or her understanding of the user's question by responding verbally or by nodding. In a remote situation the librarian must stay in contact with the user by text messaging and conveying interest in the question in words. For example, the librarian could say, "What an interesting question."

Negotiating the Question

Once the possibility of dialogue has been established, the next step is to establish the patron's query. Many approaches to negotiating the question have been suggested by researchers and practitioners. Brenda Dervin has suggested "sense-making" as a way of finding out exactly what the user wants (Dervin and Dewdney, 1986). Sense-making is user oriented and approaches the reference interview in an organized way designed to ensure that the librarian understands what the user really needs. This method calls for an understanding of the user's situation, the gap that led to the question, and how the user plans to use the information. Dervin argues that it is important to understand that the "gaps individuals face (i.e., the questions they have) depend upon the way in which they see the situation and how they are stopped. The kind of answers they want is dependent on how they expect to use or be helped by the answers" (Dervin and Dewdney, 1986: 507). Two questions, alike in form, may not, in the end, be at all similar if the users who ask them differ in their views of the situation. Dervin and Dewdney went on to develop a further approach to questioning called "neutral questioning" which grows out of "sense-making"

(Dervin and Dewdney, 1986). Neutral questioning involves asking open questions that will help the librarian discover the true nature of the question. Dervin and Dewdney state that the librarian through questions must assess the situation, assess the gaps and assess the uses of the information (Dervin and Dewdney, 1986: 509). They suggest that the most useful neutral questions are the following:

- What kind of help would you like?
- What have you done about this so far?
- What would you like this book (information) to do for you? (Dervin and Dewdney, 1986: 512)

An example of this questioning in action is the following:

Do you want annual reports? What sort of details do you want? If you could tell me the kind of problem you're working on, I'll have a better idea of what would help you. (Dervin and Dewdney, 1986: 510).

This form of questioning can be tailored to the needs of each individual by focusing on how the information will be used. Once learned, neutral questioning is not a long process since it is adapted to the needs of the individual. Neutral questioning can help librarians avoid the kind of category mistakes described above. It also helps facilitate other forms of disambiguation, by ensuring that all possible information about the information desired by the user is made known. Users may ask where books on a certain subject are, thinking that they can browse when they get to the section and find what they are looking for. Another patron may need some specific information and think the library does not have it just because a particular book is not on the shelf—unaware that a librarian may be able to answer the question with another source.

In order for a positive reference interview to take place, the librarian must listen carefully to the user and ask clarifying questions as necessary. The librarian must begin with open-ended questions, giving the user a chance to express reference needs. Often the first question asked by the user does not really describe what the user is seeking. The librarian must ask probing, open-ended questions such as "Please tell me more about your topic or what you want to know about (the topic)? What additional information can you give me?" The librarian should continue with clarifying questions that may be a combination of open-ended or closed questions until it is clear what the user wants. These clarifying questions might include the following:

Open-ended questions	Closed-ended questions
How much information do you need?	Do you need current or historical information?
What have you already found?	Do you need factual or analytical information?
What format for the information do you need?	Can you read languages other than English?

The librarian should rephrase the question to be sure that he or she really understands what is needed by the user. Of course, it goes without saying that the librarian should remain objective and does not make judgments about the subject of the question. The same is true of a virtual reference question. The librarian must ask the same open-ended questions to give the user a chance to type out his or her information.

Although the librarian should begin with open-ended questions that allow users to express their question more fully, there is also a place for closed-ended questions. Once the librarian understands the question he or she may want to narrow the search with some clarifying, closed-ended questions. The important thing to remember about closed-ended questions is that the response from the user will be brief. For example, if the librarian asks the user "Do you want books or just articles?" the user may respond with a one-word answer, such as "books" or "articles." Sometimes a mix of open- and closed-ended questions works best. As the librarian listens to the user's question, he or she must not make assumptions about the user or the question. Assumptions may lead the librarian in the wrong direction, bringing the search up short. By working to avoid the always mistaken belief that the horizon of the user is the same as one's own, the librarian can extend the limits of his or her vision.

For this interchange to be truly effective, the librarian should include the user in the search. For example, the librarian may turn the monitor toward the user to show the user the information being located in the database. This will enable the librarian to continue to test whether he or she is proceeding in the right direction, and it will be less isolating for the user. As the exchange proceeds, including the user will give the librarian the opportunity to other information about how to use the library that may be helpful to the user in the future.

In the course of assisting the user the librarian may need to help the user reframe his or her question. The question may be too general or too specific, and the librarian must then work with the user to better formulate the question. For example, the user may ask for information on the Civil War but actually want information on the Battle of Gettysburg. The librarian should try to find out in carefully crafted phrases how the information will be used and what level of material is needed.

Finally the librarian should paraphrase the question back to the user to be sure that the understanding is mutual. For example, "If I understand you correctly, you want information on the coral reefs in Key West, especially their geology, location, and water temperature?" It is easy to misunderstand the user's question so every effort should be made to make sure the user's needs are being communicated.

Developing a Strategy and Communicating It to the User

Once the subject is clear the librarian should construct a search, selecting search terms and identifying the most appropriate sources for the particular user. If the librarian has little knowledge of the subject, he or she should partner with the user in selecting the subject terms. No one, even a subject specialist, can

ever expect to be an expert on that which might be of interest to library users, and the reference encounter is often as much a chance to learn as it is to teach.

A#3 As long as one knows where to begin looking, the reference process can be exciting for both librarian and user. As the search is developed, the librarian should explain as much about the search as he or she thinks is of interest to the user. The librarian should also respect the user's time frame and work to assist the user to the fullest extent possible within that time frame.

Of the many kinds of information available on most subjects, the librarian must determine what information will fit the user's needs. Does the user want more general information or more technical information? This can only be judged by continuing to communicate with the user. The user may also have a preference as to the format of the information, the amount of information, and the level of the information. Ideally, much of this information should have been discovered in the earlier phase of determining the question. It is important that the librarian constantly keep in mind all he or she knows about the user's needs and work to plan the search accordingly.

Locating the Information and Evaluating It

Whatever the extent of a reference query, the librarian should continually check in with the user to determine whether the material being discovered complies with the user's needs. This process should continue until the user has the information needed or the user has resources to examine.

Instruction in the use of the resources should be provided to the user if the user is unfamiliar with the source(s). Attention should also be paid to the quality of the information by evaluating that information to be certain that the sources selected are of high quality. This can be done by using the guidelines for the selection of reference materials.

Ensuring That the Question Is Fully Answered—The Follow-up

The follow-up question is of great importance to the reference interview. It is necessary to check with users to see whether they have had their question answered. The librarian may want to ask if users found the information they sought or say, "Please come back if you don't find what you are looking for and we can look somewhere else." Or the librarian may be roving and check in with the user. Gers and Seward stated that the follow-up question "may be the single most important behavior because it has the potential for allowing one to remedy lapses in other desirable behaviors" (Gers and Seward, 1985: 34). Dewdney and Ross (1994) found that librarians often fail to ask follow-up questions. This can result in a situation in which the user lacks needed information but is unable to express the discrepancy.

Closing the Interview

Like the closing moves of a chess game, the conclusion of a reference interview is a highly specialized art. Once it has been confirmed that the user has all the

information he or she desires, the consulting librarian should find a way to bring the conversation to a close without making the patron feel summarily dismissed. Christopher Nolan suggests that a reference department should develop goals for the interview, making it easier to know when the conversation should be brought to a close. He further states that "three factors are involved in the end of most interviews: knowledge or content of the interview, dynamics of the interpersonal interaction, and institutional or policy components" (Nolan, 1992: 515). Keep in mind that, as is suggested elsewhere in this book, reference services are one of the primary means to spotlight the value of the library itself, so the interview should close on an open note. In particular, the librarian can make a follow-up comment that will encourage the user to return.

Problematic Strategies in the Reference Interview

The Imposed Query

Most librarians and researchers have based their evaluations of the reference interview on the assumption that the questions are self-generated. This is not always true. Melissa Gross defines and discusses the imposed query, as "a process in which the imposer or end user passes the question to another who will act as the agent in the transaction of the query and then return to the imposer with the answer or resolution" (Gross, 1998: 291). Although we do not know all the implications of the imposed query, it is logical to suppose that the assumptions and stereotypes of both the person who asked the question and the person who transmits the query will affect the outcome. Gross points to the need for more research in this area. A good example of the imposed query is when a parent arrives in the library asking for information for a child's homework assignment. In this case the person who needs the information is not present and the parent may or may not be clear as to the actual information need. It is helpful to the librarian to identify this situation as the imposed query since the librarian will realize that the person asking the question may not be able to clarify the question for the librarian, making it more complicated to provide help.

The Communications Trap

Sometimes the problem between the user and the librarian is one of communication. The article, "Oranges and Peaches: Understanding Communication Accidents in the Reference Interview," points out this problem. This article begins by describing a scenario in which a student arrives at the library, claiming that he has been assigned a book to read titled *Oranges and Peaches*. The librarian is unable to find a book by this title and asks the student for the author. The librarian does not ask the student any open-ended questions or sense-making questions in order to get information on the context of the request. Finally the student does provide additional information, and the librarian realizes that the student is looking for Darwin's *On the Origin of Species* (Dewdney and Michell, 1996: 520–521).

Sometimes the librarian misunderstands the question because the pronunciation of the key words is slightly different or the librarian hears the word and relates it to something familiar to him or her. In another example, Dewdney and Michell describe a user who arrives at the library asking for material on Socrates. But the librarian has just been weeding in the sports section and hears it as "soccer tees." There are, of course, many words that sound the same but have completely different meanings such as China/china, Turkey/turkey and Wales/whales (Dewdney and Michell, 1996: 527–528). Other communication accidents happen when the user asks a question that he or she has heard from someone else. The solution to these miscommunications is first to restate the question, allowing the user the opportunity to restate it, and second, to ask follow-up questions, helping to introduce context into the discussion.

Behaviors to Avoid

Librarians should take care not to fall into the many traps that can easily occur during the reference transaction.

Keep in contact with the user. It is tempting to just start typing on the computer once the user has asked a question. This is extremely confusing to the user who neither knows what the librarian is doing nor if the librarian really understood the question. Before beginning a search, be sure that the question is clear by restating it and explaining to the user what is being searched. If possible, let the user see the screen so he or she can follow the search. If the librarian goes elsewhere to get the information for the user, he or she should try not to be out of sight of the user for any length of time so that the user knows the librarian is still working on the question.

Avoid the negative closure, i.e., a dismissive behavior that falls short of providing full service. In a negative closure the librarian is more interested in getting rid of the user than in answering the question and sends the user away without the information needed. Here are some examples of this:

- The librarian provides an unmonitored referral. This is when the librarian sends the user somewhere else without any clear direction. For example, the librarian gives the user a call number and suggests looking in that area or points to a particular area and suggests browsing there. Similarly problematic would be a situation in which the librarian refers the user elsewhere in the library or to an agency without confirming that the user will actually find information there.
- The librarian suggests that the user should have done some independent work before asking for help.
- The librarian tries to get the user to accept information more easily available than what the user needs.
- The librarian suggests that the information will not be found for one of a number of reasons, such as too hard, obscure, or elusive or simply not available in the library and perhaps not in any library.
- The librarian tries to convince the user not to pursue the question.
- The librarian leaves the desk and does not return.

- The librarian through a nonverbal action such as turning away from the user indicates that the interview is over (Ross and Dewdney, 1999: 151–163).

Ross and Dewdney offer recommendations for more positive behavior. They recommend that when the librarian refers the user to another part of the library or to another library or information source, the librarian should verify that useful information will be found by the user. The librarian should also encourage the user to return if the user does not find the information needed. Roving reference can help identify users who need more help or who need help but have not talked to a librarian. If the reference interaction is remote, the librarian might suggest a visit to the library for further information or encourage the user to contact the library again for more assistance.

Another behavior to avoid is simply not listening to the user. It is hard to listen intently to each user's question. But the librarian must do this in order to understand as completely as possible the user's question. To not listen closely and ask pertinent questions can lead to assumptions that will lead the librarian in the wrong direction. For example, the librarian might be asked about abortions and immediately go to the health section only to find out the person wants to know about aborting space flights.

Finally, avoid making the user feel stupid. Sometimes the user does not know the library jargon. They may use "bibliography" instead of "biography" or they may use "reference book" when they mean a circulating nonfiction book. The librarian should correct the user in a nonjudgmental manner. It is the librarian who must learn to understand the users (Cramer, 1998).

The Telephone Interview

The telephone interview is one step removed from the face-to-face interview. It does have the advantage of getting immediate feedback from the user. Although the librarian cannot see the user, the librarian can hear the tone and inflections in the user's voice and can ascertain how he or she is communicating.

The librarian should develop a pleasant speaking voice to aid in phone communication, aiming to sound approachable and attentive. As always, it is important to rephrase the user's questions to clarify meaning and ask open-ended questions. In this more ethereal context, it is doubly important that the user be kept informed as to how the search process is proceeding and that silent time be kept to a minimum. Once the answer has been found, follow-up questions should be asked in order to confirm that the question has been properly answered. The librarian should also cite the source where the answer can be found (Ross, Nilsen, and Dewdney, 2002: 127–131). A recent study by Agosto and Anderton revealed that eighty-six out of 125 telephone reference transactions analyzed gave no sources for their answer. The authors defined the standard citation elements for print resources as "title, author, publisher and year and for Web sites, the author (if there is one) and URL" (Agosto and Anderton, 2007: 52–53).

Librarians can provide value-added information that will enhance the user's understanding of the answer while doing telephone reference. For example, when a user asks, "Who is the current governor?" it would be useful to explain that the state has an official Web site and a page for the governor in addition to giving the URL (Agosto and Anderton, 2007: 49–50). Finally, as in all good reference interviews, the user should be encouraged to call again or visit the library.

Virtual Reference—E-mail, IM, and SMS

Using electronic means to provide reference assistance has become part of the lives of most reference librarians. Answering questions by e-mail, chat, instant messaging (IM), and text messaging (SMS) is not so different from answering questions face to face. The problem is that virtual reference lacks the advantage of the face-to-face reference interview where the user's tone of voice, facial expressions and body language help the librarian to judge whether he or she is communicating well with the user. A handicap for some is, however, an *advantage* for others who cannot leave home or do not communicate well verbally, making it a powerful means to support the mission of many libraries to make their resources available to all. Librarians should approach the virtual reference question in the same way as a face-to-face one.

E-mail reference has been offered by libraries since the mid-1990s. The structure of the e-mail reference interview is a well-designed form that captures essential information. This is the best way for the librarian to get information from the user. Collecting enough information is essential since it is hard to go back, ask follow-up questions, and get a response from the user. Sample e-mail reference forms can be found on many library Web sites, but the Internet Public Library's (www.ipl.org) e-mail reference form is a good place to start. A study by Diamond and Pease identified eleven question categories for e-mail queries including factual ready reference, information for term papers and assignments, and library policies and procedures (Diamond and Pease, 2001). Powell and Bradigan's study of e-mail reference also attempted to categorize the kinds of questions being asked by users and stated that most of the questions fell into the following categories: assignments, holdings information, library services and policies, and consumer health (Powell and Bradigan, 2001). Although e-mail reference is slower, it has the advantage of giving the librarian time to do some research and provide a more thorough response. The e-mail response should also invite the user to return for more information or to use the service again.

Chat, IM (Instant Messaging) reference, and now SMS (text messaging) have considerable potential for the reference interview because they are done in real time. Chat reference was adopted by libraries wanting to be able to provide immediate answers to questions. The advantage of chat reference is that the reference interview can be used successfully in this format. There is an opportunity to communicate back and forth with the user, and an opportunity for providing guidance the user can use in future queries. When providing chat reference, the librarian should not assume that the user does not have time for

the reference interview. The fact that the user has not chosen to come to the library does not indicate that the user is impatient or in a hurry (Kern, 2003). Librarians should greet users by name and acknowledge the receipt of the question. They should then proceed to do a reference interview, asking the user for the context of the query, followed by open-ended questions. He or she should explain that the questions are aimed at ensuring that the librarian understands the question, and should rephrase the question to that purpose. It is also important to tell the user what steps are being taken since the user cannot see what the librarian is doing. The librarian should read carefully the users' replies for clues as to whether they are communicating well since the chat is text-based with no opportunity to observe nonverbal clues. When information is identified, the librarian can provide a URL or can co-browse with the user. Attention should be paid that the information given to the user really answers the user's question. As in the face-to-face interview, the librarian should encourage the user to return for more information or with another question. A final advantage to chat reference is that the user can receive a transcript with all the information from the search.

IM and SMS are faster than chat because of the nature of the software, but they often lack context. The kinds of questions answered in this mode are usually ready reference questions, directions, policy information, or URLs. Since both the questions and answers are quite short, the librarian may not have contact information to follow up, and it is difficult to know when the question is finished. Librarians must be succinct when responding to IM or SMS (text messaging) queries. They should also try to get an e-mail address if they want to do some follow-up or encourage the user to come to the library. Because the quick back-and-forth nature of IM and SMS (text messaging) may become tiresome to the user, it is recommended that the librarian should "respond with a small amount of information plus a request for clarification" (Ross, Nilsen, and Dewdney, 2002: 199). If the information needed is not available electronically, the librarian should arrange to get the print information to the user by fax and other convenient means (Ronan, 2003: 158). Steiner and Long studied the attitudes of academic librarians toward IM and found that 80 percent of the librarians had used IM (Steiner and Long, 2007). User perceptions of IM software were examined by Ruppel and Fagan, who found that users valued IM reference for its convenience, anonymity, and quick help (Ruppel and Fagan, 2002). SMS (text messaging), the newest communication mode, is communication by text messaging through cell phones. A variety of software including Altarama, AIM, and "Text a Librarian" is being used.

Virtual reference librarians should aim to be approachable in the way they word their responses to the user. Just as in the face-to-face interview, the librarian will want to strive to make the user comfortable with the process so that the user will return to the library. Follow-up should encourage the user to use the library virtually or in person. Recent research shows that the same mistakes happen in virtual reference as in face-to-face interviews, that is, the lack of the reference interview, unmonitored referrals and failure to ask follow-up questions (Nilsen, 2005). Straw comments that "a well-written response not only answers

a question eloquently, but it also tells the user about the importance that the library places on the question" (Straw, 2000: 379). Mon and Janes' study confirms this. They found that librarians who used more words in their answers tended to be thanked more often whereas librarians who resorted to the "canned" responses or the FAQs received fewer thank-yous (Mon and Janes, 2007).

As librarians reach out to where their users are, many are providing information about the library and answering questions on Facebook (www.facebook.com) and MySpace (www.myspace.com). Hennepin County Library in Minnesota and the University of Massachusetts Boston Healey Library can be found on Facebook, whereas Brooklyn College and the Denver Public Library are examples of libraries that can be found on MySpace.

Virtual reference is often underused simply because users don't know about its existence. It is important that libraries clearly mark the service and make it visible on all pages on their Web site. Virtual reference policies such as who can use the service should also be visible to the users. Marketing a virtual reference service is essential.

Assessment and Accountability

Many researchers have spent time examining virtual reference. Two studies have examined the accuracy of the questions answered and the satisfaction of the user. Arnold and Kaske analyzed chat transcripts and found that the accuracy rate was 92 percent (Arnold and Kaske, 2005). White, Abels, and Kaske (2003) also found a high level of accuracy in chat reference in both university and public library service.

Assessments have included examining librarian and user judgments of service values, examining how libraries are setting policies, assessing virtual reference quality, developing quality standards for virtual reference, and using survey instruments such as LibQual+ and WOREP (Wisconsin-Ohio Reference Evaluation Program) (Radford and Mon, 2008).

Librarians doing virtual reference can develop a peer-reviewing system to help one another to improve the quality of their work. Transcripts should be reviewed on a regular basis to ascertain that the best possible service is being provided.

RUSA Guidelines—A New, More Integrated Approach

The most recent guidelines for the reference interview, "Guidelines for Behavioral Performance of Reference and Information Service Providers," were approved by the Reference and User Services Association Board of Directors in June 2004 (www.ala.org/ala/mgrps/divs/rusa/resources/guidelines/guidelinesbehavioral.cfm). These guidelines cover approachability, interest, listening/inquiring, searching and follow-up. Each of these five areas includes general guidelines, in-person guidelines, and guidelines for remote reference, that is, telephone, e-mail, and chat. For the first time, the guidelines have been tied to remote reference as well as in-person reference. This provides the librarian with a way to

begin to blend the various ways of answering a reference question rather than treating remote reference separately as it had been when first emerging. These guidelines stress the need for good communication skills, whether the question is asked in person or remotely stating: "In all forms of reference services, the success of the transaction is measured not only by the information conveyed, but also by the positive or negative impact of the patron/staff interaction. The positive or negative behavior of the reference staff (as observed by the patron) becomes a significant factor in perceived success or failure."

In discussing approachability: "Approachability behaviors, such as the initial verbal and nonverbal responses of the librarian, will set the tone for the entire communication process and will influence the depth and level of interaction between the staff and the users."

On the subject of interest: "A successful librarian must demonstrate a high degree of interest in the reference transaction. While not every query will contain stimulating intellectual challenges, the librarian should be interested in each patron's information need and should be committed to providing the most effective assistance."

About listening: "The reference interview is the heart of the reference transaction and is crucial to the success of the process. The librarian must be effective in identifying the patron's information needs and must do so in a manner that keeps users at ease."

On searching: "The search process is the portion of the transaction in which behavior and accuracy intersect. Without an effective search, not only is the desired information unlikely to be found but users may become discouraged as well."

About follow-up: "The reference transaction does not end when the librarian leaves the users. The librarian is responsible for determining if the users are satisfied with the results of the search and is also responsible for referring the users to other sources, even when those sources are not available in the local library."

Kwon and Gregory surveyed whether users would be more satisfied if RUSA Guidelines were used. Five behaviors were the strongest predictors of user satisfaction: "receptive and cordial listening, searching information sources with or for the patrons, providing information sources, asking patrons whether the question was answered completely and asking patrons to return when they need further assistance" (Kwon and Gregory, 2007: 137).

Understanding and Respecting Cultural Differences

The librarian should try to understand and respect the cultural differences of the users. Some users may have trouble asking their question. If they are difficult to understand, the librarian could ask them to write out their question. Librarians should avoid jargon and speak slowly and distinctly. When possible, give users struggling with English handouts that they can read. Other issues to be aware of involve differences in body language and personal space issues. In some cultures it is acceptable to stand very close to the librarian when talking

to him or her. For others this can be uncomfortable. Etiquette also differs among cultures. In some countries it is important to greet someone formally before beginning the conversation and in others it is important to shake hands first. No matter what the cultural differences it is important to treat all people with respect.

A recent study by Shachaf and Snyder found that once African-American students asked a question, they asked more questions on follow-up in second and third e-mail messages to librarians than the Caucasian students did (Shachaf and Snyder, 2007).

Improving Our Skills

Doing a good reference interview takes skills that come only with practice. The new librarian should continually evaluate his or her abilities and try to improve them.

- Practice looking approachable. This means being relaxed and open and not looking so busy that the person will hesitate to ask a question.
- Practice active listening skills. Listening to the nuances as well as the words of the user will help the librarian to be sure that he or she understands the question.
- Develop knowledge of reference sources. Continuing to build knowledge of reference resources is essential in assisting the user.
- Practice posing questions. Think about how to craft and ask questions that will elicit more information from the user and help the librarian to better understand the question.
- Practice the follow-up questions and the closing of the interview. Both are essential in making sure the question is answered and making it comfortable for the user to return again.

A Look Ahead: Striving for Excellent Service

As we look to a future which is a mix of face-to-face, telephone, or virtual reference, the importance of the reference interview remains. It has been proven in all situations to be an important key to successfully answering the user's questions. It is also important in ensuring that the user feels that the librarian has tried his or her best to answer the question. It is interesting that the user values the behavior of the librarian often more than the answer. Consequently, the development of good people skills is of great importance no matter the form of the reference interview. Kathleen Kern summed up the reference interview as follows: "we need to remember that the type and quality of the service we offer must depend on our philosophy of reference service and not on the mode of communication with the user (Kern, 2003: 49). As the ways in which we work to help library users continue to change, we would do well to keep these words in mind, remembering that it is an orientation toward excellent service that leads to satisfied users.

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3

Finding the Answer: Basic Search Techniques

All the right questions have been asked in the reference interview. What next? In a perfect reference world as epitomized in a children's poem, the questions are asked, understood, and answered to the complete satisfaction of the user.

The Firefly

"How DO you make your bottom glow?
How DO you make your sitter light?"
The firefly cleared his throat and said,
"Bioluminescence is the oxidation of an enzyme
or protoplast called lucifern or luciferase."
I thanked him and went home to bed.

—Jack Kent

At a reference desk, however, the absence of that vocal, erudite firefly makes for a more challenging interaction. As described in the previous chapter, the reference interview is not merely conversation. It is skilled conversation with a definite purpose. It requires the use of pre-established procedures and practiced skills to be effective. The conscious use of tools such as keeping eye contact to be approachable, repeating the user's question to verify, and asking open-ended questions that can elicit further details are not a function of individual personality but requirements for which every reference librarian should be trained.

A less-studied aspect of the reference interview is the reference answer. It is assumed that once the user's question is understood to its fullest extent, reference librarians will, like the firefly, clear their throats and spill out a fully formed answer. As even the most experienced librarian can vouch, the clearing of one's throat is the closest one approaches to the above perfect scenario. The reference answer, much like the interview, benefits greatly from preconditioning, practice, and a conscious adoption of answering tools. With these tools, the reference answer is less vulnerable to the randomness of the librarian's knowledge coinciding with the user's idiosyncratic questions. A professional interaction is ensured regardless of the personalities involved.

Tools of the Answering Trade

Questions, queries, quests, and quizzes, the range of user needs is vast. It is both the most exhilarating and the most terrifying aspect of the reference librarian's job. Below is a list of requests received during a day at an academic library:

- I need examples of funerary sculpture from the eighteenth century.
- Do you have articles about deforestation in the Dominican Republic in Spanish?
- I have to write about how the Internet has negatively affected American society.
- Do you have an outline map of Georgia?
- What is the date for the first Seder in 2012?
- I need to do a paper on the relation between monasteries and printing.
- Are there cookbooks in this library?
- Which New Jersey governor signed the Declaration of Independence?
- For my senior thesis, I have to research the life of Emily Brontë.
- How can I tell if a journal has been peer reviewed?

The act of leaping reflexively from one type of answering level to another can be done by everyone, much as hitting back at an approaching tennis ball is done. To effectively leap, however, requires much the same dedicated training as a professional tennis player who learns to hit balls with skill combined with instinct. Answering skills can be developed, just as questioning skills can be developed in a successful reference interview. As the reference interview proceeds, the librarian should simultaneously consider the following three steps to avoid a scattershot search:

1. Categorize the answer
2. Visualize how the final answer will appear
3. Test the waters to check if the answer is proceeding in the right direction

Step 1: Categorize an Answer

Time-consuming or Quick?

Slotting an answer into ready reference versus time-consuming is of immense help:

- It helps in avoiding panic and frustration on the part of both the librarian and the user by setting up a level of expectation.
- It also helps in organizing the flow of a reference desk. Alerting the user that finding the answer could take five minutes or fifteen minutes or one hour or more allows the user to vacate the desk and plan his or her time more effectively.
- It assigns a more professional stamp on the interaction. For telephone reference, if the answer does not fall in the realm of ready reference, the librarian

can say "I will call you back with an answer within fifteen minutes." This way, the user is not left dangling in a seemingly endless abyss of waiting for the phone to ring.

- It alerts the librarian to possible complications. Approximating a time value to each answer can sometimes be miscalculated, but most questions in a school, public, and academic library are answerable within fifteen minutes of research. If not, the question may be based on incorrect assumptions, or must be upgraded to an in-depth research question rather than a quick reference question, or a referral may be in order. The question on the New Jersey governor who signed the Declaration of Independence, for example, was printed on a school assignment sheet and occupied two reference librarians. Almost one hour was squandered before it was finally deduced that such a governor simply did not exist. It was suggested that perhaps the assignment was alluding to the New Jersey governor who signed the Constitution rather than the Declaration.

Simple or Complex?

Simplicity allows the librarian to think "within the box" and allot relatively little time to finding the answer:

- A question can be simple because it is pedestrian. An outline map of Georgia, for example, has no hidden complexities. It is a graphic. Moreover, it is an ordinary graphic that can be found in well-established sources such as the Outline Maps folder published by Facts on File, Inc., or printed via a simple Google images search.
- A question can be simple because it falls within the purview of the librarian's own interests and therefore the resources are highly familiar. Locating, explaining, and presenting the best resources does not require fresh initiative or the rapid acquisition of "knowledge on the fly."
- A question can be deceptively simple such as the above request for cookbooks, which proceeded to develop into a search for obscure recipes for cocktails that could use cardamom as an ingredient. In such cases, when original searches balloon into quite another direction, time and simplicity estimates must be recalculated.

Current or Retrospective?

It can be useful to delineate questions that require current information from those that do not. Literary critiques, biographies, histories, word etymologies, and etiquette books are subject areas that require currency but do not put a premium on it. Stock reports, directories, almanacs, and statistical yearbooks do. Deciding on whether the question is retrospective helps to veer the search process to appropriate formats. A question on the life of Emily Brontë would most definitely benefit from an exhaustive print biography. Searches on a database for current articles on Brontë would be more likely to provide a single, scholarly perspective on some aspect of her work. The question on the first

Seder of 2012, on the other hand, would be most efficiently answered by an Internet search.

Specific or Cross-disciplinary?

Being alert to differences in questions aimed at facts versus analyses helps in structuring the search process. Factual information is usually to be found in one classification area, though not necessarily one source. Analyses requiring cross-disciplinary perspectives will have to be broken down into their component parts in order to select multiple classification areas. See, for example, the difference between the following two inquiries:

- What are the different kinds of illegal drugs?
- I need to do a five-page report on the impact and incidence of illegal drug abuse in the teenage population of the United States.

In the first question, the Dewey area of the 360s or the Library of Congress call numbers in the RC566–RC568 area would amply cover a listing of all the different kinds of illegal drugs. In the second assignment, however, additional research would have to cover the 306 or HV5825 area on drug culture; 613 or RA564.5 for impact of drugs on teen health; the 310 or KDZ32 area for criminal statistics; 909 or H35 for overviews such as those found in CQ Researcher; and databases for articles.

Single Source or Multisource?

Questions requiring no more than a single source are usually closed-ended questions. "I was born on 10 January, 1976; what day of the week was that?" The question requires one perpetual calendar. There is no need for further confirmation or evaluation. The World Almanac would suffice. A question on the "impact of ancient Roman architecture on the perceived power of Rome" on the other hand, would draw from multiple sources dealing, at minimum, with the history of Rome and the dynamics of architecture and architectural forms.

User Appropriate?

Academic librarians are faced with students attempting to pick up resources for absentee friends, just as public librarians are invariably approached by parents wanting resources for the "Civil War," "The Holocaust," or "a famous African American." A printed sheet in their hands, a slight disconnect in their enthusiasm for the subject, and a successful reference interview should establish their role as middlemen, rather than as end users of the information. For such "imposed queries" (Gross, 2001), ascertaining the age, grade level, or purpose of the end user's needs is critical in choosing the appropriate answer source. Recognition of the reading level of the user is also required. A question on the workings of democracy in America could be answered with Tocqueville's dense treatise or with *Cliffs Notes'* simple explanations in American Government.

Step 2: Visualize an Answer

This book describes hundreds of important resources. While envisioning the exact resource to consult for each question is an unlikely scenario, it is both possible and advisable to triangulate onto the category of sources. Indexes, guides, directories, catalogs, dictionaries, journals, statistical yearbooks, government publications, almanacs, Web sites and databases: the strengths of each are established so that a move toward any one appropriate category or format is a logical first step.

Most reference librarians follow the visualizing search strategy without consciously practicing it. The librarian who spends time looking for the "oversize commercial atlas that was right here in the business section" has admittedly used a visualization tool, but has been stumped by the change in shape as the publication has morphed into two smaller-sized publications, as was the case with the 135th edition of the *Rand McNally Commercial Atlas and Marketing Guide*. Conscious practice improves the visualizing process. As Tim Owen (2003: 27) suggests, "You can't see the fine detail, and you don't know yet whether there is a source... [but]... conjure up a picture in your mind's eyes of what the final answer will look like."

The focal points for successful visualization of answer resources are not color and size, but a rapid mental slide show of whether the answer would be in:

- Print/Internet/Database;
- Textual/Graphical/Statistical; or
- Reference/Circulating/Children.

While the first step of categorizing the answer is essential in visualizing the answer source, shuffling through rapid images of format, category, source type, and reading-level appropriateness not only helps triangulating onto the right resources, but aids the process of continuing to ask the right follow-up questions. Here are three questions on Africa:

1. What were some of the causes and effects of imperialism in Africa?
2. What are current crime statistics for countries in the African continent?
3. Is the African setting necessary for character and plot development in the novels of J. M. Coetzee?

Given the breadth of information and the analytical requirements inherent to Question 1, a circulating print textual manuscript may be the first choice in resource visualization. For Question 2, **current crime statistics for all countries might be most accessible through the Internet with globally vested sites such as the United Nations at www.uncjin.org/Statistics/WCTS/wcts.html.** Unless a specific critical study exists of all aspects of Coetzee's works, a database of literary criticism might be the best bet for answering Question 3.

Step 3: Test the Waters

In basketball, players are urged to use soft-focus techniques and peripheral vision to be aware of the entire playing area. While providing answers, it is

useful to use a similar technique to continually gauge whether the answer is proceeding in the right direction.

Creative Browsing

Float a trial balloon with introductory information and check user response. Calibrate accordingly. As studies have shown, individual research can be highly nonlinear. Users are far more likely to recognize the information they need when they see it than know all the details of what they need before they start.

For example, a somewhat taciturn user asked this question: "Where is your section on airplanes?" A reference interview of some length established that the user needed "pictures of planes flying together." Faced with an illustrated encyclopedia of aircraft, the user was interested but continued to want more material. At this point the ongoing verbal interview was not producing new insight, so a trial balloon was floated. The user was asked which type of illustration was closest to what he wanted. He pointed to a V-formation of military aircraft, but remembered that the V was disrupted at one point during the flight. This was the clue that it was the classic "missing man formation" aerial maneuver enacted at parades and funerals to honor the MIA. That further piece of information led the user to remember that he had seen it in a broadcast of President Reagan's funeral. That was the exact image he wanted and the librarian was able to get it for him.

In short, the more inchoate the question and the more limited the ability to draw clues from a reference interview, the greater is the value of trial balloons in locating the right answer.

Subcategorizing

Draw the user into various subcategories of the question to see if any strike the right chord. As the user shows interest in one category over another, focus on the chosen material and add to it.

For example, a user was interested in sexually transmitted diseases (STDs). The topic, being of a somewhat sensitive nature, was treated to a less than exhaustive interview. Presented with monographs, statistical data material, a dictionary of diseases, an illustrated encyclopedia of diseases, and a quick sample of online sites, the user was most interested in graphic images of people afflicted with STDs. In this case the online option worked best as the user was a concerned mom who wanted gory pictures to scare her adolescent son into following the straight and narrow.

Overviews

Provide a range of synopses of material and ask, "Do any of these appear to answer your question?" While ready reference questions require a single source, broader queries can be answered through different perspectives requiring different resources. However, as Joseph Janes has correctly pointed out, "users

often want a response that is good enough—not perfect but optimal" (Janes, 2003: 38). The user rather than the librarian, though, must necessarily decide the optimal response. A way to navigate between the lines separating the overzealous librarian flooding the user with material and the Spartan librarian assuming the optimal choice is to provide "bites." A quick look at the "About" icon in an online resource, or a scan of the preface, table of contents, or back-page blurb in print resources is enough to provide a sweeping overview of the kinds of perspectives available to answer the question.

Whether the user is gently pushed into creatively browsing through the material to clarify the research and enable the librarian to select the right answer source; or the librarian organizes the range into subcategories from which the user can choose; or the user is provided with a quick and sweeping overview of the resources available, the end result is still the same. The librarian tests the waters to see if the initial response to a question is heading into the right answer field.

Types of Answers

Like all of human language and communication, the phrase "reference answer" conceals as much as it conveys. An "answer," far from being a uniform entity, can be of many different types, and more pertinently, provide various levels of utility for the user. Both during and after a reference interaction, it helps to be clear about what kind of answer was given to a user and whether another level of utility could have been possible.

Levels of Utility

Value-added answer ← Skilled answer ← Elementary answer

While all of the three broad answer gradations given above are helpful to the user, the highest level of utility can be assumed to derive from the value-added answer.

Value-added

The value-added answer goes a step beyond merely providing the right resources. It organizes the material, prioritizes the resources, keeps an eye open for potential research needs being generated by the material, and presents the answer with élan.

- On paper, providing a cover letter annotating the various sources so that their relevance is made clear goes a long way to adding value to an answer. Corporate and law librarians are perhaps the best practitioners of value-added answers. Not only are the right resources to the question selected, but the relevance of each resource is made clear so that answers are presented as professional time-saving reports. Such reports, of course, are far from the fifteen-minute answers averaged by desk reference and can take up to weeks or months to prepare (Williams, 2002).

- In-person answers can benefit greatly from professional tips and the librarian's perception as to why one source is more relevant or reliable than another. If six print resources have been presented to the user, for example, the librarian can point out that the top two resources are the ones to begin with as they contain the most relevant information and are from highly reputable publishers. Alternatively, if different resource formats have been presented, the librarian can explain why a certain Web site would provide the most current updates, or how a database has a better chance of leading the user to a richer range of sources through hyperlinks.
- Answers provided via e-mail can employ simple cut-and-paste methods to consolidate the relevant facts from a variety of Web sites or database articles. With citations provided for each extract, the user has the option to do further research if necessary. If not, the user is provided with a high-utility answer that has saved both time and energy.
- In live or chat reference, thinking ahead and out of the box makes for a value-added answer. For example, a user had a question on the control of pests without the use of pesticides. The librarian was able to locate a perfect environmental Web site and a transcript of a radio interview on the subject. Most librarians would stop at this point, having provided a complete answer. This librarian picked up on the minor clue that the information was for a college paper and did a follow-up question on whether the user had access to a style guide to cite Web sites and transcripts. The user was most appreciative.
- Concerns, suggestions, and possible referrals can also be included in all formats, so that the user has the best possible overview of a topic before starting the research process.

Skilled

Value-added answers, however desirable, can be quixotic in the working life of many librarians. Often, there is just not enough time or staff to provide the icing on the answer cake. At this point, the skilled answer adequately serves the purpose. To provide such an answer, the right resources are located, sifted, and judged so that only the best sources are selected for research consumption. As Kathleen Kluegel (2001: 109) states, "Most of the decisions a searcher makes in the search strategy are made to achieve the appropriate balance between the two aims of information retrieval: precision and recall. 'Precision' refers to getting only relevant material. 'Recall' refers to getting all the relevant material."

Sifting through all the material available on a subject, especially in a large library with vast resources, is almost as daunting as having no information at all. While there is some truth and much humor in Roy Tennant's (2001) aphorism that librarians like to search and users like to find, a complete and calibrated answer includes both the challenge of a search and the satisfaction of a find. Fast and effective ways to vet multiple sources and create a hierarchy of utility for the user include the following:

- Check the table of contents to get a quick overview of subjects included and pertinent keywords included.
- Locate keywords in the index to see if there is a long list of entries or pages on the subject.
- Skim through the preface to gauge the focus of the author.
- When available, review excerpts on book jackets; these may also provide a clue to the strengths of the resource.
- Past experience with certain publishers or series can be used to expound on resource choices. For example, a Gale encyclopedia can be expected to have glossaries, boxes highlighting important facts, enlivening illustrations, and extensive cross-references. A DK publication is guaranteed to have spectacular graphics. CQ Researcher can be relied upon to provide an unequivocal overview, chronology, statistics, and evaluative account of hard-to-find sociocultural issues.

In chat reference too, the skilled answer would require professional weighing of resources. For example, a question was asked about Turner syndrome. The librarian was able to locate two authoritative Web sites. One was the acclaimed *Merck Manual* and the other was a special-interest national organization, the Turner Syndrome Society. The user wrote back to say that he or she was confused because the occurrence rates listed in the two sites were variant. Here was the librarian's assured answer: "That's a tough call; they are both reputable sites. While the Merck is a reference book, the site for the Turner Syndrome Society may be more in touch with the actual statistics, because they deal exclusively with the condition" (Gurzenda, 2005).

Elementary

There are occasions when you simply do not have the right resources or you do not have the time to provide a value-added or skilled answer.

Collaboration

If the resources are not available, a strong system and ethic of referrals is both valid and highly useful for the user. As mentioned in Chapter 9, keeping a list of the nearest medical, legal, and business libraries is essential to all library reference services. The areas are specialized and invariably require more in-depth research. Keeping a list of databases available in other open-access libraries is also helpful. At the Harvard University Library Web site, links to catalogs far beyond the university are offered so that it is possible to check the British Library Catalog and Germany's Karlsruhe Virtual Catalog.

Encouraging the increasingly sophisticated system of electronic bookmarking and "blinklisting" can help when sufficient resources do not appear to be available. Traditionally, librarians have a list of "Favorites" bookmarked on reference desk computers. This tradition has carried over to roving librarians with laptop computers. However, with each computer needing to be bookmarked individually, there is a pattern of irregularity in what gets bookmarked in one and forgotten in another. With innovations such as "Blinklist" at

www.blinklist.com, links can be stored online so that they can be accessed from any computer. A "tagging" system allows for a categorizing of the links. Yet another iteration currently gaining relevancy is "social bookmarking." Digg, Delicious, LibMarks and Frassle, to name a few, allow a "finding, keeping, and sharing" of online information (Fichter, 2004).

Strategizing

When time is scarce, some methods can stave off the inclination to simply not answer users' questions or to keep them waiting indefinitely.

- Ascertain whether the question can be "tabled" and answered at your convenience or whether it requires an immediate response.
- Hand over a handy introductory resource such as an encyclopedia to get the research started.
- Escort users to the right area to browse and inform them you will be rejoining them in a certain number of minutes.

Common Pitfalls in Reference Answering

Wrong Information

The pressure to "just answer" can sometimes be overwhelming. Take for example the following scenarios: An irate user on the telephone who wants the location and number for a gas station "right now" because she's running out of gas on some highway; the trusting teenager who asks a trivial question for which your mind draws a blank; the new coworker who is at the desk with you and looking to you for reference know-how—the world of human reference can be fraught with the pressure to "just answer." The point to remember is "do not do it."

Anticipating the pressure and recognizing that it is part of every reference librarian's experience helps in developing a resistance to "just answering." Wrong information can range from being irksome to dangerous. Rather than just answering, compromises can always be negotiated. The highway driver can be asked to pull over to the shoulder so you can conduct a more reliable search. The teenager can be drawn into a minute of conversation as you Google the trivia. The new coworker can learn along with you as you consult with a colleague.

Inappropriate Information

A poor cousin to wrong information is inappropriate information. Heaping a researcher with resources on African-American culture because of an inability to find a specific resource on Kwanzaa is counterproductive. It not only may not answer the question, it wastes the time of the researcher. In addition to librarian lassitude, a poor reference interview is usually at the root of inappropriate information. The school librarian who pulled out multiple biographies of Karl Marx even though the student had continued to expand on his need for a

Marx biography as part of a book report for Black History Month could easily have established the confusion between Marx and Malcolm X. The futile medical information plied on the user who needed to research "Wounded Knee" is a painful product of poor reference interviews leading to inappropriate information.

Keep yourself fresh.

Avoidance

Avoidance of difficult questions is highly unprofessional and unethical. It is usually an outcome of momentary panic in the face of a seemingly impenetrable question. A guard against falling prey to avoidance techniques is to remember a few helpful tips when faced with a panic attack.

- Develop handy referral systems both within and outside the reference area. Knowing staff special interests or aptitudes can help refer users to the right person in the event of a difficult reference question in that area.
- Keeping pathfinders, how-tos, "knowledgebases," and referral lists on intractable subjects are other tools to prevent avoidance tactics. An interesting online incarnation of this can be found in the blog created by Q&A NJ, the virtual reference answering service established in New Jersey. The blog, inaugurated in October 2005, aims to keep a set of handy FAQs (Frequently Asked Questions) with successful search strings for the use of librarians conducting live answering sessions.
- Establish a context for the question. Technical jargon, for example, can be intimidating on its own, but is considerably tamed when located within a subject context for which material is handy. The user looking for "Mott insulator transitions in Bose condensates" is really looking for a basic textbook on condensed matter physics.
- Attack questions from different angles. If all the books on the Reformation in sixteenth-century Europe are out, you can still help a user by providing biographies of Martin Luther.
- If a resource simply cannot be located for a query, play Sherlock Holmes for a moment and reasonably deduce what institution might have a vested interest in creating, organizing, or advertising such information. An overview of soybean production in Argentina, for example, would most likely be located in online sites for organizations such as the Ministry of Economy and Production for the government of Argentina or the Economic Research Service of the U.S. Department of Agriculture.
- Finally, do not succumb to feeling that you must know everything. If the topic is unfamiliar, get familiar with it. Ask the user for clarifying information, or else consult a ready reference resource. Even wildly unfamiliar concepts and words can be decoded with a handy dictionary, encyclopedic entry, or a quick browse on the Internet. Having understood the word, the question no longer appears as unapproachable.

"Disappearing into the stacks," as one study found (Ross and Dewdney, 1998), is quite simply unthinkable.

Poor Knowledge of Resources

No librarian can escape from the inevitable errors committed by not knowing the reference collection. Most librarians have, at some point in their career, forgotten a perfect resource available in their collection; however, the experience must be avoided at all costs. The best way to minimize the margin of error is to consciously refresh familiarity with resources on an ongoing and unremitting basis. Studying a new acquisition as it is received provides bedrock knowledge that is both incremental and absorbed at an unhurried pace. Shelf reading, weeding, swapping stories of successful answering resources with colleagues, and testing alternate sources with hypothetical questions are all ways of getting intimate with the collection.

Lack of Follow-up

A less obvious but equally egregious error in answering reference questions is not following up after providing the resources. As mentioned in the chapter on the reference interview, user questions tend to grow roots as more research is done. It is good practice to return to the user to see if anything else is required. Even live reference usually has a preset message requiring the user to write back if "further information is required."

Competent Search Skills

The most powerful deterrent to the answering of complex questions, however, is an underlying sense of inadequacy in searching skills. This is easily remedied. All reference librarians can become proficient search strategists if they consciously practice the art of "searching," rather than fall into the habit of "browsing." Search skills can be practiced with three major tools of reference:

1. The local library catalog
2. Electronic databases
3. The Internet

Given that Internet searching has sounded a dominant note in the past few decades, Chapter 13 is devoted to the study of finding answers on the Internet. In the following sections, the other two search strategy tools are outlined.

The Library Catalog

As one reference veteran correctly remarked, the catalog is the "first-resort tool for identifying and locating reference works in the library and if the catalog records includes links, on the Web" (personal communication, 12/29/2005).

Catalogs in the majority of libraries use the Library of Congress Subject Headings (LCSH). A conscious recognition of the structure of authority headings goes a long way in honing the art of catalog searches. The LCSH, for example, can offer "magic searches" (Kornegay, Buchanan, and Morgan, 2005) if one acknowledges the efficacy of its form subdivisions. Form subdivisions, of little value in pre-online cataloging times when author and title searches

predominated, allow "librarians to combine the precision of the cataloger with the freewheeling style of a Googler" (Kornegay, Buchanan, and Morgan, 2005: 46). They do this by establishing what the material "is," rather than what it is "about." So, for example, if a user is searching for primary documents on the Revolutionary War, a search strategy that recognizes form subdivisions would look like this:

<Revolutionary War—Diaries>
OR
<Revolutionary War—Correspondence>
OR
<Revolutionary War—Sources>

By directing the search to what the material "is," namely primary documents such as diaries, correspondence, and sources, the search avoids the necessary irrelevancies associated with random topical keyword searches. It also obviates the necessity for having any prior knowledge of a controlled vocabulary, as would be required for a strict subject search where the search string would have to look like this to get the same results:

<United States—History—Revolutionary War, 1775–1783—Diaries>

While the list of form subheadings runs into the thousands, a study of actual usage found a highly skewed pattern with barely 100 subdivisions being used 90 percent of the time (O'Neill et al., 2001). It is therefore both a productive and feasible exercise for reference librarians to keep a handy list of some of the most-used form subdivisions. The following is a selected list of twenty common LCSH form subdivisions:

Common LCSH Form Subdivisions	
Periodicals	Case studies
Biography	Dictionaries
Bibliography	Pictorial works
Directories	Guidebooks
Statistics	Indexes
Maps	Databases
Handbooks	Study guides
Poetry	Interviews
Fiction	Popular works
Scores	Tables

Similarly, in an effort to train new reference librarians, a list of "25 high-performance subdivisions" was created by the reference staff of the Hunter Library of Western Carolina University and reported in a study (Kornegay, Buchanan, and Morgan, 2005). A lengthier list of selected subdivisions can be seen at Princeton University's reference cataloging at <http://library.princeton.edu/departments/tsd/katmandu/reference/formsubdiv.html>. Having a handy kit of subdivisions that anchor topical keywords to subject areas allows a speedy and effective search of the online library catalog.

Database Searching

A bewildering array of interfaces prompts one to believe that databases are very different creatures. Although the differences in databases must be acknowledged, some basic search patterns and strategies prove effective, regardless of whether one is looking for images in *AccuNet/AP Multimedia Archive* or global equity pricing in *Mergent Online*.

Step 1 involves identifying the research topic.

Writing out the topic either as a full sentence or as a list of concepts central to the topic is critical in establishing the framework for starting the search. Database searches can quickly derail with misleading or unnecessary keywords. Search strategy worksheets and search tips such as that created by the Humboldt State University at <http://library.humboldt.edu/infoservices/sstrawrksht.htm> help researchers to organize their search strings in a methodical and productive way. Worksheets such as the one designed by the J. Paul Leonard Library at San Francisco State University and reproduced as Figure 3-1 can be used to clarify the initial topic for both the researcher and the reference librarian.

Step 2 requires identifying the appropriate database.

Database collections typically resemble a suburban mall. There are a few "big name" databases highlighted by the library, accompanied by a host of smaller or more subject-specific acquisitions. Each of these has an "About" or "Help" icon that lists the scope and focus of the collection. Combining a comprehensive "big name" database with a more specialized subject database can result in a well-balanced search. Randomly wandering through a mall of databases in search of specific information can conversely be an enervating, even fruitless, experience.

Step 3 encourages becoming familiar with the search screen and search functions.

A number of major databases are subscribing to a somewhat similar form interface where the entry box for search terms is typically followed by a set of limiters. The limiters are of tremendous value and should be exploited to the fullest extent possible. Searches can be variously limited by date ranges, full-text availability, peer-reviewed entries, within-text searches, subject descriptors, and formats. Boolean operators such as AND/ OR/NOT are also available to narrow, broaden, or eliminate unnecessary terms in a search string. Other standard search tools such as proximity operators, truncations, wildcards, and plurals are also part of the database search-polishing arsenal. A key describing what

Figure 3-1. Database Search Strategy Worksheet

Database Search Strategy Worksheet			
Name _____ Date _____			
Reference Librarian _____			
Please fill out this form to help the Reference Librarians assist you in determining the best databases and search strategy for your topic.			
I. State your research topic (in complete sentence). Example: How has the relationship between blacks and Jews historically been portrayed in the popular media?			
II. List any limitations such as language, period of time, periodical title, etc.			
III. Concept terms you think might be useful in searching your topic. Use another sheet of paper if your search has more than three concepts. Note: Terms within the same columns are connected by the Boolean operator "OR" and are called a "set." Sets are connected by the operator "AND." Sources for relevant terms:			
<ul style="list-style-type: none"> • natural language; that is, familiar words you know • database thesaurus (see if one is available for the specific database you are using) • subject headings and descriptors in relevant citations records you find • terms from encyclopedias, textbooks, coursework, etc. 			
Concept 1	Concept 2	Concept 3	
Example: Blacks African Americans Afro-Americans Negroes	Jews Jewish	Mass Media Radio Film Newspapers	Broadcasting Television Movies
AND		AND	
Search statement example: (black* or African American*) and Jew* and (mass media or broadcast* or televis* or film*)			
The asterisk (*) symbol in this statement is used to truncate. Truncation symbols vary among databases. Look in the database help sections to find which symbol is used.			
<i>Source: San Francisco State University, J. Paul Leonard Library, www.library.sfsu.edu.</i>			

polishing tools can be found in any given database is always included. Sometimes the tools are nested within an “Advanced Search” button, and will perform more effectively than the “Basic Search.” Figure 3-2 is an example of an archetypal form interface where the search terms are fine-tuned with a set of Boolean operators and followed up by a set of date, title, subject, images, and target audience limiters.

Step 4 urges a search that uses subject headings or/and refines keywords.

If keyword searches using the advanced limiters do not produce the desired results, be prepared to step up to a higher level of search strategizing. Refer to the controlled vocabulary inherent to each database. This can be done by consulting the thesaurus attached to most databases, or by retrieving the subject descriptors listed in every individual record. Most thesauri list terms with broader, narrower, and related terms as well. These can be methodically used to dredge up more accurate material. Alternately, retrieving subject headings listed in an initial search entry can achieve the same results. A great many databases are set up with subject headings. Many of these headings are linked and allow for a one-click entry to new descriptors. Institutions such as the Alvin Sherman Library of Nova Southeastern University in Florida provide detailed individualized instructions to aid users in creating the most effective database search. A small sample of the instructional pages is given in Figure 3-3.

Step 5 evaluates the results.

The results can be speedily evaluated both by the number of documents returned and by the occurrence of search keywords in the title, subject keywords, or

Figure 3-2. Form Interface for a Database (*Gale PowerSearch™*)

Figure 3-2. Form Interface for a Database (Gale PowerSearch™)

Advanced Search
Select Index to search, then enter search term.

Keyword(s):

And: Author(s)
 And: Publication Title(s)
 And: ISBN(s)

[Hide search options](#) | [CCL Advanced Search](#)

Limit results:

to documents with full text
 to peer-reviewed publications
 to document with images

Images

Date: All Dates Before On After Between
 and

Publication Title

by publication title:

by publication subject:

by Lexile score:

Subject

Figure 3-3. Refining a Database Search

■ Additional Features

The Thesaurus is a controlled vocabulary list of subjects and related terms used to standardize the indexing in the database. You can select and search for synonyms, related, and preferred terms.

To use the Thesaurus

- click the **Thesaurus** button—left side of screen
- select **one or more databases**
- enter a **term or phrase**
- click **Start**

The results screen displays your term, or a related term, in a hierarchy. The report includes the database(s), and how many related records are available.

To clear the terms entered

- click **Clear** in the bottom taskbar

Search Thesaurus For:	<input type="text" value="computers"/>	Start
<p>Select one or more databases. Enter a subject. Click Start.</p> <p>The Thesaurus is a list of suggested subject headings and related terms in the database's controlled vocabulary. You can look up and get information about subjects covered.</p>		

<http://www.nova.edu/library/dlts/lessons/wilsonwebeducation/>
Alvin Sherman Library, Research, and Information Technology Center, Nova Southeastern University

Source: Created by the Distance and Instructional Library Services department of the Alvin Sherman Library, Research, and Information Technology Center at Nova Southeastern University in Ft. Lauderdale, Florida.

abstract prefacing the document. Much like Goldilocks entering the bears' house and trying out things until she found them to be "just right," the number of documents returned in a search indicates whether the terms used were "just right." For the most part, searches that result in less than ten documents may suggest a search string that has been overly cautious and can be broadened by truncating the term or using the <OR> operator. More than 200 documents can be frequently defeating and may benefit from <AND> or <NOT> operators or any of the given limiters offered by the database. Any number in between is a good indication that the search string was "just right."

Search words are frequently highlighted by databases so that a quick eyeballing of the title, descriptors, and abstract is sufficient to suggest whether the result is worthwhile. Most results are also arranged in reverse chronological order, so that the timeliness of the articles can be gauged immediately. Some databases tab the results into scholarly and general categories; others list the citation and the number of words so that they need to be checked for evaluating levels of appropriateness.

Step 6 pulls together the search results into an organized whole.

Having conducted a successful search, it is important to remember that database results, unlike print material, disappear unless immediately organized. The results can be printed so that a hard copy is available. They can be saved on diskette, CD-ROM, or flash drives or exported directly into software such as EndNote or RefWorks. Students and staff at Yale University, for example, have open access to import citations into RefWorks. The globally renowned scientific database, SpringerLink, adopted CiteULike, a bookmarking Web site so citations can be instantly stored, shared, tagged with personal ratings and exported. Alternately, the results can be e-mailed, a welcome management addition for users who do not have the immediate means to print hard copies, and for research collaborators alerting members to pertinent research. The results can also be tagged as the search is being conducted. This is particularly useful when an introductory or overview of a research field is conducted and a large number of entries are being scanned for possible relevance.

However careful the original search strategy, it is vital to keep in mind that the strategy has to be constantly revisited and redefined as the research process continues. New subject descriptors suggest different tacks to the same topic. Indexed terms are certainly not graven in stone, and "related" terms can vary quite noticeably between databases. Searches may also have to be repeated over time since there can be significant time lags. As the University of Glasgow library Web site has noted, "MEDLINE gives priority to American titles and is notoriously slow to index non-U.S. specialty journals such as the *British Journal of General Practice*" (www.lib.gla.ac.uk/Docs/Guides/searching.html, accessed on 1/3/2006).

With the ongoing development of federated searching and open URL link resolvers, which allow a single query interface to trawl across multiple databases (Linoski, 2008), the future trend of database searching appears to be striving for increased search friendliness. Kids Search, Power Search, Metafind, Innovative Serials Solutions Article Linker, Muse Global Muse Search, and Innovative Interfaces Web Bridge are just some of the innovations that "offer a bridge between the reluctant searcher and the wealth of information in library databases" (Curtis and Dorner, 2005: 37).

Raison d'être: Finding the Answers

Finding answers is what we do as reference librarians. All of our skills in collection development, format management, and reference interviewing find their full flowering in the effective answering of user questions. It is quite simply our *raison d'être*.

Clarity in establishing the processes that go into the making of an answering strategy is a good thing. Deconstructing the process can appear as a slow-motion take that confirms and validates what the experienced reference librarian is doing almost instinctively. Or it can provide an instructive framework to condition and hone the librarian's techniques in answering queries of wildly

different provenance. Either way, it aims to emphasize the pedagogical aspects of search strategies and the answering process.

Recommendations for Further Reading

Duckett, Bob, Peter Walker, and Christine Donnelley. 2008. *Know It All, Find It Fast: An A-Z Source Guide for the Enquiry Desk*. 3rd ed. London: Facet. Cross-referenced and comprehensive, this book is a helpful guide for reference librarians confronted with unfamiliar enquiries.

Eurodesk. Available: www.eurodesk.org/edesk/Supportcentre.do?go=17 (accessed 11/27/2008). This Web site is an example of an answering process set up on "How to answer European questions." Designed for Eurodesk, an online support site for professionals working with young people in the European region, the site establishes an "enquiry answering checklist" and gives examples of successfully answered questions that followed the process.

"The Exchange." A one-time regular column in *RQ/Reference and User Services Quarterly*, "The Exchange" is an interesting way to study the asking and answering of tricky reference questions, some of which were never answered. The compilation of questions and answers is available to RUSA (Reference and User Services Association) members at www.ala.org.

National Health Service (NHS). Sponsored by the NHS, a national British pharmacy service available online at www.ukmi.nhs.uk, aims to provide collaborative and evidence-based information on medicines and supplies an interactive template for "standard search patterns" such as one for drug interactions. Templates such as these can be useful for searches that are repeated often. In academic libraries, subject-specific templates can be developed based on curricula. In public libraries, genealogy searches, relative car prices, personal finance resources, doctor information, and researching a house, are some general areas that one can find ready answers with prepared pathfinders.

Oder, Norman. "The End of LC Subject Headings?" 2006. *Library Journal* (May 15): 14. In a report both commissioned and publicized by the Library of Congress, it was suggested that the Library of Congress Subject Headings or LCSH, are becoming less necessary in an emerging research world where "we think of Google as the catalog." The debate between the use of free-text searching as epitomized by information searches online, and the use of controlled vocabulary as traditionally espoused in both print and online research, appears to have sharpened following the LC report.

Project Wombat. Since 1992, Stumpers-L was a popular reference listserv where librarians could post challenging questions that had "stumped" them. As of January 2006, Project Gutenberg hosted the new version of the listserv, known as Project Wombat, named after the mascot of the earlier listserv. Available at <http://project-wombat.org>, the list has various levels of subscription so that the user can choose between unmoderated and filtered lists.