ASKING "WHY" QUESTIONS IN THE REFERENCE INTERVIEW: A THEORETICAL JUSTIFICATION[1]

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In the reference interview, the library user's information need can often be clarified by asking questions that elicit his or her reasons for presenting a reference query. However, librarians are often advised to avoid using the question, "Why do you want this information?" This article draws on theory from linguistics (particularly speech act theory), philosophy, and cognitive science to show how the ambiguous nature of "why" questions may lead to unproductive or even hostile responses. The key to using "why" questions successfully in the reference interview lies in a theoretically based understanding of the form and function of these questions in their social context. Two main strategies, contextualization and the use of neutral questioning, are suggested for resolving this conflict in practice.

References librarians will recognize the following question pairs as typical examples of initial queries presented by library users, followed by a more precise statement of the user's real information need, as it emerges from a reference interview: "Where are your law books? I want to know if my lawyer is right when he said that there's nothing I can do to keep my neighbor from throwing snow on my driveway" and "Where is your section on portraits? I'd like to know where I can purchase a reproduction of a portrait of Cardinal Newman, to hang in

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my office."[3] As these examples suggest, understanding an information need involves more than simply asking questions about the subject, form, and amount of the information requested. It is often helpful if the librarian can find out how the information need has arisen (as in the law query above), how the user plans to use the information (as in the example in which the user requires a reproduction), or both. However, the prescriptive literature of library and information science is confusing: some authors exhort librarians to "constantly ask why" [1, p. 72], whereas others state that librarians "should never ask why the client-patron wants the information requested" [2, p. 117].

The purpose of this article is to arrive at an understanding of the dilemma created by this conflicting advice. Theory in philosophy, linguistics, cognitive science, and communications provides a useful context for understanding "why" questions asked by the librarian in the reference interview. We will clarify the nature of such questions by showing, first, that the function of "why" questions is systematically ambiguous to the hearer and, second, that the form of "why" questions can make the function unambiguous and hence a productive tool that reference librarians can use with confidence.

Why (or Why Not) Ask Why?

Librarians have long recognized the tendency of library users to pose their initial questions in incomplete, often unclear, and sometimes apparently covert terms. As early as 1944, Margaret Hutchins explained that, by asking "why" questions, the librarian "can learn a good deal more about the person from his answers to questions as to how he became interested in the subject, what he already knows about it, whether he knows how to use certain reference tools, and what use he intends to make of the information" [3, p. 26].

The librarian needs to know the reason underlying the information need not out of prurient interest but in order to develop a productive search strategy and to avoid useless searching for information that does not answer the real question. A literal answer to the request for directions to the law books, for example, will not help a user unfamiliar with the law, nor will the suggestion that he consult a lawyer.[4] In the second

3. These question pairs were collected from public librarians who were asked to recall recent examples of queries that required negotiation.
4. To avoid awkward constructions, the pronoun "he" will be used to refer to the library user, while "she" will refer to the librarian.

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example, it is impossible to give directions to "the section on portraits"; furthermore, what is really needed is not a portrait but an address for a reproduction service.

Robert Taylor was among the first to collect empirically based data in support of "why" questions. Among the five categories of information needed by the librarian to negotiate a query, Taylor described determination of the user's motivation and objectives as "probably the most critical" [4, p. 185]. The librarians interviewed by Taylor reported that this type of question was extremely important to ask: "Unless you are sure what the why is, you can never be sure what it is the person really wants" [4, p. 185]. Nicholas J. Belkin and Alina Vickery provide a good review of other information science research that indicates the importance in information retrieval of understanding both the underlying need and the use to which information will be put [5, pp. 6–19].

However, every experienced librarian also knows that "why" questions are difficult to ask and may not be well received. Many texts on interviewing techniques warn that "why," "how come," and "what for" questions are likely to be perceived as intrusive or, at best, irrelevant by the interviewee. Hutchins states that "the blunt question 'What do you want this for?' [will] undoubtedly antagonize the reader" [3, p. 26]. William Katz, in his most recent edition of *Introduction to Reference Work*, makes only an oblique reference to "why" questions by saying that the librarian needs to learn "how the information is going to be used" [6, p. 51]. Others seem to share Patrick Wilson's view that information "spontaneously offered by clients about their purposes" can be useful but that librarians ought "not to inquire explicitly into purposes" [7, p. 473].

Indeed, in over 300 tape-recorded reference interviews in public libraries, Mary Jo Lynch [8] reported finding no explicit questions about what Taylor had called "motivation." One of the reasons that Lynch may not have found empirically based evidence of librarians asking "why" questions may be that such questions are particularly difficult to ask when the user expresses a need for sensitive information, especially in the case of financial, medical, or legal information. Katz has enumerated the reasons that library users may be reluctant to answer a "why" question: "The user (1) does not trust the librarian's reaction to what may be an embarrassing question; (2) does not trust the librarian's knowledge of the field; (3) does not think the reason is any business of the librarian" [1, p. 72]. Even in general conversation, the use of "why" questions may be perceived as intrusive or judgmental. For example, questions such as "Why are you late?" or "Why didn't you do X?" appear to arise from assumptions by the speaker that any explanation that might be offered will be unacceptable. As J. T. Dillon ob-

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serves, " 'Why' questions often express criticism or objections and permit of no satisfactory answer. . . . Their communicative effect is to say: 'I know your reason for X and it is wrong' " [9, p. 150].

Hence, it is not surprising that "why" questions do not always generate a productive or even cooperative answer in the reference interview. In fact, library users may go to some trouble to avoid answering a "why" question, especially one like, "Why do you want to know about AIDS?" The user might decide to be polite by appearing to answer the question but actually providing very little information (for example, "Just interested"), deliberately concealing the motivation or purpose in asking the question ("A friend asked to get this information"), or ignoring the question ("I just want some names"), or might even challenge the librarian's right to ask the question ("None of your business").

Given the possible range of user reaction to "why" questions, it is not surprising that many librarians are reluctant to ask such questions and are confused by the contradictory recommendations in the literature on the reference interview. This confusion is exacerbated by the lack of a theoretical basis for prescriptions, either for and against, which offer no real explanation for the unpredictable nature of responses to "why" questions other than that users may (or may not) perceive them as intrusive or irrelevant. The following sections attempt to provide this basis through a brief discussion of relevant theory from linguistics, philosophy, cognitive science, and communications research. For a more detailed review of the different kinds of research on the nature of questions, in the context of information retrieval, see Belkin and Vickery's chapter on question analysis [5, pp. 20–49] and Richardson's chapter on modeling the reference transaction [10, pp. 89–149].

Speech Act Theory: Why "Why" Questions Go Wrong

What Is a Question?

A question can be defined or recognized on several levels. For example, prototypically a question is identified grammatically by the use of interrogative syntax, as in "How are you planning to use this information?" But in actual use, questions can also be conveyed by means other than grammar, so a declarative sentence can also function as a question in practice, for example, "It depends on how you are planning to use this information."

Of interest here is what the act of uttering the sentence does, what linguists call its "force" in conversation. Thus, the utterance of a sentence may act as, or perform, a command, a promise, or a threat. The

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study of how speakers use utterances to accomplish one or another of these acts has given rise to what is known to linguists and philosophers as "speech act theory" [11–13]. In speech act theory, questions of the sort we are interested in are a subclass of requests, namely, requests for information. The speaker's act is requesting the hearer to provide certain information, and the essential feature of the request for information is that the speaker intends by this act to obtain a response from the hearer that gives the speaker the information desired. Speech acts in which the speaker intentionally accomplishes the act by speaking, such as asking a question, making a promise, or laying a bet, are known as "illocutionary acts" [11, p. 98].

The "illocutionary force" or act the speaker intends to perform in speaking can be expressed explicitly, as in the following examples. (1) I ask you to tell me the answer right now (request for information). (2) I tell you that's not true! (declarative). (3) I command you to leave (request for action). More usually, the questioner signals the illocutionary force of a request for information grammatically or phonologically through one or more of the following formal linguistic devices described by Jerrold Sadock [13, p. 10] and summarized as follows: (1) inverted syntax, or word order, usually with the verb preceding the noun: "Is this for a project?" (2) a special intonation pattern such as rising intonation: "This is for a project?" The use of "tag questions" with rising intonation such as "This is for a project, isn't it?" may also signal a question; (3) special morphemes, or the use of "wh" words: "Why do you need this?" or "What is this for?" (4) deletion, or the invitation to complete the sentence: "You need this because . . . " Other pragmatic or syntactic devices may also convey requests for information. For example, the use of an imperative ("Tell me what you need to know") might equally well be expressed as the question, "What do you need to know?"

The declarative sentence mentioned previously ("It depends on how you are planning to use this information") will also more than likely be interpreted as a question, especially when the librarian also gives paralinguistic cues, such as pausing or making eye contact, to signal that it is the user's turn to speak.

Whether or not the user correctly interprets the librarian's intention depends on the user's interpretation of these cues, which can differ culturally. It also depends on his or her awareness of the schema of a reference interview (see, for example, [5, pp. 65–66] and [14, p. 87]). In a set of reference interview transcripts obtained in public libraries [15], examples like the following prove that the user does not always correctly interpret the intended function (or illocutionary force) of the librarian's question.

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Librarian: Do you know the call number?
User: Yes.

The question is perceived by the user to be a simple question of fact, rather than a request for information. It therefore fails in its purpose of eliciting from the user the answer wanted by the librarian.

Other categories of questions occur regularly in reference interviews. Among the utterances that are interrogative in form but that may not really function as requests for information at all is another class of interrogatives commonly found at the beginning of the reference interview. As linguist Thomas Eichman [16] has pointed out, the initial "question" presented by the user in a reference interview usually does not function as a request for information but acts instead as a communication device for making contact, a way to get the librarian's attention. It prepares for a cooperative discussion of the real information need, which the user normally is willing to disclose later in the conversation.

Other initial questions function as commands or requests. For example, "Do you have the local telephone directory?" usually means, "Give me the telephone directory—I can see you've got it there behind the desk" or "Tell me the location of the directory." The librarian who treats this request as a question and answers it literally ("Yes") would probably be perceived as uncooperative since she is not responding to the intended function of the utterance.

The reference interview is thus full of utterances that take the form of questions but may or may not be intended to function as questions or requests for information. These "questions" may be incorrectly interpreted by either the librarian or the user, as each tries to gather information from the other. The focus in this article, however, is on questions intended by the librarian to discover the user's reasons for wanting a particular kind of information, which we will call "generic why questions," since they can be paraphrased with the word "why" even if this word does not occur in the utterance.

Cooperative Discourse

Anyone who asks a question signals to the person being questioned not only that an answer is expected but that the answer must be of a certain sort. A cooperative (or appropriate) answer must satisfy certain conditions. The concept of cooperation in conversation is one proposed by the philosopher H. P. Grice [17] and has been widely used by linguists and others interested in conversational structure [18–21]. Grice proposed that a "cooperative principle" governs conversation:

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"Make your contribution such as is required, at the stage at which it occurs, by the accepted purpose or direction of the talk exchange in which you are engaged" [17, p. 67]. In practice, Grice suggested, this cooperation is achieved by observing four basic rules or maxims:

The maxim of quantity: (i) make your contribution as informative as is required (for the current purposes of the exchange); (ii) do not make your contribution more informative than is required.
The maxim of quality: Try to make your contribution one that is true, . . . (i) do not say what you believe to be false; (ii) do not say that for which you lack adequate evidence.
The maxim of relation: Be relevant.
The maxim of manner: Be perspicuous . . . (i) avoid obscurity of expression; (ii) avoid ambiguity; (iii) be brief; (iv) be orderly [17, p. 67].

As Stephen Levinson [19, p. 103] observed, Grice's point is not that people follow these guidelines to the letter or that cooperative conversations always adhere to these maxims on a superficial level. Rather, people interpret conversations as adhering to these maxims on at least some level and (perhaps more important) recognize and repair violations of the maxims. In the earlier example where the librarian asks the user, "Do you know the call number?" the response "612.4" is not a direct answer to the question but is actually a more relevant and cooperative answer than "Yes."

A question can be successful from the librarian's perspective only if the user recognizes the intent of the question. A cooperative answer will be true, appropriately informative, relevant, clear, and polite. (Although the maxim "be polite" is not explicitly stated by Grice, it is implied, according to other researchers [21, p. 3].) The relevance of Grice's maxims in conversations between information seekers and intermediaries has been described aptly by Belkin and Vickery [5, pp. 51–53]. For our purposes, these maxims relate to the reference interview in two ways: first, they help to explain what would constitute a cooperative answer to a question asked by either the librarian or the user; second, they help to explain why some responses to "why" questions do not appear to be cooperative. In the case of a question such as "Why do you want this information?" an answer such as "I already looked in the catalog" would clearly violate the maxim of relevancy by not appearing to be on the same topic, yet the user might give such an answer in order to avoid answering the "why" question directly. Any answer such as "Just because" violates the maxim of quantity by being too short, just as a long-winded answer violates this maxim by being too long. On the other hand, an answer such as "Because I need it for a project" or "I want to find out about X" would be considered by the librarian to be a generally appropriate or cooperative response. Even though they may not be sufficiently cooperative for the purpose

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at hand, these are appropriate answers because "why" questions are intended to elicit answers that could be paraphrased with a response that begins, "Because . . ." or "The reason is that . . ." or "In order to . . ." However, the use of the word "why" tends to lead to misinterpretation and therefore to uncooperative answers.

Why "Why" Is Misinterpreted

"Why" questions lend themselves to misinterpretation in a number of ways that can be classed into two general problems: the part/whole problem of interpretation and the confusion between causes and goals. First, determining the scope of the "why" can be a problem: to what part of the sentence does the "why" apply? For example, "Why are you asking me for information?" could be questioning the reason for any one of several parts of the action, or all of it, as paraphrased by the following sentences. (1) Why aren't you looking for it yourself? (2) Why aren't you asking someone else? and (3) What reason do you have for asking me? Because of the ambiguity, the user might respond (1) because I don't know how, (2) because you're the only one here, or (3) none of your business, depending on whether the user thinks the "why" applies to the act of asking a question, to the librarian, or to something too personal for a stranger-librarian to ask about. That is, the question is interpreted by the following paraphrases, respectively. (1) Why do you need to ask this question? (2) What are you asking me for (rather than someone else)? and (3) What is it about you that has led you to ask me this (it's probably something bad)? To the librarian, on the other hand, a reasonable paraphrase of the intent of the question might be, "How are you planning to use the information, because if it's for a school project, I'll give you a different answer than if it's for some other purpose."

Suppose that the librarian had instead asked, "What has happened that you want to know this?" or "What are you going to do with the information?" Neither of these paraphrases communicates to the user the librarian's purpose in asking the question. The user therefore may reasonably infer that the question is irrelevant ("What's that got to do with your ability to provide the information?"), intrusive, or both. If the user perceives the question as merely irrelevant but decides to cooperate anyway, he will reply at some level that seems to make the most sense—perhaps with what he thinks would be a helpful explanation of purpose or motivation or a description of the situation that gave rise to the query. If the user perceives the question as not only irrelevant but also intrusive or rude, he may avoid answering (see, for example, some common strategies proposed by Ann Weiser for not answering a

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question [22]) or, less frequently, refuse to answer, conceal the answer, or challenge the librarian's right to ask the question. The response thus depends on the extent to which the user perceives the librarian as violating the rules for this clarity, relevance, and politeness.

These examples give some sense of the complexity of using questions in general and "why" questions in particular. Not only are they governed by grammatical rules but they are also subject to a wide range of pragmatic or social rules. Who has the right to ask a question of whom and whether it is perceived as polite or not is determined by the following considerations at the very least: the roles and relative social positions of the speakers, the topic of the question, and the context in which the question is asked. Not surprisingly, then, for certain types of information needs, users may go to some trouble to avoid answering a "why" question that is perceived as a question about cause or about potential use, especially if the user's need involves legal, medical, financial, or other sensitive information.

Causes and Goals: Two Answers to "Why?"

The second explanation for the misinterpretation of "why" questions is that they can be construed as a request to give either the cause for the question ("The instructor gave me a project on this subject" CAUSES "I ask this reference question") or the intended result, purpose, or goal of asking the question ("I ask this reference question" HAS AS A RESULT/PURPOSE/GOAL "I can get an A on my project"). Linguists have pointed out that the semantic domain of "why" can be divided on the basis of a "cause" and "purpose" distinction [23, p. 926]. Wendy Lehnert, in her work on question-answering systems, has used the terms "causal antecedent" and "goal orientation" [24, p. 51], which can be used to distinguish two aspects of appropriate responses to "why" questions. If the librarian asks, "Why do you need this information?" the user might reply, "Because my instructor told me to get it" (cause) or "To write my essay" (goal).

Goal orientation can be further classified in terms of subordinate and superordinate goals [25, p. 51], sometimes called "subgoals" and "high-level goals" in a planning sequence [26, p. 167]. This type of classification allows an understanding of the hierarchy of possible responses to a "why" question. That is, there is a sequence of subordinate goals that represent various means to a superordinate goal, for example, (1) to get a book (subordinate goal), (2) to find information on medical discoveries (subordinate goal), (3) or to decide on a topic for my essay on one recent significant medical discovery (superordinate goal). In this example, identification of the superordinate goal is probably sufficient for the librarian to be of assistance, although it should

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be noted that the hierarchy can continue to be expanded in the user's cognitive framework, where there may be more goals (for example, to get an A in the course or to be accepted in college) leading to a set of superordinate goals that may not be relevant to the librarian's role in this particular interaction (for example, to get into medical school, to become a surgeon, to make lots of money, to buy a Rolls Royce).

In the context of the reference interview, the user may have difficulties in knowing what level of response is appropriate or expected. Does the librarian want to know the cause (or underlying situation) of the reference question? Does she want to know the goal? At what level should the goal be described—subordinate (means) or superordinate (end)? What does the librarian want to know? To be helpful to this user, the librarian may need to know something about both the cause and goal, including subordinate and superordinate goal levels. For example, it would help the librarian to be told "I've been assigned a project on recent medical discoveries [causal response], and I want to look at some options before I choose my exact topic, because this needs to be a really good paper [goal-oriented response]." But the librarian's question, "Why do you want this information?" provides the user with no clues about the kind of response expected by the librarian.

Speech Act Theory as a Tool to Suggest a General Solution

Felicity Conditions

Part of the process of interpreting and/or understanding a "why" question has to do with seeing it as being an appropriate question or as making sense in its social context. The person who is asked "Why do you want this information?" is expected to share with the speaker several unstated assumptions, according to research in the philosophy of language that has led to the development of speech act theory (for example, [11, 12]). If the question counts as a real question, it is said to be "felicitous" or that its "felicity conditions" have been met. Searle [12] has classified a number of kinds of necessary and sufficient conditions for illocutionary acts, such as requests for information and questions. One kind is input and output conditions, which refer to the basic conditions of speaking and understanding (for example, that the speaker and hearer speak the same language, are conscious of what they are doing, have no physical impediments to communication, and are not acting in a play or telling jokes [12, p. 57]). Others that apply to requests for information include preparatory conditions (for example, the speaker does not know the answer and it is not obvious that the hearer will provide the information without being asked) and sincerity

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conditions (such as the speaker truly wants to have the answer [12, pp. 66–67]).

In the specific case of the "why" question in the reference interview, we might instantiate some of these felicity conditions as follows: the librarian believes that (1) the user is looking for the requested information for a particular reason (that is, some genuine need has caused the user to ask the reference question), (2) the user knows this reason, and (3) the user is willing and able to say what the reason is, but it is not obvious to the librarian that the user will say it without being questioned. Further, (4) the librarian does not know the reason but wants to know the reason in order to understand the true nature of the information need (which is, of course, a precondition to being able to perform her task successfully).

Shared Knowledge Structures

Further, the correct interpretation of a "why" question, like any other question, depends on the extent to which the questioner and the answerer share the same knowledge structure. As James A. Galambos and John B. Black have pointed out, "Given the potential for ambiguity in any question and the wide range of potentially appropriate answers, it is almost miraculous that question answering works at all. However, it does work because the participants share much pragmatic knowledge. From the perspective of the question *answerer* [in our case, the library user], this shared knowledge must be used to correctly understand the question and to access the information relevant to the speaker's [librarian's] request" [26, p. 158]. In the context of the reference interview, the user and the librarian must share, at least to some extent, the same mental model of the activity in which they are engaged. (The concept of a "mental model" is derived from work by Philip Johnson-Laird [27] to refer to the working model that an individual constructs in his or her mind to explain, predict, or control how a system works.) Otherwise, the user is unable to make the correct inference about what would be an appropriate response. The type of answer thought to be appropriate (by either the librarian or the user) depends in part on inferential analysis, one of the many processes involved in question answering [24, p. 145]. These inferences are made on the basis of an individual's knowledge about the world.

However, two problems arise in the context specific to the reference interview. First, the user and the librarian may not share the same knowledge structure or mental model of the reference interview as an activity. Whereas librarians have been taught to label information-gathering conversations with users as "the reference interview," most users do not see it as a special kind of conversation as is clearly shown in this excerpt from a tape-recorded reference interview:

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User: Why have you got that walkie-talkie?
Librarian: Well, we're doing a special research project for the library school and they are investigating the reference interview which you and I are—ah—
User: They call this an interview?
Librarian: Yes, it is.
User: Well, how about that! (Laughs) [15].

Given these different perceptions of the activity in which they are engaged, there is room for a good deal of slippage in the conversation. The user's model of how the library works and the role of the librarian in that context may differ considerably from the librarian's model. For example, when a user asks a question such as "Where is your law section?" the underlying assumptions may be that (1) finding out how to beat a traffic ticket is a legal problem, (2) legal problems are described in law books, (3) libraries have law books, (4) libraries are arranged by subject sections, (5) librarians are there to tell people where to find a particular section, and (6) if the user is given directions for finding the law section, he can find the law book concerning traffic tickets and can successfully defend himself in court. The user's reasoning may be partially correct, but it does not match the librarian's model, which is likely to be much more complex. The librarian is also likely to have a mental model of different kinds of reference questions and users who need reference material for different purposes. Ample evidence exists that experienced librarians have models or typologies of library users. However, they also know that they cannot always depend on these models to identify the purpose for which the material is sought or what would be the most helpful kind of material: this can be determined only through a reference interview. The librarian's "why" question does not fit into the user's mental model of the reference transaction. The user does not understand why the librarian is asking why, since he does not share with her the belief that "why" questions are an appropriate way to elicit a statement of cause or goals or that this information is needed in the task of recommending the best source for the situation at hand. Instead, he may incorrectly infer that the librarian has some improper interest in his personal situation, and he will become either puzzled or annoyed. For the "why" question to work, the librarian must recognize that both participants need to share, at least approximately, the same understanding of the activity.

Specific Solutions

It seems intuitively reasonable to experienced librarians that they can be more helpful if they can find out why the user wants the informa-

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tion. However, the preceding analysis drawn from linguistics, philosophy, and cognitive science shows that "why" questions are unlikely to work well in the reference interview because they are perceived by the user as ambiguous, intrusive, or irrelevant. Furthermore, because "why" questions invite false inferences, both the user and the librarian tend to violate the rules governing cooperative behavior. The practical question for librarians is how to find out "why" without asking a question that is likely to be misinterpreted.

Problematic solutions.—Several solutions have been suggested in the prescriptive literature of library and information science. Unfortunately, many of these are vague at best and can even cause other communication problems. For example, Hutchins states that "the librarian may exercise his imagination as to two or three possible uses that might be made of [the information requested] and ask in rather general terms which of these is the right one, intimating that it might make a difference in the material to be consulted" [3, pp. 26–27]. Katz's recommendation to try and deduce from the user's age or appearance what he might do with the answer [1, p. 73] can create more problems than it solves. Katz further suggests that the librarian "begin subtly asking questions which will bring out the 'why' " or asking, accompanied by a reassuring tone of voice and nonverbal signals, "Would you mind if I asked why?" [1, p. 73]. Even if the user does not mind, it may still be a puzzling question.

The foregoing suggestions are problematic for three reasons: (1) some of them introduce even more ambiguity into the situation, (2) some of them may create new communication barriers, and (3) all of them lack the theoretical basis needed if librarians are to learn to generate a variety of "why" questions that fit individual situations. Better solutions to this dilemma are those that have a theoretical basis and are easy to teach to librarians. We propose a combination of two helpful strategies: providing the user with a context for the "why" question and neutral questioning, an approach developed from the theory of sense making.

Contextualization.—Some of the more useful suggestions in the prescriptive literature involve providing a context for the user by answering the user's unspoken question "Why are you asking me why?" Librarians who make the conversational agenda more explicit can minimize the discrepancies between their mental model of the reference interview as an essential activity in the information-seeking process and the user's mental model of that activity. Several researchers (for example, Belkin and Vickery [5, p. 79]) have emphasized the importance of helping the user to perceive the coherence of the interview by providing context. Marilyn Domas White suggests a combination of

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interview techniques including "outlining the framework early in the interview . . . , making transitional statements to reveal relationships between or among questions or to place them within a broader framework . . . , and summarizing the information exchange" [28, pp. 375–76]. White further comments, "Coherence is simply a perception, but it is important to remember that it is a perception of the user, not the librarian, which means that the librarian consciously has to make an effort to ensure that order readily perceptible to him becomes perceptible to the user. In the absence of a common framework for understanding questions, the user will use his own, and if he then sees the interview as a series of unrelated and perhaps irrelevant questions, his cooperation will suffer" [28, p. 376]. Similarly, Katz [1, p. 73] observes that "it is usually best to preface [a why question] with, 'I think I can help you faster, and certainly better, if . . .' " The theoretical basis of such suggestions is found in studies of the pragmatics of speech acts. That is, by explaining to the user why she needs to find out "why," the librarian is increasing the relevance of the "why" question. When the user understands the reason for the question (namely, that disclosure of the cause and goal maximizes the likelihood of a successful search), his response is more likely to be relevant as well.

We do not mean to imply that users should ever feel forced to reveal what they do not wish to reveal but simply that the librarian should make the relevance of her question explicit, then leave the amount of disclosure up to the user. Questions of the form "It would help if you told me . . . " are not syntactically interrogative questions but statements that function as questions. The declarative form of the "question" or invitation to talk may reduce the pressure on both the librarian and the user by seeming less direct. When utterances that take the form of declarations or requests function as questions, they are technically called "indirect speech acts" by linguists. In conversation, these indirect speech acts also serve as politeness mechanisms [29, p. 7]. Using less direct (and therefore more "polite") ways to ask questions is a strategy that can be particularly useful when librarians talk with users who have grown up in cultures in which direct questioning itself may be perceived as impolite.

Neutral questioning.[5]—Contextualizing the "why" question does not completely solve the problem, however. The user still has to decipher

5. "Neutral questions" are not really "neutral" since they contain the basic assumptions that any information need will have three universal elements—the situation, the gap in knowledge, and the uses to which the information will be put. Brenda Dervin, the original inventor of the term, sometimes uses "sense-making questions" as an alternate term. However, the term "neutral questions" has been integrated into the literature for so many years (for example, [15, 30, 31]) that a terminology change at this point seems confusing.

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the precise meaning of the word "why"; specifically, he must make inferences as to whether the librarian is asking him about the cause or the goal and on what level. Researchers [30] have suggested that librarians avoid the word "why" altogether and use instead the strategy of neutral questioning, an application derived from Brenda Dervin's sense-making theory [31]. The following brief summary focuses on aspects directly related to our discussion of "why" questions. Dervin conceptualizes the information need as a knowledge gap in the user's perception of a particular situation. In sense-making theory, the information seeker constructs whatever sense is necessary to bridge the knowledge gap in order to progress through the situation to a desired state or goal, which might involve being able to make a decision, understand the available options, get reassurance, acquire skills to overcome a barrier, or similar objectives.

It follows from this theory that, while information seekers may be unable to articulate their information need as a "well-formed" query (that is, in a form that librarians would call a complete, clear reference question), they are nevertheless able to describe (1) the situation from which the information need arose, (2) the knowledge "gap," or what is missing in their understanding of the situation, and (3) the uses to which they want to put the information, or how they expect the information to help them. The strategy of neutral questioning calls for the librarian to ask questions based on these three dimensions of any information need: the situation, the gap, and the uses. Neutral questions are usually open or divergent in form; that is, they do not limit the user's response to a "Yes"/"No" or "this"/"that." However, they are more structured than traditional "open" questions by virtue of the fact that they focus on the three generic dimensions of the information need. Partly because they are open in form, they avoid explicit assumptions about the user's information need or premature diagnosis of the cause or goal. For example, the closed question "Is this for a project?" contains the presupposition that the user is a student, but the neutral question "How do you plan to use this information?" presupposes only that the information is being sought for some purpose. Some simple examples of neutral questions include (1) What are you working on? (2) What would you like to know about X? and (3) How do you plan to use this information? These questions tap the situation, gap, and uses, respectively. Examples (1) and (3) are neutral questions that get at the "why" without using the word "why." In theoretical terms, they are effective because they distinguish between the cause (situation) and the goal (uses), thus reducing the potential for incorrect inferences about the level of response required, and they are less likely to trigger the socially negative reactions to the word "why."

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It is useful to note that Dervin's concepts of "situation" and "uses" are analogous to the concepts of "cause" and "goal," respectively: that is, the cause is the event that precipitated the reference question, or the situation in which the user found he needed information, while the goal (or result or purpose) refers to what the information will allow the user to do, or how the information will be used.

Help Chaining: A Technique for Identifying Goal Levels

It has been empirically demonstrated that librarians can be taught to tap the situational (causal) or use (goal-oriented) dimensions of the information need by asking such questions as "How did this problem arise?" or "How do you plan to use this information?" [30]. However, using a single neutral question may still not elicit responses that enable the librarian to determine the kind of help the user needs.

Let us take "How do you plan to use this information?" as an example. "For my own personal use" is a somewhat helpful response insofar as the librarian can infer that the user is not working on a school project or job assignment, but the librarian still does not know very much about the user's goal. This response is similar to a series of previous examples: to get a book, to find information on medical discoveries, or to decide on a topic for my essay on one recent significant medical discovery. In this case, the user correctly infers that the librarian is asking about the goal but may make an incorrect inference about which part of the goal activity the librarian is referring to. To solve this problem, Dervin has proposed that the librarian ask a series of neutral questions that she calls "help chaining" [31, p. 12]. In help chaining, the librarian formulates a sequence of questions that encourages responses from the user to identify subordinate and superordinate goals. The librarian might begin by focusing on the knowledge gap then move to the potential uses for the information:

User: I want information on earthquakes.
Librarian: What would you like to know about earthquakes? (taps gap)
User: Where there have been earthquakes.
Librarian: How do you plan to use this information? (taps uses)
User: For an essay. (subordinate goal)
Librarian: If I find you an encyclopedia article about where major earthquakes have occurred, would that help you? (taps uses)
User: Maybe. (inadequate response to a closed neutral question)
Librarian: How would finding out about major earthquakes help you? (chaining)

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User: I'd be able to tell if there were any earthquakes in China. (subordinate goal)
Librarian: How would *that* help you? (chaining)
User: Well, if there haven't been any earthquakes in China, I wouldn't do my essay on earthquakes. It has to be about natural disasters in a certain country. (superordinate goal)

Help chaining allows the librarian to move up (or down) the hierarchy of goals or uses. The librarian's recognition of subordinate and superordinate relationships of responses to "why" questions is important for two reasons. First, the librarian must recognize when more questions are needed. When a single question does not produce an adequate response, more questions may uncover a higher-level goal that is a better representation of the underlying information need and that consequently facilitates the information search. Second, the modular nature of chaining helps the librarian to observe the social rules governing self-disclosure; she can control the questioning so that she does not pursue the cause or the goals too far up (or down) the sequence for the purpose of the reference interview.

Combining Contextualization with Neutral Questioning

In the earthquake example, the librarian might have elicited a complete description of the information need (and shortened the interview) by asking, "Why do you want to know about earthquakes?" However, there are other types of inquiries in which a librarian would intuitively refrain from asking "why" and might even be reluctant to ask a neutral question such as "How do you plan to use this information?" These include "delicate" situations such as those involving a need for medical, financial, or legal information. Let us return to the example of the user who asked for information on AIDS. As with any other type of reference question, it is not only useful but necessary for the librarian to know how the question arose and how the user is planning to use the information, since the nature of the information need will determine the type of answer that will be most helpful. On the other hand, it is especially important that the librarian not ask questions for which she does not need to know the answer, especially those that seem intrusive or judgmental. The librarian might begin the interview, therefore, by asking a neutral question to elicit a description of the knowledge gap, such as "What would you like to know about AIDS?" If the user replies, "Names of experts on AIDS," the librarian needs to get some idea of the superordinate and subordinate goals in order to be helpful. The subordinate goal statement (to find the names

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of experts) must be interpreted in the light of the superordinate goal, which might range from helping the user to choose a famous researcher as an essay subject, to locate a local expert who could be interviewed for a newspaper article, or to consult a specialist about his own health. Given the choice of further questioning about either the situation (cause) or the uses (goal orientation), the librarian is in this case able to avoid appearing intrusive by focusing on the uses of the information (the superordinate goals) rather than the cause or underlying situation. She therefore might ask, "How were you planning to use this information?" a neutral question that guides the user toward a response focusing on the goal rather than the underlying situation. However, negotiation of this query needs to be handled sensitively for numerous reasons, including the public nature of the typical reference desk and the social context whereby too-direct questioning might be perceived by the user as impolite or as a face-threatening act [29, p. 66].

A better wording in this case is, "It would help me locate the best information for you if you could tell me a little bit about how you plan to use this information." This combination of contextualization with a neutral question designed to tap the uses not only deals with the ambiguity problem but also allows the user to save face by acknowledging the felicity conditions by using the phase, "If you could [are willing to] tell me . . . " signaling that complete details are not necessary. That is, by using this form, the librarian can maintain control over the important dimensions of the information need (as opposed to asking a totally open question such as "Tell me about it") and yet give the user almost complete control over the degree of self-disclosure. The user wanting to join an AIDS support group, for example, need not describe how he came to have AIDS, but he is still able to make the inference that the librarian will provide different information if, for example, he is writing an article and wants to describe a typical support group or perhaps wants to interview someone with AIDS.

Conclusion

We have attempted in this article to give some sense of the complexity of using questions in general and "why" questions in particular. Not only are questions governed by grammatical rules, but they are also subject to a wide range of pragmatic or social rules. Underlying our discussion is the premise, drawn largely from Dervin's theory of sense making [31], that librarians can often be more helpful to users if they understand the "why" of the user's reference question. To understand the reasons for the communication failure that can arise from "why"

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questions, we have drawn together theories from other disciplines, particularly the philosophy of language and cognitive science. Using Austin's theory of speech acts [11], later refined by Searle [12], we have treated the "why" question as a particular speech act, an utterance that has a specific force or function. That is, the librarian intends the "why" question to function as a request for information about the underlying situation (or cause) and/or information about what the user plans to do with the information (goal).

However, since the user and the librarian may not share the same mental model of the reference transaction, the user may perceive the "why" question as intrusive or at best puzzling. Fortunately, Grice's [17] theory of the cooperative principle in conversation can be used to explain the reasons that "why" questions can lead to false inferences, misunderstandings, and even hostility. Asking "why" directly tends to lead both the librarian and the user to violate the conditions of a cooperative discourse by misinterpreting each other's intentions. The word "why," with its multiple ambiguities and connotations, almost ensures a conversation that furthers neither the librarians's nor the user's goals. What is required instead is a modified form of the "why" question that offers the user some clues about the appropriate inference he should make in responding to the librarian's question. The key to using "why" questions successfully in the reference interview lies in a theoretically based understanding of the form and function of these questions in their social context. We have proposed, therefore, two main strategies for the librarian who wants to avoid the problems of "why" questions: contextualization, which helps the user understand the role of the reference interview in the overall process of information service, and the use of neutral questions in order to distinguish between the cause and the goal of the information need, so that the user can more accurately infer the type and level of response required. Also recommended is the strategy of help chaining [31], or asking a series of neutral questions in order to identify the user's subordinate and superordinate goals as they relate to an adequate delineation of the information need.

In addition, a basic understanding of the preparatory and sincerity conditions for this type of request as outlined by Searle [12], as well as Austin's [11] concept of felicity conditions, can help the librarian generate a question that shows explicit recognition of the underlying conditions for asking such a question. Consequently, the social effects are more predictable. For example, the use of indirect speech acts often accomplishes the librarian's dual goals of establishing a cooperative communication climate with the user and at the same time discovering information that may help her make more search strategy decisions.

Speech act theory and related research from other disciplines have

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several practical implications for library and information science. First, in learning how to conduct the reference interview, librarians need to understand the nature of questions (both those asked by the librarian and those asked by the user) as rule-governed behavior produced by certain intentions; that is, librarians must recognize how people try to "do things with words" in particular contexts. Librarians also need to begin thinking about information seeking and about the role of the librarian in a different way. Basic sense-making theory helps librarians arrive at an understanding of how users' information needs arise from particular situations and how the user is able to articulate his perspective on that situation and the kind of help wanted to progress through that situation to a goal [31]. It follows that the role of the librarian is to intervene in an appropriate way in that journey and to see the problem as need based (that is, requiring a response to the user's intentions or goals) rather than as question based (that is, trying to match an answer to the literal question), an important distinction described by Joan Durrance [32].

Second, the literature of the reference interview needs to move away from simplistic prescription (do this, do that, never say this) and toward an explicit recognition of relevant theory drawn from a variety of disciplines, in order to justify the prescriptions. Otherwise, advice on using particular questions in the reference interview can complicate rather than simplify the problem. Understanding the general principles will help librarians learn to generate an infinite variety of "generic why" questions to suit any given interaction.

Finally, library and information science literature would be enriched by more research that investigates and explains how people communicate in the information-seeking context. This might include further work on the pragmatics of conversation, with particular attention to the speech acts of information seekers and information givers. Further research might look specifically at other aspects of the librarian's questions by collecting empirically based data on the use of various forms of "why" questions, investigating the process of teaching librarians how to discover causes and goals in the statement of information needs, and examining the effects of these strategies in a range of settings.

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