Users' Perceptions of Library Service Quality: A LibQUAL+ Qualitative Study

COLLEEN COOK AND FRED M. HEATH

ABSTRACT

SERVICE MARKETING HAS IDENTIFIED THE CUSTOMER or user as the most critical voice in assessing service quality. Before assessments can be made of service quality in ARL libraries, it is essential to investigate what connotes service quality in the minds of library users. Today the dimensions of library service quality among the ARL cohort are not fully understood from the user perspective. The LibQUAL+ project attempts to identify those dimensions and measure the gaps between expected service and perceived service in each dimension. This article describes the interviews conducted with users of research libraries across North America in the first round of work on the still-evolving LibQUAL+ instrument. The interviews provided a rich pool of information about the users' own behaviors, their perceptions of what a library should provide, and their interactions with that important resource as they pursued their diverse objectives at their respective universities. Analysis of the interviews contributes to the identification of the dimensions of library service quality, which will be further tested in future iterations of the LibQUAL+ tool.

SCENARIO

I hurried back to the university library from an interview I had just conducted with a graduate student in health sciences in order to meet my colleague for our end-of-the-day debriefing session. The student with whom I had spoken was passionately self-reliant—typical of the graduate students we interviewed—and he had taken to the purpose of my visit with an earnest goodwill. We spent two hours on a late afternoon exploring the concept of service quality in a research library from his

perspective. On the whole, he valued his experiences at the university, one of the finest public institutions in North America. For the most part he recognized that its libraries were well-funded, boasting the comprehensive collections and rich array of databases that allowed him to pursue his independent methods of information-seeking largely without impediment.

But sometimes the system got in his way. Instead of removing barriers to his quest, libraries seemed to be a party to their erection. A system that appeared so complex and rational could sometimes break down completely. He explained that his interdisciplinary research often required document delivery from other libraries across the vast campus. He would go to the departmental library to pick up the items he ordered only to find that all did not go as expected. "And then you get this crappy looking fax thing that's really ugly. That's usually what happens. And then they put all those stamps on it about copyright notices and everything. I can understand that, but do they have to put it over the text? That's what they do sometimes" (I37:622-625*).

He kept saying that what he wanted was "ubiquity of access," a concept that resonated with me the first time he said it and became more meaningful to me each time he used it. Would it be too much, he asked, for the modern research library to ensure that he could obtain access to the information he required at any time of the night or day, without regard to its format? (I37:198-209).

Just what were all these interviews with some of the brightest students and most highly sought-after faculty in North America telling us about the necessary components of service quality in the research library? And just what, if anything, did a carelessly placed stamped notice, obliterating the muddy text of a fax transmission, have to do with service quality?

PROBLEM STATEMENT

Service marketing has identified the customer or user as the most critical voice in assessing service quality. Before assessments can be made of service quality in Association of Research Libraries (ARL) libraries, it is essential to investigate what connotes service quality in the minds of library users. Today the dimensions of library service quality among the ARL cohort are not fully understood from the user perspective.

Many service marketing and library and information science researchers have defined service quality in terms of the *Gaps Model of Service Quality*, based on a service quality model posited by Parasuraman, Zeithaml, and Berry (1985). Their construct describes five gaps that produce "disconnects" in service quality. Library researchers, adhering to the desire to accentuate a user-driven perspective, have focused their attention upon

*This and subsequent notations refer to individual interviews cited in the appendix with the page numbers where the comments appeared in the LibQUAL+ report—e.g., I37:622-625 refers to Interview 37 of a Graduate Student in the Health Sciences whose comments are on pages 622-625 of the report.

the fifth gap—i.e., "The quality that a consumer perceives in a service is a function of the magnitude and direction of the gap between expected service and perceived service" (Parasuraman, et al., 1985, p. 46).

In an age of accountability, it is more important than ever for library administrators in the continent's largest libraries, who—in the aggregate—spent more than $2.5 billion in 1999 on operating expenses, to be able to evaluate how well service is provided from a user perspective. With data assimilated across libraries, research library administrators can turn to model service providers for best practices and can gauge their own performance across appropriate peer groups.

METHODOLOGY

Much research in service quality has been conducted in the commercial sector, and a modest body of literature is growing in the library and information science sphere as well (Andaleeb & Simmonds, 1998; Coleman, Xiao, Bair, & Chollett, 1997; Cook & Thompson, 2000, in press; Cook, Heath, & Coleman, 1999; Edwards & Browne, 1995; Hébert, 1993; Nitecki, 1995). A protocol, SERVQUAL, developed in the 1980s by Berry, Zeithaml, and Parasuraman (Parasuraman, Berry, & Zeithaml, 1988, 1991; Parasuraman et al., 1985, 1994; Zeithaml, Parasuraman, & Berry, 1990) for evaluating service quality from the customer perspective has led the field of service quality assessment. As de Ruyter, Bloemer, and Peeters (1997) noted: "On an operational level, research in service quality has been dominated by the SERVQUAL instrument, based on the so-called gap model" (p. 390).

To develop a theory for the construct of library service quality from the user viewpoint, grounded theory, whose central feature is "a general method of [constant] comparative analysis" (Glaser & Strauss, 1967, p. viii), was followed. In this methodology, "theory may be *generated* initially from the data, or if existing (grounded) theories seem appropriate to the area of investigation, then these may be *elaborated* and modified as incoming data are meticulously played against them" (Strauss & Corbin, 1994, p. 273). Using the dimensions identified in SERVQUAL as a starting point, the concept of library service quality from the user perspective was explored. The SERVQUAL dimensions are:

> tangibles: physical facilities, equipment, and appearance of personnel; reliability: ability to perform the promised service dependably and accurately; responsiveness: willingness to help customers and provide prompt service; assurance: knowledge and courtesy of employees and their ability to inspire trust and confidence; and empathy: caring, individualized attention the firm provides its customers. (Parasuraman et al., 1988, p. 23)

A series of sixty interviews with a diverse set of library users was conducted at nine ARL libraries in spring 2000. Faculty of all ranks and graduate and

undergraduate students from a variety of disciplines were interviewed through a series of open-ended and unstructured questions based on Lincoln and Guba's (1985) recommendation for naturalistic inquiry studies:

> To put it another way, the structured interview is the mode of choice when the interviewer *knows what he or she does not know* and can therefore frame appropriate questions to find it out, while the unstructured interview is the mode of choice when the interviewer *does not know what he or she doesn't know* and must therefore rely on the respondent to tell him or her. (p. 269)

A major tenet of grounded theory is its insistence upon safeguarding multiple perspectives through process. As Strauss and Corbin (1994) noted: "Perhaps not every actor's perspectives can be discovered, or need be, but those of actors who sooner or later are judged to be significantly relevant must be incorporated into the emerging theory" (p. 280). Grounded theories are rooted directly and indirectly in the actors of the phenomenon studied.

To gain an understanding of the context of the actors in research libraries, each person interviewed was first asked to list the libraries that he/she had used throughout his/her academic experience. Interviewees were then queried regarding their concept of service quality in the research library environment. The dimensions of service quality identified in the SERVQUAL instrument served as a basic set of issues that were initially explored, but neither the exact wording nor the order of questions was predetermined. In keeping with grounded theory and the unstructured interview format, the answers to open-ended questions served as guideposts to further questions. Dexter (1970) described such interviews as a conversation with a purpose. Grounded theory methodology insists that "no matter how general—how broad in scope or abstract—the theory, it should be developed in that back-and-forth interplay with data that is so central to this methodology" (Strauss & Corbin, 1994, p. 282). Thus insights gained from one interview were incorporated into subsequent interviews and explored until saturation was attained and no new information was forthcoming. Each interview was transcribed and analyzed using Atlas TI, a software package for performing content analyses, particularly amenable to grounded theory analysis.

PARTICIPANTS

The member libraries of ARL are among the most important research facilities in the world. While encompassing a cadre of public and specialized libraries, ARL membership is composed primarily of libraries from North America's preeminent universities. The membership shares a commitment to excellence in support of research and instruction. In large measure, that commitment is acknowledged by the post-secondary world. The 111 libraries that comprise its academic library membership are

generally regarded as the apex of an important pyramid of more than
3,000 post-secondary libraries on the continent. Their richly diverse col-
lections support the missions of the institutions of which each is a part
and draw scholars from around the world who seek to mine their trea-
sures.

The faculty at these universities are also regarded as among the very
best teachers and researchers in North America. Their reputations in the
classroom and laboratory and their impressive lists of presentations and
publications are testaments to their collective accomplishments. Interest-
ingly, they also share common origins. As the investigators moved around
North America interviewing faculty about their views on research library
quality, they found that the professorate uniformly completed their gradu-
ate degrees from institutions that were Research I or II universities, most
of whom were also institutional members of ARL. Indeed, thirty-two of
the thirty-eight faculty interviewed held their terminal degrees from ARL
member institutions. Among the thirty-one institutions represented, doc-
toral pedigrees include Harvard University; M.I.T.; UCLA; the University
of California, Berkeley; Johns Hopkins University; the University of North
Carolina; the University of Texas; and the University of Virginia.

As a result, it should not be surprising that they should share a very
common set of expectations as to what constitutes quality in an academic
library. It could also be posited that, through a mentoring relationship with
graduate students and by transmitting their own values to the undergradu-
ates from the classroom lectern, those perspectives would be shared in large
measure throughout the academic community. A rigorous defense of deep
comprehensive collections and responsive bibliographers was among the
values the investigators expected to encounter. While in the main those
expectations were affirmed, other expectations also surfaced.

As might be expected, many faculty have worked in several universi-
ties en route to their current jobs. Their impressions of quality library
service are determined not only by their years of graduate study—the pe-
riod of most intense use—and the resources of their home institutions,
but by the other stops along the way. In fact, when measuring the quality
of library collections, or setting the standard for exemplary attentive ser-
vice, faculty often recall experiences at places other than their current
place of employment. Experiences were not limited to North American
universities. In setting their standards for service expectations, faculty re-
call their tenure at such universities as Albert Ludwigs University in Freiburg
(I10), the Eberhard Karls University in Tübingen (I2, I44), Ulm Univer-
sity (I18), and Trinity College in Dublin (I59), to name a few.

As leading researchers in their fields, they have necessarily made use
of national libraries and special collections in North America and abroad.
The Library of Congress headed the list of most frequent stops (I2:1, I19:1),
with the National Library of Medicine frequently mentioned (I12:1). But

the use of national libraries includes as well the Bibliothèque Nationale de France (I7:1), the British Library (I8:16), and the Archivio Segreto Vaticano (I9).

From the sixty interviews conducted (see Appendix), thirty of those richest in content were selected to provide the texture and substance of the following analysis. Thirty interviews were considered sufficient to cover the range of issues among research library users. The remaining interviews can be used for an independent, stepwise, or split-half reliability check on the results of the analysis to answer the need for confirmability in naturalistic inquiry. The thirty interviews studied were chosen to represent the widely diverse population of users of research libraries and thus included sixteen males and fourteen females, of whom nine were full professors, five associate professors, five assistant professors, six graduate students, and six undergraduates.

The following analysis is framed in three parts. The first section, "Who am I?—the User" investigates the constituents of the research library of the twenty-first century and offers defining characteristics of the user. The second section, "What is the Library?" examines the dimensions of library service quality that constituents identify as important. The domains of service affect, reliability, ubiquity of access, and collection adequacy are investigated. The final section, "What is It that I want from the Library?" addresses the complex role that library as place plays in the minds of users and its relationship to the general construct of library service quality.

I. Who am I – the User?

I want to be confident and self-reliant in using a library. When I have questions, I want to be treated with dignity.

A major focus of library service quality—as central to the issue as the library itself—is the user. Interviews established that the user expects the library to provide service with respect for users having various levels of expertise and sensitivities, and to promote wide and easy access to a broad spectrum of informational resources in traditional local library collections and access to electronic resources and remote print collections. How is the user characterized?

First, the user of research library collections, whether an undergraduate, graduate student, or faculty member, wants to be self-reliant and confident in navigating the library. Self-reliance is built in many ways, but in the interviews two means dominated the responses. Self-reliant users are forged formally through bibliographic instruction and informally through mentoring relationships of faculty and librarians with students and through trial and error. Albeit inefficient, independent trial and error is, indeed, the most commonly followed strategy to building self-confident user behavior.

Interviews revealed primarily two behavioral strategies for creating self-reliance. The first is exemplified in users who interact with librarians with the goal of building their own information gathering skills. Once equipped with a skill set in navigating the library, often a minimal set, their goal is to venture off on their own as quickly as possible to find what they need. These users interact with librarians on a seldom, and only as needed, basis. Repeatedly, users reiterated that they do not want to bother librarians whom they see as very busy people. Other library users do not want to display their own ignorance. Some users also feel that the encounter with a generalist librarian is inadequate for their needs. A specialist librarian who shares the discipline vernacular with a user is the only assistance that can be trusted to yield results. There is a spectrum of user approaches to librarians from the wary and sometimes tentative undergraduate to the confident faculty member; ultimately, all seek self-reliance.

A second method to self-reliance also emerged from the interviews. Some users seek out a trusted librarian colleague to establish a point of contact for assistance. These users develop an enduring relationship with a librarian and are confident that, when they are in need, assistance will be delivered. This group has a goal of self-reliance in navigating the labyrinthine information universe on their own terms. However, these terms include a librarian interface in some circumstances. They differ from the previous group in that they do not feel a need to do everything themselves. These users still want to be confident in finding what they need or in obtaining the service they desire. To be self-reliant within the information-gathering process, proficiency may be sought through an intermediary—a trusted established human point of contact within the library.

SELF-RELIANCE

Most faculty are very comfortable in finding the information they need on their own. One assistant speech professor reported "97% of the time I do my own search . . . . I often find my searches are much more fruitful than letting somebody else do it" (I12:16-17;176-217[SR7]). But how did this professor achieve this level of self-reliance? " [T]hey [the library] had someone you could hire to do the searches as I do them. That was critical . . ." (I12:12:265-268[SR8]). More than once an interviewee described this learning experience, quoting the adage, "teach me to fish and I will feed myself for my whole life" (I55:286-299:[SR68]). On those occasions when a faculty member has to ask a question, he/she will often want assistance only to get started, "Well, that's the other side of it. Sometimes I just want them to get me pointed a little bit" (I49:34:539-548[SR52]). For faculty, the availability of Internet resources builds independence as well, but the librarian can still maintain a role. One professor commented: "Well, first thing, I would turn to the best search engines that are out there.

That's not a person so much as an entity. In this sense, librarians are search engines [just] with a different interface" (I56:14:145-154[SR71]).

The same drive for self-reliance is evident in the graduate student cohort as well. One graduate student commented: "By habit, I usually try to be self sufficient. And I've found that I am actually fairly proficient. I usually find what I'm looking for eventually. So I personally tend to ask a librarian things only as a last resort. Part of it, again, is because of this self-sufficiency streak I have" (I37:26:340-343[SR31]).

Undergraduate library users also have a goal of self-reliance in using the library but often hesitate to ask for help to a palpably different degree from faculty and graduate students. A first year undergraduate explained: "I try to teach myself to do that rather than coming up here and asking" (I14:10:130-140[SR9]). Navigating the library system is daunting for many undergraduates. One undergraduate commented, "I think students have a lack of confidence. Students don't want to look dumb. Probably five times out of ten, when a student goes to ask a librarian something, they'll say I know this is a really stupid question or I know I should know where to find this book, but .... They always preface it with some sort of self-degrading remark, and I think sometimes students are just too embarrassed to admit what they don't know" (I51:41:523-528[SR57]). How do undergraduates want to be treated when asking a question? "Not too sentimental . . . not too condescending. Well, even a little condescending would be kind of good . . . . [Like] another human being would go out and show you how to use something to help you out. Not rude comments or anything like that . . . about me not knowing how to use it" (I14:9:101-13[SR9]). Often students will not pursue a question: "I figured that if I can't find it, then I just won't find it" (I14:19:264-277[SR10]).

Having long understood the drive for self-reliance on the part of users, librarians have traditionally sought to build user skills through bibliographic instruction. The effectiveness of formal bibliographic instruction, particularly of the in-library tour variety, was often questioned by faculty and students: "But people [library staff] have come, they have made overtures. It's not a problem with communication, a lack of people trying to reach out. I'm really surprised and impressed at that. But it's true that I haven't picked up the ball [in library bibliographic instruction] (I9:34:319-324[SR6]). Another professor has long instructed her students in using Medline and would avail herself of the opportunity to have a librarian come into the classroom to teach, but not because she understands the intrinsic value of formal bibliographic instruction: "Because anything that reduces the amount of time I have to spend in instruction frees up time for me to be more productive in the areas I get rated on with my research" (I12:20:244-251[SR8]. An associate professor explained:

> I have the feeling they [students] may not have used it [formal library orientation], and I think they may just have been a little too

young for it, too unprepared. They're brand new at the college and
she's going through stuff that I didn't even know about how to use
. . . these databases and so on. I never really followed up with them
[librarians]. They [students] all had to write papers, that's why we
did that. But I'm not sure whether they used any of the services or
not . . . . I think the important thing is, at least they knew the library
was there, they knew the staff was friendly, and they probably at least
felt they knew how to ask questions. And you know really that's the
most important thing, making the students feel comfortable in the
library. (I44:28:288:306[SR39-40])

Very customized bibliographic instruction woven into the fabric of
classroom instruction seems to be more effective in teaching information-
seeking skills. One professor explained:

There is almost no literature on how to motivate students to learn
how to use libraries. Librarians told me that the typical student here
would do this only because they had to. Intrinsic motivations are
only going to guide a few people like us [in learning how to use
libraries]. The librarians and a couple of real deconstructionist profs
are there in libraries . . . they live in libraries, they wish they could
have just hooked one up to their veins, and that's about it. There
would be a small percentage who would just do it for intrinsic rea-
sons and everybody else does it because they have to. When they
have to and only then . . . . [The] best way to break that wall down
doesn't seem to be going to the library for the orientation, because
we are doing that already. That doesn't seem to have any magic
result. But, why don't we bring librarians into the classroom more
and not just for orientations? So I worked out a deal with Mary, who
is the bibliographer who does normal orientations. We'd go in and
get people familiar with her and do the normal orientations at the
beginning of the semester. Then she would come back mid-semes-
ter when we had mini-roundtables for the students to pitch their
research topic ideas to each other. Mary worked with the students
through several sessions. In December, the class asked whether Mary
was going to be there for our final project presentations. I didn't
really mean to impose on her time that far . . . . well I floated the
invitation to her and she said that she had been thinking about that
very thing. So Mary was actually there. So what I've done is try to
break down the whole idea that the library is a place that you go.
It's a resource that you tap into for the whole idea of answering
questions, forming them and answering them, and the librarians
aren't the custodians of anything there. It's not like you go up to a
counter and order your scoop of ice cream, and they dispense it
out of a container. They [librarians] are a part of the thinking pro-
cess; the research is part of the thinking process. (I16:13:165-
212[SR11-12])

Some users develop self-reliant habits by establishing a collegial work-
ing relationship with a trusted library staff point of contact. It was note-
worthy that this type of working relationship was often associated with
mixed feelings of guilt on the part of the user.

> If Joe were to leave . . . I think that it takes somebody on the library
> staff with a commitment beyond the usual to do it. I'm kind of two
> minds about this, because (a) it's great, it's fabulous, it's wonderful
> and (b) I'm probably using, shoot'n up more than my share of the
> cannon balls here . . . of the library's resources. I'm one of those
> captains who's constantly shooting off too many guns, ripping up too
> many sails, and there is a little feeling of guilt about that, but it seems
> to me that's an extremely important thing . . . that librarians really
> have to be involved as much in the learning process [or] they simply
> [will be reduced] to asking "What may I help you find, or let's take a
> look at this whole scavenger list that your professor has given you"
> . . . that kind of role, like waiting behind the counter for people to
> show up. (I16:15:216-233[SR12-13])

Another professor commented on her librarian point of contact: "[She was] always dashing about in a bit of a whirlwind, but she was very useful and very good. She would get things or get back to you or connect you. So, I've gone to her even when I think, my God, I wonder if I'm being lazy" (I22:21:187-197[SR20]).

The effectiveness of bibliographic instruction in building self-reliant user behavior is seen as a function of timing and need. An undergraduate student mentioned, "I feel that libraries like this can be pretty daunting to freshmen, and they become less so through people's academic careers when they actually have to use them and negotiate them. And when you have to is when you actually do, because then you're motivated to do it, and you know it's not going to necessarily be the easiest thing in the world and you're gonna have to sometimes be assertive to get what you need" (I39:30:491-496[SR34]).

II. What is the Library?

In response to a question about the relationship between undergraduates and those who dispense information services in research libraries, one person replied "The way that librarians handle these people is a big factor." The interview was with a journalism professor, and the talk had turned to the impact of technologies on his profession and upon libraries. Always complex, he felt research libraries had become even more intricate and imposing to young students: "Now that's not to say that we need to send the librarians to charm school, just that they are really great at handling these people as they come in, like a good retail sales person" (I16:23:447-463 [AA13]). A recurrent theme throughout the interviews, his observation recalled the SERVQUAL dimension of empathy—the caring individualized attention a firm provides its customers (Parasuraman et al., 1985). That value clearly has its counterpart in the research library.

His choice of a retail metaphor was coincidental. Unlike several other interview subjects, he had no prior exposure to the literature of service quality. Nor had he intended to diminish the professional skills of the librarians as, repeatedly, during the course of the interview, he underscored

the critical role of librarians in the process of critical inquiry. But he was not the only one to recall the importance of a caring relationship across a service counter between a library employee on one side and a library user on the other. A student worker understood the importance of always connecting a user with someone in the library department able to answer a question, to ensure "they [users] are not walking away feeling like they did not get the help they need" (I39:29:455-464 [A41]). A young undergraduate half a continent away had a similar assessment. When he had worked in the library, he recalled, his "supervisor made it very clear that customer service was the most important thing to work on. That was important, to be helpful. That is why we're here" (I60:8:79-83 [A77]). But, he continued, there were important differences from the retail sector. "I view it [the library] more as a bureaucracy," he said, comparing his experiences. "I have more authority in a retail setting of what I can do for customers because it is a service and the goal is to make a sale. Whereas with a bureaucracy . . . it's not our product at the desk" (I60:84-99 [A78]).

Indeed, the problem may be that the student employee—so frequently encountered by the user—has little sense of ownership of the library mission (I35:26:471-485 [A31]). "A lot of the people you deal with are students that are working for extremely low pay because there are no jobs in this area," said one graduate student. So, you have the basic graduate students and undergraduate students that are making six to ten dollars an hour and . . . that's the kind of service you get . . . . You can ask one person and get nothing and you can ask another person and get great help" (I27:18:288-296 [A20]; I27:34:562-577 [A21]).

Several interviewees stressed that a caring, empathetic response was especially important for undergraduates. "They're really scared just to walk in that door," said one full professor. "Some students just have a block about doing that" (I28:39:526-521 [A25]). An undergraduate was one of several interviewees affirming that point of view: "Undergraduates going to an institution that is prestigious feel embarrassed if they don't know how to use something like the research library, and librarians can seem sort of stand-offish" (I50:6:75-80 [A56]; see also I51:44:530-552 [A59-60]).

"It becomes less important as you go up the higher education ladder" was the general assessment (I2:17:48-51 [A1]). One observer offered a perceptive explanation for this dynamic, contrasting the library experience with the classroom. "Once you've broken the ice in the classroom," he suggested, "that's everybody's turf . . . . I don't walk into a class thinking 'this is my classroom.' . . . I have a role to play and I hope the students feel the same. You are on foreign turf when you go [into the library] . . . . There are some demeanor issues that are important, that librarians should understand as faculty intuitively do" (I16:25:484-491 [A14]; I16:32:577-590 [A15]).

For impressionable undergraduates, disconfirming acts can be especially problematic and can have an impact on perceptions of service quality far out of proportion to the frequency of their occurrence. One associate professor, generally favorably disposed to the level of library service at his university, offered one example of the ripple effect of a negative encounter. The incident involved a keyword search he recommended a student make on a certain database. Unfortunately, he recalled, the librarian on duty was unfamiliar with the database, questioned the search and whether the instructor "was at all up on what I was talking about." He continued:

> When somebody goes to a staff member of the library and gets told
> something completely different from what I've told them [and] then
> the staff member questions whether the professor really knows what
> the hell it is he's talking about, . . . that can be very damaging to the
> student especially. . . . That came up while I was chair of the Senate's
> Library Committee. (I16:20:412-423 [A13])

For graduate students, this is less of an issue, suggested another. "A graduate student," she observed, "is an academic in training. To do that you've got to seek information-seeking skills or you are in the wrong business. So, clearly, they are becoming more self reliant in that way, but I think they still need help" (I46:50:616-622 [A51-52]). For faculty, the situation is much the same. Secure in the command of her discipline, a faculty member is also comfortable about what she does not know. Far more than a student, she is more comfortable saying "I really want to find something out about Japanese and let me tell you the truth: I haven't worked with this language at all" (I22:20:177-184 [A16]). The difference in confidence levels can make the expectation of an empathetic reception across the service desk less important.

In a curious way, some of the problem may also stem from perceived differences in the role users assign to librarians versus the role that they routinely accord to staff in retail or other sectors. One empathetic graduate student mused upon the differences in roles of librarians and retail staff. He wished that he could feel his information-seeking behavior was not intrusive:

> Anytime that I have been to a reference desk, they are usually field-
> ing multiple phone calls, and typing stuff in, and I feel like a fifth
> wheel. I sort of try to stand at the side and wait until they are done
> and by the time they are finished, I feel a little bit sheepish about
> asking them a question because—it's like, "wow," they just did all
> this stuff and now I'm asking them something else. (P37:33:397-
> 418 [A35])

That aura of approachability is an issue that emerged several times during the interview process. Perhaps the goal should be that espoused by a West Coast assistant professor:

I would hope that they would be sort of calm and professional. I
think the most important thing is that they be people who are highly
flexible, tolerant of ambiguity, because it is the unusual question, I
think, that reference librarians are approached with, that is actually
easy . . . to categorize . . . . If you approach somebody you want to feel
like they were somebody who could calmly and professionally sort of
redefine what you bring them in some way that provides useful infor-
mation back. (I56:27:308-320 [A70])

Knowledge and Courtesy

In the Gap Theory of Service Quality, a dimension closely paralleling
empathy is the affective trait, assurance—defined by the SERVQUAL au-
thors as a trait of knowledgeable and courteous employees who have the
ability to convey to customers both trust and confidence (Parasuraman et
al., 1985). Conversely, when the customer or library user has an expectation
of courteous or knowledgeable service disconfirmed, the results can have a
very negative effect. "I have not been happy with the quality of service at the
Reference Desk," one young female associate professor observed. "Often
they are too engaged in trivial pursuits to help. I am sometimes appalled by
their responses to my graduate students" (I2:16:43-46 [A1]).

The instructor, in fact, made little distinction between a retail en-
counter and an information transaction in the library. "I want to be treated
with respect. I want you to be courteous, to look like you know what you
are doing and enjoy what you are doing. . . . Don't get into personal con-
versations when I am at the desk" (I2:28:92-98; I2:31:104-109 [A2]). A
professor at another research institution shared a similar frustration with
a librarian who appeared unwilling to go the extra step. Her need was for
a recent volume of a journal, she recounted, but "there was nothing be-
yond 1996, and the librarian . . . said 'I don't know if we have it; go look in
the card catalog to see if we have it,' or something like that. But to me she
didn't follow through on the problem. That's kind of an incomplete thing.
So I guess there is a sense here that people can help you find what they
have, but perhaps not go beyond that. They will help you find what's on
the shelf, but not go beyond that . . . . A more knowledgeable bit of help
would have helped . . . " (I9:13:75-86; I9:14:88-96 [A4]). In a faithful echo
of the SERVQUAL assurance dimension, she added that those working at
the reference desk should be "respectful" and "knowledgeable." What she
was looking for was evidence of "a commitment to following
through . . . . Everything can't be found, but being knowledgeable and
being committed to giving what they know. I guess those two things to-
gether" (I9:27:251-259 [A5]). Students echoed the same disconfirming
experience (I39:10:132-157 [A37]).

One graduate student laid her decision to leave one graduate pro-
gram for another university squarely at the feet of a librarian:

The personality of the librarian created a lot of institutional prob-
lems. So even though [the library] had some good resources there,

you couldn't access them and he was not interested in helping you to access any other resources you might find within the . . . area. In a very specialized field, if the librarian isn't willing to give you that first heads up on what resources you have, you're sunk. So the library was about a sixth of the reason why I left . . . . I could never find what I needed and every time I tried to talk to the librarian, he tried to tell me, "go to Russia." (I55:26:286-299 [A67])

Every disconfirming act chronicled during the interview series was counterbalanced by a far larger number of examples of successful service encounters. One instructor summarized her own experiences as follows:

I've always been quite impressed, even if they are students, with people working a position. If they don't know the answer to a question, they know who to refer me to, and that means a lot to me. Nothing is more frustrating than when you're urgently looking for something and someone says, "Well, I don't know how to help you, can you come back tomorrow?" But everybody whom I've come across, any-where—in the Main Library, Science Library, Health Sciences—on this campus, they've all been quite knowledgeable, and they don't leave you without some direction." (I12:36:504-513 [A7])

The library user is expecting a "friendly encounter," observed another. The ideal encounter is with a librarian or staff member "who has sugges-tions for you" (I22:20:177-184 [A16]). One faculty member offered a spe-cific example of how content mastery and demeanor can be combined:

I think demeanor is really important and I think sometimes it's over-looked, sacrificed for content. I brought a group of juniors and se-niors over who were writing a senior paper. And it was a combination of demeanor and content. It was not being overwhelmed with so many things that they weren't sure what the relevance was . . . . Then the utility of these things was made . . . very clear through example and through discussion of what they could be used for. And then the demeanor was very important because the librarian who made the presentation was very accessible, took questions, involved the stu-dents after lecturing to them. It was active as opposed to passive learn-ing. It was very effective. And also, [she] made [it] clear that she was a resource that they could continue to use. (I41:23:269-288 [A43])

The Margin of Excellence
For the SERVQUAL authors, the third affective construct in the de-livery of quality service is responsiveness, or the provision of prompt ser-vice and a perception on the part of the customer of the service provider's ready willingness to help (Parasuraman et al., 1985). Faculty attitudes in this regard were instructive. The great majority of faculty interviewed cur-rently had or could recall successful one-to-one relationships with librar-ians upon whom they could rely to facilitate their own information-seek-ing behavior. But when asked to assess librarians, as a group, as a profes-sion, they were often less charitable. One senior professor spoke of a huge gulf—a "temperament breach"—between librarians and their users

(I4:8:16-22 [A3]); another spoke of the "walls" between the librarians and "the rest of the academy" (I16:16:256-284 [A12]). It is, the former insisted, a "conservative, circle-the-wagons mentality" that had dire implications for service quality. "Librarians don't go to faculty offices," he continued. "Librarians won't bring their works in progress to faculty. They want you to validate conclusions they have reached. They have a huge contempt for faculty knowledge" (I4:8:16-22; I4:9:24-32 [A3]). His own way of coping with this dynamic, he explained, was to "walk behind the fences" the librarians had erected and to engage those who could be useful to him. "You discover what you expect to find," he concluded simply (I4:9:24-32[A3]). From the librarian who exhibited a casual disinterest in the availability of a recent journal title needed by a professor, a simple gesture of "just let me check and see if we have that" would have sufficed, she said. "That would have been very helpful at that point, and it would have made [the encounter] satisfactory for me" (I9:14:88-96 [A4]).

Again, for every instance of a service encounter negatively perceived by the user, there were many more confirming examples (I47:12:131-154 [UA 50]). Where the uncaring librarian mentioned previously failed to go the extra mile, another faculty member used as an example of responsiveness an e-mail she received three days after visiting the reference desk. A much-needed article was finally obtained after a journal reference was discovered to be mistitled and the correct one identified (45:15:177-184 [A47-48]). Another instructor commented upon the commitment to service quality excellence at her institution. "I think this school has demonstrated such interest in being competent, in providing the best possible services, and that has been my impression of the library system here . . . . I think this system here is really unique in that way. I've never anywhere else had that kind of interaction with the people running the library system" (I12:37:520-533 [A7]).

In sharp counterpoint to the perceptions of the professor who vented his frustrations over librarians' reluctance to approach the faculty, another recounted a collaborative effort of faculty and librarians on his campus to bring the latter into the classroom as partners in the learning process. Over time, the process evolved into a semester-long interactive process involving students, instructor, and librarian. In what the instructor called his "mini round table," the librarian would join in sessions with the students where research projects were shared. The students not only benefitted from the librarian's familiarity with databases and sources, but were able to interact with her to reap the benefits of trial search inquiries she performed on their behalf before setting off on their own critical inquiry. So productive was the learning process, he recounted, that when the time came at the end of the semester for the students to share their research results with him and their colleagues, the class requested that the librar-

ian, a key partner in their endeavors, attend the final presentations as well (I16:14:200-212 [A11]).

For the faculty member who has spent a career mastering a discipline, the role of the subject specialist is also vital. Even for the most senior professor, whose command of a discipline is shared by only a few closely-networked colleagues around the world, there are trusted librarians with whom a close working relationship is vital. One senior history professor summed up the situation as follows:

> I think it's very important for my colleagues in the library to understand the kinds of questions that we ask. That they understand how we work with documents, how we work with sources. I think it's very important that they have at least a familiarity with the languages that we use even if they don't have any particular expertise in them. I think it's not only important for them in the direct ways that they help us through collection development or through collection acquisition [but that] they also sense that they are advocates too. They need to understand how we work in order to make sure when we are not there that library policy is consistent with our goals and the goals that we set for our students. (I54:22:147-160[A62])

For herself, added one associate professor, librarians are "far and away the single most important sources for me about what to look at and where to go to find it. And they are really the gatekeepers of knowledge. And so. . . the human element is absolutely the most important in terms of where I go and what I look at" (I41:27:333-359 [A44]).

Comprehensive Collections

As it has been since the great library at Alexandria, the research libraries of the world are symbols of inestimable importance to the life of the mind. It should come as little surprise that no discussion of library service quality with its primary clientele would fail to highlight the issues of library resources and their interaction with them. One senior professor of history observed that research libraries remain at the center of the intellectual process:

> It used to be that we could send [students] to the library and we could assume that they were mostly coming into contact with works published by academic presses, the university presses, or by rigorous commercial presses. I think that is still the case, but so many of them have come to think of the web as a resource . . . . [They] need to be taught that much of what exists on the web is the product of . . . . entities whose standards for research and publication are not always equivalent to those that my colleagues and I abide by. So I let them know that there is such a thing as a juried publication. [These publications] insist that anything that gets published is read by two, sometimes three, four, or more specialists in the field and that when a book is published, it's not error-free but it has certainly been read and critically assessed and revised according to critical standards. (I54:31:238-255 [A62-63])

For the great majority of faculty, the research library is still a central place, and comprehensive collections are still required by most to fulfill their instructional and research responsibilities (I41:14:165-174 [C17]). This section assesses the changing definition of comprehensive collections in research libraries, the roles of technology in the life of students and faculty, and the implications of a steadily expanding information universe.

The Importance of Comprehensive Collections

The same professor who so eloquently explained his decision to inform his students of the differences between the collections housed in the research library and the information encountered on the Internet also had a clear appreciation of the uniqueness of North American collections. He always enjoys, he related, showing his European counterparts the richness of his home university holdings:

> One of the things I always make sure I do is to take them to the library where they can see the open stacks, where they can see how large the collection actually is, where they can see in fact that we have the equivalent of the entire Congressional Record for the French National Assembly going back to 1789 and if one wanted one could pick one of these lovely leather bound volumes up, take it over to the copy machine, crack the spine and, for a nickel, photocopy to the heart's content. And this just brings tears to them because they have nothing like this . . . . I think one of the things I love about academic life in the United States is that, as a culture, as an academic culture, we tend to appreciate the extraordinary importance of libraries and the life of the mind. That's such a tremendous resource and such a precious resource and—in my experience—such a unique resource in terms of the western world. It's something we need to preserve and cultivate. (I54:34:281-299 [A63])

For most faculty, the older research libraries that have benefitted from sustained investment over time are still the most satisfactory, for that ensures an unbroken access into the deep past (I2:5:16-29; I12:9:97-104; I12:10:106-113 [C4]). One professor spoke respectfully of the role of his predecessors in building the collections he used and how, now, he "had taken over from them" the responsibility for their future development (I54:14:70-75 [C27]). Journals were a particular focus (I22:12:79-80 [C9]). One professor recalled fondly her experiences at one of North America's largest research collections, where she was almost always able to find the journals she needed, and where impasse was taken as a personal affront by the librarians. "People cared if they didn't have it," she observed. "It was kind of like, 'Oh!', because there was this assumption that 'Oh, golly, we don't have that?'" (I9:38:357-368 [C3]). For the most part, deep rich collections of books and journals are uniformly valued and often play a fundamental role in a professor's choice of positions (I12:5:16-29 [C4]; I12:14:148-152 [C5]). For most, deep collections are key to their academic

success. Graduate students and faculty generally agreed that it was difficult to imagine succeeding in environments where the comprehensive collections with which they were familiar were unavailable. A senior history professor made clear that his success could be attributed to the library:

> I sometimes wonder about colleagues in other places. We meet at conferences all the time and . . . I wonder how they do it. I sense that if I were in an institution that didn't have the rich collections as this library and the very effective staff members that this library has that I would imperceptibly slip in my discipline . . . . And I think I provide a qualitatively different and qualitatively better experience for my students because I am a research scholar and what my students get depends heavily on the work other people have done, what they've written, what they've published. (I54:20:113-134 [C28])

One young music professor volunteered that her most recent book could not have been written at her previous institution. The depth of the local collections and the richness of other holdings in her geographical area created the possibility of publication (I47:23:353-360 [C21]). A graduate student echoed the sentiments of the professor above when she talked of the importance of browsing the holdings related to her dissertation research (I50:21:267-278 [C24]; I18:44:453-462 [UA 19]). Even a business professor who, for the most part, conducted his research using World Wide Web resources, found the retrospective collections of his library to be essential: "All the models I am working on are things that were invented in the 20's through the 60's" he said, "and they have been forgotten by today's academics and industry people . . . . In all fairness, the only time . . . I'll be using the library and actually coming here and perusing shelves is looking for stuff [older print materials] like that" (I52:25:366-382 [C26]).

Only one professor brushed aside the importance of comprehensive collections, observing that even the most extensive collections were incomplete and that he was able to pursue his interests from the local holdings without too much reliance on interlibrary loan (I4:133:45-48 [C3]).

Budgetary Issues

The issue of sustained investment over time is not lost on educated library users. One faculty member contrasted her experiences at another research university with her more constrained present experiences. Formerly, she recalled, she was able to count on the availability of materials whether they were old or current. "You could tell that things were being acquired steadily," she said (I9:9:45-48 [C3]). Soon after her arrival at her current university, she became disappointed in the depth of library holdings in her field. "There was a lot of talk about budget cuts and cutting back on journals. And that left a lasting impression . . . that there were nice people in the library, but they couldn't do anything because they didn't have much money. . . . There's been an implicit assumption on my part that, however nice they were, they were powerless in the situation"

(I9:493-500 [C4]). Others were more understanding: "I really appreciate
the tight budgets the library is under and, the more that I serve on the
senate library committee, the more keenly I'm made aware of the fact
that funds just aren't keeping track in any real way with what we need to
do" observed one full professor (I28:2:306-309 [C12]).

Almost without exception, faculty and graduate students had come to
understand the costs of procuring library materials, especially the rising
costs of journal titles. Nevertheless, the fight for the retention of current
journals and the acquisition of missing titles was high on many lists
(I1:36:202-206 [C2]; I2:37:152-155 [C3]; I9:38:357-368 [C3]). One pro-
fessor commented on his own university's commitments in the face of
adversity:

> You talked about great libraries versus second-tier libraries and my
> sense is that there is a kind of subliminal boost that you get from
> knowing that the university cares enough about this sort of stuff to
> go beyond the bare minimum of what you could get away with . . . .
> And the fact that the stuff is here and easily accessible can lead to
> serendipitous discoveries . . . . I think one has to pay some attention
> to the value-added aspects of going overboard, of providing more
> than the bare minimum. (I46:54:662-681 [C20])

The technological revolution, another added, was changing the face
of libraries, redefining roles, changing the way collection development
worked, increasing the need for costly computing. As a result, he argued,
"these are exactly the wrong years for library budgets to be cut. These are
the years when we need to be investing in libraries, expanding library
roles . . . and to make sure the budgets expand commensurately"
(I54:59:548-555 [C30]).

Ability to Influence Collections

Equally important to sustained investment over time that assures the
deep rich collections necessary for research is the ability to influence the
ongoing shape of library holdings (I2:36:143-147 [UA5]). One professor
of philosophy placed these two issues in perspective:

> I shape the collections a lot . . . . Even though it is a big library [it]
> has had its up and down periods. [There was] a period in the 60's
> and 70's when they didn't have so much money and the collections
> are thin in those years . . . . Nobody was paying attention to philoso-
> phy for a period of years back then. So yeah, I work closely with our
> bibliographer and with the rare books guy . . . . I send them stuff all
> the time. And they give me the impression that they have the money
> to respond. (I49:40-43:586-621 [C22-23])

Where collections are deep, access by other means becomes accept-
able and helps to define the quality of the library (I56:6:45-60 [C32]). "I
can't think of a document or book that's been critical to my research that
I haven't been able to track down or have access to in some way," recalled

a distinguished professor (I28:25:338-341 [C12]). The improvement of interlibrary loan in recent years has likely reduced the stress somewhat, but does not completely compensate for thin collections (I50:21:267-278 [C24]; I49:41:595-599 [C23]). "I have had history and sociology of science graduate students tell me to check a school's library before you enroll in a Ph.D. program," said one graduate student, "because they often have to use interlibrary loan to get stuff" (I51:46:555-571 [C25]).

The Future Role of Electronic Access and Its Relationship to Print

To be sure, some members of the higher education community continue to live in the primarily print world with which they are comfortably familiar (I29:33:315-337 [C13]). However, for many, the issue now is *access*. In the minds of most faculty, the great libraries are those that are able to ensure timely access to information in their respective disciplines without regard to format (I12:9:97-104, I12:10:106-113 [C4]). Access, however, is not a mere substitution of electronic versions for print but rather the delivery of information when needed, wherever needed, in the medium of choice.

Even the most devout defenders of print recognize the relentless incursion of electronic text into scholarship. While many embrace it, others view the development more cautiously (I54:23:160-173 [C28]). One professor shared her own anxieties:

> We're in the midst of this enormous, really revolutionary transition to electronic communication. But I think it's really, at this point, a very incomplete revolution. We're still very much . . . in the sort of preliminary stages of the transition. And as an instructor and also as someone who uses electronic resources in my research, I am painfully aware of how uneven both people's knowledge and usage and access to this stuff is. (I41:1:36-41[C15])

Others have embraced the new technologies wholesale. One senior professor observed that "over time, my own library use has become increasingly electronic . . . . Something has to be really vital for me to look for it physically nowadays. I can usually satisfy my lust for indulgence with full text online sources" (I46:9:58-72 [C19]). Another professor categorized the modern online public access catalog (OPAC)—with its accurate view of local collections—and OCLC World Cat—that "gives me a virtual collection that is the collection of North America that isn't institution specific"—as the two most important electronic developments for him, followed closely by the indexes of the periodical literature (I54:26-29:208-224 [C29]).

UBIQUITY AND EASE OF ACCESS

"You don't want anything until you really need it." With these words, a young assistant professor expressed the expectations of most of those

interviewed regarding the libraries on their respective campuses
(I45:19:231-240). Deep comprehensive collections in libraries with exten-
sive hours and reliable catalogs have been the means through which re-
search libraries have traditionally met those expectations (I12:9:97-104
[UA 10]). The technological revolution of the past decade represents some-
thing of a double-edged sword. On the one hand, the technologies per-
mit research libraries to address the needs of their communities in new
and innovative ways. On the other hand, the possibilities introduced by
the information technologies contribute to a ratcheting up of user expec-
tations while introducing a new set of reliability issues that inevitably im-
pact upon service quality. One senior professor personalized the situation
that many agreed they confront:

> In those days, when there was no choice, people made regular trips
> to the library. It was part of your daily or weekly [routine]. You
> went in and you looked at the current journals and you scanned
> the tables of contents, or people did *Current Contents* and things
> like that. So it was actually less disruptive because you had to do it
> all the time. Now that I hardly ever go, . . . I have to think about
> where I'm going to be and why I'm going to be there. It's not some-
> thing I would really expect to do on a regular basis. (I46:25:316-323
> [UA 47])

Half a continent away, an associate professor expressed the same
frustrations on the online side. Whenever he or his students encounter
electronic alternatives to print, they must learn whether the online of-
fering faithfully replicates the information in the original and whether
it spans the historical offerings of the original or only of the most recent
decades. "I think for students that's a problem," he said. "A lot of them
think 'I've searched this online; that's all I need to do'" (I58:44:371-386
[UA 77]).

The interviews revealed that, while many people cared deeply for,
and evinced a preference for, printed materials, the electronic alterna-
tives were increasingly impacting information-seeking behavior. Full-text
electronic resources, database accessibility at the desktop, and improved
responsiveness of interlibrary lending transactions were all things that
users considered in evaluating access to information (I46:10:74-93 [UA
45]). "If I could have the option of printing it off for storage, such as
with an electronic document, so much the better. To me, that's the ideal"
(I12:13:140-146 [UA10]). "Collections," it appears, have taken on a new
meaning, with JSTOR occupying a place as significant to many as bound
journals on the shelf (I49:21:347-361 [UA 53]). One scientist recounted
her experiences at a former institution where canceled journals were
replaced by electronic document delivery that generally was fulfilled
within the hour. This ability to obtain faxed copies so quickly in lieu of
the originals she described as "paradise" (I18:11:55-64).

HOURS OF OPERATION AND BRANCH LIBRARIES

Ubiquity and ease of access require that libraries provide convenient hours of operation at both main and branch libraries. Of course, the ideal goal would be that libraries "would be open 24-hours a day, . . . seven days a week" (I1:22:160-162 [UA2]). For many faculty, however, the electronic access to the desktop and document delivery to the office have made that less important. Increasingly, access to the physical space seems to be a graduate and undergraduate issue (I1:43:300-311 [UA3-4]). Indeed, the desire for extended hours was usually expressed in terms of student needs (I2:23:2-76 [UA4]; I9:10:53-67 [UA7]; I12:39:591-595 [UA12]; I46:38:495-500 [UA 48]), many of whom made use of library study facilities into the early morning hours (I14:22:325-347 [UA13]). "They won't necessarily have access from home," observed one scientist of her students. "They won't necessarily have access from their own computer address on campus, so they will have to go to the library to have access . . . " (I18:53:539-544 [UA30]).

As a rule, libraries will adjust their hours during intersession and holiday periods to the lower volume of use. Unfortunately, those budget-saving decisions are not always well-received by those who would like to make heavy use of the libraries in off-peak periods (I49:39:582-584 [UA 54]; I50:28:380-391 [UA 58]; I58:66:670-691 [UA 78]). "The problem is that when the semester is in you're usually really full. You're up to here with marking and so on. It's when that's all finished that you say 'now I am going to find out what people are doing' or read up on the last issue of this or whatever and it's closed" (I22:49:695-709 [UA23-24]). Another senior professor expressed the same sentiment, but gave his current institution high marks for being open "when I have the free time to spend in the library" (I29:46:548-563 [UA 30]). Reduced hours of specialized service points, such as special collections and maps, was also a concern of users (I50:36:531-534 [UA 59]; I55:32:390-399 [A68]). In some libraries, certain service desks may be closed or staffing may be severely curtailed during periods of lighter use. As one annoyed graduate student observed, "I teach at 8:30 in the morning. I take classes myself. By the time I get around to research, it tends to be around five o'clock in the afternoon. The bulk of my research is done between 5 P.M. and 10 P.M. And the Slavic office is closed" (I55:32:390-399 [UA 71]).

One subject on which there was wide division was the issue of branch libraries. All books in one location was one graduate student's definition of ubiquity of access (I37:15:211-218 [UA 33]). Adherents of branch libraries tended to be found among those whose disciplines were traditionally defined and who tended to have experienced specialized collections and dedicated staff in their doctoral preparation or early career development (I4:10:40-42 [UA5]; I12:5:16-29 [UA 9]). Those who found branch libraries an impediment to their research activity largely came from the

more interdisciplinary fields or had little experience with branch libraries
in their formative educational experiences (I18:60:593-599 [UA21]). Most
seemed to accept the logic inherent in branch libraries and planned their
research accordingly. "It seems to me, actually, impractical to feature hav-
ing everything under one roof. I mean look at the size of this institution.
. . . I think it absolutely depends upon the size of the institution"
(I28:34:415-427 [UA 27]). In the end, confessed the graduate student
who yearned for a simpler world, it was necessary to accept the distributed
research library: "I just use what I can get. And the way that libraries are
structured and all the campuses I've been to, it involves going to lots of
different libraries and using lots of different libraries and lots of different
services" (I37:49:585-588) [UA 34]).

INTERLIBRARY LOAN AND DOCUMENT DELIVERY

It appears that most graduate students and faculty are willing to pace
their research efforts, working on available materials from local collec-
tions while inserting loaned materials as they become available (I27:25:381-
389 [UA25]; I47:6:51-65 [UA 48]). For the most part, interlibrary loan is
now seen as an acceptable and important component of the research pro-
cess (I29:50: 532-534 [UA 29]; I46:34:435-465 [UA 47]; I50:20:254-260 [UA
57]; I54:16:80-87 [UA 66]). The standard for delivery of a requested in-
terlibrary loan that most would seem to find acceptable was one week,
with some provision for more rapid turnaround in priority cases (I1:10:40-
41 [UA2]; I2:24:78-83 [UA4]; I12:13:140-146 [UA10]; I22:32:320-342
[UA22]; I45:9:98-110 [UA 41]).

"The service is just terrific," observed one senior professor of history
of ILL service at his university. "I am amazed by the speed in which most
of these things appear. Interlibrary loan . . . is just superb. I have no com-
plaints about the library at all" (I44:11; 15:96-99, 110-119 [UA 40]). One
professor was so impressed with the improvements in ILL in recent years
that he said he now finds himself requesting things only when he antici-
pates delivery will coincide with cycles of the school years when he can use
them effectively (I54:45:390-405 [UA 69]). An interesting side issue, wor-
thy of further investigation, is the possible inefficiency inherent in the
interlibrary loan process. As one graduate student observed, whereas the
browsing of physical collections allows her to cull unwanted materials, she
is unable to do that with her interlibrary loan requests: "I would have to
request fifty items that would all take seven to ten days to arrive, half of
them I would probably send back thirty seconds after I looked at them"
(I50:22:272-275 [UA 57-58]).

Document delivery also has a place. One campus received praise in
several quarters for its fee-based delivery program that allowed delivery
of locally-owned or electronically procured materials to the faculty of-
fice (I28:20:277-284 [UA 26]; I29:45:522-539 [UA 29]). The availability

of books on demand, giving the user a bound copy to retain, is a recent innovation that one faculty member singled out for special praise (I49:50:726-733 [UA 55]). Observations about shortcomings are limited to lengthy wait times, the breakdown of "rush" processes, and the poor quality of materials delivered by fax (I12:25:302-308 [UA11]; I37:54:622-631 [UA 34-35]).

One alternative to institutional interlibrary loan is the reliance upon one's own informal networks. Networking often arises in response to perceived shortcomings in the local ability to provide information in a timely manner, either through in-place collections or document delivery. But sometimes it serves to complement formal library services that are viewed to be working well. One chemistry professor related how, if he really needed something quickly that was unavailable locally, he would ask his staff to contact chemistry colleagues at nearby institutions and arrange for a faxed copy. In that fashion he could count on having the needed item in a couple of days (I1:9:32-34 [UA2]). Another scientist revealed that, if she could not find material on the shelf, or was unwilling to pay the service charges levied by the library, she would "call a colleague at [another institution] and say 'would you please print it out and send to me?' Or call a colleague in Germany and [ask] 'can you fax this to me?'" (I18:34:304-317 [UA18]).

THE ROLE OF THE LIBRARY WEB PAGE

One of the important advances in facilitating access to library information is the role of the library Web page. As one senior professor observed, "over time my own library use has become increasingly electronic so that the amount of time I actually spend in the physical library is getting smaller and the amount of time I spend at my desk on the web . . . is increasing" (I46:6-7:45-48 [UA 44]). Well-designed Web pages and the search engines made available through them are popular with all types of users. "I have found stuff on that Web page I didn't know to look for. And it's easy to navigate through. It feels like they are always upgrading it, improving it. After all, I spend all my time in my office. I don't have time to leave very often"(I12:34:488-493 [UA 12]). For those engaged in interdisciplinary studies, Web pages help to break down the geographic barriers of branch libraries, centralizing collections bibliographically, and bringing databases and full text to the desktop (I37:10:182-185 [UA 32]; I45:48:576-585 [UA 43-44]; I54:25:204-208 [R28]). Improved remote access through authentication systems that allow faculty and students access from home or while traveling are especially popular: "I appreciate being able to sit at my desk in my office, or even at home, and being able to look through all these things" (I37:12:189-198 [UA 32-3]). Even powerful databases and full-text that are accessed through or mounted on dedicated library workstations are regarded with increasing disfavor. As one professor observed, "a lot of the CD-ROM stuff is so boring because you have to

go into the library to get it and then you do your search and so on. It's just such a disincentive when you have to do all that" (I22:59:840-843 [UA 24]).

RELIABILITY

The interviews with research library users affirmed the importance of the reliability dimension identified by the SERVQUAL authors. In their research, reliability is defined as the ability to perform a promised service dependably and accurately (Parasuraman et al., 1985). In the world of the research library, there are many aspects of library operations where unreliable services can be viewed as impediments to self-reliant behavior, as barriers to the ubiquity and ease of access that users seem to value so highly. Included in issues of concern over reliability are accurate records, management of collections, and functionality of equipment essential for library use that library users have defined as important. While many of those interviewed praised the reliability of the libraries in these areas, this section—in order to more efficiently make the necessary points—will concentrate on the deficits in functionality or performance.

Accurate Records

An alternative title for this section might be "a library fine is not nearly as bad as a car accident," a phrase used by one library user to describe a library record-keeping error—overdue materials—that can plague borrowers (I22:42:569-613 [R9]). However, for library users there are several other areas of record-keeping that can impact the information-seeking behavior of users: cataloging accuracy, circulation records (is a book actually on the shelf if the catalog indicates its availability?), recall notices, binding records, and the like. Perhaps the most frequently occurring complaint is the unavailability of books found in the catalog and noted as available (I9:19:156-160 [R2]). "That's really frustrating," said one faculty member who acknowledged her own lack of patience. "You look for it, and you think: 'It says it's here, and I got the number right, and it's not there.' That can be frustrating" (I22:16:170-173 [R7]). Availability of print journals for the period of time they are away at the bindery was an issue for at least one professor, apparently a limitation of the local electronic catalog. He did acknowledge that the increasing availability of current issues in electronic form would diminish the severity of the problem (I1:39:220-235 [R2]). Inaccurate overdue notices also came in for their share of criticism. "I had gotten overdue notices for books that I knew I had turned back in," said one graduate student. "And it had gotten to be almost a comedy of errors" for which library staff would later apologize (I37:45:530-541 [R17]).

Even in those cases where library records were accurate, an apparent unawareness of user behavior patterns can be a source of irritation. One

faculty member recounted her dissatisfaction with recall notices sent through campus mail during the summer or holiday times. Not only are others deprived of access, she observed but, to evade the fine for non-response, it is necessary "to bring in some kind of documentation that shows you were away on university business. That's not very respectful treatment of faculty" (I9:42:500-511 [R4]). "I have not figured out why," said another, "if we do everything online [why] there are not generated electronic recall notices as well as paper ones" (I47:36:550-556 [R26]).

Follow-through was also an issue. It is particularly irritating, said one faculty member, to go to the trouble to fill out a search form for a lost or misplaced book and never receive any further communication: "You put a search on a book and it's just gone; it's not reacquired .... There's more of a problem of lost books, of books that are gone and nobody knows why and nobody's doing anything about it" (I9:12, 20:62-63, 171–179 [R2-3]). "I put something on reserve," recalled another, "and it didn't show up, and somebody complained. I went back and said I've asked for this to be put on reserve and they had lost the form. So I had to do it again" (I22:28:273-278 [R7]). Sometimes the rules are regarded as so user-un-friendly they constitute an impediment to service:

> You either get them copied yourself on machines that basically Moses would have used, or you let this little copy center do it. The copy center can only take payment of cash [or] a check that can only be for twenty dollars or less. . . . For a big copy job like I did for a class the other day, [the cost] was 45 bucks . . . . They would not take a check or a credit card . . . and there's no parking on this campus so you have to hoof it out to where your car is, and it took me four hours to deal with something like that. . . . They are not trying to sell you something; they are trying NOT to sell you something. (I27:17, 41:273-282, 611-614 [R12-13])

Equipment

It seems almost everyone who was interviewed had some anecdote about machine malfunctions that had adversely affected their ability to use library resources. Those complaints included, but were not limited to: photocopy machines, microform readers and reader-printers, and micro-computers (I37:61:687-733 [R19]; I50:49:343-366 [R34]). "I want better, reliable machines," insisted one associate professor. "We have some anti-quated photocopy machines. Similarly we have horrible and unreliable microform reader-printers" (I2:32:113-120 [R2]). Unreliable and slow microcomputers, as well as limited numbers, was a complaint frequently encountered (I14:6:77-78 [R5]; I51:21:257-261 [R35]). One faculty member found the numbers of microcomputers in the library to be inadequate and their performance unreliable. "You get things that don't work or you have to wait," she said. "That's why you use them in your office before coming. You have to wait; there could be a line of people there, or because

the computer will be slow, or won't work or will be stuck on something I don't know" (I22:43:622-646 [R9]). A student, otherwise highly complimentary of his libraries, reserved his fury for the balky networked printers. "Printing is the issue that . . . makes me irate," he offered. "I would expect that to be high quality, top notch, so that you don't have any problems with it. I think that there are three of them out there, and I don't know how all three of them manage to go down all at once" (I14:25:389-408 [R6]). "I will never, ever, use the [microform] printer," said another user, "because I've never seen one that works right. . . . They don't have very good upkeep of them" (I37:59:662-668 [R19]).

One professor compared unfavorably the limited number of public microcomputers available for viewing the library's holdings to the card catalog, with its thousands of drawers accommodating many simultaneous users. Peak periods lead to long queues with the microcomputers. With the old catalog, she said, "as long as you can get to the drawer, you can get it, you can find a place to put it on your knee, and you can find the book and go on" (I9:26:226-243 [R3]). "In modern America," said another frustrated user, "people don't like to wait in line . . . for anything. They want the stuff they want . . . NOW" (I27:11:196-207 [R11]).

Online public access catalogs, providing access to local collections and to electronic databases and full-text materials, received much comment. Indeed, for one senior professor, "a good catalog is the only tool that I really need from librarians" (I29:36:354-390 [R14]). Most of the user assessments were positive, but others had things to say about reliability issues. Interestingly, some of the newer catalog software is regarded as functionally inferior to earlier versions (I27:9:159-166 [R10]). "Formats change too much," observed one faculty member not fully comfortable with the electronic environment (I2:32:113-120 [R2]). Part of the problem is, of course, the level of the user's information literacy. "The problem with electronic means," observed one professor, "is they're too stupid to be integrative. You have to supply all the [information]. You have to ask the right question or you don't get the right answer" (I46:52:639-656 [R25]). Increasingly, electronic catalogs are regarded as utilities, and any downtime is greeted with hostility. "If you've got a paper due and your professor hasn't had time to mess with you being late, that's not good" said one graduate student who encountered server failure at a critical juncture. "So, basically, I was unable to get the resources and, by the time they got it back up and I came back, the materials were gone" (I27:10:177-191 [R10]). Another graduate student was critical of the time it takes some of the new systems to back up data, resulting in extended downtime that impeded his access (I37:61:687-733 [R19]). Insufficient numbers of passwords to permit ease of access to high demand databases, whether through library computers or off-site, was another issue cited by users (I16:21:424-431 [R7]).

Management of Collections

Discerning faculty at several institutions noted the problem of reshelving library materials in a timely manner (I12:31:444-449 [R5]). Insufficient attention to stacks management and to inventory and shelf checks was also noted on several occasions (I16:21:424-431 [R7]; I45:40:469-473 [R24]; I51:18,25:248-250, 310-326 [R34-35]). Student workers on campus mentioned that inefficient intra-university document delivery unnecessarily tied up documents in lengthy transit periods (I35:21:388-400 [R16]). "There is a serious delay at the library," said one full professor, "between when you return a book and when it appears on the shelf, and it's very hard to locate a book within that twilight zone. And sometimes it appears to take several weeks" (I44:31:409-421 [R22]).

III. What is It that I want from the Library?

The interviews suggested that the user of an academic research library is, in the main, a self-reliant person whose confidence and expertise increase with time. Assessment of library service quality is based on interactions with libraries in several dimensions: affect of service, provision of comprehensive collections, ubiquity and ease of access to information, and reliability. But what of the physical library itself? Does it still have meaning, or is it becoming an anachronism tottering on the brink of irrelevance?

As that question was posed to users, it became apparent that perhaps there were two layered responses to that question. In the first place, users pragmatically still agreed in the value of library as place. In the main, this was a threshold concept: for most users, libraries as physical entities were part of the physical landscape, useful for specific purposes of research and study but otherwise taken largely for granted. Only when libraries fell below that acceptable threshold limit, becoming impediments to self-reliant information-seeking behavior, did physical libraries trigger a disconfirming perception. At the other extreme, however, for many, the library served as symbolic affirmation of the life of the mind, of an intellectual vocation within the academy.

Library as Place

When asked of the relative importance of libraries as place in the current technological setting, an associate professor agreed that they were indeed still important places as learning environments and places of study. But, he suggested, libraries were largely taken for granted until a certain threshold was reached. "I guess you'd call them satisfiers," he said. "[A]s long as they are not negatives, they won't be much of a factor. If they are negatives, they are big factors" (I16:28,33:503-535, 596-602 [L4, L5]).

The press of academic business will often drive faculty from their offices in search of more facilitative space (I22:40:489-521 [L6]). The noise and congestion of home or dorm life will likewise drive students to the

library in search of a respite. That is not to say that undergraduates would use university libraries by choice. As one graduate student put it, "most undergraduates, at least at this university, would not come here unless forced to" (I27:511-516 [L8]). Other students corroborated that view (I39:12:179-182 [L14]). Indeed, offered one student, there were emerging attractive alternatives to the academic library: "If you're looking for a personal book just to read, then I think maybe you would just go out to Barnes and Noble, or go someplace where it seems like it would be a little bit easier instead of going to a big library where there's . . . millions of books" (I39:13:182-187 [L14]).

Even for undergraduates, however, personal circumstances influence library behavior. As one faculty member observed: "The poorer your situation, the more you need the public spaces to work in. When I was an undergraduate, I spent most of my time in the library, just using it as a study space" (I46:24:293-314 [L19]). And a graduate student added, "I think I use the library less for studying and writing as a grad because I live off campus and because I don't feel like this is my home base like the way I felt my alma mater [library] was my home base as an undergrad" (I50:18:210-226 [L24]).

Nevertheless, for many students, the physical building is an essential part of academic life. For urban commuting universities especially, libraries play a particularly important role, serving as a home away from home for the length of the academic day (I2:33:124-127 [L1]). As one professor observed of his university:

> Because it's a metropolitan school [it] has a lot of students that use the library for studying . . . . One of the problems that we've had here has been high-priced study space. We've built floors to hold books and they hold students studying, and it's probably not the most efficient use of the investment in infrastructure, but it's essential because so many of the students here commute. Between classes, the library is a convenient study space. (I29:22:209-222 [L10])

For these users, the library building serves as an arena for those issues identified in the ubiquity of access section above.

The demands of users for library space are usually restrained. Libraries above the minimum threshold need only to be "comfortably functional" (I16:28:503-535 [L5]). Probably the expectation threshold is defined by the campus facilities as a whole (I16:28:503-535 [Ll4]). Disconfirmation likely occurs only when library facilities fall discernibly below norms set by other campus facilities—such as classrooms, dormitories, or cafeterias—or when they fail to meet a specific assigned mission such as the study needs of commuter students (I35:8:219-224 [L10]; I37:38:458-478 [L13]; I55:15:152-168 [L28]). Good lighting (I112:32:467-480 [L2]), comfortable furnishings (I9:25:211-224 [L2]; I37:38:458-478 [L13]), quiet study (I58:68:707-711 [L33]), pleasant ambience (I22:40:489-521 [L6]), and

safety (I58:68:707-711 [L33]) were among the qualities that various users required of a library building. "I wouldn't want to study back there," said one female student, "because it was so dark that I would just feel like I'm all alone in this big library" (I39:22:318-343 [L15]). Diverse study environments, from soft seating to carrels and group study rooms, were also enumerated during interviews (I12:32:467-480 [L2]; I14:5:47-73 [L3]). Adequate signage to ease way-finding was also noted as desirable (I39:11:159-172 [L14]). Adequate numbers of up-to-date computers are also required (I12:33:484-486 [L2]). All he wanted, said one graduate student, was a space "where it's reasonably comfortable. Where I can stay for an hour or two and pore through the journals that I took off the shelves . . . . Or if I brought a laptop with me, that there happens to be an Ethernet jack there that I can plug into. I put a little more stock into creature comforts, I think" (I37:40:484-491 [L13]).

Library as Symbol

Beyond the threshold concept of the library as a place that enables information-seeking behavior of students and faculty alike, there was also in the language of interviewees a recurrent reference to something more, something richer. In some instances, the difference was only a matter of degree; that is, descriptions of favorite libraries were little more than extensions of the threshold concept, much in the way one might describe a favorite restaurant or vacation spot. One faculty member described a Swiss monastic setting where the baroque reading room of the small library was furnished with comfortable worktables and awash in natural light from high windows and skylights. The attentive and knowledgeable staff that attended to her needs only added to the vividness of the recollection (I47:28:414-441 [L21]). Another compared a particularly special place in her main library to the Cathedral of Learning at the University of Pittsburgh (I28:11:117-123 [L9]). "One of my cherished rituals," said one history professor, "is going up the steps and through the gorgeous doors of the library and heading up to the fifth floor to my study. . . . I have my books and I have six million volumes downstairs that are readily available to me in an open stack library that is efficiently operated and a staff that is almost uniformly and consistently responsive to my needs" (I54:13:66-70 [L27]). Still another faculty member offered the vision of the graduate student study room at the university where he earned his doctorate. Far less imposing than the monastic reading room, it was a place where he could work quietly at large tables, surrounded only by other like-minded students. It was, he recalled, a large well-lit room with floor to ceiling windows overlooking a particularly scenic lake (I49:16:251-302 [L23]).

Yet, for others, libraries served as an affirming symbol of the life of the mind and of the vocations that faculty and graduates had chosen as career paths. The symbolic importance of libraries was something that

even undergraduates observed. "It draws on my sense of antiquity," said one pre-professional student. "You have that . . . sense of just being around that many limitless books, that much knowledge" (I14:3:33-36 [L2]). A first year graduate student used the example of the main reading room at New York Public Library: "It's a beautiful room and it really almost imparts some of the intensity of what a library is all about—huge masses of knowledge . . . " (I127:19:321-326 [L7]). The library as a "contemplative" environment was a term offered by two graduate students, including one disabled student who appreciated safe and accommodating reading and study space (I34:12:39-40 [L10]; I37:458-478 [L13]). Observing the access to libraries by all citizens regardless of socioeconomic status, one professor added that, for himself, "there's a sort of democracy of a library that we have not approached in our political system . . . . I think there may be some symbolic [significance] there for people for whom libraries as a place, a physical place of importance as opposed to those who see it as useful as long as they need that place to get information"(I58:54, 58:534-539, 563-573 [L32]).

For many faculty, libraries are often an affirmation of a chosen lifestyle. "I grew up in a small college town," said one professor. "As a kid I had free run of the college library. . . . [I]t was my favorite place, and so I have always loved being in the library around books, the excitement of . . . the treasures that are there that are fun for me to check out . . . . Being in the library is just an essential part of being an academic" (I29:95-98, 99-101[L9]). Another faculty member spoke of a library's "spiritual" aspects: "I really like being in the archives, . . . holding the piece of paper that the person I'm studying actually wrote on . . . . . The place itself is an asset, is part of the experience . . . . To sit in the middle of all that knowledge" (I41:33:434-451 [L17]). For one scientist, whose own research is now accomplished largely in electronic mode, the library is an affirmation of the purpose of an academic life: "The fact that it is here and easily accessible is really important to me. That's what a university is about. I could work in a little research lab and do my thing, but I wouldn't have all this other stuff going on" (I46:26:327-341 [L 19]). The affirming role that libraries play in the life of the mind is perhaps best summed up by a West Coast history professor who offered the following:

> My daily routine involves coming to the university . . . and going directly to my library study. . . . There are people that I see everyday, or that I nod to, or wave to, or smile to, and we all have a sense that we are doing something that is very important and enriching and good for us and for our students . . . . I think even if it were possible, and I'm convinced it is not, . . . to duplicate the collection in some virtual form, that we would still be missing the sense of being part of a shared enterprise in which, as scholars, . . . or as scholars in the making, the library provides. It is one of the great third places between the home and the place of work. (I 54:12,40:60-66, 325-338 [L26-L28])

Despite the marvels of the technological revolution, the library seems still to have a place in the hearts of most library users.

SUMMARY

Interviews with users of research libraries across North America provided a rich pool of information about their own behaviors, about their perceptions of what a library should provide, and about their interactions with that important resource as they pursued their diverse objectives at their respective universities. Analysis of the interviews revealed a penchant among all users for self-reliant, autonomous, information-seeking behavior. Such behavior was palpably different among various user groups. New undergraduates just learning to navigate the complicated labyrinth that is the modern research library certainly had different expectations regarding how a library should facilitate self-reliance than the full professor, secure in the command of her discipline and its information resources. For users at every level of expertise, the extent to which libraries facilitate self-reliant information-seeking behavior seems to be related to their perceptions of library service quality. The relationships among perceptions, satisfaction, and assessments of quality established by de Ruyter et al. (1997, p. 401)—i.e., that perceptions of quality are the most important indicators of satisfaction—seem to be confirmed qualitatively. A question meriting further investigation is whether successful self-reliant information-seeking behavior is a component of service quality or is the result of service quality. Future rounds of research with the LibQUAL+ instrument may permit investigation of this question.

For users, the research library is expected to work simultaneously on several different levels to facilitate their information-seeking behavior as reflected in Figure 1. In the analysis, the mass of content relating to affective issues is revelatory. Interviewees spent more time expressing their concerns and expectations for the delivery of respectful and caring service than other factors. Critically important were library staff who were informed, courteous, and engaged in their roles as they interacted with users. Users expected to be received with dignity and a solicitous understanding of their needs and their command of the information labyrinth.

While varying with discipline and level of information need, there was universally a respect for comprehensive collections. At a practical level, collections are there to answer information needs. But they also serve as an affirmation of the purpose and mission of the research university and of the life of the mind for which the primary university community has opted. Increasingly, the revolution in information technologies has fostered wide and easy access to information. Rich physical collections require facilities that are open adequate hours, are well-staffed, and are easy to negotiate. Electronically accessible information should be easily available at the desktop, whether at the office, in the home, or in the library
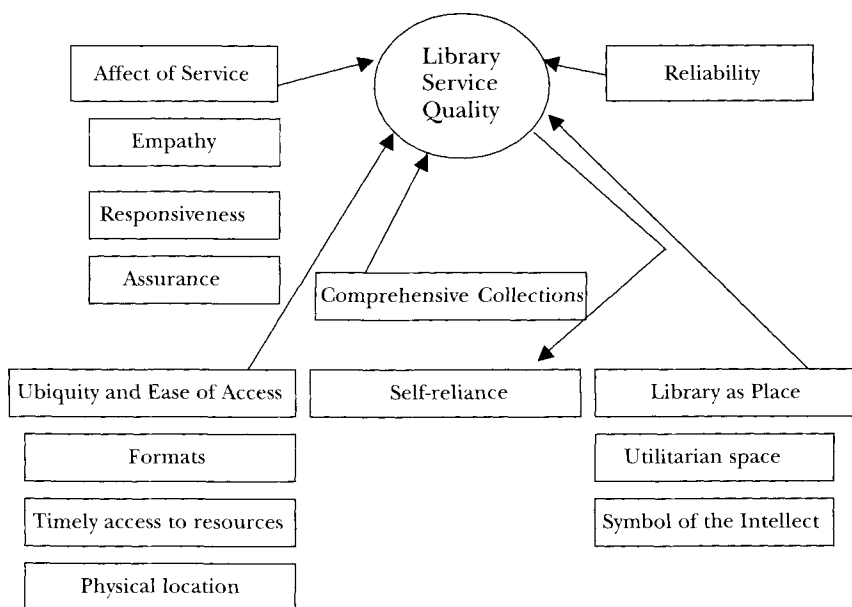
Figure 1. Dimensions of Library Service Quality.

itself. Document delivery and interlibrary loan are acceptable complements to local access if they are easy to accomplish and rapid in delivery. And, importantly, the library systems that support self-reliant information-seeking behavior should perform reliably. Public catalog records, circulation data, and interlibrary loan transactions should be accurate, free from the errors that spark disconfirming experiences, impact negatively upon satisfaction, and influence assessment of library service quality. Equipment such as photocopiers and microcomputers should be available in adequate numbers and perform as expected when needed.

CONCLUSION

A traveler crossing San Francisco Bay over the Golden Gate bridge moves easily toward a destination almost unaware of the engineering feat that made the journey possible. For the engineers responsible for planning, siting, and constructing a bridge, the details that must be considered are almost endless. The length of the span, the height of clearance for traffic beneath, the number of vehicles per hour, emergency islands for disabled vehicles, the design of toll collections, and the nature of access to and exit from the bridge from neighboring thoroughfares are among the many factors that must be considered by the designers. When the bridge works as the designers intended, the traveler engages the bridge on few, if any, of those dimen-

sions. If asked to consider the contribution of the bridge to the journey, there would likely be ready acknowledgment that it provided a welcome alternative to a circuitous land route around the bay or a lengthy queue awaiting a ferry. On the other hand, when the bridge fails to meet expectations of a timely and incident-free commute due to mechanical repairs, accidents, traffic snarls, or other factors, then it is reasonable to expect that judgments regarding service quality would be rendered.

And perhaps so it is with the library. It is an essential component of the research university environment. For undergraduate students, graduate students, and faculty alike, the library is supposed to function well across a number of dimensions, enabling them to move self-reliantly in their specific information-seeking behaviors. As the price of the toll is more important for one traveler, and the length of commute more important for another, library users approach the various dimensions of service with differing expectations. When it works well, the library is a place that enters into the consciousness of the user little more than the span over open water enters into the awareness of the traveler; the library is merely an entity that facilitates a more important undertaking. When expectations are not met—whether it be inadequate collections, insufficient hours, or otherwise—perceptions of service quality can be altered.

Yet, simultaneously, a higher order factor may be at work as well. It is unlikely that any traveler, in recalling the *idea* of a bridge, conjures up the cloverleaf intersection of one interstate highway over another. Rather, the Golden Gate Bridge, Verazanno Narrows, or similar structures as architecturally resplendent as they are functional come to mind as quintessential expressions of bridges doing what they were designed to do.

And so it may be with libraries. The *symbol* of the library that is called up in the mind's eye—whether it is the small monastic library with its reading room awash in the afternoon light or the sprawling stacks of a modern research library containing the cumulative works of human accomplishment—is a representation of a structure working as it should in support of the life of the mind. Further, the symbol represents not only one library performing as it should but expresses as well the overarching notion of library service quality that resides in the mind of the beholder. It is these constructs that the LibQUAL+ instrument undertakes to measure.

In the interviewing process, the dimensions of service quality as promulgated by Parasuraman et al. (1988)—responsiveness, reliability, assurance, empathy, and tangibles—did clearly emerge from the user perspective in research libraries. All were domains richly represented in discussions with users regarding their views of what constitutes library service quality. Responsiveness, assurance, and empathy seem to merge into a general need for an affective relationship between the library and its constituents. The definition of a satisfying affective relationship seems to change over an academic lifetime from an undergraduate to a full-fledged professor engaged

in research and teaching. Reliability emerges as a significant component of service quality from the perspective of library users. Services should be provided as promised at the promised time. Communications should be accurate. Intrinsic to the tangibles dimension is the role played by equipment in the modern library. When equipment fails, the library fails as a whole. Users see equipment only as a means to an end, never the end itself. The content is in the conversation, the telephone is only an instrument.

While the dimensions of service quality established by Parasuraman, Zeithaml, and Berry reemerged from the analysis in the library context, three others, perhaps unique to the research library context, were compelling: ubiquity and ease of access to collections, the library as place, subsuming dual concepts of utilitarian space and of the library as a symbol of the intellect and, finally, the overwhelming drive on the part of users to be self-reliant and confident in navigating the information world. Whether self-reliance is a component of library service quality or a result of service quality is unclear and will be investigated in further research. Ubiquity and ease of access, the library as place, and self-reliance emerged from the interviews with users as inescapable elements of the construct of quality library service. As such, these dimensions will be explored in further LibQUAL+ evaluation studies in an iterative process of building and testing theory of library service quality.

APPENDIX
Interviews (I) cited

I1 Professor (Chemistry) (1999)
I2 Associate Professor (English) (1999)
I4 Professor (Engineering) (1999)
I9 Associate Professor (Education) (1999)
I12 Assistant Professor (Speech) (1999)
I14 Undergraduate (Pre-professional) (1999)
I16 Associate Professor (Journalism) (2000)
I18 Assistant Professor (Chemistry) (2000)
I22 Associate Professor (Education) (2000)
I27 Graduate Student (Remote Sensing) (2000)
I28 Professor (Literature) (2000)
I29 Professor (Geography) (2000)
I34 Graduate Student (Education) (2000)
I35 Undergraduates (Political Science/Speech) (2000)
I37 Graduate Student (Health Sciences) (2000)
I39 Undergraduate (Education) (2000)
I41 Assistant Professor (History) (2000)
I44 Professor (Anthropology) (2000)
I45 Graduate Student (Sociology) (2000)
I46 Professor (Biochemistry) (2000)
I47 Assistant Professor (Music) (2000)
I49 Professor (Philosophy) (2000)
I50 Graduate Student (English) (2000)
I51 Undergraduate (History) (2000)
I52 Professor (Marketing) (2000)
I54 Professor (History) (2000)
I55 Graduate Student (Slavic Studies) (2000)
I56 Associate Professor (Medical Education) (2000)
I58 Associate Professor (Communications) (2000)
I60 Undergraduate (Liberal Arts) (2000)

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