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## **The Social Life of Digital Reference: What the Technology Affords**

**The Social Life of Digital Reference: What the Technology Affords  
By Mita Sen-Roy**

**Summary**

Digital reference service (also known as virtual reference) has become a contentious topic in the library literature as some critics feel that it threatens reference service more than it enhances it. Through this paper it is hoped that the debate can be refocused after a careful assessment of what exactly digital reference technology can *afford* and what social impact such affordances could bring. The suggestion will be made that digital reference should be employed as a means to provide reference service as long as the service is designed to play to the strengths of the technology. As such, it is recommended that libraries pursue digital reference service that is local, professional and with privacy constraints.

**Keywords:**

digital reference, virtual reference, reference service, affordance

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## **The Social Life of Digital Reference: What the Technology Affords**

### **Summary**

Digital reference service (also known as virtual reference) has become a contentious topic in the library literature as some critics feel that it threatens reference service more than it enhances it. Through this paper it is hoped that the debate can be refocused after a careful assessment of what exactly digital reference technology can *afford* and what social impact such affordances could bring. The suggestion will be made that digital reference should be employed as a means to provide reference service as long as the service is designed to play to the strengths of the technology. As such, it is recommended that libraries pursue digital reference service that is local, professional and with privacy constraints.

### **Introduction**

Digital reference has become a contentious topic in the library literature. On one side it's "Virtual reference: overrated, inflated, and not even real" [1] and on the other, it is deemed a critical necessity otherwise reference librarians "will become extinct." [2] At these extremes, those who advocate the use of email or 'chat' reference service imply that such action should be deemed critical, citing recent ARL [3] and Pew Internet and American Life reports. [4] Those in the library literature critical of digital reference voice a strong rebuff, claiming that digital reference promotes different values than are inherent in traditional walk-in, in-person reference help [5] and may even threaten these values. [6]

The suggestion that a change of medium can fundamentally change the human values expressed through traditional desk reference service reveals an understanding that no technology is neutral. This is not a point of view shared by everyone and so it

deserves further explanation. Langdon Winner does this eloquently in his book *The Whale and the Reactor: A Search for Limits in an Age of High Technology*. He writes:

The language of the notion of "use" also includes standard terms that enable us to interpret technologies in a range of moral contexts. Tools can be "used well or poorly" and for "good or bad purposes"; I can use my knife to slice a loaf of bread or to stab the next person that walks by. Because technological objects and processes have a promiscuous utility, they are taken to be fundamentally neutral as regards to their moral standing...

But, as Winner goes on to say:

If the experience of modern society shows us anything, however, it is that technologies are not merely aids to human activity, but also powerful forces acting to reshape that activity and its meaning. The introduction of a robot to an industrial workplace not only increases productivity but often radically changes the process of production, redefining what "work" means in that setting. When a sophisticated new technique or instrument is introduced in medical practice, it transforms only what doctors do, but also the ways people think about health, sickness, and medical care.

As such, it is important to evaluate our choices of technology as measured by their potential social impact. "From this point of view, the important question about technology becomes, As we 'make things work', what kind of *world* are we making?" [7] What kind of world is made by the employment of digital reference service? How does this technology reshape human activity in the library? These are important questions to raise now as digital reference technology is still in a nascent stage of development.

Not only is it useful to examine the sort of abilities and possibilities that digital reference technology possesses but exactly what this technology can *afford*. The concept of affordance in the digital realm in has been employed most notably by Don Norman. [8] Following his lead, a number of librarians have used the concept of affordability as a means to improve usability of library websites. [9,10]

The concept of affordances originates in psychology:

The notion of affordances can be traced to the ecological psychologist J. J. Gibson in his seminal book *The Ecological Approach to Visual Perception*. Gibson's theory was that people "pick up" information about their environment and the objects in it largely by attending to what those objects afford. An affordance refers to the fact that the physical properties of an object make possible different functions for the person perceiving or using that object. [11]

An examination of a technology's affordances can be quite enlightening. By examining the affordances of paper and careful study of how paper and computers are actually used in the workplace, Sellen and Harper explain why the advent of computers has led to an *increase* of paper use and not a paperless office. Their research suggests that paper possesses significant advantages over computers by the way that paper affords better conditions for collaborative work.

Following Sellen and Harper's example, this paper seeks a better grasp of what human activities can be supported by digital reference service and for which activities it should be employed with reservations. In addressing the most significant affordances of digital reference software, no particular brand of software will be addressed but only a generalization of the currently existing software. It will be assumed that the reader is already familiar with digital reference technology. If not, the works suggested in Bernie Sloan's *Digital Reference Primer* [12] is a recommended starting point for these readers.

### **The affordance of visibility**

Some libraries offer digital reference service at the reference desk. This scenario can be used to highlight one difference in affordance between traditional reference

service and that of digital reference service: the affordance of visually conveying activity to others. A library user approaching the reference desk can see if the librarian is currently speaking with another library user and hear the nature of the conversation. A library user approaching the reference desk can see if the librarian is on the phone with another library user and also hear the nature of the conversation. But if a library user approaching the reference desk with a librarian typing at a computer, this user has no way of knowing whether the librarian is writing a document (which some users would feel comfortable interrupting) or engaging in a 'chat' and assisting an off-site library user. A librarian engaged in a digital reference interaction at the reference desk who is approached at the desk by a library user seeking assistance has the choice of asking the in-library user to wait or ask the out-of-library user engaged in chat to be placed on hold. Because the in-library user is unable to discern that the librarian is engaged in an online chat that is not merely social, the librarian may feel it necessary to explain that she is currently helping another user. Because digital reference does not afford the ability to convey to other users its activity, a number of libraries have decided to provide digital reference service through service points other than the reference desk.

### **The affordance of content**

The most common alternative to traditional face-to-face reference service is that of reference service facilitated by the telephone. Phone reference service is more widely available to library users as the phone network is the largest in human history. [5] But unlike the phone, digital reference affords digital documents and links to documents to be easily and immediately exchanged. Not only is a librarian able to send any digital document on hand, it is possible for the librarian to send digital artifacts such as sound files, video clips, or multimedia. Bandwidth may be an issue if

the documents in question are exceptionally large, but the distance between collection and library user is no longer a barrier if that collection has been digitized. Content within the library that has not been digitized must be accessed within the library; a librarian offering digital reference service can only offer the library catalogue record of a non-digitized item or digitized supporting documents.

At the risk of over-generalizing the findings of Sellen and Harper, digital documents afford superior storage, searching, and retrieval whereas print documents afford better reading, marking up, and collaborative work. To the out of library user, this means that digital documents are more convenient to retrieve than the printed material that requires a trip to the library. Consequently, librarians who provide digital reference service should consider how they will present potential information sources to library users. Should a librarian only present the most appropriate source to a query or is a librarian obliged to provide the most convenient source as well? Or as Thomas Mann asks the question, "To what extent can librarians – surrounded by copyrighted print sources, and by the vast bulk of public domain print sources that are too expensive to digitize, and by site-licensed databases that are not freely available in cyberspace – provide reference service to remote users who are not inside the walls?" [13] Mann considers digital reference services to off-site library users an unfortunate "tradeoff" that threatens to devalue the print collections of libraries and in doing so, threatens the value of the library itself. Others, such as Anne Lipnow, see the digital reference service as an opportunity that must be taken so librarians can promote the print collection of the library:

If we do not begin now to demonstrate the need for reference librarians by providing service that recognizes our clientele's new ways of searching for information, there is more at stake than reference service by reference librarians. First, by our inaction, we contribute to the decline in the use of the library's print materials. Online commercial information services draw entirely on electronic sources... The information seeker using one of these commercial

services will never get the response 'The question you are asking is better handled by a wonderful reference book that is available in your library.' [2]

Further discussion of this issue of appropriateness versus convenience and how librarians may be able influence students' web-based information choices [14] can be found in the library literature.

### **The affordance to transcend geography**

As digital reference requires a computer network to connect the librarian with the library user, the geographical area that can be served by digital reference is dependent only on the availability of access to the network. This means that the library user can be anywhere: in the next continent or the next room over. Both scenarios are likely in an academic library: many universities are providing distance education programs and promoting such services overseas and it has already been documented that some users within libraries make use of digital reference service so as not to lose their seat at a public computer. [15] Digital reference service may even be preferred to phone reference service to those library users who are so far from the library that "long-distance" phone rates apply as Internet access is charged by a set fee, by time used, by bytes downloaded, or combination of these options.

With no physical barriers to worry about, the library user effectively has more choice in which library to approach for reference help. How does a library user decide when to visit the web site of her local library rather than the nearest university library, national library or some other library of renown? It's not known -- there hasn't been much research in the descriptions of information seeking behaviour in an online environment. [15]

What *is* known is that when an offsite library user visits the website of a library that is not “her own”, she will not be have access to that’s library’s online proprietary databases. The affordances that make digital documents easy to transmit also are the same qualities that allow digital documents to be easily copied and shared. The social constraint of copyright legislation has been established so that proliferation of proprietary materials does not become rampant. Consequently, libraries have established validation systems to ensure that online access to digital collections of publications are restricted to only the members of libraries as required by publishers’ licensing agreements, the ramification of which is that, as access to digital documents is concerned, the library does not care where you are but *who* you are. This is significantly different from how libraries handle the copyright restrictions of printed material. Most libraries allow all members of the public to browse the books of their collection. “They can provide *free* access to copyrighted print sources, especially books... because libraries impose on them a *where* restriction to a place within walls.” [16]

Not only can the library user be outside of the library when engaged in digital reference service, it is possible that a librarian can be physically located outside of the library as well. This model has been most notably expounded by Steve Coffman who suggests that libraries would be wise to emulate customer call centers as a means to maximize the efficiency of reference librarians. [17] Juris Dilevko strenuously opposes the call center model and suggests that such a move will lead to deprofessionalization of those involved. [6] Deskilling is also an issue. Placing librarians outside of the library building or mandating that a librarian only perform

digital reference service effectively ensures that the librarians' knowledge of a library's print collection will diminish over time.

One could argue that the primary reason why the call center model of digital reference service has been pursued is due to the fact that a call center is cheaper to maintain than a library, especially if the goal is to provide 24/7 digital reference service for a library's 24/7 digital reference collection or to "compete with the Internet". Some libraries are pursuing this same goal but not by means of call centers; these libraries are partnering with other libraries – some in other time zones - to expand hours of digital reference service. These libraries are taking advantage of the affordances of digital communication to allow for collaborative work over large distances. "And all these examples of interconnection and independence are the result of our being poor. Let's face the truth – if libraries as a group were better funded and supported, it's quite likely that some of these examples of sharing would not exist or be far less extensive." [18]

### **The affordance of working alone**

Research in the library is generally considered a solitary activity. Brown and Duguid explain the distinctions of learning in solitary and social environments by contrasting the car and the VCR:

Almost everyone in our society who learns to drive has already spent a great deal of time traveling in cars or buses, along roads and highways. New drivers begin formal instruction with an implicitly structured, social understanding of the task. Now consider the VCR. Most people can use their machines to play tapes. What they find more difficult is recording although that's not a much more complex task. The central distinction between these two functions is that one is often a social act, the other is highly individual. [19]

But research within the library isn't a completely solitary endeavor. In their work "Browsing is a Collaborative Process" Twidale, Nichols and Paice documented significant social interaction within the library as library users sought out how to use the library system from friends, strangers, staff and librarians. Even those users who do not actively engage other library users can watch and see how others in the building are acting and can try to learn from what they see.

The digitized library environment completely lacks these visual cues. As such, it is feared that

any trend towards remote searching will make traditional collaborative interactions rarer by losing physical proximity to other searchers. Even today, access from one's own room to the local online public access catalogue (OPAC) system is reducing the opportunities for social interaction, and with the development of full-blown digital libraries this tendency will be intensified. [20]

One of the most common points brought up by advocates of digital reference service is that the technology provides ability for the librarian to be available at the point-of-need – online with the library user. How digital reference service may be applied as a means to support the library user of the digital library has been explored in the library literature. [21]

### **The affordance of privacy and lack of privacy**

Michael Gorman has formulated a shortlist of fundamentals that he feels should inform librarianship. One of these eight values is privacy.

Users of reference services are entitled to privacy. This presents a particular problem. Most libraries seek to make reference areas open and welcoming, but those digital are inimical to privacy. This can be a real problem in dealing with "sensitive" subjects or with shy, easily intimidated library users. [5]

In this context, one could make the case that digital reference service can provide a more comfortable venue for shy patrons or those embarrassed. For example, digital reference service may be preferred by those students who know English as a second language and feel more comfortable with their written skills than with their verbal abilities. I also suspect that library users who wish conceal ignorance or need, such as faculty members in an academic library setting, may also enjoy the ability to ask questions of the library anonymously.

But the ability to use digital reference service anonymously is not an inherent aspect of digital reference. Many libraries require users of digital reference service to fill out forms before an online chat can be initiated. These forms ask the user to self-identify asking for (in frequency of order given) name, email address, phone number, affiliation, mailing address, fax number, and deadline. [22] We do not ask our walk-in patrons to self identify before they ask us a question, why do we require it of our online users? In the age of the U.S. Patriot Act, libraries should seriously rethink such policies or destroy information that can be used to identify the library user.

The privacy rights of librarians should also be seriously considered when a digital reference is employed as digital media affords the possibility of monitoring computer activity right down to the keystroke. Currently, most brands of digital reference software are unconcerned with what librarians do when not answering digital reference questions but do save and store the transcript of very digital reference transactions. Anecdotal evidence has suggested these transcripts may prove useful learning tools and a fruitful ground for future research. [23] Intellectual property concerns may also be raised in the future if these transactions are mined for the marketing of "reusable reference objects." [18]

## **Conclusion: our Strength is Social**

As reference librarians we understand that what our users ask for isn't always what they want. In many instances, the user does not know who collects and publishes the information that they are interested in. "Whether consciously aware of it or not, when anybody asks us a question, the first thing we (librarians) do is sort through our mental maps of the information territory." [24]

Reference librarians are better positioned than most to understand this social context of information and the importance of people in knowledge transfer and information distribution. Libraries serve as both social and knowledge intermediaries every day. [25]

Information is created in a social context and the delivery of information through digital media does not change this. Digital reference can be employed as a means to provide a human presence in an online environment to assist users at a point of need and to make librarians' work less invisible. [2] Such a service will allow us to extend our traditional role as information intermediaries into an online environment. The long-term success of digital reference service – especially the collaborative digital reference projects that are presently in their beginning stages – will greatly depend on whether the services will play into the strengths of what the technology can afford. As such, it is recommended that libraries pursue digital reference service that is local, professional and with privacy constraints.

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