ON VIRTUAL FACE-WORK: AN ETHNOGRAPHY OF COMMUNICATION APPROACH TO A LIVE CHAT REFERENCE INTERACTION[1]

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Erving Goffman's theoretical framework and concept of face-work has the potential to greatly increase the understanding of interpersonal dynamics in computer-mediated communication realms. This research used an ethnography of communication approach and the concept of face-work to analyze the transcript of an interaction between a librarian and a library user in a Web-based virtual reference service environment. This highly goal-oriented interaction, even though it lacks the immediacy of face-to-face interaction, was found to be a rich source of face-work.

> A promise to take ritual care of his face is built into the very structure of talk. (Erving Goffman [1, p. 40])

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Introduction

Consider the plight of a freshman university student working on a paper applying the work of the sociologist Erving Goffman to the study of computer-mediated interaction. The deadline for submitting the paper is two days away, and the student is starting to panic. She needs to locate some contemporary articles on her topic but does not know where or how to look for them. She has flailed around on Google and Wikipedia but is not getting anywhere. In desperation, she visits her university library home page and sees a button that says "Ask a Librarian." The student thinks it's worth a shot, so she clicks the button. She finds herself in a one-on-one live chat session. A computer-generated message appears that says, "Welcome to the Ask a Librarian service. A librarian will be with you in a moment." The student's interaction is soon to begin.

Take a moment to reflect upon the interaction that is about to take place. If you were this student, would you feel excited, nervous, or perhaps indifferent? Will this interaction be the same one you might have if you spoke to the librarian in person and face-to-face (FtF)? Will you be able to express what you need to say in this text-based environment? How can you be sure the librarian will understand what you need? Will the librarian think your question is frivolous? Is the chat service perhaps not meant to deal with these kinds of questions? What if you do not understand what the librarian is telling you? How can you present your problem without appearing to be ignorant? Are you putting yourself in jeopardy by initiating a conversation with a highly qualified information professional who may be judging and evaluating you through every ill-formed sentence or spelling error that you type?

According to Erving Goffman [1], putting yourself in jeopardy is exactly what is about to happen, for both the user and the librarian. "When a person volunteers a statement or a message, however trivial or commonplace, he commits himself and those he addresses, and in a sense places everyone present in jeopardy" [1, p. 37]. In every interaction, people are always engaging in "impression management," that is, acting in ways with the goal that others might have a positive impression of them. There is always the danger of committing a gaffe, or offending the other person in some unintended way, or presenting oneself in ways that are not desired. This insight is not a profound one, by any means. However, it is an insight that is often ignored in the consideration of reference interactions in the library setting, and even more so in the computer-mediated setting, even though the sense of "putting oneself in jeopardy" is heightened in these encounters [2, 3].

Gary P. Radford and Marie L. Radford [4] have argued that for many library users, their experience of the library is structured by their man-

agement of fears, including fear of appearing stupid, of authority, of disrupting the order of the library, of wasting the time of a professional, and so on [5]. These fears form the cornerstone of popular culture representations of libraries and stereotypes of librarians. It is not difficult to see why fear should be so fundamental to a typical reference encounter, considering what the user is asked to tolerate. First of all, the encounter is often conducted with a stranger. Second, the users often are unsure what is needed to address their information gap [6]. Users may not know if a source or citation will help until they actually see it or work with it. They may be hazy about what their information need is exactly [7] until they talk with the librarian or work through the search process [8]. Often added to this uncertainty is the users' knowledge that the librarian possesses a more sophisticated understanding of highly complex, rapidly changing information sources and systems. On the surface, the reference encounter will be about locating information and sources to address a particular information need. However, as Goffman notes, "Much of the activity occurring during an encounter can be understood as an effort on everyone's part to get through the occasion and all the unanticipated and unintentional events that can cast participants in an undesirable light" [1, p. 41].

Goffman's work has been effectively applied to explore interactions in school libraries (e.g., see [2]) and in academic libraries (see, e.g., [9, 10]). Goffman's concept of "deference" has been identified as integral to success in FtF reference encounters [2, 9, 10], and Lorri Mon [3] has written an overview of "Face Threat" as a theoretical approach deemed useful for studying human information behavior. The present article explores the question of whether or not Goffman's work is useful in understanding the dynamics of the "computer-mediated reference encounter" and, in particular, the reference encounter between a user and a librarian in a one-on-one live chat environment. Is the communication activity in a virtual reference (VR) encounter part of an effort to "get through the occasion" and avoid events that can "cast participants in an undesirable light?" How are these concerns realized in the virtual encounter? What implications does the management of interpersonal jeopardy have for the success or failure of the VR interaction? The argument made here is that the management of interpersonal jeopardy is as central to the virtual encounter as it is to an FtF encounter, and that the virtual interaction is a rich site to explore the relational dimensions of communication [10, 11].

Goffman's Face-Work

According to Goffman's seminal essay, *On Face-Work* [1], participants risk their sense of *face* in every interaction. For Goffman, face does not refer

to an actual facial expression (see also [12]). However, the comparison of a physical facial expression and Goffman's notion of face is nevertheless instructive. One's physical face is the part of the body that is most immediately informative to others. The human face is the site where others pick up the most powerful cues concerning one's emotions, personality, and state of mind. When and how people smile, frown, roll their eyes, or flash their eyebrows provides information about those persons and how they feel in any given situation. The connection to Goffman's notion of face is that these facial expressions do not occur randomly. They only can appear in, and be made meaningful by, a particular context. A smile, for example, arises in the flow of an ongoing conversation in response to something said or done by another. Such a smile might be considered as friendly (you're laughing with me), or it may be considered offensive (you're laughing at me). The same smile can mean different things in different places and with different others. The interpreted meaning of the smile is always contingent upon the context, the ongoing sequence of interactions in which it occurred.

This notion of *contingency* is central to Goffman's concept of face [13]. Goffman describes a person's face as an image of self that is based on social expectations. It addresses the questions, "Who am I supposed to be in this situation?" and "What behaviors are expected of me?" Like the meaning of a smile, one's face is always contingent; it is always "diffusely located in the flow of events in an encounter" [1, p. 7]. One's sense of face has to be constantly established and maintained in how one acts. It is not enough to say, for example, that "I am the reference librarian." One also has to act like a librarian and engage in behaviors that establish that particular professional face. These acts constitute what Goffman refers to as a *line*, the actual "pattern of verbal and nonverbal acts" [1, p. 5] that serves to express how one sees oneself in this situation. To maintain one's face in a particular interaction, particular kinds of behaviors must be enacted, and not others. A participant "must ensure that a particular *expressive order* is sustained . . . so that anything that appears to be expressed by them will be consistent with his face" [1, p. 9]. Thus, face-work, the work that must be done to create and maintain one's face, refers to the "actions taken by a person to make whatever he is doing consistent with face" [1, p. 12]. For Goffman, the need to achieve this consistency is the central organizing principle of human social interaction. Goffman writes, "By repeatedly and automatically asking himself the question, 'If I do or do not act in this way, will I or others lose face?' he decides at each moment, consciously or unconsciously, how to behave" [1, p. 36]. Goffman asserts that one's feelings about our face are reinforced by our encounters with others. If a better face is established during the course of events, the participant will feel good about himself/herself. If expectations are not

fulfilled, the participant will feel bad or hurt. Most experiences tend to be neutral or expected, so are not memorable [1].

Goffman [1] described several types of face-work that people engage in on a regular basis in order to protect their face and that of others [3]. Types of face-work include the following:

Rituals.—Rituals are routine behaviors that are considered polite and are expected to be enacted by participants in everyday encounters. Among the most common of these in American culture are ritual greetings (including "hello" or "how are you?" when one meets another) and ritual closings (including "good-bye" or "see you soon") when one takes leave of the other.

Corrective process.—When a person causes another to be put in a negative light, or causes an insult to be made, whether directly or indirectly, Goffman contends that this person must then engage in a corrective process of repair that includes the offer of an apology by the offending person. The corrective process demands that the other accept the apology [1].

Avoidance process.—If a person thinks that someone else may pose a threat to the person's face, he/she may simply avoid that person to prevent the threat.

Poise.—When a person's face is threatened, one is expected to control his/her embarrassment by exhibiting poise. Others are also expected to protect the other by ignoring the embarrassing incident or by dismissing it as unimportant.

Goffman's seminal and influential essay on face-work was published in 1967 and was written many years prior to the modern age of computer-mediated communication (CMC). However, the authors intend to show that his concepts developed with respect to FtF interpersonal communication can also provide illumination and insight into the behaviors displayed by participants in a computer-mediated interaction.

Face-Work in the Computer-Mediated Environment

Web-based virtual reference services (VRS) are offered by most libraries to assist users who choose online venues for their information queries. As libraries of all types have developed digital collections that feature a large array of electronic information resources, they have experienced increased user demand for quality online reference assistance. Live chat reference is a popular type of VRS in which librarians engage in synchronous reference encounters with users in text-based interactions, similar to instant messaging (IM) but with additional features tailored to library needs and generally using proprietary software.

When studying CMC, Annette N. Markham cautions researchers to not

ignore "the person's understanding of, response to, and interaction with the technology" [14, p. 796]. Although VRS users may have reservations about the technology, they have made the decision to use this format to meet their information needs instead of choosing more common formats, such as FtF or the telephone [5]. Users of VRS also have stated that they feel more comfortable in the virtual environment when asking certain types of questions than in other reference formats [15] and that it is more convenient for them [16].

Rituals akin to face-work have been demonstrated to occur in virtual encounters similar to VRS [17–20]. Behaviors used to maintain one's face in these computer-mediated encounters include the use of emoticons and other text-based cues that enable the participants to communicate meaning beyond the literal meaning of the words on the screen [21, 22]. With respect to computer-mediated reference interactions, Jody C. Fagan and Christina M. Desai [23] have argued that librarians "must introduce social and even emotional elements and high degrees of interactivity through a seemingly impersonal medium" [23, p. 125]. Their study of VR transcripts identified a number of prosocial verbal behaviors that communicated a caring attitude. These behaviors included offering follow-up questions, the use of humor, being appropriately formal or informal, showing interest and sympathy, and verbal representations of nonverbal acts, such as "<giggle>." Similarly, Lynn Westbrook [24] found that participants in a chat-reference service at a public library used various techniques to lower or raise formality levels, including abbreviations, self-disclosure, humor, apologies, and self-deprecation. This research suggests that face-work plays a significant role in computer-mediated reference interactions.

An Ethnography of Communication

Goffman's description of face-work in any interaction follows an ethnography of communication approach; that is, the statements and communication acts of the participants need to be understood in terms of the context of their occurrence [25, 26]. The context includes such factors as the setting of the interaction, the relationship of the participants, the goals that the participants wish the interaction to achieve, the emotional pitch or feeling of the interaction, and the norms of communication that are appropriate for this interaction [27]. An ethnography of communication also considers "the way verbal and nonverbal signs create and reveal social codes of identity, relationships, emotions, place, and communication itself" [25, par. 2]. The focus of an ethnography of communication is not the feelings or thoughts of the participants but the communication acts them-

selves and how these take on meaning in the context of the interaction as a whole. Goffman writes that "the proper study of interaction is not the individual and his psychology, but rather the syntactical relations among the acts of different persons mutually present to one another" [1, p. 2]. Goffman's concern is not with whether or not an individual is happy but, rather, what the role the statement "I feel happy" might play in the conduct of an interaction. What response might be expected of the conversational partner if this statement were uttered? Is it an appropriate statement given the context of this particular interaction? How might this statement shift the topic of the interaction, or contribute to the face-work of the participants? Goffman's focus is on how communication events are coordinated and how this pattern of events provides the conditions in which face is created and maintained. Goffman explicitly deals with "behavioral material" [1, p. 1], such as glances, gestures, positioning, and verbal statements, and the specific contexts in which these behaviors occur, such as "conversation, track meets, banquets, jury trials, and street loitering" [1, p. 3]. In this analysis, the context is the VR encounter.

An Ethnography of Communication in the Virtual Reference Context

In the VR context, the behavioral material that makes up the interactions includes the *acts* of making verbal statements and how those statements are coordinated with other statements to enable the participants to establish and maintain face. The participants must make choices concerning how these statements are presented and how they will respond. These choices, and their coordination by the participants, comprise the ritual behaviors that will enable the participants to achieve both their information goals and also maintain their identity, self-worth, and the impressions "given" and "given off" to the other [28, 1].

This article provides an in-depth analysis of one VRS transcript selected from the data set collected by Marie L. Radford and Lynn Sillipigni Connaway [29]. The data set consisted of 746 live chat transcripts randomly selected from OCLC's QuestionPoint and 24/7, an international chat software provider, during twenty-three months (July 2004–May 2006) from a population of 479,673 chat sessions. These transcripts were stripped of identifying information to protect the participants' privacy and analyzed through repeated reading, identification, comparison, and categorization (coding) of patterns, issues, and themes. Previously Radford [9, 10, 30] analyzed interpersonal aspects of FtF reference encounters. She identified two classes of face-work behavior and rituals: (*a*) *relational facilitators* that have a positive impact on the interaction, and (*b*) *relational barriers* that

have a negative impact on the interaction. A detailed coding scheme of facilitators and barriers was constructed by Radford [9, 10] and expanded to include VR categories [30].

A theme analysis of the data set of 746 chat transcripts by Radford and Connaway [29] built upon Radford's [30] coding scheme identifying and tabulating a number of face-work categories [31]. However, an ethnographical approach of the kind advocated by Goffman requires that these themes be considered in terms of the context of the interaction in which they occurred; therefore, in this article, one transcript has been selected, and the creation and maintenance of face are described within the context of this actual interaction. This transcript was chosen because Radford and Connaway determined that it involves a relatively complex reference question with a large number of back-and-forth exchanges that contain a wide range of relational facilitators and positive face-work behaviors for both the librarian and user [29]. A transcript selected at random would most likely have been much less illustrative of the face-work concepts that this article highlights. This transcript is reproduced verbatim, and thus misspellings, typographical, grammatical, or other errors are not corrected. It focuses on the question: "Where can I find the leading drug companies in boston [sic] doing diabetes treatment/prevention R&D?" To facilitate discussion, the transcript has been broken into several excerpts, each followed by an ethnographic analysis and discussion of the elements of face-work as they occur.

Transcript lines 1–11:

1. User (U) Where can I find the leading drug companies in boston doing diabetes treatment/prevention R&D?
2. Librarian (L). [A librarian will be with you shortly, please hold.]
3. L [[Name]—a librarian has joined the session]
4. L Hello. I'm a reference librarian at X University. How may I help you?
5. U Where can I find the leading companies in boston doing diabetes treatment/prevention R&D?
6. L Please hold on while I check a few sources.
7. L I can probably give you a few sources to get started, but I may wind up referring you to a business and/or medial librarian specialist.
8. L Let's start witht X library web page ...
9. U ok great thanks
10. L. [Page sent]
11. U. ok

The opening to this VR interaction has significant differences from a standard conversational opening that one would expect of any FtF con-

versation [32]. The main difference in the VR encounter is that the conversation begins with the input of a question into a search box by the user, rather than a ritual greeting such as "hello" or some words of phatic communication, otherwise known as "small talk," (e.g., "How are you?" or "what a lovely day") [33, 34]. Interestingly, the first response received by the user to her initial request is an automated response from the system, rather than a personal message from a librarian. Indeed, when the librarian does respond, she seems unaware of the user query that initiated the interaction in the first place. The librarian's question of "How can I help you?" bypasses the original query completely. This lack of personal acknowledgment does not deter the user, however. The user restates the question word-for-word, suggesting that she may have cut and pasted the text of the original query, although one cannot determine this as a certainty from a transcript. However, the user does not engage in an acknowledgment of the librarian as a person. She does not reply "hello" in response to the librarian's "hello." Repeating the query word-for-word is akin to the automated message she received from the system, and she seems to be responding in kind by not including any social messages in her reply to the librarian.

In line 4, the librarian offers the verbal acts "hello" and a statement of her job title and affiliation. This *line* (in Goffman's terms) enables the librarian to affirm herself as a "legitimate participant" [1, p. 35] in this interaction. After all, the user needs to know that she is interacting with a person qualified to deal with her query. The user offers no such self-disclosure statements about herself, nor does the librarian ask for any, except in the context of trying to articulate the user's particular information need in line 12 (see below). From the beginning of this interaction, the identity of the user is treated (and constituted) as less important than the user's query. This becomes apparent in line 6 when, after receiving the user's resubmitted query, the librarian immediately offers to "check a few sources."

In line 7, the librarian chooses to use the word "probably" to preface her attempts to locate "a few sources" for the user. She also informs the user that she may "wind up" referring the user to another librarian with more specialized subject knowledge appropriate to the user's query. This line of verbal acts may be serving to establish a certain level of expectation for the user and that the user should not expect to find the perfect information right away. The choice to include the term "probably" indicates that the librarian may find the appropriate information, or she may not. The choice of the term "wind up" suggests that the search process may take some time and that the end of the conversation may not meet the expectations that the user may be bringing to the encounter. The use of this line early in the interaction, and the setting of appropriate expectations for the user, is important face-work for both the librarian and user. As

Goffman remarks, face-work is all about consistency between actions and verbal acts [1]. The librarian could have chosen to present herself to the user as someone who can guarantee to solve the user's information need. However, if she did that, then she must also ensure that her subsequent actions are consistent to maintain that particular face. In this particular interaction, by establishing a particular line of verbal acts in line 7, the librarian is creating a sense of face that can remain consistent with her subsequent verbal acts, even if the interaction fails to address the user's information need completely. In other words, she will not be seen to have "failed," both in her own eyes and in the eyes of the user.

The librarian's choice to use the word "Let's" to begin her remarks at line 8 includes the user in the search process. The librarian could have chosen to type "*I* will start with the library webpage." The user responds in line 9 with "ok great thanks" choosing to use three words to acknowledge the librarian where any one of these would have been appropriate. This constitutes a verbal line performing face-work on the part of the user. Not only is the user acknowledging the librarian's utterances in lines 7 and 8, the triple redundancy of terms is also saying something about the user that will form the basis of verbal acts that will occur as the interaction continues.

In lines 1 through 11 the greeting ritual has been performed, the participants have agreed to "accredit each other as legitimate participants" [1, p. 35], and the persons so ratified are now considered to be in a "state of talk," that is, they have "declared themselves open and to guarantee together to maintain a flow of words" [1, p. 35]. The interaction continues.

Transcript lines 12–18:

12. L Are you a studnets or faculty member at X University?
13. U Student
14. L OK. I'm going to try the "co-browse" option—that might let us see the same information at once .... (if it's working!)
15. U Wonderful
16. L Since what you want to find are drug companies, I'll try to get you into a busienss database ...
17. U perfect thank you
18. L [Page sent]

In line 12, the librarian asks for some specific information about the user ("Are you a studnets [*sic*] or faculty member?"). This question is a pivotal one for understanding the context of the entire interaction. The user self-identifies as a student at X University, which establishes an academic identity (or face) for the user and an academic purpose for the question as opposed to one being asked out of curiosity, for a job interview,

and so forth. The librarian is staffing a cooperative VRS and thus may or may not be working at X University. The librarian's affiliation is not as important as the user's, as it is necessary for the librarian to determine if the user is affiliated to "X University," which would permit the user to access its subscription databases. Also, with a student client, the librarian would be inclined to view the goal of the interaction as one of providing information as well as library use instruction [see 5, 9, 10, 29]. The academic librarian thus generally assumes a teaching role or line in reference encounters with students.

In social conversations, it is common to ask questions about the other person in order to find commonalities that help the conversation to continue and allow the relationship to develop. For example, one may ask another "Where are you from?" The librarian's question in line 12 seems, on the surface, to be similar to this kind of question. However, this question, when considered in the context of the preceding and following verbal acts, does not seek to achieve a social purpose, even though it may do so inadvertently. The librarian is seeking information to provide context for the initial query (and to determine if the user is affiliated to "X University") rather than information about the user herself. This inquiry emphasizes that this interaction will be explicitly task oriented (i.e., the participants are participating in this interaction in order that they resolve the user's information need). However, even though this emphasis on task may be explicitly recognized and agreed to by the participants, there is still considerable face-work being conducted that constitutes a significant, if not immediately apparent, social dimension. While the task-oriented dialogue is taking place in what is said, a relational dialogue is also taking place in the choices the participants make in the ways they express themselves. These choices form the "behavioral material" [1, p. 1], that is, the choice of words, phrases, sentence structure, and use of grammar out of which the dialogue is constructed and constitute a secondary social conversation that is the basis of face-work.

For example, line 14 seems clear enough at a content level—the librarian has suggested using a co-browse facility so both can see what the librarian is doing on her computer screen. However, the term "co-browse" has been placed in quotation marks. This use of quotation marks is a choice made by the librarian, and it is carrying out face-work that is running alongside the content that is being communicated. What face-work is being carried out by these quotation marks? To address this question, we need to put this verbal act back within the line (the context, the pattern of verbal acts) in which it appeared. First of all, the librarian says "OK," which is not task related, and states she is going to "try" the co-browse option. This choice of the word "try" is consistent with line 7 where she said she can "probably" find a few sources. Again, she seems to be guarding against having the

user set her expectations too high. The choice to use such terms as "probably" and "try" also functions to lessen the distance in expertise. It gives the sense that the librarian and user are in the "same boat" or "in this together" and that they are both experiencing a shared state of uncertainty.

The choice of the librarian to offer the use of a co-browse option becomes relationally significant because it continues the line of acts that communicate "being together." The librarian could have easily chosen to browse Web pages in private before sending them out. The choice to allow the user to see the librarian's search activities acts as an invitation for the user to be part of the process, rather than simply being at the receiving end of it. By making this decision, the librarian is choosing to frame her relationship with the user in one direction rather than another, and this says as much about her as it does about her perception of the abilities of the user.

Given this context, the significance of the quotation marks around the term "co-browse" can be understood to reinforce these relational messages. Their use seems to communicate that the librarian is aware that the user may not be aware of this technology. If the librarian had chosen to state the term "co-browse" without quotation marks, the message might be "I know you understand what this term means" or even "I know what this term means" even if the user does not. But the librarian does not choose to do this. Instead, she flags the term "co-browse" with quotation marks and then offers an explanation of what the term means; it "might let us see the same information at once." The choice of the word "might" is significant because it is consistent with the terms "probably" and "try" and it continues the librarian's line of maintaining an appropriate level of user expectation. The librarian could have typed "I'm going to try the co-browse option" and left it at that, without the quotation marks or explanation, but that would be a different line with a different relational message.

At the end of line 14, the librarian chose to add four periods (....), which does not address the task in any way but, rather, communicates something about the librarian and what she is doing. The periods seem to be communicating the equivalent of a thoughtful pause that will precede a statement of what the librarian is thinking about, and indeed, this is the case. The four-period pause is followed by "(if it's working!)." The use of parentheses seems to communicate that this is an afterthought, but an afterthought about what? The message can be read on the content level as being about the reliability of the technology. However, the choice to end the statement with an exclamation point rather than a period seems to be an attempt to communicate to the user on a personal level rather than an informational level. This phrase is not only telling the user that the technology "might not work"; it also seems to be establishing the sense that the librarian and user are "in this together" and that the librarian is as

helpless as the user when it comes to potentially unreliable technologies or perhaps that the librarian will be as disappointed as the user if the technology does not work. It is also consistent with the line of verbal acts such as "probably," "try," and "might," and the message that the outcome may not completely satisfy the user's information need. Indeed, the word "try" is used again in line 16 when the librarian states "I'll try to get you into a business database ..." This phrase is followed by 3 periods, which seems to indicate thoughtfulness, or even that the librarian will now be engaging in search activity that will prevent her from posting immediately. Again, the periods convey a relational rather than a content message. They not only say "I will be away for a while" but also say "I am considerate of your waiting."

In this section of the interaction, the user responds with words such as "wonderful" (line 15) and "perfect thank you" (line 17). The choice of words such as "wonderful" and "perfect," as opposed to a simple thank-you, is communicative of the user's appreciation, which appears to extend as much to the relational work being carried out in the librarian's line as it is to the content of what is being said. It indicates that the user is responding favorably to the librarian's face-work and is willing to accept the definitions of self and level of expectations that are being constituted by that work. In addition, the user signals "deference" to the professional expertise of the librarian in Goffman's terms [35]. The interaction continues.

Transcript lines 19–24:

19. L I clicked on article datbases
20. U Alright
21. L By the way, wht's your email address in case I need to send yo a transcript?
22. U [email address]
23. L Business and Company ASAP and Business Source Premier both look good. I'll try business and company asap.
24. L [Pages sent]

In line 21 the librarian asks for the user's e-mail address for the stated purpose of being able to send the user transcripts of articles she may locate. Again, this seems quite a straightforward informational request, but the choice to include "by the way" at the beginning of the request continues the line of face-work the librarian has established throughout the interaction so far. "By the way" serves no informational purpose. The request would be perfectly understandable without it. The inclusion of "by the way" seems to be maintaining the personal tone of the interaction. It seems to be communicating that the librarian is engaged in one task (looking

for articles), that this activity has stimulated another thought (sending the article to the user via e-mail), and, most important, that the librarian is thinking of the user even while engaged in her primary task of searching. "By the way" is such a simple and seemingly irrelevant phrase, but in the context of the present conversation, it is alive with face-work.

This phrase also softens the librarian's otherwise bald request for the personal information represented by an e-mail address. The librarian risks a possible face-threat in requesting this information, as the user could refuse, which would turn the encounter toward a negative tone. In line 22, the user complies, and the interaction continues on a smooth, positive note.

In line 23, the librarian is choosing to explain to the user what she is doing. This, again, is a choice; the librarian does not have to do this. She could just browse databases and send the user what she finds without informing the user what is happening. On the one hand, the phrase "I clicked on article datbases [*sic*]" is entirely informational—it tells the user what the librarian is doing, but it also conveys a relational message—"I am being considerate of you by telling you what I am doing." The interaction continues:.

Transcript lines 25–31:

25. L Could you please type in your last name and X barcode number? Thanks.
26. L [Pages sent]
27. L hmmm. I treid the keywords "diabetes and boston and research" and tht came up with soem possibilities ...
28. L [Page sent]
29. U [name, barcode] uh huh, more specifically im looking for maybe some kind of list of who is doing what, for respective drug companies
30. L I'm looing at teh actual article and the links at the bottom. The SIC can be particularly helpful ...
31. L [Pages sent]

In line 25, the librarian's choice to include the words "please" and "thanks" may seem to merely be common courtesy. Nevertheless, it is a choice the librarian has made, and it has communicative value to the user. It says something about the librarian and the librarian's relationship with the user. The terms signify respect and deference to the user, which is consistent with the line of verbal acts that have comprised the interaction. "Please" and "thanks" have no informational value with respect to the task. The librarian could have requested the name and barcode information without these terms, and the information would be just as clear. The use of these terms is a relational message, and part of the face-work being

performed by both librarian and user. As discussed earlier, in line 21, the request for more personal, private information (i.e., the user's last name and barcode number) forms another risk for the librarian, as there is a possibility that the user could choose to refuse or log off abruptly. The user complies in line 29 (somewhat out of synchronicity, which frequently happens in live chat exchanges in which time lag in typing and receiving messages is common), further allowing the smooth continuance of the interaction.

The use of the phrase "hmmm" in line 27 is interesting because this is something that would occur spontaneously in a FtF conversation. In the context of a VR interaction, "hmmm" cannot be spontaneous—it represents a choice made by the librarian to type these letters on the keyboard. It is a verbal act that mimics what would otherwise be a spontaneous nonverbal act. So what is communicated by a phrase such as "hmmm"? It has no informational value concerning the task. It does not report any information on what the librarian is doing or has found. Instead, it seems to be communicating a feeling, or a state of mind, adding an explicitly human dimension to the task that is being performed. It reinforces the message that a person, and not a machine or robot, is performing an activity. It says this person is thinking, perhaps considering a course of action or the relevance of a particular document. The "hmmm" communicates that this is a human activity, and even that the librarian is taking this activity seriously, or considers the user's request to be important, or even that she considers the user to be important as a person, not just as a requestee.

In line 27, the librarian again invokes the word "tried" in her description of locating keywords. She does not say she "used" keywords such as "diabetes," "boston," and "research" but that she "tried" these keywords. The choice is significant, and communicative. It is consistent with previous usage of similar terms ("probably," "try," "might") and continues a particular line of face-work that seems to be establishing human qualities such as "thoughtfulness" or "tentativeness," as well as management of the user's expectations. The librarian's choice of the term "some possibilities" to characterize the results of the search is consistent with and reinforces these themes. The librarian could have said something like "came up with some results." But to say that she "came up with some possibilities" is telling the user that the process is not over and that these "possibilities" will need to be explored and followed up before the actual information the user needs is located. The interaction continues.

Transcript lines 32–47:

32. L Sorry, I thought there was a way you could search by sic code and get a ranked list of companies in a certian code.
33. U thats alright, seemed liek you were on the right track
34. L [Pages sent]

35. L What I'm gettign here is a nation-wide list ....
36. U and they are all in the process of Diabetes R&D?
37. L I'm having trouble getting you such a list. It might be possible, but we need to play aroudn with our serach terms ...
38. U perhaps the business librarian would be helpful, can i be connected through this same online format?
39. L yes, there might very well be a book in the [univ.] reference collection. Might be best to call them.
40. L No, I cannot connect you, but I can look up her email address.
41. U this online help is very convienient though, my roomate is actually sleeping, so a phone call would be tough
42. U ok, e-mail should be ok
43. L It's [e-mail address]
44. L did you get that?
45. U alright thank you for your help, have a good day
46. L good bye and good luck.
47. L [Note to staff: XFERIN [L Name]—user has closed this session]

The closing ritual of the VR encounter is interesting because the librarian was unable to locate information that met the user's information need. Would it be fair to say that the encounter was a failure? If one considers the reference encounter purely in terms of its content dimension and goal of providing information, then one might say that it was not successful [9, 10]. But when one reads the final lines of this chat encounter, it certainly does not feel like a failure. The user has not obtained the exact information she has requested, but she has obtained a referral in the form of the e-mail address of a business librarian who is a subject specialist, and the user seems satisfied with this outcome. However, beyond considerations of content alone, the encounter can be considered successful in terms of face-work. The librarian did not find the appropriate information, yet the face-work she displayed ensured that her behaviors at the end of the encounter were consistent with the expectations established at the beginning. The librarian was careful in several places to emphasize that she may not be able to find the information that the user requires. She did not have to do this explicitly but, rather, through the strategic use of small verbal acts, such as framing her utterances with words such as "tried" and "probably."

The user seems quite content with the interaction as interaction. She remarks to the librarian that the online help was "very convenient," and she ends the encounter with "alright thank you for your help, have a good day." The user has once more chosen to articulate her thanks and appreciation with a triple redundant message: "alright," "thank you for your help," and "have a good day." She does not complain that she did not receive the information she was looking for. Instead, she offers the librarian

other possible strategies, including reaching out to another librarian with expertise in business. It is significant that the user chooses to begin this request with the word "perhaps" as in "perhaps the business librarian would be helpful." The use of "perhaps" changes the tone of the request from something that would threaten the librarian (i.e., if the user had chosen to say "the business librarian would be more helpful") to something where the librarian's input is being sought as to whether or not changing librarians would be a good change (i.e., "perhaps we can do this, if you think it is a good idea"). The inclusion of a single word in a phrase yet again performs a broad range of face-work, both for the user and the librarian. It is possible that requesting another librarian to work on the information request might be seen as a threat to the librarian's face; that is, the user may be communicating that she does not see the librarian as competent or that she is not happy with the librarian's efforts. However, in the context of the conversation that preceded it, this particular verbal line does not work to communicate such attitudes, and the response of the librarian suggests that she did not receive the user's request in this negative light. Indeed, the librarian is supportive of the request and offers to look up the business librarian's e-mail address. This offer is made possible by the positive face-work established in the conversation so far. The interaction ends with the librarian saying "good bye and good luck." Again, the choice to say "good luck" is significant. It communicates support for and empathy with the user, as well as acknowledging that her efforts did not bring about the desired result. It also communicates to the user that her search process is ongoing, that her journey is continuing, and that their combined efforts in this interaction have helped in the progress of that journey.

Discussion

The transcript analyzed above reveals that VR encounters in a chat environment are extremely rich sites of interpersonal communication where users and librarians actively create and maintain face through the coordination of text-based verbal acts. Goffman's insights concerning the structural role of face-work in all social interaction is important to understanding the reference interaction because much of the library and information science literature's concern with this topic is focused on information retrieval and exchange [9, 10]. The purpose of an interaction with a reference librarian has traditionally been seen as goal directed, that being to obtain a piece of specific information or to provide help or instruction to library users, guiding them in locating needed resources. The success or failure of the interaction is typically judged with respect to the librarian's

ability to give the user the help required [10]. The same criteria of "success" can be applied to an interaction that takes place in the VR chat environment, namely, did the librarian give the user the information or help that was needed? However, in Goffman's terms, achieving the stated strategic goal of an interaction is not enough for that interaction to be considered successful. Goffman would maintain that such an interaction would be successful only if the participants emerged from it without feeling slighted, foolish, or offended, regardless of the success of finding a particular piece of information or needed resources. In other words, success would be achieved when both the user and librarian were able to establish and maintain a desired face. Users, as well as librarians, appear to greatly value how they are treated in addition to accomplishment of the encounter's goal to facilitate information discovery and use [5, 36].

Although there are clear similarities with FtF interaction in the performance of face-work in the virtual context, there are also important differences that deserve consideration. The first is that, unlike FtF interactions, participants cannot see the production of the chat messages. Garcia and Jacobs have termed this mode of communication "quasi-synchronous," as participants cannot experience the messages in the process of being made [37]. All they see is the end result of that process, the message as it appears on the screen. The chat interaction presents a situation in which participants work with messages that are detached from the mode of their production and the flow of messages does not occur in "real time." For example, the chat session analyzed in this article took place over a seventy-minute time span, which means there are significant amounts of time when the participants are not exchanging messages at all. Does the absence of communication constitute face-work? What relational messages are sent and received when nothing is happening? How do participants fill in these gaps?

These temporal communication gaps are prominent in virtual modes of communication, including live chat. In FtF interaction, the participants can see and hear each word as it is produced in the context and flow of the overall conversation. The nonverbal behaviors of the participants, including their facial expressions, their body language, and tone of voice, accompany and frame the verbal acts, surrounding what is said, both before and after. There are text-based representations of nonverbal communication in chat reference encounters, but they do not frame the verbal act in the same way [22, 30]. In an FtF interaction, one might "give a look," establish eye contact, and then deliver an utterance. There is a sequence in which these events happen, and the act contextualizes the message. In chat reference, the nonverbal substitutes are all in the same form (letters, words, grammatical expressions) and appear all at once. It is not that VR totally lacks a nonverbal component but, rather, that it lacks the sense of

flow that occurs when verbal and nonverbal acts work together in the production of an utterance.

The situation in chat seems to be something like the following—the presentation of brief verbal and nonverbal messages interspersed with communication gaps where nothing happens at all. What happens in the gaps? Well, there is the potential for much to be happening, and much of it not necessarily related to the interaction. Participants are free to multitask. Perhaps the user is checking e-mail or the librarian is browsing Web pages for appropriate information. Perhaps the user is trying out original search strategies. It is hard to believe she is sitting there twiddling her thumbs. When the librarian finally comes back online to talk to the user, the context of the preceding conversation may have been lost. The flow of the conversation has been changed.

Unlike FtF interactions, in live chat, spelling and punctuation are important elements of the communication act and have significance in the construction and maintenance of face. For example, there is a choice to be made concerning whether or not to send a message with or without typos, and this choice may have significance in the context of the interaction. Incorrect spelling may contribute to a perception of sloppiness, or the correction of a previously misspelled word may contribute to a perception of seriousness and attention to detail. Every aspect of the message's presentation has potential communicative value, whether the sender of the message intends it or not. Librarians concerned with putting forth their professional face often take more care in composing and typing replies than users do and sometimes have negative perceptions of users who make mistakes or use chat shortcuts [5, 29]. Fagan and Desai note that librarians who take too much care may be perceived as overly formal in chats and that even uncorrected misspellings "can make the librarian seem more approachable or less robotic" [23, p. 141]. Radford and Connaway [31] found that users are less formal than librarians in using chat speak abbreviations and in leaving misspellings uncorrected and recommend that librarians mirror the level of informality or formality of the user, as one would do in FtF communication (see [24]).

Conclusion and Future Directions

Although much can be learned from the VRS transcripts, many questions involving the participant's perception of these interactions remain unanswered. One limitation of dealing with transcripts that have been made anonymous to protect participants' identities is that the researchers are unable to conduct any follow-up interviews or surveys. Demographic data are absent, unless self-disclosed by participants (as above, when the user

discloses that he/she is a university student) or inferred from the session transcript. This disclosure is an important one as it frames the transcript as occurring within the context of an academic inquiry as opposed to other types of inquiry (for pleasure, work, etc.). Further research is needed that examines VR face-work within different situations and with users and librarians from a variety of types of institutions and personal characteristics [38].

One possible direction for future study is to examine the impact of cultural differences and stereotypes on face-work and deference. Fagan and Desai [23] argue that CMC levels the playing field since judgments based on race, age, and gender are more difficult to make since visual and other nonverbal cues, such as accent and tone of voice, are not available. However, one study that took an experimental approach found that manipulating the use of African American and Arab names, while asking the same questions, received lower service quality than with other ethnicities [39].

Building upon the analysis of 746 VR transcripts [29, 31] and the findings reported in this article, the authors are extending Goffman's work by closely examining VR interactions to see what causes some interactions to deteriorate into negative face-work. Marie L. Radford [40] analyzed VRS transcripts and offers guidelines for librarians who may encounter rude or impatient users. Jocelyn DeAngelis [41] examined a subset of the 746 transcripts to study negative face-work and conflict in VR. She found that librarians were responsible for negative face-work more often than users and that once conflict emerged, both participants contributed to its rise. This is a promising area of inquiry, and CMC researchers outside of Library and Information Science are also studying conflict and its management in online environments (see [42]).

This research has demonstrated how rich the theoretical framework of face-work is in analyzing the interpersonal communication found in chat reference transcripts. This analysis is part of a larger Institute of Museum and Library Services grant-funded project [29] that is working toward development of a theoretical model of reference success in FtF and virtual environments (see [37]). This effort has been advanced by the findings reported here. Further research and exploration into interpersonal aspects of CMC and in VR, in particular, will provide a deeper understanding of these interactions as well as the cost of violating politeness rituals. Ultimately, the authors believe that these insights will lead to more positive, successful interactions and will increase use and satisfaction on the part of users and librarians who engage in live chat and other VR encounters. Perhaps then the panicking student introduced in the beginning of this article, once having dared to try VR and having found the librarians to be

non–face threatening and pleasant (as well as knowledgeable and savvy) may be less leery of seeking professional assistance the next time and may be more likely to recommend the service to other potential users.

REFERENCES

1. Goffman, Erving. *Interaction Ritual: Essays on Face-to-Face Behavior.* Garden City, NY: Doubleday, 1967.
2. Chelton, Mary K. "The 'Overdue Kid': A Face-to-Face Library Service Encounter as Ritual Interaction." *Library and Information Science Research* 19, no. 4 (1997): 387–99.
3. Mon, Lorri. "Face Threat." In *Theories of Information Behavior*, edited by Karen E. Fisher, Sanda Erdelez, and Lynne McKechnie, 149–52. Medford, NJ: ASIST, 2005.
4. Radford, Gary P., and Radford, Marie L. "Libraries, Librarians, and the Discourse of Fear." *Library Quarterly* 71, no. 3 (2001): 299–329.
5. Radford, Marie L., and Connaway, Lynn Silipigni. "'Screenagers' and Live Chat Reference: Living Up to the Promise." *Scan* 26, no. 1 (February 2007): 31–39.
6. Dervin, Brenda, and Dewdney, Patricia. "Neutral Questioning: A New Approach to the Reference Interview." *Research Quarterly* 25, no. 4 (1986): 506–13.
7. Belkin, Nicholas J. "Anomalous States of Knowledge as a Basis for Information Retrieval." *Canadian Journal of Information Science* 5 (1980): 133–43.
8. Kuhlthau, Carol Collier. *Seeking Meaning: A Process Approach to Library and Information Services.* Littleton, CO: Libraries Unlimited, 2004.
9. Radford, Marie L. "Relational Aspects of Reference Interactions: A Qualitative Investigation of the Perceptions of Users and Librarians in the Academic Library." PhD diss., Rutgers—The State University of New Jersey, 1993.
10. Radford, Marie L. *The Reference Encounter: Interpersonal Communication in the Academic Library.* Chicago: ACRL, A Division of the American Library Association, 1999.
11. Watzlawick, Paul; Beavin, Janet; and Jackson, Don D. *Pragmatics of Human Communication.* New York: Norton, 1967.
12. Domenici, K., and Littlejohn, Stephen W. *Facework: Bridging Theory and Practice.* Thousand Oaks, CA: Sage, 2006.
13. Cupach, William R., and Metts, Sandra. *Facework.* Thousand Oaks, CA: Sage, 1994.
14. Markham, Annette N. "The Methods, Politics, and Ethics of Representation in Online Ethnography." In *The Sage Handbook of Qualitative Research*, 3rd ed., edited by Norman K. Denzin and Yvonna S. Lincoln, 793–820. Thousand Oaks, CA: Sage, 2005.
15. Connaway, Lynn Silipigni; Radford, Marie L.; and Williams, Jocelyn DeAngelis. *Engaging Net Gen Students in Virtual Reference: Reinventing Services to Meet Their Information Behaviors and Communication Preferences.* Proceedings of the Fourteenth Annual National Conference of the Association of College and Research Libraries, Seattle, March 12–15, 2009. Chicago: ACRL/ALA, 10–27. http://www.oclc.org/research/activities/synchronicity/presentations.htm.
16. Connaway, Lynn Silipigni; Dickey, Timothy J.; and Radford, Marie L. "'If It Is Too Inconvenient I'm Not Going After It': Convenience as a Critical Factor in Information-Seeking Behaviors." *Library and Information Science Research* 33, no. 3 (2011): 179–90.
17. Walther, Joseph B. "Interpersonal Effects in Computer-Mediated Interaction: A Relational Perspective." *Communication Research* 19, no. 1 (1992): 52–90.
18. Walther, Joseph B. "Impression Development in Computer-Mediated Interaction." *Western Journal of Communication* 57 (1993): 381–98.

19. Walther, Joseph B. "Computer-Mediated Communication: Impersonal, Interpersonal and Hyperpersonal Interaction." *Communication Research* 23, no. 1 (1996): 3–43.
20. Walther, Joseph B., and Parks, Malcolm R. "Cues Filtered Out, Cues Filtered In: Computer-Mediated Communication and Relationships." In *Handbook of Interpersonal Communication*, 3rd ed., edited by Mark L. Knapp and J. A. Daly, 529–63. Thousand Oaks, CA: Sage, 2002.
21. Dickey, M. H.; McLure, M. Wasko; Chudoba, K. M.; and Thatcher, J. Bennett. "Do You Know What I Know? A Shared Understandings Perspective on Text-Based Communication." *Journal of Computer-Mediated Communication* 12, no. 1 (2006): 66–87.
22. Walther, Joseph B., and D'Addario, Kyle P. "The Impacts of Emoticons on Message Interpretation in Computer-Mediated Communication." *Social Science Computer Review* 19, no. 3 (2001): 342–47.
23. Fagan, Jody C., and Desai, Christina M. "Communications Strategies for Instant Messaging and Chat Reference Services." *Reference Librarian* 79/80 (2002–3): 121–55.
24. Westbrook, Lynn. "Chat Reference Communication Patterns and Implications: Applying Politeness Theory." *Journal of Documentation* 63, no. 5 (2007): 638–58.
25. Carbaugh, Donal. "Ethnography of Communication." In *The Blackwell International Encyclopedia of Communication*, edited by Wolfgang Donsbach. Malden, MA: Blackwell Publishing, Blackwell Reference Online, 2007.
26. Hymes, Dell. "Models of the Interaction of Language and Social Life." In *Directions in Sociolinguistics: The Ethnography of Communication*, edited by John Gumperz and Dell Hymes, 35–71. New York: Holt, Rinehart & Winston, 1972.
27. Hymes, Dell. *Foundations in Sociolinguistics: An Ethnographic Approach*. Philadelphia: University of Pennsylvania Press, 1974.
28. Goffman, Erving. *The Presentation of Self in Everyday Life*. Garden City, NY: Doubleday Anchor, 1959.
29. Radford, Marie L., and Connaway, Lynn Silipigni. "Seeking Synchronicity: Evaluating Virtual Reference Services from User, Non-user, and Librarian Perspectives." Funded by the Institute of Museum and Library Services (IMLS), 2005–8. http://www.oclc.org/research/activities/synchronicity/default.htm.
30. Radford, Marie L. "Encountering Virtual Users: A Qualitative Investigation of Interpersonal Communication in Chat Reference." *Journal of the American Society for Information Science and Technology* 57, no. 8 (2006): 1046–59.
31. Radford, Marie L., and Connaway, Lynn Silipigni. "Reflections of Reference Practice: Analyzing Virtual Reference Transcripts." Paper presented the ALISE conference, Seattle, January 16–19, 2007. http://www.oclc.org/research/activities/synchronicity/presentations.htm.
32. Schegloff, Emanuel A. "Sequencing in Conversational Openings." *American Anthropologist*, n.s., 70, no. 6 (1968): 1075–95. http://www.jstor.org/stable/669510.
33. Laver, John. "Communicative Functions of Phatic Communion." In *The Organisation of Behaviour in Face-to-Face Interaction*, edited by Adam Kendon, Richard M. Harris, and Mary Ritchie, 215–38. The Hague: Mouton, 1975.
34. Malinowski, Bronislaw. "The Problem of Meaning in Primitive Languages." In *The Meaning of Meaning*, edited by C. K. Ogden and Ivor A. Richards, 296–355. London: Routledge, 1923.
35. Goffman, Erving. "The Nature of Deference and Demeanor." *American Anthropologist* 58, no. 3 (1956): 475–99.
36. Nilsen, Kirsti. "The Library Visit Study: User Experiences at the Virtual Reference Desk." *Information Research* 9, no. 2 (2004). http://InformationR.net/ir/9-2/paper171.html.
37. Garcia, Angela Cora, and Jacobs, Jennifer Baker. "The Eyes of the Beholder: Understanding the Turn-Taking System in Quasi-Synchronous Computer-Mediated Communication." *Research on Language and Social Interaction* 32, no. 4 (1999): 337–67.
38. Radford, Marie L., and Connaway, Lynn Silipigni. "Thriving on Theory: A New Model for

Virtual Reference Encounters." Paper presented at the American Society for Information Science and Technology annual meeting, Vancouver, November 6–11, 2009. http://www.oclc.org/research/activities/synchronicity/presentations.htm.

39. Shachaf, Pnina, and Horowitz, Sarah. "Are Virtual Reference Services Color Blind?" *Library and Information Science Research* 28 (2006): 501–20.
40. Radford, Marie L. "Interpersonal Communication in Chat Reference: Encounters with Rude and Impatient Users." In *The Virtual Reference Desk: Creating a Reference Future*, edited by R. David Lankes, Eileen Abels, Marilyn White, and Saira N. Haque, 41–73. New York: Neal-Schuman, 2006.
41. DeAngelis, Jocelyn A., "Friction in Computer-Mediated Communication: An Unobtrusive Analysis of Face Threats between Librarians and Users in the Virtual Reference Context." PhD diss., Rutgers—The State University of New Jersey, 2010.
42. Zornoza, Ana, Pilar Ripoll, and Jose M. Peiro. "Conflict Management in Groups That Work in Two Different Communication Contexts: Face-to-Face and Computer-Mediated Communication." *Small Group Communication* 33, no. 5 (2002): 481–508.