

UNCORRECTED PROOFS

6 Internet communication as a tool for qualitative research

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Qualitative studies of the Internet are quite diverse. In the early 1990s, Julian Dibbell published an ethnographically informed account and analysis of a rape in cyberspace (1993). In a popular chatroom space of an online community, one member utilized a program that controlled the text-based actions of two females present in the room. He then proceeded to write acts of violation involving these women, while they were powerless to do anything except turn off their computers, but their online characters continued to be violated online in front of many other people. The event had serious repercussions for the women violated and the community in general.

In the mid-1990s, Witmer and Katzman (1998) studied computer-mediated communication (CMC) users and the ways they compensated effectively for the absence of non-verbal and para-linguistic elements of conversation. Using emoticons, users convey humor, irony, and other emotions, supplementing the content of the message to enhance interpersonal connectedness.

In the late 1990s, Norwegian scholar Anne Ryen utilized the capacity of the Internet to conduct a long-term and long-distance case study of an Asian businessman in Tanzania. While she began by simply using the Internet as a tool for extending her reach, Ryen ended up also examining how the Internet influenced her personal and professional relationship with the participant (2002).

In 2003, Camille Johnson archived and analyzed nearly 600 web pages promoting anorexia as a lifestyle rather than a disease. She contends that this network of pro-anorexia relies on Internet technologies to build and reproduce their ideologies. Through cutting and pasting images and common texts, such as the "Thin Commandments," these women are actively constructing a global yet anonymous community, which appears to provide solidarity and helps to justify their choice to be anorexic.

These are four brief examples of distinctive Internet studies conducted by qualitative researchers. As a communication medium, a global network of connection, and as a scene of social construction, the Internet provides new tools for conducting research, new venues for social research, and new means for understanding the way social realities get constructed and reproduced through discursive behaviors. This chapter seeks to illuminate some of the

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possibilities as well as limitations of studying the Internet and/or using Internet technologies to augment qualitative inquiry.

DEFINING THE INTERNET

As an umbrella term that includes the associated terms cyberspace and the Web (World Wide Web), the Internet can refer to the actual network and the exchange of data between computers. Many people use the Internet in a seemingly straightforward way: sending and receiving personal email, accessing public information, downloading maps, viewing merchandise and making purchases online, and generally using the technologies for information gathering and transmission. Internet can also refer to social spaces where relationships, communities, and cultures emerge through the exchange of text and images, either in real time or in delayed time sequences. There is a long tradition of social interaction and community development based on the capabilities of the Internet. In short, the Internet can be perceived as a set of technological tools, a complex network of social relations, a language system, a cultural milieu, and so forth. The way one defines and frames the Internet influences how one interacts with Internet-based technologies, as well as how one studies the Internet.

Which of these metaphoric frameworks is most useful for qualitative researchers? What does the Internet contribute to the endeavors of qualitative researchers? The answers depend on the specific phenomena under study, the research questions asked, and the methodological approaches favored.

The following three frameworks can help illustrate how the Internet is typically conceptualized and therefore how the qualitative researcher might use or study it as a context in itself or use it as a tool in a traditional study.

- 1 As a *medium for communication*, the Internet provides new channels for people to communicate with each other, new channels for researchers to communicate with participants, and new venues for conducting research. Still primarily text based but increasingly augmented with moving and still images and sound, these tools both parallel and depart from traditional media for interaction. Thus, researchers can tap into emerging discursive forms and practices, either studying the way people use CMC in cultural contexts or utilizing CMC to interact with participants.
- 2 As a *network of computers*, the Internet collapses physical distances between people, thus creating the potential for collectives and collaborations not heretofore available. This network extends the potential reach of the researcher to a more global scale. The speed of transmission in these worldwide networks, along with the archiving capacity of computers, transforms time into a malleable construct. As individuals gain control over how time structures their interactions with others, researchers gain considerable flexibility in designing and conducting research. Understanding and utilizing time and notions of space in creative ways can significantly

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augment research practice, particularly in terms of collecting information for study.

- 3 As a *context of social construction*, the Internet is a unique discursive milieu that facilitates the researcher's ability to witness and analyze the structure of talk, the negotiation of meaning and identity, the development of relationships and communities, and the construction of social structures as these occur discursively. Whether the researcher participates or simply observes, the linguistic and social structures emerging through CMC provide the opportunity for researchers to track and analyze how language builds and sustains social reality.

Whether conceptualized as a communication medium, a global network of connection, or a scene of social construction, the Internet offers the qualitative researcher many means of observing and/or interacting with participants in order to study the complex interrelation of language, technology, and culture. Regardless of the general framework used, one can utilize the *Internet as a tool* for research topics unrelated to the Internet specifically (e.g., using the Internet as a convenient and anonymous means of gathering information on racial attitudes) and/or study the *Internet as a specific social phenomenon* (e.g., studying the way a special interest group develops and sustains community through the copying and pasting of group-specific images in a network of websites). Put simply, the Internet is both a tool of research and a context worthy of research.

As with any metaphoric framework, these three frameworks guide and naturally restrict the qualitative researcher's general approach and specific practices in using and understanding the Internet, allowing the researcher to focus on certain features or experiences at the expense of other possible views. Understanding the general features of these frameworks can help researchers make wise choices as they investigate potentially unfamiliar research environments or use design studies in which Internet technologies augment the collection or analysis of information.

THE INTERNET AS A MEDIUM FOR COMMUNICATION

I begin with the assumption that qualitative researchers analyze discursive practices in naturalistic settings to help build knowledge related to the construction, negotiation, and maintenance of human social practices and structures. Whether exploring culture writ large or a single conversation, we can say that most qualitative inquiry is grounded in information collected from observation, text, talk, and interviews (Silverman, 1997, 2001). At a very basic level, then, qualitative researchers engage in the process of studying communicative practices in context.

Inserting the Internet as a medium for interaction between researcher and participant or studying the Internet as it mediates interactions among subjects in the field changes the research scenario in that the Internet influences

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communication practices in ways that are simultaneously mundane and profound.¹ Even as one will note similarities between many features of the Internet and earlier media for communication, such as letter writing, telephone, telegraph, post-it notes, and so forth, certain capacities and uses of Internet communication uniquely shape a user's perceptions and interactions. These influences extend beyond the interpersonal to the social and cultural; outcomes of these communication processes have the potential to shift sensemaking practices at the cultural level. Essentially, the Internet mediates – and in some ways moderates – interactions and the possible outcomes of these interactions at the dyadic, group, and cultural level. Equally, Internet technologies have the potential to shift the ways in which qualitative researchers collect, make sense of, and represent data.

From “information transmission” to “meaning-making”

The Internet is a medium that transmits information virtually instantaneously between computers, individuals, and groups of people. Because of this, information transmission has become a defining characteristic of the Internet and the term communication is often conflated with the channels or media through which message are transmitted. However, by shifting one's view from this conduit model to a slightly different view of communication as a contextual process of meaning-making, other issues become salient for the researcher. The beauty of the Internet is the way in which it is interwoven into the sensemaking process at various levels. Interfaces on the surface of the screen facilitate certain interpretations of the medium, exerting influence on the way the user perceives the communication process. Below the surface, the content of the information exchanged is made sense of individually within a specific context, adding several variables in the complex relationship among self, other, and technology. Individual negotiation of this relationship interacts with others' negotiation processes.

I have argued elsewhere (Markham, 1998, forthcoming) that people tend to experience the Internet in distinctive ways. Some conceptualize the Internet as only a tool, while others perceive it as a place. Still others experience the Internet as a way of being in the world. These conceptualizations result in very different uses and interactions with Internet-based technologies. Although not all individuals fall into these neat categories, this heuristic of tool, place, and way of being is a useful starting point for considering how users and, by extension, qualitative researchers tend to (or can) conceptualize and approach the Internet:

- 1 *As a tool for communicating*: One might naturally or deliberately conceptualize the Internet as a tool for retrieving and transmitting information, extending one's physical reach to connect with others, enter and cross between multiple cultural fields, or performing multiple tasks simultaneously. From this perspective, users tend to perceive CMC in a straightforward way as a convenient addition to traditional media for communication. Email might

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be simply a new form of writing letters or leaving short notes for people without the scraps of paper. The Web might be a means of finding and purchasing products and services without leaving one's home. Just as a hammer augments our physical strength, CMC can be perceived as a tool that extends some of our senses out to a global level. For researchers, this tool can be utilized with great benefit. Mann and Stewart (2000) provide an excellent and comprehensive review of methodological and ethical considerations under the umbrella of Internet as Tool.² In addition to using these new tools for exchanging information, interacting with participants, or collecting discourse, qualitative research usefully explores the tools themselves as well as social interactions afforded by these tools.

- 2 *As a place for communicating:* Many users and researchers conceptualize the Internet as a place as well as a tool. From this perspective, the Internet describes not only the network that structures interaction but also the cultural spaces in which meaningful human interactions occur (Jones, 1995). Internet interactions have no literal physical substance, yet they can be perceived as providing a visceral sense of presence (Soja, 1989) and having dimension. Novak (1991) tells us that once we discover space in information, we are freed from the constraints of architectures that occur in standard three dimensions. Internet communication can be seen as "liquid architecture," which "bends, rotates, and mutates in interaction with the person who inhabits it" (Novak, 1991). Interactions in these sensed dimensions are not merely meaningful but can have genuine consequences for participants, as exemplified by the text-based rape mentioned at the beginning of this chapter (Shields, 1996; Dibbell, 1993).

In this frame, the Internet can be a tool but is also a location where one can travel and exist and wherein one's discursive activities can contribute directly to the shape and nature of the place. Researchers can take advantage of these sensed dimensions to create interaction spaces that facilitate particular types of engagement with participants. Alternately, and perhaps more present in the past decade of research in this area, researchers have studied these sensed dimensions as cultural contexts (see, for example, Baym et al., 2000; Jones, 1995; Kendall, 2002; Markham, 1998; Turkle, 1995). Using basic terms, one can study the space itself, the interactions within these places, and the relationships and communities formed through the interactions. In my own work (Markham, 1998), the Internet is an umbrella term for those social spaces constituted and mediated through computer-mediated interactions. In addition, Jones (1995, 1999) provides several volumes in which authors examine Internet as Place.

- 3 *As a way of being in the world:* One can also conceptualize the Internet as a way of being. In this sense, Internet-based technologies provide a means for reinscribing, reconfiguring, or otherwise redefining identity, body, and self's connection with other. For example, a user might have two online personae with two distinct personalities and gender. Recently, scholars have argued compellingly that the performance of self through CMC has allowed transgendering to flourish, both as a concept and as a way of life,

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because users can experience a different gender without the necessity of cross-dressing, makeup, hormones, or surgery (Future of Feminist Internet Studies, 2002). This is a good example of the extent to which users can perceive the Internet as a meaningful way of being, whether completely separate from or inextricably intertwined with their physical lives.

The focus of research from this perspective shifts away from looking at the Internet as a tool or a cultural space and moves toward the ephemeral territory of exploring the ways individuals in a computer-mediated society construct and experience themselves and others because of or through Internet communication. This conceptualization crosses many disciplines and often studies the intersections of social identity, body, and technology (see, for example, Benedikt, 1991; Cherny and Weise, 1996; Featherstone and Burrows, 1995; Sondheim, 1996; Stone, 1996; Turkle, 1995).

It is essential to consider the various ways in which people use and make sense of the Internet as a communication medium, because sensemaking practices differ widely. One might make sense of it as a tool, focusing on the ability of the Internet to make information seeking and retrieval more efficient and effective. Another might perceive the Internet as a place, focusing on the cultural boundaries created by interactions rather than on the channel for communication. These different perceptions can influence greatly the way people utilize and talk about the Internet. As well, the researcher's own perceptions will influence the way he or she observes and interprets discourse in online contexts. Being aware of the distinctions can help one better understand the context.

THE INTERNET AS A GLOBAL, INSTANTANEOUS NETWORK OF INTERACTION

As a tool for connecting with participants and collecting data, the Internet offers many interesting possibilities. So too does the Internet provide a means of understanding better the way that language constructs and maintains particular social realities. The Internet continues to provide environments within which researchers can interact with or gather information from participants. Whether one sets up an environment in which to interact with participants or observes naturally occurring discourse in discussion boards, weblogs, real-time chat environments, email exchanges, and so forth, one must consider the fundamentals of how people are communicating with one another in these environments and how CMC can influence interaction tendencies and outcomes. One can also explore means by which to utilize creatively certain environments to truly augment the way we come to know the subjects of our research and better understand the complexity of language and social reality. Here, I examine three essential aspects of Internet communication to consider in the development of any qualitative research endeavors related to the Internet:

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- 1 Geographic dispersion
- 2 Temporal malleability
- 3 Multiple modality

Internet as geographically dispersed

This capacity of the Internet is, for many of us, taken for granted in our everyday communication with others. We can disregard location and distance to communicate instantaneously and inexpensively with people. Logistically, the distance-collapsing capacity of the Internet allows the researcher to connect to participants around the globe. The researcher can include people previously unavailable for study. This not only increases the pool of participants but also provides the potential for cross-cultural comparisons that were not readily available previously for practical and financial reasons. In a world where potential participants are only a keyboard click and fiber optic or wireless connection away, distance become almost meaningless as a pragmatic consideration in research design. Ryen (2002), for example, was able to use email to conduct a long-term interview study with an Asian entrepreneur in Tanzania from her home location in Norway. In this case, the Internet serves as an extension of the researcher's and participant's bodies.

Research can be designed around questions of interaction and social behavior unbound from the restrictions of proximity or geography. Participants can be selected on the basis of their appropriate fit within the research questions rather than their physical location or convenience to the researcher. Hine (2000) argues that the ethnographer's notion of cultural boundary must be reconsidered given this capacity of the Internet. Rather than relying on traditional, geographically based means of encapsulating the culture under study, such as national boundaries or town limits, ethnographers might find more accuracy in using discourse patterns to find boundaries.

Senft's work (2003) exemplifies this reconsideration of cultural boundary from geographic to discursive. Senft studies the sensemaking practices of "webcam girls," a project that would be highly unlikely ten years ago, for many reasons. In this long-term project, Senft accesses websites wherein women display many – and sometimes all – of their private activities through the use of single or multiple video cameras in their homes. Senft studies the video displays themselves and talks to several women about their use of the Internet to express self or make personal and political statements. Because of the capacity of the Internet as a network of connections, participants are selected because they engage in this activity, regardless of where they live in the world. Not only does Senft have access to archived activities of these women, but also she can sustain contact with these participants over long periods of time, which allows her to study the way their perceptions and displays of self change over time.

The global potential of this medium is often conflated with global reach, an achievement that relies on global access. Popular media accounts have made wildly speculative and promising predictions about free global access

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to the Internet (see, for example, the many articles written in the 1990s by George Gilder for *Forbes Magazine*). Current statistics fall far short of the predicted mark. Partly this is because the pace of technological development far exceeds the infrastructure required for widespread and inexpensive high-speed access. Even in those countries at the top of the list, diffusion of this technology into the home has not exceeded 67% (ITU, 2002). For qualitative researchers seeking to conduct truly global studies, this medium therefore remains inadequate. More generally, in speaking of the issue of access as a double edge of technology, researchers should remain conservative in their expectations that the general populace accesses and utilizes Internet-mediated communication technologies in the same way and degree as those in academically rich contexts.

As a consequence of geographic distance, the participant can remain anonymous. This has obvious advantages for the qualitative researcher. Anonymous interaction environments may allow participants to speak more freely without restraints brought about by social norms, mores, and conventions. This feature is useful in studies of risky or deviant behaviors or socially unacceptable attitudes. Johnson (2003) explores the way the "pro-anorexia" movement was born and evolved online. Rather than talking face to face with participants, she examined their discursive practices in websites they had created. The infrastructure of the Internet allows pro-anorexics to express their ideas and values without censure and without connection to their actual identities. They may have provided this information to the researcher in focus groups or in interviews, but because of the stigmatized nature of this eating disorder, Johnson's task as a researcher would have been much more difficult; in this case, she was able to access over 500 sites (Johnson, 2003).

Bromseth (2002) studied the sensemaking practices of Norwegians exploring lesbianism and bisexuality. Again, although she could have obtained these data in face-to-face settings, it was unlikely that she would have obtained such a rich and diverse sample, partly because the population of Norway is very small and therefore residents may feel less anonymous in general (Bromseth, 2002). Within a culture of heterosexual normativity, the likelihood of involving face-to-face participants in the manner Bromseth achieved via the Internet is unlikely.

Viewed pragmatically, anonymity and geographic distance ease certain ethical considerations: the participant has many outlets to withdraw from the study and the likelihood of maintaining confidentiality is high. The other side of this, of course, is that the researcher does not know who the participant is, at least in any embodied, tangible way, which for some researchers raises concerns about authenticity. The issue of authenticity has been a sticking point for many Internet researchers. On one hand, interacting with participants in anonymous environments results in the loss of many of the interactional qualities taken for granted in face-to-face interviews and observations. This absence of physical non-verbal information may constitute a meaningful gap of information for the researcher who relies on these as a way of knowing.

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On the other hand, authenticity is questionable in any setting, online or offline, and the search for authenticity presumes not only that people have real selves to be revealed, but also that the authentic reality of a person is revealed by the person's physical presence (see Silverman: this volume). The Internet appears to engender and highlight the dilemma about authenticity for researchers. First, one's online identity need not correspond to physical markers. If a researcher seeks to understand the physical person yet relies on anonymous CMC as a way of discerning this, authenticity will arise as a problem. Second, it is difficult to "read" participants online. If an interviewer seeks to know the participants in depth but does not spend enough time to get to know them and understand their idiosyncratic discursive tendencies, authenticity may be considered a problematic issue.

Mann and Stewart (2000) take up the question of how researchers have approached the problematic issues of anonymity and authenticity in detail (208–15), noting that solutions must be both pragmatic and case specific. Regardless of whether one believes authenticity is possible at all, research design must fit well with the questions being raised.

Internet as chrono-malleable

As well as collapsing distance, Internet technologies disrupt the traditional use of time in interaction, with several intriguing results for qualitative researchers conducting interviews or focus groups. Because Internet technologies accommodate both asynchronous and synchronous communication between individuals and groups, the use of time can be more individually determined. Though an individual's choice may be somewhat limited by the specific technology used, the Internet marks a significant shift from previous technologies for interaction, which forced simultaneity (telephone), took a long time (letters), or provided only a very limited middle ground (answering machines, facsimile transmission of documents).

This feature of Internet technologies has several pragmatic advantages for the qualitative researcher. Complications regarding venue, commuting, and scheduling conflicts are less restrictive when interactions occur on the Internet. As with the distance-collapsing capacity of the Internet, the elasticity of time is often taken for granted in our everyday interactions. We rely on our ability to send a message at times convenient to us, secure in the knowledge that the recipients will access and read our messages at times convenient to them. Beyond this convenience, Internet communication is persistent; conversations can extend over long periods of time, picking up where they left off with greater ease than in face-to-face settings, where memory instead of archived text aids in the reconstruction of prior events. The ability to archive accurately and trace precisely the history of conversation has been used by researchers to conduct longitudinal studies with individuals (Danet, 2001), to follow the development of groups over time (Bromseth, 2002), and to refocus attention and discourse about certain events that otherwise would degrade in the recesses of organizational memory (Baym, 2000).

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In the midst of a conversation, synchronous or asynchronous, users appreciate the opportunity to reflect on a comment or message before responding and, if the communiqué is sensitive or important, to review the message before sending it. In the research setting, these taken-for-granted capabilities can significantly enhance both the scope of a study and the collection of information from participants. In 1997, as I was conducting interviews online, it became clear that the questions asked could be carefully considered and rewritten during the interview. In one interview, I began to write, "Would you describe yourself as an Internet addict? – Realizing that the outcome of this question was limited by its format, I erased this question and modified it to read: "How would you define an Internet addict?" Whether the latter was an excellent choice is of less importance to this discussion than the fact that it is a better question than the first, which was both leading and close-ended. Even in a synchronous environment, I had the opportunity to reconsider my message and reformat my query.

Backspacing and editing are made possible by stopping time during an interaction. Pauses and gaps are expected in CMC because of speed of connection, interruptions, and the fact that many users are multitasking. In asynchronous media such as email or threaded discussions, these pauses can be quite long, perhaps even weeks or months, yet can still be considered pauses rather than stopping points. Herring discusses this as "persistent conversation," whereby participants understand and work around the disjunctive and fragmented structure of interactions (1996, 1999).³

Not only is it useful to consider the way that time can be utilized as a malleable construct in qualitative inquiry, but also it is necessary to consider that as modes of interaction continue to merge, the technologies for communication increasingly saturate our everyday lives (Gergen, 1991). If we take seriously the collapse of time-space distinctions (Giddens, 1991) in the "knowledge age," these become not simply pragmatic but ontological considerations.

Internet as multi-modal

Communication via the Internet occurs in multiple modes, alternately or simultaneously. Whether sponsored by software and hardware, a person's individual use, or the emergence of dyadic or group norms over time, these multiple modes operate on the sensemaking practices of users. Consequently, the issue of the Internet as multi-modal becomes meaningful when designing interactions in the research context.

In technical terms, interaction can be synchronous, asynchronous, anonymous or non-anonymous. One can use text, graphic images, sounds, and video, exclusively or in combination. Programs can simulate letter writing, passing notes, or simply display information without few contextual features, or programs can provide a sense of shared space.

In interactional terms, communication via the Internet involves much more than accomplishing the mechanics of these multiple modalities or learning the

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specific software or hardware: contextual aspects of being with others must be added to the process. We adapt and use technologies to suit our needs, whether or not these uses are those intended. For example, users tend to employ more than one communication technology at once: surfing the Web simultaneously as email is being downloaded; additionally, at any time an Instant Message might pop up onto the screen, occasioning a typed comment within a new or continued conversation. On the surface, this is multitasking; beneath the surface, social reality is both perceived and constituted through the interplay of time, spatiality, technology, information, and the other.

Even in straightforward information transmission environments, which were not designed to facilitate a sense of presence, programs can evolve into shared spaces as the meanings, relationships, and communities created by the interactions transcend the limitations of the programs in which people are interacting. During an online focus group discussion conducted by me, participants used multiple technologies simultaneously in ways that complicated data collection but facilitated in-depth participation levels. The environment was a synchronous chatroom, which allowed for pseudonymous real-time participation among seven people. Each person's comment would be posted as soon as he or she clicked the send or enter button. Messages scrolled up the screen as the conversation progressed. In one session, two participants who had previously been active contributors were not talking as actively as others were. Because of the programmed environment we were using (Internet Relay Chat), I was able to send one of them a request to talk privately, which, when accepted, opened a new screen that appeared only on our two desktops, in which we chatted privately. The participant told me that she and the other non-talkative participant had actually been chatting, as we were, in a private room, discussing one of the group's earlier issues in depth.

My discussion with this participant was similar to whispering during a group conversation, except that exchanges in the larger group were not disrupted. Her private chat with another participant was also an extended side conversation, one that added valuable data and could not have occurred unobtrusively in a physically present focus group setting. Of course, the data must be captured and archived, which requires that participants be well informed enough to realize this and tell the researcher that they are producing valuable information when they engage in these whispered – and private from the researcher – conversations.

In another instance, when a participant appeared to stop participating, I found out, using this same technique, that the participant had been offended by an earlier comment made by another participant. He stated that he was no longer certain that his contributions to the conversation were desired, and that perhaps he should withdraw from the study. By talking with him about this in a private, online discussion, I was able to convince him that the offending comment was not directed at him, and that his contributions were valuable. Certainly, this could have happened in the course of a physically located focus group, but our private sideline conversation defused the

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situation, eased the participant's misgivings, and allowed the larger group conversation to continue while we were sorting this out. The participant re-entered the conversation and later told me he talked about the offending comment with the person who wrote it, with positive results. These examples illustrate how a researcher can take advantage of multi-modal features of Internet communication. Allowing multiple conversations to happen at once, when these do not negatively affect the main group discussion, can add depth and texture to the discussion.

Whether the technology provides the multiple modes or the users adapt technologies to a multi-modal way of thinking is less important than the fact that this multi-modal function powerfully influences the way users perceive contexts and interact with one another. For researchers, this has great potential for augmenting traditional approaches and creating previously impossible methods of interacting with participants.

Control over the communication process

Consider the complex combination of oral and written styles, the choice, granted by anonymous software, to create alternate identities online, and the ability to stop time in the middle of any interaction. These means of being in the world with others are associated with a feeling of greater control: control over the content and form of the message, control over the presentation of self, and control over others' perceptions of the self. The issue of control warrants discussion as it is an inevitable part of doing qualitative Internet-based research.

Internet communication can provide the researcher and participant with the opportunity to reflect on and revise their statements before actually uttering them. Most participants interviewed by me online believe that the ability to edit affords a higher degree of control over the meaning of the message and the presentation of self. Whether or not the producer of the message can actually control the presentation of the self through careful editing is not as relevant as the faith placed in editing.

Jennifer, a participant in an online interview, trusts that careful attention to the construction of her words will give her a higher degree of control over the conversation. When asked how she tends to interact online, Jennifer replies (the programmed environment in use displays the responses as follows):

Jennifer says, "I would say that I become very attuned to *what* is being said and *how* it is being said – particularly in a synchronous conversation and likewise attuned to how/what I am saying as part of that conversation."

Jennifer says, "I find myself thinking a lot about what is the "right" thing to say . . . trying to make sense of and interpret the mood/attitude in addition to the words, such that I can be sensitive and focused in what I am saying in reply."

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Jennifer says, "Obviously, I have the choice to type in what I want to say to you . . . as well as how I want to say it to you . . . i.e., language choice, depth of explanation, smiling, etc."

Jennifer suggests, "For example, you may or may not have noted that I insert "actions" into what I say- - :) , or things like "X explains" before launching into what I have to say, or emphasis around certain words with asterisks,"

Jennifer continues, "things that I've found tend to humanize the conversation."

Jennifer believes they guide both where she's going and where the listener is going.

Jennifer says, "I think it's very helpful . . . I think it demonstrates more attention to the quality of the interaction between X# of persons who are participating in the interaction."

Jennifer has always found it helpful to be very descriptive in on-line environments, whether synchronous or asynchronous, b/c it gives people more to work with . . . a fuller, more rounded sense of your thoughts, feelings, environment, etc.

To the point of speaking of herself in the third person, Jennifer uses a variety of methods in the text to achieve what she believes to be conversational certainty. This excerpt is instructive in several ways. First, it allows us to see how careful attention to the form of the text can help or hinder comprehension and sponsor certain reactions. Even if one does not grant this level of control by the producer, the keen observations Jennifer makes about the written structure of sentences can remind the researcher that understanding between interviewer and participant (or between participant and participant) is an achievement that might be aided by careful attention to form of the message as well as content.⁴

Second, this excerpt gives us insight into the way people might perceive Internet communication. Some will pay close attention to the use of language in this medium. Others will pay very little attention to form or content. To provide contrast, here is a typical excerpt from a different participant in the same study. Beth, who spends up to fifteen hours a day in her online community, is responding to the question: "Why do you spend so much time online?" We pick up the conversation mid-stream:

Beth says, "yes but I think I like it this way because I can just type what comes to mind and not have to think about it as much thinkgs seem to be communicated better through my fingers then my voice"

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Beth says, "I can type what i'm feeling better then I can voice my;m"

Beth says, "feelings it just comes a little easier seeing things to answer then hearing and having to answer I like to worrk with my hands a lot"

Beth says, "it's just what your typing that counts"

Beth says, "this is a place where you can get to the real person and not have to overcome the obsticle of looks and having people judge you by your appearance insteaofd of the real you here your real self comes inside the things your wrte"

Like Jennifer, Beth believes she can better control how others perceive her in this medium. In Beth's case, the control is not in the form of the message but in the meaning "inside the things your wrte [*sic*]." In contrast to Jennifer's typical writing style, Beth's grammar and spelling are, by any standard, terrible and most likely not deliberate. These errors can be a result of typing fast, not editing the text, or being unaware of the errors. Regardless, the example demonstrates an important point for researchers: discursive practices in this medium are wildly different; form can be unnoticeable or glaring; and content cannot be disconnected from form if the form is glaringly disjunctive from traditional writing norms. The researcher cannot help but be influenced by the form of the message, which in turn influences the interpretation of the meaning of Beth's words. Even as Beth believes that she communicates better in this form than through her voice and that people reading her words will see through the form to the real self, the question arises: "How well does she represent her self with this use of language?" These examples are good reminders that participants are likely to have different habits, skill levels, and experience using Internet communication. The same might be said of spoken language, of course, but not with this same degree of difference among speakers one would typically classify in the same category (in this case, native speakers of English, at least high school educated, self-described heavy users of CMC). The Internet intensifies these issues for researchers.

The text is a fundamentally different space of observation and interaction than sitting next to the participant or observing interactions in natural settings. Careful reflection is necessary to make sense of how we researchers are engaging in or observing these interactions. In most cases, it is recommended to treat each case individually and apply appropriate standards, practices, and procedures to each. Even so, it is impossible to predict how individual participants define, use, and respond to specific computer-mediated media and contexts. Take for example this series of benefits about synchronous, anonymous, text-based CMC, cited by several users participating in a study. These benefits are mentioned in response to the question: "Why do you like using this medium to interact with others?"

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"I can write who I truly am clearly and directly by editing."

"I can edit the text and control how I present myself."

"Through editing, I have a lot more control how others perceive me."

"I can be anything and anyone I want to be in the text."

A simple question about benefits of the medium yields multiple interpretations of how text functions in relation to self and self's relation to other. In this set of responses, respondents indicate that they (the writer/sender) control the message, thereby controlling the outcome. As a group, this set of responses tells us these users perceive that they have a high degree of control over the way they are perceived by others because they control the outgoing message. By contrast, consider the statements below, uttered by the exact same participants in response to the question: "What are some of the limitations of this medium for you?"

"In this medium, nobody knows who I really am."

"I can't tell who other people really are if I just have their texts."

"It's difficult to know the reality of somebody if their writing doesn't affect you or speak to you."

"It is a game; everybody wears masks."

The contradictions in these responses are curious. Participants indicate that the benefit of the medium is that the text conveys an accurate or desired sense of self to the other in the interaction (the only message is the message sent). At the same time, however, they also indicate that one of the limitations is that the text cannot convey an accurate or real sense of the other to the self in the interaction (the only message is the message received). Whether this simply means humans operate from an essentially self-centered position is unclear; none the less, this example demonstrates at least two considerations for researchers using the Internet to interact with participants. First, people are still adjusting to Internet media and have distinctive and possibly unknown ways of performing the self through these media. It is hasty to presume all individuals use Internet media in similar ways; information collected from two people using the same medium may yield incomparable results because of the way they perceive the medium, a problem that can go unnoticed because it falls outside the researcher's careful planning and consistency in design. Second, as researchers using these media, we are likely to make these same assumptions about how texts operate in nameless and faceless settings. Does the researcher believe that the only message is the message sent? Conversely, does the researcher believe the only important message is the message received? On the surface, these may seem simple questions with

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straightforward answers, but even with careful reflection, it is easy to believe that our own utterances are clear and unproblematic. It is valuable practice, whether working in Internet settings or not, to engage in critical self-reflection about how questions are being asked, what presumptions are being made when observing focus groups, and how our own preconceived notions of the communication process shape our interpretation of everyday interactions.

Push versus pull modes

Anyone who markets products on the Web or who teaches courses online can verify the importance of using the right media for the right purpose. Push/pull considerations are vital to whether or not the intended recipient notices or attends to the message. *Push* describes a technology that pushes the information to an individual's computer or handheld device. This term also refers to the extent to which users feel as though the message is pushed toward them, requiring attention to read, trash, file, or otherwise *do* something with. Email is a good example of push technology; messages arrive in a list and, putting filtering programs aside for the moment, require attention and action. Other technologies can collect and push news items from various sources to one's desktop, text messages and weather reports to one's mobile phone, or flight schedule delays to one's PDA.

Pull technologies require a more proactive approach by the user: the idea of the information is so interesting, important, or intriguing that the user will be compelled to seek out, find, and attend to the message. Although distinctions between push and pull technologies are becoming more and more blurred by the evolution of various media and usage patterns, the concept is useful as an initial categorization tool for the researcher.

The following example from a teaching experience illustrates the importance of push/pull considerations in designing an effective communication environment for active group participation (focus group) and collaborative learning. In a recent course focused on hypertext theory and design, students were required in one assignment to redesign the Internet-mediated aspects of the course. I intentionally designed the course to overwhelm the students initially with multiple media choices and requirements for communication. Each week, students were required to log into a password-protected website where they could find links to the syllabus, schedule, and announcements. They were also required to use a threaded discussion board accessed from this site. In addition to this Web-based system, they were expected to check their university-assigned email account, where I sent them both individual and group (listserv) messages. Many students did not use their university-assigned email account, which meant they must begin to either check their university account or notify me to change the default address I used to send email. Finally, each student was required to set up a blog (Web-based journal) to post their responses to readings and other thoughts related to class. They were expected to read and link to other student's online journals in addition to mine.

As planned, too many different modes of communication vied for the students' attention in this configuration; and they quickly realized this prob-

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lem. The remainder of the course involved solving the problem to meet the goal of building and maintaining a productive learning community. Students examined, among other things, the push versus pull aspects of various communication choices. When some students suggested, "Let's get rid of email and just use the password-protected website for all information," others responded that this would require unsolicited attention to the course, a proactive approach that could not be presumed. In addition, students aptly noted a key usability issue: before the student could even view the front page of the course, the password-protected site required three keyboard events, six clicks, and effective navigation through three screens of information. A public website with easily accessed information would be easier, one bright student said, "but then we would still need to remember to actually go there." After several weeks of lively debate over various issues, the students finally decided on the following elements:

- Public web page, which all students agree to keep as their browser's default Home Page for the duration of the semester. Most relevant information appears on this first page.
- Running chat board on the web page for general student conversation and student announcements (similar to Instant Messaging software).
- Threaded discussion on the front page of the site for more serious, lengthy, course-content-related discussions.
- Links to all student web journals for those who are interested.
- Links to the course syllabus and schedule (transformed from documents to HTML documents for speed of transmission and ease of reading).

In addition to this single web page serving as the course site, students believed that both the listserv and email should remain active. To a person, they hypothesized (rightly or wrongly) that any information sent from the professor to the student is vital and should be pushed into the student's immediate awareness.

This extended discussion of a single assignment in an academic course underscores the considerations that go into the design of a communication environment. In parallel fashion, research environments utilizing various Internet media must undergo similar evaluation, as each decision concerning participant communication makes a difference. Testing various mediated environments can help one discern which is most suitable for the type of participant. Collecting life histories via email may be satisfactory, but allowing participants to create ongoing life history accounts on websites that they can design with color and images may yield richly textured results. For an interview study, real-time chatrooms may provide anonymous participation and spontaneous conversation, but email interviews may be better suited to participants who have busy schedules and desire time to consider their responses. The key is making a conscious and measured effort to match the mode to the context, the user's preferences, and the research question. If one is studying naturally occurring data, this issue may not be salient to the

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process of collecting data, but because push/pull variables influence interactions within the contexts under study, knowledge of the possibilities and limitations inherent in CMC design can aid in the process of analysis and interpretation.

The overriding message throughout this discussion is that reflection and adaptation are necessary as one integrates Internet communication technologies into qualitative research design. Adapting to the Internet is one level of reflexivity; as we use new media for communication, the interactional challenges and opportunities can teach us about how to use these methods. Adjusting to the individual is another level; as in face-to-face contexts, a skilled researcher will pay close attention to participant conceptualization and utilization of the medium for communication. Without having access to physically embodied non-verbal features of interaction, the researcher may want to deliberately address these concerns with the participants so they may aid in the interpretation of discourse. Alternately, the researcher may want to adjust his or her expectations of these possibly unfamiliar environments. If researchers cannot adjust to the particular features and capacities of Internet technologies, they may miss the opportunity to understand these phenomena as they operate in context. As Gergen (1991) notes: if we are to survive, flexible adaptation and improvization will become our norm.

Along these same lines, Carvajal (2001) reminds us that any decision made about method should derive from a conceptual and epistemological level rather than from a procedural level. In discussing computer-aided discourse analysis software (CAQDAS) training issues, Carvajal stresses that anyone using computer-assisted programs to analyze data should incorporate "critical thinking instead of mechanical thinking" (section 3.2). "To know a software is to know about the methodological implications its use has for qualitative methodology" (section 3.2). This thinking applies also to the use of the Internet in gathering information for analysis.

THE INTERNET AS SCENE OF SOCIAL CONSTRUCTION

The Internet is a network of computers that allows us to create networks of connection. At a basic level, one can study the connections themselves, or one can use the connections to conduct studies. However, remaining at this simplistic level of binary distinction obscures the complexity with which the cultural and technological aspects of the Internet are interwoven in constructing possibilities for being with others in everyday social life. Although we might consider the Internet merely a conduit for information transmission, the content and resultant social contexts of these networks and **transmissions** are also fruitfully conceptualized as meaningful phenomena themselves. Through the deceptively simple process of exchanging messages, complex and transformative understandings of self identity, other, and reality are negotiated. As more and more people mediate their social interactions in

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this confluence of technologies and subjectivity, close attention to the way texts operate is crucial.

The Internet is not novel in that individual use, habitual practice across groups, and technical capacities constitute patterns of temporal interactions, building social structures that may become concrete realities. These processes describe any language system. The Internet is unique, however, in that it is possible to view these processes of social construction as solely discursive, primarily textual interactions. Watson reminds us that texts are more than conduits for the transmission of meaning. He critiques a common conceptualization of texts:

Texts are placed in service of the examination of 'other', separately conceived phenomenon. From this standpoint, the text purportedly comprises a resource for accessing these phenomena—phenomena existing 'beyond' the text, as it were, where the text operates as an essentially unexamined conduit, a kind of neutral 'window' or 'channel' to them. (1997: 81)

Referring to Rose's (1960) notion of the world as a "worded entity," Watson emphasizes that texts mediate social interaction and build social organization. Although we may not be in total agreement as to what comprises text, Watson's point (a point made also by Heritage in this volume) is well taken in considering the centrality of texts in the negotiation and construction of meaning. As a context almost entirely comprised of text, the Internet is an exciting location of social meaning and organization (defining text broadly as discursive practice). One can also usefully recall Prior's discussion of Foucault's approach to the study of culture (this volume), whereby the text becomes the focus of qualitative exploration rather than the always elusive "knowing subject."

Internet technologies allow qualitative researchers to study the social construction process in a very active way. Because it can constrain, hide, or minimize the visible products of interaction (read: bodies, clothing, accent, mannerisms, and geographically based social structures), the Internet allows focus specifically on the building blocks of culture at the basic level of interaction.

Kendall (2002), for example, spent several years conducting an ethnographic study of an online MUD community called BlueSky, analyzing the discursive foundations and negotiated features of this community. As a consequence of studying the software settings as well as individual conversations, Kendall is able to make interesting arguments about how gender is performed. In MUD environments, for example, gender is a choice one makes by setting a command. One can choose from a variety of genders, including male (he, his), female (she, her), neuter (it, its), spivak (e, er), royal we (we, our), and so forth. After the user makes a choice, certain texts produced for other members show the corresponding pronouns. In BlueSky, some members of this online community use the gender settings for joke purposes, so that, for example, when someone asks the system what gender

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the other participant is, the preprogrammed response might read, "Not lately," or "No, thank you" (35). BlueSky members might make gender a relevant feature of their persona or not, and those whose gender is typical (male or female, in this case) tend to be responded to in correspondence with their chosen gender, rather than with their embodied gender. In other words, if Mike (offline) has a persona named Susan (online) and declares that Susan is female, people will tend to interact with Susan as a female, even if they know Mike is a male playing the character of Susan and even if they have met Mike offline.

If one accepts the basic premise that reality is socially constructed through language, the Internet allows us to study this social construction in progress as a real, enacted process rather than a theoretical premise. Internet technologies allow the researcher to see the visible artifacts of this negotiation process in forms divorced from both the source and the intended or actual audience. Websites and website archives, for example, can give researchers a means of studying the way social realities are displayed or how these might be negotiated over time. In Kendall's ethnographic study (2002), extensive archiving of interactions gave her an immense and enormously rich set of data to work with.

Of course, multiple variables influence the way we make sense of the world and this confronts researchers when making decisions about how to approach the field. In designing the interface with participants, interacting with participants, and analyzing human expressions and experiences in naturally occurring settings, researchers will naturally make assumptions about how the communication process works, taking certain invisible features of interaction for granted, whether or not this is warranted. Certain researchers may naturally rely on non-verbals as well as the content of talk in analyzing both the content and structure of conversation and may unconsciously use socio-economic markers derived from participants' clothing, accent, posture, and other physical features. These are just two factors influencing the way researchers perceive or interpret subjects, particularly in research that relies on researcher interaction with participants, such as case study, focus group, interview, or ethnography. Warranted or not, we use physically embodied features and behaviors to make categorical assessments of conversational partners, which in turn sponsors the creation of a framework for interaction. Researchers trained in analytical methods which do not rely on visual or verbal contact with participants may be less inclined to do this, but a priori assessments based on typical/traditional gendered, ethnic, and socio-economic categories remain a problematic feature of social research.

These statements are not unfamiliar to anyone who pays attention to human interaction. What may be less familiar is the extent to which Internet technologies bring into relief and problematize these working assumptions. Attending to these basic processes of communication not only constitutes healthy practice for social research in general, but also is essential in developing effective, rigorous, and reflexive research practices in Internet-related studies. Depending on any number of factors only discovered during the

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actual study, the rules, practices, and outcomes of interaction in online contexts may be distinct from or quite similar to face-to-face contexts.

At various levels, some more conscious than others, people interacting in computer-mediated contexts negotiate, rather than simply observe or discover, the identities and social realities of the others with whom they are interacting. Whether interpreting naturally occurring texts or participating in an online interview, this can become quite challenging, perhaps because it is unfamiliar territory for most researchers at this point in time. For example, one may find that some of the typical rules of conversation do not seem applicable in the fragmented structure of online conversation. Sarcasm, irony, or non-obvious humor is extremely difficult to discern in the text. Additionally, many paratextual elements are difficult either to ignore as non-meaningful data or to categorize effectively. The following interview excerpt, taken from an online interview conducted by me, demonstrates the elusion of clear interpretation in the unembodied text.

<Annette> Tell me about your most memorable experience online.

<sherie> gee, i don't know, so many. some are personal. some aren't.

<Annette> great!

<Annette> choose any--all. talk all you want!

<sherie> well, most seem to have something to do with the community i belong to. everything from personal relationships to flesh meets to flame wars . . .

Interviewing via CMC requires patience and careful attention to the skills, tendencies, and pacing of the respondent (Markham, forthcoming). The ellipsis at the end of Sherie's last statement above indicates to the researcher that the participant will continue. To help prevent the interruption of a person's story when non-verbal signals are unavailable, I devised this rule. Outlined for the participant at the beginning of each interview, this strategy was useful to indicate continuation and – by its absence – the end of a conversational turn. In this case, however, the rule did not work, because even though she used the ellipsis, Sherie's next statement indicates she had completed her thought:

<sherie> are you there?

<Annette> oh! yes, I'm here.

<Annette> I'm sorry, I thought you were thinking. . . . I have a tendency to ask questions too quickly, and always interrupt people.

No response was forthcoming from Sherie at this point, which was surprising given the question I had just asked concerning memorable experiences online. I tried another question to prompt a narrative account:

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<Annette> if you picked an experience randomly, what would you tell me about it?

After another long pause with no response from Sherie, I changed tactics:

<Annette> is it too hard to pick just one experience to talk about? if you want, we can go in a different direction . . .

<sherie> ok.

Throughout this interview, it was difficult to cajole, prod, or compel Sherie to utter more than primarily monosyllabic responses. It is difficult to ascertain whether Sherie did not like the way the questions were being asked, she was not interested in the topic, she was multitasking, she had a migraine, or something else. Perhaps this can be simply dismissed as a non-useful interview. On the other hand, since the study was focused on how people express themselves online and make sense of their experiences through language, the interview has meaning and cannot be immediately dismissed.

Reflecting on that interview, the difficulty lay in the fact that there were no non-verbal cues to guide the interpretation of the situation. Questions or conversational direction could not be modified based on embodied signals. To add yet another layer of complexity, in an earlier session, this participant had written that she liked herself better in text because she was eloquent, and that she felt, "more beautiful as text than as flesh." The text above represents Sherie's style throughout the interview process and seems to belie her statement because her responses are a far cry from standard notions of eloquence.

Internet communication gives qualitative researchers an intriguing opportunity to witness the social construction of reality as this occurs textually. This short snippet of Sherie's conversation is one among millions of globally accessible texts, all vying for attention in a cacophony of networks. In this specific case, where the researcher interviews the participant, identity and reality are negotiable during these online interactions in subtle and intriguing ways. Both the participant and researcher send messages that display identity and play into the construction of the context. The researcher makes judgments of the participant and responds with these judgments in mind. The participant makes sense of the researcher in the same way. The structure of interaction is an ongoing accomplishment, drawn from previous interactions and sustained (or adjusted) by adherence to (or absence of) the rules of conversation.

Another layer of complexity involves the way users perceive the nature of text. The Internet sponsors a casual communication style. It is, however, hasty to assume that because of this, users conceptualize text in a similarly casual manner. Indeed, users frequently conceptualize and respond to the text as a concrete, formal, lasting vessel for truth (Markham, 2000). This is true for both participants and researchers, making this an issue that requires critical self-reflection and careful planning to resolve. Attention to this factor in research

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design and/or analysis allows the research project to accommodate varying perceptions.

The idea that Internet communication has little value and is, by its nature, fleeting, is made possible by habituated practices as well as the technology. Consider message length: when transmission rates were slower because of bandwidth limitations and storage capacities on servers, short messages, particularly in synchronous environments, were necessary. In email, because the technology did not allow anything beyond plain text and single spacing, simple and short messages were more likely to be read. Though these limitations are being overcome, short messages remain the norm, possibly because the technology evolved in this way and the habit is now a social norm.

Take the issue of informality: informality may be a choice but is also quite often a necessity. Simply put, typing takes longer than talking and errors in typing are frequent even for the most skilled typists. For the average user of CMC, a smooth flowing conversation may be considered a good tradeoff for simplified phrases, spelling or grammar errors, and unedited messages.

Consider the ephemeral nature of computer-mediated texts. Messages in a bulletin board system are often compared to post-it notes or notes on refrigerator doors and counters for one's flatmate to notice. When the message is sent, it seems to disappear, even as much as we know it does not. In these and many other computer-mediated contexts, the notion of the throwaway text is apparent.

In this context of short, informal, and ephemeral communiqués, it would seem likely that users would consistently treat CMC as temporary and casual. However, users simultaneously or alternately privilege the text, giving it a state of considerable concreteness and importance. This is partially because any information transmitted via the Internet may be archived somewhere. Interactions via the Internet can be perceived as having a long-lasting shape or effect, which may result in the participant feeling like he or she is on a public stage as much as it may result in the more commonly believed feeling of being in an informal conversation.

Students often bemoan this very capacity of the Internet. Low participation in online discussion groups during the first few weeks of any school term may be associated with fears of permanent effects: ideas spoken may not be erased and will likely be archived and used later against the student. Second, the only things that should appear in written form for public consumption are good – or at least well-developed – ideas. Not only do students tend to fear that speakers are held accountable for everything they utter, but also they believe that they should be certain of their statement before making it, since it will be written in stone. The pragmatic outcome of this situation is that ideas are less likely to be tested until participants achieve a greater sense of self-efficacy and learn to minimize or demystify the authority of the written text.

Taking this idea to a broader cultural and historical scale, we can see that the tendency to give Internet communication formal and fixed characteristics is in no small measure related to the tradition in most cultures to hold written

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texts in high regard, giving original documents a near sacred status. Tearing a page out of a textbook is almost as difficult to imagine as destroying the constitution of the United States or the Magna Carta. We preserve original documents in hermetically sealed containers. We tend to believe what is written more than what is heard. In the United States, witnesses testifying in the judicial system must put their hands on the Bible and swear they will tell the truth in order to verify and solemnize their testimony. These are just a few examples of how we privilege texts. In this context, the Internet falls somewhere between and we are still struggling with the tensions this creates, whether researchers and participants are conscious of it or not.

A student's fear of being judged by his or her texts is well grounded because any comment a person makes operates in conjunction with other factors to represent a person's identity and merit. Likewise, it is not uncommon to judge participants of qualitative studies on the basis of their texts; online, one's typing and writing ability is as much a social marker as one's accent, body type, or skin color. Even though we are trained to know better, textual markers influence our interpretation of participants. A greater appreciation for how users perceive the nature of texts can help researchers make better analytical decisions.

The Internet highlights the influence of non-verbal behaviors on our understanding and interpretation of others. It also illustrates the centrality of the text in negotiating and constructing reality. A fascinating outcome of Internet-based communication has been the revival of focus on basic sensemaking processes. There is great potential in this shift of focus. When geography no longer determines the boundaries of the study's parameters, the researcher can be less constrained by the structure, space, and time within which interactions occur. Observing Internet use as it constructs social reality can be accomplished easily; obtaining access to online groups is a straightforward process, as is downloading and archiving the interactions of these groups.

At the same time, several ethical concerns arise. For example, although many online discussion groups appear to be public, members may perceive their interaction to be private (Frankel and Siang, 1999; Sharf, 1999) and can be surprised or angered by intruding researchers (Bromseth, 2002). Other groups know their communication is public but none the less do not want to be studied (Gajjala, 2002; Hudson and Bruckman, 2002). Additionally, confidentiality of participants' talk in these groups is almost impossible to preserve with the sophistication of search engines (Mann, 2002). Ongoing discussions and statements about ethical problems and guidelines can provide the researcher with useful background information on how others have approached and dealt with these tricky issues (for good overviews, see Frankel and Siang, 1999; Mann and Stewart, 2000; and the ongoing ethical statements by the ethics committee of the Association of Internet Researchers, 2002).

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THE DOUBLE EDGE OF TECHNOLOGY

Social theorists and science fiction writers alike warn us that every technology has a double edge and unforeseen effects. McLuhan (1962) argued that every communication medium extends the capacity of one or more of our cognitive sensibilities. Writing implements and the printing press extended our memory. Radio makes our ears bigger; television allows our eyes to see events around the world. The Internet allows us to connect personally and instantly with countless people around the globe. Wireless technologies allow us to attach technologies to our bodies in much the same manner as physical prostheses. Yet for each extension there is something removed, dismantled, or constrained. Postman (1985) argues convincingly that as television becomes more and more prominent in our everyday lives, our attention span decreases, so that Americans, for example, have an active attention span of approximately twenty minutes, the average length of the typical sitcom. The premise of this argument is compelling. Few of us in Western cultures can imagine reciting Homer from memory or attending to and analyzing oral arguments for many hours at a time, as early Americans did during the presidential debates between Abraham Lincoln and Steven Douglas.

The sensibilities afforded or limited by the Internet remain unpredictable. As a tool of research it offers many intriguing possibilities; the temptation to insert these as easy solutions to the problems of social research is great. As Mann and Stewart (2000) emphasize, it is vital to consider judiciously how the tool fits the research question and the context, returning always to the core considerations guiding solid, rigorous, systematic, and, above all, deliberate qualitative inquiry.

SUMMARY

This chapter outlines several theoretical and pragmatic issues associated with the use of the Internet in qualitative research. Placed within the fast-growing and swiftly shifting arena of Internet research, this chapter provides general categories for considering both the enabling and constraining aspects of new communication technologies, from which the reader can develop his or her own unique approach. Adopting the Internet as a means of augmenting traditional studies requires attention to the creative possibilities as well as to the foundations of qualitative inquiry, so that one's decisions to use the Internet are both epistemologically and methodologically sound. To review some of the important considerations:

- The Internet is defined variously as a communication medium, a global network of connections, and a scene of social construction.
- The shape and nature of Internet communication is defined in context, negotiated by users that may adapt hardware and software to suit their individual or community needs.

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- Internet communication affords qualitative researchers creative potential because of its geographic dispersion, multi-modality, and chrono-malleability.
- The researcher's own conceptualization of the Internet will influence how it is woven into the research project, with significant consequences on the outcomes.
- As social life becomes more saturated with Internet-based media for communication, researchers will be able to creatively design projects that utilize these media to observe culture, interact with participants, or collect artifacts.
- Each new technology bears a double edge for qualitative researchers and users; as it highlights or enables certain aspects and qualities of interaction, it hides or constrains others.

In *Interpreting qualitative data*, Silverman (2001) stresses the importance of adhering to sensible and rigorous methods for making sense of data even as we acknowledge that social phenomena are locally and socially constructed through the activities of participants. Similarly, it is clear that although the Internet can fundamentally shift some of our research practices by extending our reach, easing data collection, or providing new grounds for social interaction, application of these methods must remain grounded in the fundamentals of rigorous and systematic qualitative research methods.

NOTES

1. Much debate persists regarding the influence of the Internet on language use and meaning. The vast majority of researchers agree that the structure and content of CMC is distinctive. Language norms and rules are in constant flux and transformation, time and space take on different meaning within interactions, influenced by both technical and normative elements. It is unclear whether this distinctiveness is meaningful at the level of meaning or discursive/relational outcome. Early accounts suggested that the absence of non-verbal cues in CMC would lead to less meaningful, surface interactions among users (Sproull and Kiesler, 1991). Later researchers such as Witmer and Katzman (1998) find that users make necessary changes in their discourse to accommodate technical limitations, replacing non-verbals with emoticons. Gaiser (1997) goes further to contend that there is very little difference between data collected in face-to-face and online interactions. More recently, Thurlow (2003) argues that shortcuts used in SMS (telephone instant messaging) do not significantly influence the meaning of the message, although to an outsider witnessing the interaction, the discourse may seem almost unreadable. Baym et al. (2002) contend that it is not so much the technology that influences interpersonal relationships as the interaction itself.
2. See also Sproull and Kiesler (1991) and Chen et al. (in press) for general perspectives.
3. See also the special issue on persistent conversation in the *Journal of Computer-Mediated Communication*, 4(4), 1999.
4. Heritage in this volume provides an excellent overview of conversation analysis, which seeks to examine and illustrate how context is accomplished in and through

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talk. Obviously, we do many more skilful things in conversation than we could ever explain to a researcher in an interview. Close examination of texts can help illuminate the building blocks of both individual and institutional contexts.

Recommended reading

For in depth information on various methodological issues and strategies relating to qualitative Internet research, the most comprehensive book to date is Mann and Stewart's *Internet communication and qualitative research* (Sage, 2000). Also see the edited collection by Chen et al., *Online Social Research: Methods, Issues, and Ethics* (Peter Lang, in press).

For in-depth case studies that analyze how Internet users interact with technology and frame their experiences, read Sherry Turkle's *Life on the screen* (Simon and Schuster, 1995); Annette Markham's *Life online* (AltaMira, 1998); and Stone's *The war of desire and technology at the close of the mechanical age* (MIT Press, 1996). For a good introduction to the topic, read Steve Jones's edited collections *Cybersociety* (Sage, 1995) and *Virtual Culture* (Sage, 1997).

For discussions and studies of discourse analysis in CMC contexts, C. Susan Herring's work is the most comprehensive, including her edited collections, *Computer-Mediated Communication: Linguistic, social and cross-cultural perspectives* (John Benjamins, 1996) and *Computer-mediated conversation* (Hampton Press, in press). Also see the special issue on persistent conversation in the *Journal of Computer-Mediated Communication* (June, 1999, available online).

For ethnographically informed studies of online culture, the following titles are recommended: Nancy Baym's *Tune In, Log On* (Sage, 2000); Lori Kendall's *Hanging Out in the Virtual Pub* (University of California Press, 2002); Christine Hine's *Virtual ethnography* (Sage, 2001); and Miller and Slater's *Internet Ethnography* (Berg, 2000).

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