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Technology and the 'Self'

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Abstract

This project examines the relationship between technology and the self. Based largely on Gergen’s (1991, 2000) descriptions of technological immersion and the saturated self, I discuss the ways that modern technologies have come to be a part of self-construction. Survey and focus group data from 63 university students are used to examine types of technological use, talk about technological experience, and self-construction. This paper describes the contradictory ways participants talk about technology, and defines nine themes of self emergence in participant discussion: 1) connection, 2) over-connection, 3) ease/laziness, 4) multitasking, 5) profile stalking, 6) loss of physical presence, 7) empowerment, 8) privacy, and 9) ‘real’ communication. Themes interrelate showing a web of negotiations of self as seen in the talk of participants.
Introduction

A cell phone just rang in Boatwright Memorial Library at the University of Richmond. Students diligently pursuing their studies, stop, turn their heads to see who is popular at the moment, and then gather their thoughts again only to hear another cell phone ring minutes later. The student answering the phone in the library talks in a whisper, as if not to interrupt anyone who is studying around him. The onlookers who have been once again rudely disturbed roll their eyes, shake their heads, and then check their bags and pockets to make sure that their cell phones are off or at least silenced.

In addition to the students paying attention to cell phones, they log on to computers to type papers but instead get caught up sorting through emails and chatting on Instant Messenger (IM). The multiplicities of procrastination that potentially exist with use of the internet are astounding. Not only can we talk instantaneously with one another through IM and get our schedules solidified through email, we can find any information about anything or anyone by going to one of hundreds of search engines and typing in a keyword. For example, any question that poses itself can be instantly answered by the geniuses at Google.com who have mastered the art of information organization. If a student is not completely motivated to do work, she might as well preview tomorrow’s weather, and read the latest gossip about her favorite reality television star.

Have humans become unable to resist the multiplicities that technological advancement has brought to the forefront? From my position as a student on the University of Richmond campus, the instances mentioned above, among many others,
have become commonplace. In the library, classrooms, dining hall, academic and social buildings alike, the constant connection through technology appears to be prevalent. My observation of these activities is not only one of a student who studies in the Rhetoric and Communication Studies Department; I am an active participant in many of these processes in my daily life. As the connectedness has seemingly increased I have become interested in the ways that technological media have come to affect the persons that utilize them.

Much research has been conducted on different forms of communication technology; most notable is the research on computer-mediated communication (CMC) (Walther, 1996). Researchers have been discussing the personal effects that technological communication might have in certain individual and group situations, and they have warranted that communication through technology is a valid area of scholastic inquiry. No one has examined talk about technology and tried to highlight personal sentiments and language that may construct the ‘self.’ My thesis explores the relationship between technology and the self. I review the various meanings behind both of these terms in the following literature review. In order to observe this relationship between people and their machines I decided to go through a detailed research process on the University of Richmond campus to study the discourses about technology and the way students feel that technology has come to influence their daily lives. I collected data through surveys and focus group discussions that I closely examined for how students in this specific community view themselves in relation to technology. Statistical data reflecting daily technology usage is used to show the prevalence of different technologies in students’ lives and to give a background for the focus group data. I examined the
focus group conversations from 63 participants and extracted themes about the influence of technology on my participants’ daily lives in the university setting.

Literature Review

Sentiments about the effects of technological advancement on humanity

Discussions of the benefits and drawbacks of technology have occurred since the times of the Ancient Greeks. Humans have long argued the effects that technology could have on development and societal structure. Socrates, in Plato’s *Phaedrus* discusses his discomfort with the dissemination of textually reproduced speeches that can be made to influence humans outside the context of their producer’s intentions. Socrates fought against the Sophistic notion that looked to transfer the art of speaking into a commodity for sale and trade because he felt like it cheapened the act of speaking itself taking it from an art or craft to a mere tool (*techne*) to be used. The ancient Greek word, *techne*, from which we base our definition of technology had numerous meanings that all give insight into the way we understand our technological environment today. *Techne* is broadly defined by the following terminology: art, craft, science, taught action, skill, profession, gained knowledge, practiced knowledge, and technical wisdom (Atwill, 1998; Dunne, 1993; Poulakos & Poulakos, 1999; McComiskey, 2002; Roochnik, 1996; Rutsky, 1999). The multiple definitions of *techne* can be seen in the differing and sometimes contradictory ways that people have continued to discuss the advancement of technology.

The initial advancement of technology was surrounded in discussion about the harms and benefits of increasing technological proliferation (Rhodes, 1999). Continuing and expanding through different scientific, industrial and intellectual
advancements, 'technology' has come to define objects that we use today such as automobiles, televisions, and cellular phones, as well as objects of connection and expansion into an unknown of sorts such as the internet, digital networks, and virtual realities. Through this progression, arguments surrounding the necessity of technology and the effects technology has on the human have pervaded our societal discourses (Peters, 1999; Rhodes, 1999).

Rhodes (1999) in his chronicled history of 20th century technology describes human immersion in technology:

We swim in technology as a fish swims in the sea, depend on it from birth to final hours, but many of us trust it only in its older and more familiar guises. Recent technology is more often seen as a threat—to our jobs, our health, our values—than a blessing (p. 22).

Rhodes recognizes a dialectic built up between the human perception of technology and the human response to technology. Technology has been viewed with celebration and with caution by scholars of the 20th and 21st centuries. Many prominent literary, political and scientific figures describe technology as something to be celebrated and enjoyed—a triumph for humanity. But most of them suggest that the possible harms should always be considered as well if humans are not to fall victim to their own creations. An ambiguous response to technological progression has been situated in an affirmation of the benefits of technological advancements with a caution for the degradation of human values. Through this next section I will trace the social arguments surrounding technology and the effects it has on society.

Henry Ford (1926/1999) explained the creation and function of the machine as a symbol of man's mastery over his environment. In contrast he acknowledges that the use of technology can be troublesome if it is employed for the wrong purposes such as
physically damaging the human body out of negligence. Huxley (1927/1999) argued that comfort has become a result of technological advancement.

Made possible by changes in the traditional philosophy of life, comfort is now one of the causes of its own further spread. For comfort has now become physical habit, a fashion, an ideal to be pursued for its own sake. The more comfort brought into this world, the more it is likely to be valued. To those who have known comfort, discomfort is a real torture. And the fashion which now decrees the worship of comfort is quite as imperious as any other fashion (p. 91).

Huxley saw the continued development of ease as an irreversible direction toward which humanity is always striving through technological advancement. This can be seen in the production of numerous ‘time saving’ devices that have become commonplace for our society, such as email and cell phones that construct the ‘comfort’ of human communication as necessary and desirable.

With comfort and easy access as driving forces behind development, many scholars suggest that the progress of technology is having an increasingly negative effect on humanity. Mumford (1934/1999) suggests that the machine has become a sort of tyrant over the humans who have created it, and that we should notice this, take charge of our lives, and not let ourselves be lived through and by machines.

\[W\]e do not have to renounce the machine completely and go back to handicraft in order to abolish a good deal of useless machinery and burdensome routine: we merely have to use imagination and intelligence and social discipline in our traffic with the machine itself (pp. 121-122).

Some scholars sincerely call for the complete reversion of technology due to its possible harmful consequences for humanity in particular the power for man created by technology. As Helton (1941/1999) describes:

Productive machinery is, in a sense, the crowning achievement of half a million years of desperate struggle and of infinite craft and contrivance. Yet it is a jewel with but a single facet. As distinguished from a work of art, with which it is
comparable as representing a fruition of ages of effort, productive machinery expresses only one trait in man, and that one trait is his craving for power. Power is its achievement. Power is what it is for—power over nature, power over people, power over time, and power over space (pp. 142-143).

This positioning of technology as a human craving for power highlights the call for caution as well as underscores the negativity that has developed toward rapid technological achievements. Helton suggest that the greatest technological advancements humanity has made have been for the struggle of equality, health and sensibility and that these are too often forgotten. Goodman (1967/1999) makes the same argument for awareness of the possible harms of technology so that it is not used as a power tool that overrides the communication of ideas. Goodman suggests that, “The remedy is for scientists and technicians to reassert their own proper principles, and for ordinary people to stop being superstitious and to reassert their own control over their environment. Then there will be communication again” (p. 258). His argument that communication and thus society have somehow been hindered by certain technological advancements is explained thoroughly by Emmanuel Mesthene, the director of the Harvard program on Technology and Society from 1964-1974. He describes the problems associated with technology and calls for increased intellectual understanding so that technology can be used as it was meant to be used, as a positive creation for humanity.

Mesthene (1967/1999), as he frames technology as a social phenomenon, describes the limitless possibilities of technological development produced with the correct human will. He suggests that technology gives us new possibilities which turn into more choices. These choices manifest into greater opportunities which will allow for more freedom and therefore make us more human. Mesthene recognizes however four
limitations of technological development that can enslave and degrade humans: 1) technology creates the previously unimaginable and at the same time destroys the possibilities previously enjoyed by humanity, 2) technology often reveals what technology has not created, 3) technology is seen as an evil because of its potential, 4) technology is upsetting because it complicates the world.

Although the different sentiments toward technology seem to objectify the different effects of media in certain senses, the above thinkers remind us that technology is not just an outside force that humans choose to employ. It is an active process of increased human involvement and mastery over the world. Humans have increasingly become more connected; with respect to communication technologies the increases are astounding.

Current statistics suggest that people in the United States are using technologies at an increasing rate. The CIA factbook reports that the number of internet users in 2002 was 165.75 million people, and this number is steadily increasing and is now probably around 300 million users (www.cia.gov). IM has increased in usage as well. “With over 130 million IM users today, this is a technology that can’t be ignored…IM users will exceed 300 million users by 2005” (Farmer, 2003, p. 2). The internet is not the only technology increasing in usage.

Slightly more than half of all Americans--about 150 million people--tote mobile phones, feeding a $94 billion industry (not including hardware) that's growing 15 percent each year...By the middle of 2002, the legions of Americans carrying cell phones were each spending an average of $53 a month to talk 442 minutes on their mobile phones--about 100 minutes more per month than they did in 2001. All in all, Americans log more than 53 billion minutes chatting, getting directions and letting someone know they will be a little late (Hassan, 2003, pp. 35-36).
These examples of usage and the trends that suggest continued increases in communicative technology support further inquiry into the study of the effects of these technologies. If people are going to continue to utilize communication technologies to create connections with others that would not be possible face to face, then communication researchers should look at the effects that these newer types of communication have on the people that use them. A significant body of scholarship has developed over the past twenty years that examines human relationships through technology.

**CMC research**

CMC researchers have established a connection between interpersonal communication and technological media. Walther, Anderson and Park (1994) examined the interpersonal effects of CMC and establish that the computer is not just a task-oriented medium for organization. Instead, the computer is more often a socially oriented medium that people use for communication purposes that are not subjected to a specific task (e.g., chatting with friends through IM). Through their meta-analysis these authors show that communication through the computer should be comparable to face-to-face (FTF) interaction and studied as such. This view is contingent to the way that people present themselves and carry on conversations through a computer in ways, that although lacking verbal cues and non-verbal gestures, are directly related to the processes described by the acts of interpersonal communication. Subsequent studies show CMC should be viewed similarly to the way that FTF communication is viewed and analyzed (Parks & Floyd, 1996, Walther 1996). The ability for synchronous communication through the computer, as well as the contextual cues of the language that create meaning
and understanding for participants in the conversation are negotiated like FTF interactions. These experts, though, also recognize the differences between FTF and CMC, namely the loss of voice, verbal cues, tone, and non-verbal communication that accompany CMC.

Walther (1996) establishes that CMC can be impersonal, interpersonal and hyperpersonal. The impersonality of CMC can be explained through the ability for communicators to decide what information to portray about themselves through a completely textual medium that does not give any hints as to physical/personal characteristics. In this category, the lack of tone, voice, and physical presence all prove to be a part of the impersonality that can accompany CMC. He next discusses the interpersonal nature of the computer as a medium for communication. He notes the ability for interpersonal communication to exist through the computer as well, and describes situations where, similar to FTF, interpersonal relationships are developed and maintained through CMC. Hyperpersonal relationships surpass interpersonal relationships as new levels of connectedness and freedom come to exist with all access media that allow for constant connection across space and time. Thus a new area of inquiry is born as online relationships form that are no longer simply compatible to FTF distinctions. Walther ends by suggesting that we should look for ways to further develop CMC so that impressions and interpersonal relationships may be enhanced.

The connection between the interpersonal aspects of FTF and CMC is highlighted by Tidwell and Walther (2002). They use the uncertainty reduction theory to judge behaviors of initial CMC interaction and relate CMC to FTF conversation. Their findings suggest that CMC users exhibit a greater proportion of direct uncertainty reduction
techniques earlier in conversations and thus show greater gains in confidence over the course of a CMC conversation than participants do in normal FTF conversations.

Walther and Tidwell claim that CMC users might have these greater gains in confidence because they are judging their partners on a much more limited base of information than if they were to be in a FTF conversation with them.

McQuillen (2003) offers a descriptive example of how to perceive CMC interaction through the limited base of information by comparing CMC to costume party interactions. McQuillen suggests that:

CMC relationships can be compared to interactions at a costume party. Each person becomes the character represented by the costume, partially because of the highly selective self-presentation, the manipulation of one’s perceived self, and the highly restricted nature of one’s self-disclosive clues (p. 620).

He argues that because of technology, a person’s notion of self is becoming more structured and suited to the way the person wants to portray themselves textually thus more autonomy has been gained by people who develop CMC relationships. Numerous scholars have negotiated a ling between technology and manipulated identity.

The ‘self’

Technology, Piel (1999) suggests, leads humans to a freedom of self that in effect leads to better communication. As highlighted by Walther (1996) in his discussion of hyperpersonal communication, people are more likely to construct themselves how they feel most comfortable conversationally. Riva and Galimberti (1998), based on a notion that the self is “a product of the situation in which the individual acts,” discuss the technological implications of a new self that is manifested through CMC (p. 451). They use the framework of virtual communities to establish sometimes contradictory notions of self that come from increased freedom the technological media offers. This freedom of
self then also has complications. Scholarly discussion on communication and technology suggests that humans have become submerged in a technological world that has begun to define how they see themselves (Christen & Gunther, 2003; Pinchevski, 2003; Gomery 2001, Shane, 2001; Peters, 1999 Gergen, 1991, 2000; Turkle, 1997). Turkle (1997) describes how humans view themselves in relation to technology. The ‘self,’ she claims, is becoming more of an artificial phenomenon due to the multiple technological forces at play around those people who use technology. In specific reference to the computer...

Today, we project ourselves into a far wider variety of computational landscapes. We interact with programs, games, and simulations that present themselves as driven by evolution. And we create multiple representations of ourselves by developing personae in virtual environments on the internet. The images of self that are evoked by such experiences are fluid and multiple, with the line between the natural and artificial more permeable than before (p. 1097).

Shane (2001) discusses how people have become disconnected from their physical environment through daily technological reliance by using the example of a cell phone:

The cell phone user walking down Fifty-second Street is connected to the distant voice yet focused only on her own personal and innermost response to that voice. She’s disconnected from the throngs walking her way on the street. She makes no eye contact and indicates no awareness of the passerby. Look at her and the distance of her gaze tells you she looks through you, not at you (p. 6).

Shane through his myriad of examples shows that human beings have become increasingly self-consumed because of the technologies they employ and experience. This process of self involvement, he argues, is leading us to be more confused on a daily basis because of multiple sensory connections we have due to technology. “Politics confused with show business. Reaction confused with opinion. Information confused with understanding. Spin-doctored statements to the media confused with truth. Postings on the internet confused with connectedness. Electronic images confused with
experience" (p. 15). He cites these general societal examples but goes further to show the decay of human relationships because of self-absorption with personal electronic media. He highlights divorce cases from four different states where the Internet has been the cause of relationship breakdown and discusses how the understanding of place has been lost. “The old components of place, whether physical location or station in life, are undermined by television and further fractured by new, personal, one-on-one media. The new world is relatively placeless” (p. 35). Shane’a argument is taken in part from the works of Kenneth Gergen who discusses the possible social conditions that might arise from increased technological involvement and who is the main inspiration for the research questions I pose for investigation.

Gergen (1991) argues that technological immersion is driving society toward a post-modern self-consciousness through a process of social saturation. He discusses how American society has moved out of the low-tech environment defined by technologies such as the railroad, the automobile, the telephone, the radio, motion pictures and printed books into a high-tech environment of television, VCRs, and computers. Gergen elaborates on the way that time and distance are no longer threats to having relationships because of these new technologies, and thus people maintain more relationships. Gergen also describes how the ‘traditional’ family is being transformed into a process of “microwave relationships” that are based on individual technological needs of each family member, and therefore he states, “The home is less a nesting place than a pit stop” (p. 66). Beyond the effects on the family unit, each individual of this new high-tech age is becoming both overwhelmed and confused with their own personal identity because of the almost limitless impulses made available to them by new technologies. “The
technologies of social saturation expose us to an enormous range of persons, new forms of relationships, unique circumstances and opportunities, and special intensities of feeling” (p.69). From this overexposure Gergen argues that we become susceptible to *multiphrenia*: “a splitting of the individual into a multiplicity of self investments which is partly the outcome of self-population and partly a result of the populated self's effort to exploit new technological potentials of relationship” (pp. 73-74). He argues that this continued advancement toward an over-populated self will necessarily lead to a condition where the entire idea of a ‘rational choice’ will become meaningless because of the over exposure in all human lives.

Gergen (2000) continues his previous argument and states, “The concept of the self as an integral and bounded agent is slowly becoming untenable” (p. 202). Though the self was once nested in traditional notions of community, Gergen argues that a communal and value based self is no longer a reality for the three following reasons: 1) populations have become increasingly mobile, 2) people have a much wider range of relationships, 3) strong bonds that once defined a sense of self have become eroded due to a broad array of superficial engagements. Gergen claims that people have come to question everything that they are told because they are constantly exposed to contradictory opinions on almost every issue they encounter. He argues that multiple truths and loss of faith have led people to become much more self involved and in essence more cynical. The reasons for this type of reaction can be found by looking at technology: “The technological context works directly to undermine the intelligibility of the traditional self” (p. 206). He discusses four specific reasons for this self-erosion: 1) polyvocality, 2) plasticity, 3) de-authentication, and 4) commodification.
Polyvocality refers to the technologically driven human coming to accept and promote multiple diverse opinions, values and sentiments that are conflicting in their nature. This is due to the almost limitless capacities of information gaining from, and exposure to technology. For example, instead of just having his or her ‘own’ opinion on a social issue, a person will choose from a large network of opinions that they have been exposed to in order to make a situational choice on what type of self to express. Plasticity refers to the multiplicity of information, opinions, and values humans are exposed to through technology which enlarge the range and complication of their daily activities. De-authentication occurs as a result of technological overexposure to the point that people no longer feel anything they say is original. For example, any show of affection or projection of ‘love’ in a relationship through language is often thought of as cliché because the words used might have been seen in a movie, or on a television show.

Commodification is the use and sale of these types of selves through the use of technological media, a business that Gergen cites as a reason for our shift in cultural and self understanding. For example, commodification can be seen in the images portrayed through print and technological media that make some women feel like they have to be thin, an image which is then used by the people who construct it to make profit off of diets, exercise routines, and pharmaceuticals, for example. Through this process our notions of self, and in effect our entire culture are changed to model certain ideals or values (i.e., the dominant images).

Gergen (2000) follows by stating that relationships are becoming increasingly bodiless and that people are forced to conform to this type of communication and
understanding so that they may hide from the multiplicities that seemingly make their lived experiences trivial.

On the internet, identities can be put forward that may not be linked in any specific way to the concrete existence of the participants, and these cyber-identities may carry on active and engaging relationships. Most significant is that these relationships proceed not on the basis of 'real selves' (integral minds in physical bodies), but on the basis of positionings within conversations or the discursive flow. Further, it is only the coordinated functioning of these discursive formations that enable 'community' to be achieved. In effect, community has no geographic locus outside the web of discourse. Here we approach pure relatedness, without self or community in the traditional sense (p.211).

The 'pure relatedness' Gergen discusses depicts a self that will no longer be definable through FTF interaction alone, and suggest that we are approaching a point where our lives and ways of relating might change drastically in their social make up because of technology.

Gergen's (1991, 2000) arguments leave me to question if people think about their own perceptions and their identities in this way. Based on Gergen's discussions about the effects of technological immersion, I propose to examine language from group discussions and identify where and how the self is located in talk about modern technology. If the self is a product of negotiation that can be seen through talk as Tracy (2001) suggest 1, and if, as Gergen suggests, it is technological immersion that is driving people to become more scattered and lose their sense of a stable self, then examining talk about the effects of technology could prove a valuable way to relate these theoretical ideas. I would like to see if a scattered self can be located in the way that participants talk about their technological experiences. Thus, I asked the following research questions for my study:

1Tracey (2001) suggests the self can be though of as construct of speech acts that accentuate and define how a person perceives him/herself and is perceived by others in an interactive environment.
**RQ1:** What types of technologies do individuals use?

**RQ2:** How do individuals talk about their experiences with technology?

**RQ3:** Where is the self located in the participants’ conversations about technology?

**Methods**

I conducted my research by using both quantitative and qualitative methodologies to gain statistical as well as subjective perspective of how my participants negotiate themselves through and around technologies in their daily lives. By using both research perspectives I gained access to technological usage and personal sentiments through survey questions as well as participant talk regarding their personal experiences in focus group discussions. These methods allowed for a thorough investigation of my research questions through different kinds of data as benefits exist with both types of investigation.

Frey, Botan and Kreps (2000) note, “Surveys provide researchers with a convenient method for gathering information about a population’s beliefs, attitudes, and behaviors from asking questions of representatives of that population” (p. 198). Qualitative research differs as the researcher’s emphasis is placed on empirical, inductive and interpretive approaches applicable within a specific interaction and context (Keyton, 2001). Focus groups promote discussion and encourage the people in the group to use others’ ideas to describe and explain their personal feelings about a topic of conversation (i.e., ‘piggy backing’). Focus groups also allow for a level of comfort between researcher and participants to be weighed in the side of the participants so that they can openly and honestly expound upon their personal experiences in the given subject lines put forth by the researcher (Edmunds, 1999; Frey et al, 2000; Krueger & Casey, 2000). This type of
research has become increasingly utilized because of the researcher’s ability to let the participants use one another’s ideas to help explain their own experiences. Combining both types of method, survey and focus group, increases the assortment of data which Keyton suggests is valuable. “[B]y using a variety of data sources in once study, researchers are more confident about their findings and conclusions” (Keyton, 2001, p. 77). Combining different methodologies allows the researcher to thoroughly investigate a wide range of data and make inclusive conclusions and focused suggestions for future research. By using survey and focus group data, I was able to gain usage statistics and highlight participant talk within the same study which allowed for a thorough investigation of my research questions.

Participants

Participants were solicited through a sign-up process. With the permission of professors, I spoke to Rhetoric and Communication Studies and Political Science classes and briefly explained my project to my fellow students. I then offered seven sign up sheets that specified the date, time and location of each of the hour long survey/focus group discussions. Participants were encouraged to sign-up for a time that fit their schedule. As an incentive I offered food and drinks to students who agreed to participate. After soliciting participants in the classroom, I then talked to my own social network and class peers asking if they had any interest in participating in my research. This process of solicitation, which Keyton (2001) calls ‘convenience sampling,’(p. 130) allowed me to increase the size of the discussion groups. I solicited participants equally using the two sampling methods.
The participant pool was selected from a small, private, mid-Atlantic liberal arts institution, and primarily consisted of students in the Arts and Sciences college. All participants were current students. The diversity of students participating in the project was limited due to the small scale solicitation processes and the homogeneous constitution of the college campus of only three thousand students. Participants were more likely to be Caucasian and situated in the middle to upper middle class based on the demographics of the specific college student body.

Procedures

Once the sign-up process was complete, I sent a reminder email to all participants the morning of their respective session. In the focus group rooms tables or desks were set up in a circle with individual wireless laptop computers. Upon their arrival, participants were instructed to have a seat and read through the informed consent document on the desk or table in front of them. After they read and signed this document, they were instructed to open the wireless laptop computers, log on to the university network, and go to the web page where the online survey was located. At this point the participants were told that upon the completion and submission of their survey, they were to log off of the laptop computers and place them on a side table. After all of the students had completed their survey, which took approximately ten to fifteen minutes, I briefed the participants about the discussion that was to follow. They were asked to speak freely and openly about their personal sentiments in response to my discussion questions. A tape recorder was placed in a central location to record the discussions which ranged in length from twenty-five to forty-five minutes. Upon the completion of the discussion participants were thanked and instructed to contact the researcher if they had any further questions.
Survey measure

The online survey consisted of twenty-four items (see Appendix A). The first ten items solicit information concerning participants' usage of specific technologies (e.g., Do you use a mobile phone?). Item eleven asks how many hours per day the participant utilized the technologies mentioned in questions one through ten. Question twelve asks if participants use technology more for communication or entertainment purposes, while questions thirteen and fourteen ask how many hours per day participants spend using communication technologies and entertainment technologies respectively. Items fifteen through twenty-one as participants their agreement (i.e., strongly agree = 1 to strongly disagree = 5) with statements about different technological occurrences (e.g., When I open up my email and have an inbox overflowing with messages, I have a negative response). Included with these questions are text boxes that allow participants to make additional comments. Items twenty-two and twenty-three ask for positive and negative responses respectively to technological experiences. These items also ask for the type of technology used, the length of the interaction, and the content of the conversation if the participant could recall this information. Item twenty-four asks for participant reaction to the loss of numerous technologies during Hurricane Isabel².

Focus group protocol

I followed a group discussion protocol designed specifically for this project to guide the conversations (see Appendix B). The questions covered three main areas: 1) personal experiences with technology, 2) the impact of technology on daily life, and 3)

² Hurricane Isabel struck the east coast in mid September, 2003. The storm's path went through Richmond, VA causing much damage and leaving most people without power for at least a week. University of Richmond students lived on campus without power for two days until the university administration forced them to evacuate. Classes were cancelled for a week.
the impact of technology on human relationships. The first area of conversation asked for stories, experiences and feelings about the technologies that were reported in the survey. Participants were asked to share any information they thought was applicable to the discussion. The second area of conversation instructed students to think about the different technologies they use on a daily basis, specifically, scheduled time periods of technological use. The third area of conversation asked for instances that technology had impacted human relationships—positively, negatively or both. With specific relation to the survey and this area of inquiry, I also asked participants to recount their experiences with Hurricane Isabel, in particular their reactions to losing access to the technologies they were accustomed to using on a daily basis (e.g., email, internet, television).

Survey data analysis

All survey data were initially transferred from the survey website to an excel spreadsheet then to SPSS for statistical analysis. Tests of percentages and means were run with respect to each category and with respect to gender and age differences. The open ended questions were put into a Microsoft Word document and analyzed through the Constant Comparison Method of qualitative analysis (CCM) designed by Glaser and Strauss (1967). CCM requires four main steps: 1) comparing incidents applicable to each category, 2) integrating categories and their properties, 3) delimiting the theory, and 4) writing the theory. For each of the three open-ended response questions the CCM is used to pull out running themes and saturate the coding scheme I developed. After an initial read through, the data were coded as to theme and context. In my case, for the first two open response questions I identified and recorded 1) the types of technologies
mentioned in each question, 2) the others involved in the conversation 3) the sentiments
toward the experience described. For the third open response question I identified types
of technologies, and the specific reactions to their loss during the hurricane. For this
question I also overviewed general positive and negative experiences that were associated
with technology. Following the CCM, I brought together the themes of the three different
questions and examine how they interrelate. Specifically I looked at the positive,
negative, and ambiguous experiences people had with technologies.

Focus group analysis

The focus group data I collected were transcribed, and then subjected to an open
coding process as outlined by Emerson, Frets and Shaw (1995). Open coding allows the
researcher to qualitatively pull out themes from his data by adhering to processes of both
inductive and deductive analyses. Instead of counting instances of sentiment expressed
or instances of specific content, Emerson et al., show that in open coding a qualitative
element that reflects significance in speech acts based on the researcher’s personal
feelings is included. Thus, I felt that to look at the self in speech would be best suited if
the speech was thematically coded in an open process.

I progressed through several steps in my open coding process. First, an initial
read through of the seven transcriptions was used to get a feeling of the sentiments
suggested in each group. A second read started the coding process as line by line I
extracted a literal description of content in the data set, and summarized it in the margins
of the data. A third read was used to draw together themes that were present in the group
discussions by pulling them directly out of the text. A fourth read added analytical
insight to the present thematic schemes and helped congeal the data into a workable set of
processes that I could code with more breadth. A fifth read allowed me to pull out specific examples that exemplified the different themes I extracted. Although outcomes of this open-coding process will be discussed in detail below, the general direction of the data analysis was guided by the question: *where is the self located?* In the transcripts, for example, I was able to find connections to the self through discussions of place, space, time, future sentiments, celebrations, critiques, doubts, and specific technologies.

Results

*Survey results*

Participants ranged in age from eighteen to twenty-two (M = 20). The sample consisted of thirty-eight males and twenty-five females all of whom were current students at a small private mid-Atlantic liberal arts university.

The majority of participants reported using mobile phones (90.5%), personal computers (96.8%), televisions (96.8%), DVD players (96.8%), CD players (96.8%), and VCRs (85.7%). Only a minority of the participants reported using PDAs (1.6%) and MP3 players (25.4%). Close to half of the participants reported using digital cameras (44.4%) and game systems (50.8%) (See Table). While only 50.8% of the participants use a game system, of this group 93.8% of the users are male. For the other usage statistics, significant differences between male and female respondents were not present. The mean average hours per day participants reported using technology was 7.75 hours. The majority of participants (74.6%) reported using technology for communication and entertainment purposes equally. The average time participants reported using technology for communication purposes was 3.21 hours per day (SD = 3.03) and the mean use for entertainment purposes was 2.86 hours per day (SD = 2.13).
Participants neither agreed nor disagreed to having a negative reaction to an overflowing email inbox (M = 3.00, SD = 1.21). Participants disagreed to having a negative response to several voice messages (M = 3.7, SD = 0.93). Participants agreed that technology has helped them maintain relationships that would have otherwise faded away (M = 1.60, SD = 0.66). Participants disagreed that life without television is better than life with television (M = 3.48, SD = 1.11). Participants agreed slightly that they spend more time watching television than reading books (M = 2.86, SD = 1.40). Participants were neutral that they communicate more through technology than FTF (M = 3.08, SD = 1.01). Participants slightly agreed that there are times that they wish to escape from technology (M = 2.59, SD = 1.10).

CCM results for the open response questions are as follows. I will be reporting data based on the number of times specific instances of technological usage, types of interaction, and results of interactions were mentioned. The first open response question asked for a recollection of a positive experience with technology. Types of technologies associated with positive experiences included IM (N = 26), Email (N = 22), cell phones (N = 16), and telephones (N = 10). Digital cameras were mentioned once as were online journals. Types of contacts (e.g., relationships) associated with positive technological experiences include friend contact (N = 19), family contact (N = 16), large group contact such as a team or organization (N = 8), and significant other contact (N = 6). Work contacts, acquaintance contacts, and educational contacts were each mentioned twice.

3 To further clarify, N = "times mentioned", this refers to a specific reference in the written responses I received. Some participants talked about numerous technologies in single responses. Each time a technology was used in a response, it was recorded, and each time a reaction to technology was used in a response it was reported as well. As with each specific type of technology recorded each type of theme was recorded and participants could mention more than one theme. These numbers do not refer to the participants themselves.
The benefits associated with technology were relationship maintenance ($N = 22$), ease ($N = 15$), organization ($N = 12$), speed ($N = 6$) and a lack of FTF interaction ($N = 4$). The ability to see pictures was mentioned twice and safety was mentioned once.

The second open response question asked participants to recollect a negative experience with technology. Types of technologies associated with negative responses include IM ($N = 38$), cell phones ($N = 10$), email ($N = 6$), telephone ($N = 5$), computer ($N = 3$) and video games ($N = 2$). Types of contacts associated with negative technological experiences include friend contact ($N = 25$), significant other contact ($N = 9$), family contact ($N = 7$), acquaintance contact ($N = 3$), and large group contact ($N = 2$). Problems associated with technology included misunderstandings/lack of clarity/confusion ($N = 34$), failure of/lack of technology ($N = 12$), arguments ($N = 12$), over-accessibility ($N = 8$), ease of damage to relationship ($N = 6$), multitasking ($N = 4$), distraction ($N = 3$), time consumption ($N = 3$) and virtual loss ($N = 2$). Annoying pop-ups and IM paralanguage were each mentioned once.

For the third open response question that asked for participants’ reactions to the loss of technology during Hurricane Isabel, positive, negative and ambiguous responses were recognized. Positive responses were seen in such language as “I enjoyed it,” or “It made me happy.” Participants used words such as “frustration”, “annoyance”, “boredom” and “difficulty” to describe their negative experiences. Ambiguous responses were noted if participants used language such as ‘I didn’t mind,’ or ‘It didn’t bother me.’

Participants mentioned positive reactions to the lack of technology during the hurricane. Eleven times participants stated that they were excited for the first day because it was a new experience. Six times participants mentioned that they felt they
were living a life that was more free and simple. Three times participants said they met people they would have never met because they were forced into more FTF interactions. Twice the loss of technology was mentioned as a wake up call, and twice it was mentioned as a nice break from reality.

Negative sentiments were mentioned in relation to the lack of technology in general thirteen times, and the lack of technology for entertainment purposes five times. A lack of communication was mentioned nineteen times and the lack of ease for communication was mentioned seven times. General discomforts with the entire situation were mentioned thirteen times.

The losses of specific technologies were mentioned by participants in positive, negative, and ambiguous ways. Reports for the total number of instances these technological losses were mentioned as well as the reactions to the losses are as follows. The lack of internet was mentioned twenty times by participants, fourteen times it was viewed as negative and six times it was seen as ambiguous. The loss of IM was mentioned fourteen times, ten times negative, three times positive and once ambiguous. The loss of email was mentioned thirteen times, seven times negative, three times positive and three times ambiguous. The loss of cell phones was mentioned fourteen times, eleven times negative and three times ambiguous. Ten times participants mentioned that their cell phones worked and this was seen as positive. Dead cell phone batteries were mentioned negatively fourteen times. The loss of cell phone service was mentioned as a negative five times. Thirteen times participants mentioned the loss of television, nine times negative and four times ambiguous. Loss of telephones was mentioned eight times, six negative and two ambiguous. Increased FTF interaction was
mentioned thirteen times, nine times positive, three times ambiguous and one time negative.

**Focus group results**

In this section I will review the general themes of the self that emerged from participant talk in the focus groups. Because the focus group data is suited for discussion and not merely the representation of results, further information and analysis concerning participant language use will be discussed in the next section with specific reference to the second and third research questions. General results from the focus group data suggest the following nine overlapping themes: 1) connection, 2) over-connection, 3) ease/laziness, 4) multitasking, 5) profile stalking, 6) loss of physical presence, 7) empowerment, 8) privacy, and 9) 'real' communication. For each of these themes the representation of self in talk will be reviewed.

**Connection**

Participants talked about connection both with others and with the medium, specifically noted is the positive influences technology has on maintaining both long distance and proximal relationships. For example, one male participant stated:

M: I think it's pretty positive because like uh, since I'm a freshman, I still have a lot of good friends back home and I think that I can talk to them all the time just like on IM or just on the phone or whatnot. And I think if I didn’t have that opportunity I probably wouldn't be like, "they're still my friends." I mean I would in a certain sense, but they wouldn’t be my close friends still. But the fact that I can talk to them all the time, just have a casual conversation like I would back at home, it's not the same but it still is. It still helps the relationship a lot (Transcript 2, Lines 330-336).

This example shows how the connection offered by certain technologies allows for contact that would have otherwise faded away. These casual conversations this participant describes allow for relational identities to be maintained across great distances.
and even though they are stated as not being exactly the same, the relationships are continued and the connections are seen as positive. In certain discussions participants talk about their increased feelings of substance when others have connected with them through technology.

Participants also talked about the feelings of rejection when no one contacts them even though they are accessible through a certain technological medium. For example, one female participant said,

F: Like, if my cell phone doesn’t ring for a whole day, I’m like, well, why does no one care about me, why hasn’t anyone called me? Like if you go back (to your room) and there’s no IMs like on your away message, like no little things, saying someone talked to you, like you feel bad about yourself” (Transcript 4, Lines 122-125).

This shows an emergence of the self in talk as this participant relates personal worth to the lack of connection they had with others when they were available to be contacted.

Connection, in this circumstance, is viewed as a reason for relational contact to occur. Self-worth is established on the basis of the number of personal connections received when the lines of technological communication were open and available.

Over-connection

Both in terms of over-accessibility to other people and addiction to the technologies, participants suggest that over-connection can be a hindrance on their daily activities and their person in certain cases. One male participant describes the experience of over-connection:

M: I think it can get kinda suffocating sometimes like whether it’s like your mom or your girlfriend or something. Like she can IM you, or call you on your cell phone, or call your room phone, or email you or any other crap like that when you don’t want to talk to them a lot of the time, you know? [laughter] not girlfriend...[laughter] but um, I think its very suffocating when you feel compelled to answer your phone, or compelled to answer your IM or something
like that, when you just can’t really get away from anything (Transcript 1, Lines 31-36).

This example shows how the specific technologies of IM, cell phone, telephone, and email have allowed for over connection to occur. The self emerges here as feeling ‘suffocated’ due to the inability to escape from the excesses of availability allowed by technological connection.

References to addiction are used to describe over-connection to cell phones, IM and email. An addicted self emerges in talk about over-connection when participants recognize the need to be in contact, for example. One male participant stated:

M: [C]ommunicative forms of technology, its kinda, I’d see it like nicotine man, like you make one call one day and then you gotta make another call and it becomes addictive. Like, you need to call somebody. You have to be in contact with somebody at all times of your life (Transcript 6, Lines 410-412).

The over-connection associated with cell phones in the example above show that the participant feels addicted to the connection offered by communicative technologies.

*Ease/ laziness*

Although not always mentioned in the same contexts, ease and laziness receive similar types of talk from participants. Ease is discussed in reference to information access and technological communication, and laziness is described in numerous ways as a result of technological immersion. The following discussion serves as an example to the theme of ease/laziness:

M: I think what bothers me most is when I get an IM from someone on my floor, and they, can’t walk two doors....
M: Or your roommate, get an IM from your roommate... [Laughter]....we do it all the time, its weird...
F: I’ve literally been like ten feet away from someone and IMed them [laughter]...(F: yeah).
M: Its like we’re progressively getting lazier and lazier
M: well if you’re in a lab class and you cant talk while the professor is giving his lecture or her lecture, you can talk to each other, and that’s great, it’s real fun...[laughter]...(M: you’re really showing your academic prowess)...hey man, I do what I can (Transcript 7, Lines 69-82).

In this example we can see the self emerge in the talk of numerous participants who describe the ways that they communicate through IM. The way that participants describe being bothered, and the laughter in this discussion, shows how participants are cognizant of some of the excesses of ease that have come to take away from FTF interactions with people who are physically close to them. The ease associated with IM carries over into laziness, as one participant describes above. The description of laziness shows an emergence of a self who is caught up in IM and would rather not resort to other forms of communication because they might require more effort.

Multitasking

Participants discussed differing ways in which their lives have become associated with the processes of trying to complete numerous tasks at once. Two types of multitasking are described by participants: the multitasking of information and the multitasking of relationships. Multitasking of information shows an emergence of a technologically-dependent self as can be seen in the following example of a male participant who describes his connection to the computer:

M: I mean when I work 3 hours a day 2 days a week, and the entire time I’m on the computer. I mean I’m either doing work on the computer or I’m checking my email every five minutes cause I’m bored. Or I visit every possible website I can, just reading news. You know I can’t leave where I am at work and that’s where technology is huge, if I didn’t have that computer there I would go absolutely insane, I would probably not resort to reading (Transcript 5, Lines 190-195).

The participant’s mention of going insane without a computer shows dependence on technology.
Multitasking of relationships shows a much stronger connection to an emergence of a scattered self as described by Gergen (1991, 2000). Participants who talk with numerous people at the same time through various communication media suggest that they lose a deeper sense of meaning from the relationships. The following excerpt shows how one male participant describes the effects that IM communication can have:

M: ...[A]nd it’s great to keep in touch with people but um also, its also real easy to slip into a very thin level of conversation when you talk to them. When you keep in touch with so many people that it kinda makes it so many people to, you know, you kinda spread yourself thin with respect to that...(Transcript 2, Lines 359-362).

Being 'spread thin' was a sentiment that highlighted the self in participant talk in numerous discussions. The act of multitasking relationships often overlapped with information multitasking in discussion as well, which again exemplifies Gergen's notions of the saturated self. The following example shows multitasking of both information and relationships as a product of convenience:

M: Its all just a big uh, what she said, a time issue cause you know, when your talking to one friend you can be talking to another and at the same time you know reading a paper for your project tomorrow or whatever, so it's a convenience issue more than anything...F: Yeah (Transcript 3, Lines 57-60).

Profile stalking

The act of checking people’s away messages and personal profiles that they choose to display on IM was referred to numerous times by participants. The IM away message and personal profile by their structure are reflections of self. People are able to put forth a highly managed and controlled self through the specific text, internet links, and pictures they choose to include. The personal representations established through IM away messages and profiles can then be accessed by any users who chooses check these away messages and profiles for information. This engagement of information about
others offers a feeling of connectedness to the lives of others without any conversation taking place. Profile stalking is cited as a means of relational maintenance. The following examples suggest the prevalence of profile stalking:

M: A lot of time I don’t even talk to them, I just check their away message, I’m like oh he’s doing homework cool.
F: Yeah, I feel like they’re the best form of procrastination ever...
M: Yeah yeah it is...
F: Biggest form of frustration ever...
F: It has definitely caused me to procrastinate more....
F: You can like monitor someone’s life. Like I have like a whole bunch of my camp friends and of course I like never talk to them anymore, but... just reading away messages constantly so I know like how my friends like boyfriend situation is, what she’s doing tomorrow night, whatever she’s doing in college now. I look at all her pictures. So, you know, definitely don’t even need to talk them (Transcript 3, Lines 30-45).

M: Also you don’t even have to talk to people on instant messenger, you can like check up on people you haven’t talked to in a while just, like their away message (F: Yeah, M: Cyber stalking...everybody does it too, I guarantee everyone in this room does it)...it’s like a waste of time but (Transcript 7, Lines 22-25).

As the last female participant in the first excerpt suggests, people have come to define the other without any reference to conversation. The other is defined, in the subjective ways he/she decides to portray him/herself through the IM away message and profile. The total self-control given to the establisher of an IM profile suggests that people are able to create their own selves, not specifically conversational selves, through textual and sometimes image projection on IM profiles. Profile stalking then becomes a way to relate to and understand another person who is portrayed completely as he/she would like to be seen.

Some participants discussed the way that mass dissemination through IM away messages and profiles helps them to negotiate dealing with problems that they would
otherwise avoid in conversation. The following example shows how away messages and the profile stalking that accompanies them can be positive for the person who puts up the away message.

F: [H]ave you ever kinda like had a kinda crappy day, and you didn’t want to tell each and every one of your friends all across the country like that you were kinda having a crappy day? You can just sorta like announce that to the world, and you won’t be intruding on their lives if they don’t check it because if they like took the time to profile-stalk you then [Laughter], then they’ll know that you had a bad day, and you didn’t have to go out of your way to contact them and idono and then they’ll come and check up on you and make you feel well (Transcript 4, Lines 86-92).

This example shows how the self can be mass disseminated through the IM medium for the specific purpose of not wanting to explain having a bad day to numerous people. Profile stalking then serves as the means through which people who might have sympathy for or want to obtain further information about the person who put up the away message to know what is going on in that person’s life at a specific moment without actually talking to them.

*Loss of physical presence*

This theme refers to participant talk about the loss of active engagement with their physical environment due to technological connectivity through media such as a cell phone or IM. As cited in examples by Turkle (1997) and Shane (2001), knowledge of and reaction to the actual physical environment around a person is lost at certain points through technological immersion. In the following example, participant talk about cell phones shows the loss of physical presence:

F: ... like your walking to class talking to your friends on the phone, and that means your not gonna like bother looking around you or saying hi to the ten people who walk by you that you know. So that you... it’s just like an excuse not to talk to people. When I’m sitting there if I have nothing to do outside of a class
I'm like why don't I take out my phone and call somebody instead of having to just stand there and do nothing for five minutes (Transcript 1, Lines 77-82).

This talk shows a negotiation of self through the ability to step outside of the physical environment by making an active choice to use technological media not just for connection but also as a response to a possible feeling of discomfort. The female participant above notes the way that cell phones cause people to ignore the other people walking by them that they know, or could relate to. The participant then says that the cell phone is almost like an answer to boredom if nothing is happening in the physical environment around a person. When nothing is perceived as entertaining or pertinent in a situation, participants talked about using technologies to escape the feeling of boredom. All communicative technologies can be used this way, not just to escape boredom, but to virtually connect with others in a different physical environment.

**Empowerment**

The language of certain participants highlighted the theme of empowerment when they discussed the ways that technologies have enabled them to have more courage in social conversations. This theme shows an emergent quality of self that is most commonly related to CMC in participant talk, specifically IM. For example, the following excerpt shows empowerment in three participant responses to IM communication. Their discussion highlights the circumstances in and reasons for using this type of medium to feel more comfortable with their communication and the relation of the self to another person.

M: It kinda makes you feel a little bit braver sometimes (M: Oh yeah)...like lets say you just met a girl and you want to talk to her again, and you got her IM name. If you have her phone number if you call there's always that fear that like you'll just start babbling, and you might say something really stupid and you're just gonna get nervous and...when you're on IM you can take your time, and look
at what's been said, and read over it again, you can even type it in and then delete if you don’t like it....its just a little bit of increased bravery when it comes to talking. 
M: You can choose to say the right thing instead of just kinda (M: accidentally saying it?)...yeah that definitely happens (Transcript 5, Lines 250-259).

The empowered self is represented in talk and explained in direct relation to technological immersion in the above example. The first participant discusses the courage that accompanies communication through IM. The lack of tone, voice, and physical presence improve the confidence levels of participants as explained by Tidwell and Walther (2002). Both participants describe the benefits to thinking out what you are going to ‘say’ before ‘saying’ it. This type of technological empowerment discussed in participant talk shows the ability, in some cases, for a more calculated and carefully constructed self in interaction.

Privacy

The theme of privacy was discussed by participants as a concern and also as an increasingly non-existent factor in connectivity and relationships. Privacy was mentioned as a concern that participants had about increased technological immersion, both in terms of personal relationships and the multiple ways advertising can invade the new communicative technologies. The following example shows an instance where privacy is seen as a concern.

F: I think it’s kind of extreme now. In like people’s private lives are coming, like they're just known. That privacy and intimacy of relationships is kinda falling away. So I would love to see it go back to real community style face-to-face relationships rather than through technology (Transcript 4, Lines 315-319).

This participant suggests that privacy and intimacy are lacking with new communicative technologies, this assertion is due in part to the ability for people to easily access
information about others online, through web searches, and checking profiles for example.

Participant privacy talk also suggests that the self is violated because people do not have the choice of receiving advertisements. If a person chooses to use the internet, they also choose to receive advertisements. The following example shows frustration and fear with advancing technological advertising.

M: the thing that really scares me, I don’t know if y’all have experiences with this, but it freaked me out...they started on IM to run movie previews on the top, and if your speakers are on, IM just starts talking to you...so Will Ferrell just started talking from my computer, and I was like what is going on here, like I don’t have Win Amp™ open I don’t have music on, there’s just a person talking to me, what the hells going on? It really really freaked me out, I was like I don’t like this, I didn’t ask for this, I didn’t ask for previews on my computer, it just really freaked me out.
F: It’s a big debate, like you don’t choose to be advertised to anymore...there’s just like constant in your face pop-ups, and the problem is our regulatory rules are so far behind the advances we’ve come to...(Transcript 2, Lines 388-398).

This example shows emotional responses against advertising that is constructed as an invasion of privacy by participants. Both in terms of advertising and relationships, communicative technologies have subjected their users to a loss of privacy, and participant talk suggests that this can be a problem.

‘Real’ communication

This theme is discussed numerous times with reference to FTF talk. Unlike technologically mediated talk, FTF is viewed by many participants as ‘real’ or ‘true’ communication. Many of the negative sentiments related to technology were made in reference to the lack of reality in conversations they have through specific media. Email and IM were mentioned in the participants’ talk as sources of communication that they devalue because of the lack of necessary cues. The self can be located in the discussions
about what constitutes ‘real’ communication, as participants are defining which forms of communication allow a preferable construction of self. Participants discuss the real and unreal qualities of technological communication and express how they are affected by them. The following example is a response to my question that asked if people used technology to maintain their relationships.

F: Well I mean sometimes it can help, because if you’re gonna talk to someone you’re not gonna see for a long time then obviously it will help you keep in contact with them. But, idono, I find it easier to fight with someone on the phone since you’re not face to face and you’re not more inclined to work it out cause you’re looking at each other, or like fighting with someone on IM which is the worst because you can say anything you want cause you feel like you can cause your typing instead of actually looking at them or having to hear them. But like it’s good if it will help you keep in contact, but it’s not real communication, I mean I guess it is, but you’re gonna act differently no matter how you do it.

M: I think things get misinterpreted all the time, like when your on Instant Messenger or whatnot, cause you can’t transfer emotion across the computer, and all the time, things get misconstrued and sometimes get you in more trouble than you’re in to begin with (Transcript 1 Lines 178-190).

The above example shows how communication over IM is devalued because of the lack of communicative cues that are present. No FTF cues allows for a lack of emotion, and meaning to be attributed to certain types of CMC relationships, and for this reason, many participants cite that talk through IM and other textual media is not ‘real.’

These nine themes all have levels of interrelation as they are discussed by participants. These themes overlap in talk to show different contextual emergences of self. In the following section, the interplay between these themes will be used to help define what self is located in participant talk.

Discussion

Usage
Usage results indicate that participants use communicative and entertainment technologies approximately eight hours each day. Taking into account the average seven to eight hours people sleep per day, almost half the time that participants are awake on a given day they are using technology. This statistic in reference to an entire year would suggest that participants would utilize technology for almost 115 days out of each year. In the four years of their collegiate experience participants would spend almost 460 days, or a year and three months, using technology. When compared, participants report using communication technologies (3.21 hours per day) slightly more than entertainment technologies (2.86 hours per day).

Over 90% of the participants reported using personal computers, cell phones, televisions, DVD players, and CD players. Personal computers and cell phones are communicative technologies while televisions, DVD players, and CD players are entertainment technologies. These different types of exposure suggest that participants both gain information from technologies and transmit information through technologies on a daily basis as supported by the overall usage statistics. When looking at the separate communication and entertainment technology reports of usages participants use personal computers and cell phones more often on a daily basis than televisions, DVD players and CD players. The multiple levels and types of technological exposure and usage could be viewed as evidence to Gergen’s (1991, 2000) suggestions about technological immersion. With such high reports of exposure and use to these specific technologies, further study into their effects could be helpful in gaining perspective on what some scholars suggest is a quickly shrinking world (Gergen, 2000; Shane 2001). Communicative technologies are making relationships across distance increasingly manageable, and through this, they are
creating different kinds of relationships and connections that do not have all of the same qualities as FTF relationships. Furthermore, an ability for more relationships appears with these technologies that can lead to a fragmentation of self (Gergen, 1991, 2000).

In this specific environment PDAs and MP3 players were not used by many participants. College students might feel little the need to have a PDA for organizational purposes. Most college students are not on tight time schedules in this period of their life and they do not want the responsibility of keeping track of such a small and expensive piece of technological equipment. MP3 players are not as popular likely due to participants’ ability to listen to music on personal computers, and the ability to burn CDs. If participants already use or own a CD player, they likely see little need at the moment to employ a new technology source for music.

As suggested in the usage statistics from Farmer (2003) and Hassan (2003) the use of cell phones and IM have been rapidly increasing. If these increases are relevant to the larger population, I have no reason to believe that their statistics would not be relevant to this university population. My data suggests that cell phones are used by a majority of the participants. The use of a personal computer was also reported by a majority of participants, which could include IM usage although I did not ask for specific IM data from the participants. In sum, technology usage is high and the numbers reflect a notion of technological immersion (Gergen, 1991, 2000).

Experiences with technology

Participants reported having positive experiences with IM, email, cell phones, and telephones. These communicative technologies were mentioned as helpful in discussions with friends, family members, large groups/organizations and significant others. The
benefits that were associated with these technologies were relationship maintenance, ease, organization, speed, and a lack of FTF interaction. As can be seen with participants agreement with the statement that communication technologies have helped maintain relationships that would have otherwise faded away, relationship maintenance is one of the most common reasons people not only utilize, but also enjoy their experiences with technology.

Participants reported having negative experiences with IM, cell phones, email and telephones as well. The communicative technologies were mentioned as problematic in discussions with friends, significant others, family members and acquaintances. The drawbacks that were associated with these technologies were misunderstandings/lack of clarity/confusion, arguments, over-accessibility, case of damage to relationships, multitasking, distraction and time consumption. Data from the two open response questions showed an emergence of contradiction in participant talk. Although participants might not have noticed these contradictions themselves, their language in the cases mentioned below show that people experience technology in contradictory ways. These experiences highlight the tensions that technologies construct through their usage. The occurrence of contradictory talk about technology most fully highlights the complicated relationships people have through technological media.

The computer based communication technologies reflect ability for constant identity maintenance as can be seen in examples of users choosing to portray themselves in a careful and constructed manner through IM. IM was the most frequently mentioned form of communicative technology associated with both positive and negative experiences. Participant talk suggests that this can be a contradictory experience due to
many factors. In the following example, a participant reported in their survey response, a romantic relationship that was both helped and hurt by IM conversation.

My boyfriend is not the most open communicator, talking to him about certain issues is like pulling teeth. Sadly, using AOL instant messenger has made some of these conversations easier on both of us, because he doesn't feel uncomfortable typing things to me that he might be otherwise uncomfortable with addressing in person. This also creates a somewhat awkward level in our relationship because we will communicate online, then face to face, the topic doesn't come up anymore.

The technological medium provides a way for this participant's boyfriend to open up to her. But, when it comes back to FTF communication, the discussion does not continue the way it did online, which creates tension in the relationship. Another survey response gives examples of contradiction in participant talk with respect to IM. This participant also talks about the difficulty of negotiating a relationship through a textual medium in numerous ways.

I recently broke up with my girlfriend of over 2 years. She and I had always had a very volatile relationship, and made the frequent mistake of getting into arguments over AOL Instant Messenger. The first weeks after our break-up, at a time when it was extremely painful for me to talk with her face to face, we would talk over Instant Messenger. Instant Messenger is absolutely awful for communicating emotion, connecting with someone emotionally, and in my opinion can actually be detrimental to relationships in certain circumstances. The things I was afraid to say to my ex-girlfriend I got out over IM - but also the things I probably shouldn't have said. It makes communication too simple - it takes that tactfulness and care out of it. Arguing with my girlfriend over Instant Messenger shortly after we would break up was as well detrimental to my well-being. I was so concerned with her responses and what she was thinking that things like her taking a long time to respond to a question drew me insane. I became dependent on her Instant Messenger screen name to know what she was doing and what she was up to. Because of this medium, and because of its simplicity, it has made it all the more difficult to free myself of that relationship, or at least distance myself from it somewhat.

This person's response exhibits a lot of contradiction. This person, when he could not communicate with his ex-girlfriend FTF talked to her over IM, which was a positive
experience because it allowed conversation to continue that would not have happened FTF. He was able to say things over IM that would not have come up FTF because of the lack of emotionality associated with the medium. As he states this became a negative experience because IM allowed him to say things he should not have said, and it also allowed him to monitor his ex-girlfriend’s life and become dependent on the medium in terms of associating with her (i.e., profile stalking). Overall this experience is viewed as negative by the participant because he was unable to free himself from the pain caused by the relationship because of the ease of IM. The contradictions that emerge in this talk show the inherent contradictions with communication through IM. The contradiction between ease and dependence highlights the ability for this medium to become a communicative problem. Another participant describes the ‘paradox’ of IM and shows the ways in which this medium is both a positive and negative experience.

AIM is an odd paradox. I think that people are becoming too reliant on it and that it is having negative effects on people’s social skills. On the one hand you could argue that AIM keeps you in touch with more people than you could otherwise, but you have to ask yourself how beneficial are AIM conversations all the time? AIM is such a narrow means of communication, it doesn't allow for so many things that are important to human interaction (feeling, emotion, etc), but it sure is fuckin’ easy to use.

His example shows the inherent contradictions with communication over IM. The possibilities of numerous relationships carried out with ease is the reason many people use this medium of communication, but the lack of verbal cues and true understanding between two people is seen as a negative. Also, he mentions the reliance that develops on the medium of communication itself which is also a negative experience. This is brought on by ease and the constant personal accessibility the medium offers.
Further contradictory talk can be seen in the focus group data. One participant describes the reaction her mother has had to technology. This example shows another contradiction that emerges through technological use.

F: My mom just purchased a whole ton of electronics for her business. Like she has a brand new laptop, and I mean like when I left for school and we had this like really crappy little computer that she used since like '95 or something you know like, and I came back and we now have wireless internet. She has a palm pilot, like a new cell phone, new laptop, a new like printer with like scanner/faxer like it has it all...and she’s just like “I didn’t know all this was out there, my life is going to be so much easier.” But yet like she’ll call me and complain about how stressed out she is because like something’s not working right, or like this and that. So she’s become a lot more stressed out, yet like a little bit more organized I guess you could say (Transcript 7, Lines 146-155).

She describes her mother’s purchase and usage of numerous technologies that have both made her mother’s life more organized but also more stressed out. Her description shows contradiction in the effects that technology has on human beings. This example follows the contradictions that Gergen (2000) notes about technological immersion, specifically in connection with his four reasons for self-erosion that highlight many of the contradictions associated with technological use.

Other participants in the focus groups talked about technology in contradictory ways as well. Another example of contradictory talk occurs in focus group six. The idea of technology being a ‘tool’ and not a ‘toy’ emerged. Participants discussed the certain benefits that technology allows but suggested that through overuse and materialism communicative technologies such as IM and cell phones have the ability to become, and in some cases have become toys (e.g., cell phone ring tones, video games on cell phones).

In another focus group, a conversation about the internet, and then communication through the internet, was discussed as a “double-edged sword” (Transcript 2).
F: I think the internet is almost a double edged sword because the more we use it the more we’re dependent on it to the point of now when we have to do research and it’s not on the internet, we’re freaking out and going to the information desk because we have no idea how to go and look stuff up in books. God forbid that we use books and not the internet. So it is really helpful in a lot of ways, but you also find the more you use it, the more often you’re using it. You increase the amount of time you’re spending on it. And that’s what I found just being in college, like the transition from high school to college, I went from using it maybe a half hour a day to having it be a vital part of every day of my life at school.

F: I think when it’s a communication thing it’s a double edged sword too. Because I think, in a lot of ways, using IM is a really easy and convenient way to talk to people if you need like information. But if you’re gonna have a serious conversation that’s more emotional, I don’t think it’s the way to communicate with someone, I think you give up a lot when you don’t have face-to-face communication or even on the phone.

F: I think that’s sooo true, you always hear horror stories of the girl who like, got dumped over IM, and you just think what a D-bag. I think it makes us be a lot less courageous, I mean it’s so easy to drop an email to like some teacher your upset about over a grade or something, but I think we lose a lot of expression. I don’t know, I feel like our generation isn’t that great at communicating with others I think we lose a lot of practice that we would have prior had if we didn’t have that easy way out. But at the same time I wrote in my thing, like, my dad travels all the time to work so it’s so hard to like get in touch with him and the greatest thing is I talk to him everyday cause he writes me an email everyday to tell me how he’s doing and stuff, so if I didn’t have that I think Id like be a lot more homesick and miss my parents.

F: I think its easier for conversation to be meaningless I mean like you’re talking to someone 3 or 4 times a day on instant message and it’s always like, hi, how are you, good, how are you, what’s up, nothing, and it’s always just that meaningless conversations and it kinda defeats the point of communication with that individual. If you have something to say to someone I think its just too easy with IM just to kinda have it be another meaningless window where you’re talking to like five or six people at the same time.

M: Yeah I agree with that completely and on the other edge, you see that people can say things on IM or through email that they wouldn’t say in person, you know, so it’s sorta both ways you can take nothing or you can take things people wouldn’t normally say.

M: and as far as like that a lot of the things you say on IM you take the wrong way, so you may be saying something, like you wanna say like, you know, in a large tone of voice but you know they may interpret it wrong. You wanna be angry and scream but you can’t do it through the computer. And they might be more recipient, and people won’t understand that, and it kinda prohibits the way people understand conversation (Transcript 2, Lines 54-103).
This except shows how technology is constructed in many contradictory ways through talk. The double edged sword metaphor is used to describe the contradictions between connection and dependence, relationship maintenance and loss of emotion, and empowerment and real communication. These examples highlight the technological immersion discussed by Gergen (1991, 2000) and outline how participant talk about experiences with technology was often contradictory.

*The ‘self’*

Through the interplay among the nine themes I outlined in detail in the results section, a technological self emerges from participant talk. Positive, negative and ambiguous responses toward involvement with technology show a complicated portrait of interaction that represent an emergence of self. This multiple self is defined in part through technological involvement: through the private and carefully constructed ways people express themselves through IM profiles and away messages, through the relational identities shared through technological communication, through contradictory and negotiated differences between FTF and technological communication. The self in relation to technology emerged numerous times in participant talk, and the themes I outline and connect show the fluidity of self construction through a web of technological interactions and experiences.

Over-connection overlaps with the themes of connection, case and laziness, privacy, multitasking, and the loss of physical presence. Over-connection refers to participants feeling bound to technological media. Sometimes the ease of relationship maintenance that manifest through connection becomes overwhelming for participants and they are unable to separate themselves from the media. The following example
shows how the ease associated with IM communication can allow relationships to continue that have lost their appeal to participants.

M: Sometimes IM allows relationships that should have died down a long time ago to continue so it’s like I have friends from middle school who will IM me still. And we have nothing to say to each other. They’re just like, “hey how are you?” and like, and I kinda wish they wouldn’t.
M: I agree…My ex-girlfriend still IMs me and its idono…I don’t like to talk to her, I want her to just leave me alone.
M: Can’t you put up a block?
M: Yeah but, then she signs on another screen name to see if you’re blocking her (Transcript 1, Lines 140-147).

Here the discomfort associated with over-connection is described in terms of ease of communication through IM. This example shows how participants are made uncomfortable due to continued relationships that have no substance. Because of technology people are unable to escape from relationships that they have had that they wish would have died down. The negotiation of self is complicated by participants knowing people they do not want to talk to can still contact them. This shows how the medium of IM makes relational identities pertinent even if only one person wants to continue the online relationship.

The conversation about over-connection above relates to the theme of privacy as well. Participants are unable to escape conversation with undesirable people. Even if a participant were to ‘block’ another person from contacting them through IM that person would still be able to use another screen name to check up on the participant. This creates even more of a mess because it leads to the person who is blocked, getting upset when they figure out that they have been blocked. The lack of privacy associated with IM allows for connections to exist even when relationships have been ‘terminated.’ This

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"Blocking" someone on IM refers to putting his/her screen name on a list that does not allow him/her to see when you are online.
causes levels of increased discomfort to pervade the self without any personal control.

People can and do use IM as a surveillance tool, and, as seen with the talk above, this creates complications with online identity management.

Another participant discusses the connection between case and over-connection and describes the way that it makes people feel more outwardly focused and scattered.

This example highlights the intersections of over-connection, case, and multitasking.

M: I’d say it’s easy and it’s nice and it’s convenient, it’s efficient as well, um I would say it has taken a lot of the value away from face-to-face conversation. I mean you can just look at this example here, I mean there are six or seven cell phones out when people knew that we were coming to a group discussion where it would be everyone talking to each other and that kinda, you know...it’s kind of indicative of how we always kinda have something else on our mind besides the point at hand, you know, it’s that reason we bring the cell phone in case we get that call from that person about something later, and I think it hinders our ability to focus more on the certain tasks we’re doing. And like the opposite of that, it makes us think a whole lot larger about the rest of our life, which is a good thing, but I think it hinders our ability to focus on something (Transcript 7, Lines 46-55).

This example shows an emergence of Gergen’s (1991) saturated self that is cause by technological immersion. The self in this case, relates to over-connection, case and connection. The relation to case is obvious as cell phones are an efficient and instant way to stay available for contact, and to contact others, which also shows the theme of connection for both relational and information purposes.

By definition, over-connection implies multitasking and a loss of physical presence. For example, if a person is bound to the computer, they will most likely be negotiating numerous relationships from behind the screen. Their communication with others will be increasingly disembodied as numerous relationships are managed online.

This type of experience is highlighted by Gergen (1991) when he discusses the
`mutiphrenic` condition that shows a loss of a stable sense of self due to a multiplicity of technological involvements.

This condition is also described through the relationship between the theme of ease/laziness with themes of connection, profile stalking, loss of physical presence, `real` communication, empowerment and multitasking. Connection is related to the theme of ease/laziness as people have now come to resort to the easiest means of connection in order to relate themselves to others. IM, email and cell phones all exemplify this ease of connection that is cited by many participants as a positive connection because of the ability to maintain numerous relationships across varying distances on a daily basis.

The relationship between ease/laziness and profile stalking is almost implied by the definition of profile stalking. The task of clicking on peoples` screen names to gain information about their whereabouts and activities is easy. Participants discuss this on numerous occasions. The relationship between these two themes and the loss of physical presence theme come together under what Peters (1999) describes as disembodied communication. Peters locates the self in speech by associating the loss of place to the loss of voice and the possible loss of human to human understanding:

The power of "communication" lies in its ability to extend human interaction across the expanses of space and time; its pathos lies in its transcendence of mortal form. Communication suggests contact with touch. To talk on a telephone is to identify an acoustic effigy of the person with an embodied presence. In "communication" the bodies of the communicants no longer hold the incontrovertible tokens of individuality or personality. Our faces, actions, voices, thoughts and transactions have all migrated into media that can disseminate the indici of our personhood without our permission. Communication has become disembodied (p. 228).

Peters ideas relate to the themes of ease/laziness, profile stalking and loss of physical presence. Communication is disembodied because of the ease associated with new
technological forms of connection. This directly relates to the loss of physical presence which is exemplified by disembodiment. Profile stalking can be seen as the objectification of someone’s personhood without permission, as people do not know who is looking at their profile at any given moment.

Ease and laziness are part of the reason people suggest communication over certain textual media such as IM should not be classified as ‘real.’ Empowerment is related to both of these themes as can be seen in the following excerpt.

F: I think every time, every time my roommate wants to tell me something in terms of a problem or something she wants, she IMs me from across the room.[Laughter] and she and it sounds silly, and it really is silly for us to be sitting there from two feet apart talking over Instant Messenger but she says she feels more comfortable typing and being able to see her thought before she sends them and I guess that’s just the way some people are as they become accustomed to dealing with something maybe think that less personal and easy to deal with (Transcript 2, Lines 105-111).

This participant shows how the reliance on IM because of its ease has led her roommate to feel that she can express herself better through typing. This is an example of how people feel empowered through technology and in the same respects how this empowerment might be detrimental to relational maintenance. The need to escape from the physical environment and communicate through IM even when the two people are in the same room shows how technology has come to be described as a medium that promotes a lack of ‘real’ communication. The themes of empowerment and ‘real’ communication are often at odds, but they both represent ways the self emerges in participant talk.

The multitasking of information and relationships is also associated with the theme of ease and laziness. The ability for people to carry on multiple relationships from a single location behind a computer screen exemplifies the connection between these two
themes. Participants are able to contact multiple others instantaneously and participate in the continuous structuring of multiple relational identities from a singular location. One participant suggests one reason that he feels multitasking is so prominent with the movement of technology to the forefront of our society.

M: [E]specially in Western civilizations, I think it's mainly because we are working in a capitalist and materialist society that is focused around convenience and ease and independence like the ability to be able to do all these things by yourself at once quickly easily and as efficiently as possible (Transcript 7, Lines 385-389).

He underlines some of the themes reported by Gergen (2000) as causes for technological immersion. For example, Gergen discusses convenience brought about through technology as one of the main factors of his 'multiphrenic' condition.

The 'double edge sword' discussion shows the overlap of many of the themes as well. The addictive element of over-connection is discussed by the first female participant who talked about the increased usage of technology leading to dependence. The second participant discussed the negotiation of the contradictory experience between ease of technological communicative use and the lack of 'real' communication associated with technological media. The third participant negotiates the contradictory experience between the themes of empowerment and connection. The fourth participant continues with the themes of ease and laziness that can promote the lack of 'real' communication. And the fifth participant talks about empowerment and a loss of physical presence when he discusses the differences between the ways people act through CMC and FTF interactions.

Limitations
The sample size for this project was fairly small and is not representative of this college population. For example more females than males attend this particular university, but my participant sample was forty percent female and sixty percent male. Furthermore, a sample from this university has unique characteristics and cannot be taken as a valid representation of another university population or even the public at large. These results are case specific which can be limiting in terms of future discussion. Also I did not ask for demographic information such as race, socioeconomic status or college major, factors that could have been significant in data analysis. In terms of the data collection process, I too was a victim of technology as three of the participant’s surveys did not get sent to my excel spreadsheet due to problems with the wireless laptop computers. In a few cases the transcripts are not complete because participants spoke too softly to be heard.

Finally, the structure of my focus group questioning was inconsistent, as can be seen specifically in the transcripts for focus groups five and seven. In these cases I interjected my opinion at times and may have over-guided discussions. I feel that in certain cases my guidance became too focused on my research questions and not on letting talk happen.

Conclusions

Areas for future inquiry

Future research in this area of communication and technology should include usage statistics for IM, email, and chat rooms specifically, as they are the most common forms of online communication. The usage information allows a large scale perspective on what types of technologies are most common. Specifically in terms of communication
technologies, knowing through what means, and how often people are participating in relationships online would allow us to further justify the notions of technological immersion cited by Shane (2001) and Gergen (2000). This type of data would enable people to see the statistical side of immersion that can only be represented through reporting actual usage numbers.

Relational dialectics (Baxter and Montgomery, 1996) could be applied in a study to CMC and other forms of technological communication to get a broader picture of what types of experiences people negotiate in their relationships that are maintained and carried out through technological mediums. This type of study would expand relational dialects to a new medium of communication that is becoming increasingly more prominent. This study would also help to further understand the emergence of self within technological discussion. The dialectics of autonomy/connection and openness/closeness discussed by Baxter and Montgomery have a direct relation to the contradictions between connection/over-connection and privacy/openness respectively.

Gergen's (1991, 2000) claims of technological immersion have much validity. Future communication research should inquire further into the ways that people talk about their experiences with technology to see if they understand themselves to be technologically submerged. This type of research would be extremely valuable to the discipline because it would allow communication scholars to focus on a possible emergence of a post-modern self in talk. Research in the CMC area is limited at this point and future research studying communication and interaction through technology would be valuable in order to more fully understand human beings in the technological scope of modern communication.
References


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Annex A

The instant society: A study of the interplay among technology, communication, and the human condition.
Thank you for agreeing to participate in this discussion. Before we talk as a group, please complete the following questionnaire regarding your usage of and feelings toward modern technologies. Feel free to ask me any questions. When you are done, please submit the survey, log out of the system and close your laptop. Thank you!

Age_____ Sex_____

Mark Yes or No:
1) Do you use a mobile phone? (e.g. cell phones, digital phones) Yes or No
2) Do you use a personal computer? Yes or No
3) Do you use a television? Yes or No
4) Do you use a game system? (e.g. Nintendo, Play Station, Xbox, etc.) Yes or No
5) Do you use a VCR? Yes or No
6) Do you use a DVD player? Yes or No
7) Do you use a digital camera? Yes or No
8) Do you use a PDA (e.g. Palm Pilot) Yes or No
9) Do you use a CD player? Yes or No
10) Do you use a MP3 player? Yes or No

Answer the following questions regarding your usage of technology.

11) How many hours a day would you estimate that you spend utilizing the technologies mentioned above?

___________ HOURS PER DAY

12) Do you utilize technologies primarily for:
   a) communication purposes (e.g. maintaining relationships)?
   b) entertainment purposes (e.g. playing video games, watching tv)?
   c) for both communication and entertainment purposes equally?

13) How many hours a day do you utilize technologies for communication purposes?

___________ HOURS PER DAY

14) How many hours per day do you utilize technologies for entertainment purposes?

___________ HOURS PER DAY
Please indicate how much you agree with the following statements. For items 15-21 please use the following scale: 1= Strongly Agree, 2= Agree, 3= Neutral, 4= Disagree, 5= Strongly Disagree.

15) When I open up my email and have an inbox overflowing with messages, I have a negative response.

__________________________ 
comments: _______________________________________________________

16) When I look at my cell phone and notice that I have several new voice messages, I have a negative response.

__________________________ 
comments: _______________________________________________________

17) Technology has enabled me to maintain relationships that otherwise would have faded away.

__________________________ 
comments: _______________________________________________________

18) Life without television would be better than life with television.

__________________________ 
comments: _______________________________________________________

19) I spend more time watching TV than I do reading books.

__________________________ 
comments: _______________________________________________________

20) I spend more time communicating with others through technological mediums (e.g. email, IM, telephone) than I do communicating face to face.

__________________________ 
comments: _______________________________________________________

21) There are times in my day when I wish I could escape from the technologies surrounding me.

__________________________ 
comments: _______________________________________________________ 

The following three items are open-ended response questions. Please provide as many details as possible. Thank you!
22) Recall a recent experience when technology was useful in your communication with another person. Please describe this situation in as much detail as possible (e.g., the type of technology, what was said/written, the length of the conversation).

23) Recall a recent experience when technology was not useful for your communication with another person. Please describe this situation in as much detail as possible (e.g., the type of technology, what was said/written, the length of the conversation).

24) During Hurricane Isabel, when the power went out and you were unable to utilize most of the technologies that you are accustomed to living with on a daily basis, how did you respond? How did you feel? What types of technologies did you lose and which did you still have available to you?

THANK YOU FOR YOUR PARTICIPATION IN THIS SURVEY. PLEASE SUBMIT IN THE SURVEY BY CLICKING ON THE BUTTON MARKED 'SUBMIT.' AFTER YOU HAVE DONE THIS, LOG OUT OF YOUR LAPTOP AND WAIT FOR INSTRUCTIONS FROM THE RESEARCHER.
Appendix B

Focus Group Discussion Protocol

1. What are your experiences with technology?
   a. Are they good, bad, indifferent?
   b. If you feel like you struggle with technology at times, how do you deal with this?
   c. How do you notice people around you dealing with and talking about technology?

2. In what ways does technology affect your daily activities?
   a. Do you have scheduled times in your day for technology?
      i. For example, to answer emails, return phone calls, watch TV shows, etc.?
   b. Do you feel technology affects you too much, not enough, or a mixture of both at different times?
   c. How were you affected by the loss of technology during Hurricane Isabel?

3. Do you utilize technology for maintenance in your relationships with others?
   a. How does communicating through technological mediums affect your relationships with others?
   b. In what ways does technology help you in this process? Hurt you in this process? Not affect this process?
### Table

**Participant Usage of Technology**

<table>
<thead>
<tr>
<th>Type of Technology</th>
<th>YES % (frequency)</th>
<th>NO % (frequency)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mobile Phone</td>
<td>90.5% (57)</td>
<td>9.5% (6)</td>
</tr>
<tr>
<td>Personal Computer</td>
<td>96.8% (61)</td>
<td>3.2% (2)</td>
</tr>
<tr>
<td>Game System</td>
<td>50.8% (32)</td>
<td>49.2% (31)</td>
</tr>
<tr>
<td>VCR</td>
<td>85.7% (54)</td>
<td>14.3% (9)</td>
</tr>
<tr>
<td>DVD Player</td>
<td>96.8% (61)</td>
<td>3.2% (2)</td>
</tr>
<tr>
<td>Digital Camera</td>
<td>44.4% (28)</td>
<td>55.6% (35)</td>
</tr>
<tr>
<td>PDA</td>
<td>1.6% (1)</td>
<td>98.4% (62)</td>
</tr>
<tr>
<td>CD Player</td>
<td>96.8% (61)</td>
<td>3.2% (2)</td>
</tr>
<tr>
<td>MP3 Player</td>
<td>25.4% (16)</td>
<td>74.6% (47)</td>
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</tbody>
</table>